

THE UNKNOWN LANDS: NATURE, KNOWLEDGE, AND SOCIETY IN THE  
PANTANAL OF BRAZIL AND BOLIVIA

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## ABSTRACT

Jason B. Kauffman: The Unknown Lands: Nature, Knowledge, and Society in the Pantanal of  
Brazil and Bolivia  
(Under the direction of Cynthia Radding)

This dissertation examines the modern history of the Pantanal, a seasonally-flooded wetland in the upper Paraguay River watershed at the border between Brazil, Bolivia, and Paraguay. Scientists and environmentalists currently regard the Pantanal as a wildlife-rich and “pristine” ecosystem threatened by uncontrolled development. I seek to understand the historical roots of these perceptions through an analysis of the transnational set of social actors – naturalists, boundary officials, indigenous peoples, field scientists, merchants, ranchers, cowboys, and hunters – who made discursive and material claims upon the Pantanal from 1870 to 1967. During this period, the Pantanal experienced rapid integration into global flows of commerce and a network of ranchers, merchants, and government officials formed to profit from a growing trade in cattle products and other commodities, including *ipecacuanha*, *quebracho*, and wild animal products. To justify their efforts to control space and the movement of people and goods through the Pantanal, these groups perpetuated a myth of isolation with origins in the colonial period.

While the myth of isolation persisted, this study also reveals how perceptions of the Pantanal changed over time and varied according to social position. While powerful stakeholders (officials, engineers, merchants) viewed the Pantanal ecology as a problem to be overcome, rural populations used cycles of flood and drought to their advantage, adopting mobile lives and subsistence strategies that drew upon the resources of the Pantanal and

neighboring biomes. During the first half of the twentieth century, a critical shift occurred when field scientists identified the Pantanal as an ideal location for zoological specimen collection and Brazilian and international sportsmen rediscovered the region as a “paradise” for hunters. While development-minded stakeholders continued to search for ways to shape the Pantanal into the mold of progress, by the 1960s a growing number of social groups questioned this imperative and articulated a need to protect the region and its wildlife. In the process, they silenced the voices of local populations who continued to subsist upon the region and its resources. These competing perceptions of the Pantanal planted the seeds for a conflict over conservation and development that defines the region to this day.

To Lisa

## **ACKNOWLEDGEMENTS**

I could not have written this dissertation without the guidance, support, and encouragement of many people over a long period, stretching back to my years as an undergraduate student at Goshen College. At Goshen, historians John Roth, Steve Nolt, and Jan Bender Shetler took an active interest in my development as a student, taught me how to think critically, and impressed upon me the importance of clear writing. Jan's class on environmental history revealed the exciting ways that scholars were using the tools of the environmental sciences to interpret and understand the actions of humans in the past. I was unaware at the time, but this class introduced me to many of the questions that I later pursued as a graduate student and that, eventually, became central to my dissertation project.

One year after completing my degree, I decided to pursue a graduate program that would allow me to combine my interests in history and Latin America. Up to that point, my only experiences with the region came through a semester of study and service abroad in Cuba and Costa Rica and a political science course on Latin American revolutions. I am grateful to the Department of History at the University of New Mexico for taking a chance on an inexperienced but eager student. UNM is an excellent place to study Latin American history and the department's wide course offerings helped me to fill many gaps in my knowledge. Kimberly Gauderman, Linda Hall, and Liz Hutchison are all excellent teachers and their passion for the history of Latin America was contagious and challenged me to think in new ways. Judy Bieber introduced me to the fascinating world of Brazilian history and, although I did not have a chance to work with him personally, Sam Truett's scholarship in

the field of borderlands history inspired me to make its key questions and debates central to my dissertation. Both at UNM and UNC, I had the privilege of learning from an excellent cohort of fellow graduate students – including, but not limited to, Frank Alvarez, Shawn Austin, Justin Blanton, Angélica Castillo, Scott Crago, Rebecca Ellis, Julian Dodson, Jeff Erbig, Lucy Grinnell, Bonnie Lucero, Nydia Martínez, Katie McIntyre, and Ben Reed – whose fresh perspectives and critical analyses of scholarship made me a better historian.

At the University of North Carolina, I further developed my interests in environmental and borderlands history through coursework and independent study. Two extra years of coursework gave me the time I needed to conceptualize, design, and establish the overarching goals of the dissertation project. Throughout this process, my adviser Cynthia Radding offered unflagging support and was willing to let me follow the sources, even though they took my project in unexpected directions. During the writing process, her advice and careful readings of my work helped me to think through the theoretical and conceptual implications of my project and to discern how each chapter fit into the whole. I am also indebted to John Chasteen, who taught me the importance of storytelling and narrative structure in the writing of history. John also helped me to think through some questions of argument and conceptualization at a key moment in the writing process and Robert Wilcox read an early version of the chapter on commercial hunting. The rest of my dissertation committee – Miguel La Serna, Arturo Escobar, and John French – provided critical feedback that improved the overall quality of the dissertation. Of course, any errors of fact or interpretation that remain are mine alone.

Research for the dissertation would not have been possible without the professional, personal, and financial support of many people in Bolivia, Brazil, and the United States. The

Conference on Latin American History, the American Historical Association, the Department of History at UNC Chapel Hill, and UNC's Institute for the Study of the Americas provided critical short-term support in the early stages of dissertation research. In 2011, when the U.S. Department of Education cut funding for the Fulbright-Hays program, the Mellon Foundation and the Institute of International Education stepped in to fund and administer the program. Without this support, I could not have traveled to Bolivia and Brazil with my family in 2012 to conduct the archival research that anchored my dissertation. In 2013, the Consortium for History of Science, Technology and Medicine also granted me a short-term fellowship which allowed me to complete research for the chapter on field scientists in the Pantanal.

Many people and institutions made the time I spent researching in Bolivia and Brazil both productive and enjoyable. In Santa Cruz, Paula Peña Hasbún, Luis Enrique Rivero Coimbra, and Santos Frias Cabrera welcomed me to the Museo de Historia Regional, introduced me to others in the academic community, and wrote letters of introduction to other archives. I would also like to thank Junior Pantoja Abrego, José Burela Valdivia, and Ariel Villarroel Herbas for their friendship and generosity during my first trip to Santa Cruz in 2010 and for teaching me about the history of eastern Bolivia. In La Paz, Raquel Lara Gómez and José Pradel introduced me to the rich holdings at the Archivo del Ministerio de Relaciones Exteriores de Bolivia and put them at my disposal over the course of a highly productive month. My time in Brazil was also extremely fruitful. In Rio de Janeiro, the excellent staffs at the Biblioteca Nacional, the Arquivo Nacional, the Arquivo Histórico do Itamaraty, the Instituto Histórico e Geográfico Brasileiro, and the Arquivo da História da Ciência at the Museu de Astronomia e Ciências Afins answered my inquiries and streamlined the research process.



None of my research in Mato Grosso would have been possible without the support of Fernando Tadeu de Miranda Borges. Aside from helping me and my family secure lodging and introducing me to scholars at the federal university, Fernando spent hours teaching me about the history of Mato Grosso and its place in the broader picture of Brazilian history and culture. Along with his support as a mentor, I also valued his friendship and I hope that, in some small way, I can repay his generosity in the future. I would also like to thank the staffs of the Arquivo Público de Mato Grosso, the Núcleo de Documentação e Informação Histórica Regional, and the Instituto Histórico e Geográfico de Mato Grosso for opening their collections to me. In Cáceres, the faculty in the department of history at the Universidade do Estado de Mato Grosso – including Domingos Sávio da Cunha Garcia, João Ivo Puhl, and Maria do Socorro Araújo – took an interest in my project and facilitated my access to municipal archives and libraries. I am especially indebted to Socorro, who offered me a place to stay in Cáceres and shared freely of her encyclopedic knowledge of Brazilian history and to “*as gêmeas*” Evelin Cáceres Dan and Vivian Cáceres Dan who welcomed me as their American brother. Our long conversations – on topics ranging from the theoretical innovations of Louis Althusser and the practical implications of Marxism to Pearl Jam, Dire Straits, and Rita Lee – made my time without family a little less lonely.

In Philadelphia, I spent two productive weeks of research in Special Collections at the Bryn Mawr College Library and at the archives of the Academy of Natural Sciences and the Penn Museum of Archaeology and Anthropology. I am grateful to Patrick Crowley, Marianne Hansen, Alex Pezzati, Kate Pourshariati, and Jennifer Vess for welcoming me to their archives and to Babak Ashrafi and the Consortium for History of Science, Technology and Medicine for making the research possible.

At the writing stage, a dissertation completion fellowship from the Graduate School at UNC gave me the space I needed to reconceptualize the main themes and arguments of the dissertation, to organize my sources, and to finish writing. At Davis Library, Teresa Chapa and Rebecca Huckaby helped me to access several Brazilian books that were critical to the dissertation, the Interlibrary Loan staff helped me to obtain many obscure articles and publications, and Amanda Tickner worked with me to design and create the maps. Durham County Libraries provided a quiet and connected (internet!) place to write on days that did not include a commute to Chapel Hill.

Lastly, and most importantly, I thank my family. My parents, Roland and Janice Kauffman, were a constant source of support and even came to visit us in Mato Grosso for a very hot 10 days in September 2012. My son, Eli Thomas, was born in 2011, just after I passed my comprehensive exams and defended my dissertation prospectus. Since then, he has literally grown up with this project and has become a seasoned traveler in the process. My daughter, Alice Jean, arrived in September 2014, just in time for the final push to finish the dissertation. Both of my children bring me immeasurable joy and remind me daily what is important in life. Finally, I thank Lisa, the strongest and most generous person I know. For most of our lives together she has put my dreams and goals first and has come with me every step of the way, from New Mexico and North Carolina to Bolivia and Brazil and back again. I am forever grateful for her love, support, encouragement, and wisdom over the last eight years and I look forward to discovering what our future holds. I dedicate this dissertation to her.

## **PREFACE**

I arrived in the Pantanal for the first time in August 2010 to scout municipal-level archival sources. I also hoped to get a feel for the social geography of the region that I intended to make the subject of dissertation which, at the time, included only the Bolivian side of the border. After traveling for two days across the Bolivian Chiquitania on the dusty and bumpy roads connecting Santa Cruz de la Sierra with the Brazilian border, my friends and I finally reached Puerto Suárez and Quijarro. Set off from the main highway and railroad, the town square in Puerto Suárez sat on the edge of the Laguna Cáceres, with a long wooden pier that stretched out from the shoreline. During its heyday, all of the (legal) commerce between eastern Bolivia, Brazil, and beyond passed through this port. These days, the pier is a tourist attraction for visitors who snap pictures of the expansive Pantanal landscape which stretches for miles in all directions. Far on the horizon I could see Corumbá, the Brazilian port town which sits atop a limestone escarpment above the Paraguay River.

As we traveled closer to the border, the region came alive with activity. When we arrived in Quijarro, it was clear that the town had long eclipsed Puerto Suárez as the commercial hub of Bolivia's southeast corner. With few trees and unpaved streets, Quijarro smelled like dust and diesel fuel. Three kilometers from the border and situated along the Canal Tamengo, which feeds into the Paraguay River, it was connected by both rail and water to Corumbá and the Brazilian influence was palpable. At a nearby duty-free shopping center, Brazilians came in search of Nike shoes and Adidas t-shirts. In supermarkets and

corner stores, Brazilian products lined the shelves. At the border, money changers stood with wads of cash, eager to turn dollars and *bolivianos* into *reais*.

At the actual border a large building with a covered roof spanned the highway, with checkpoints and guards to regulate the movement of people and goods. Having experienced a U.S-Mexico border crossing, I envisioned long lines and gruff guards who would search my belongings and ask me questions. True to the words of my friends, however, crossing this border was much less of an ordeal. We drove to the checkpoint, the guard asked a few questions, and we proceeded. No ID cards, no passports, and no visas required. While I am sure the situation would have been different had I traveled alone, the ease with which we crossed into Brazil seemed appropriate in a region more historically connected through social, cultural, and economic networks than divided by geopolitical conflict.

Corumbá offered a marked contrast to Quijarro. Situated on a bluff overlooking the Paraguay River, with a majestic view of the Pantanal, its streets were paved, its buildings were cleaner, and vendors stood in shaded plazas selling street food and mixing *caipirinhas* for tourists. During the late-nineteenth century and for part of the twentieth, Corumbá was the most important commercial town in the state of Mato Grosso with a port that shipped cattle products and extractive goods to urban South America, Europe, and the United States. Merchants and ranchers dominated the economy and made small fortunes in the process. This history is evident in the built environment, with large limestone buildings constructed in the Italian neoclassical style. During the nineteenth century, these buildings served as the city homes of ranchers and public officials or the headquarters of merchants. Today, they house government offices, libraries, community centers, and museums. As with Brazilians in Quijarro and Puerto Suárez, Bolivians formed a visible presence in Corumbá and, on August

6, caravans of proud citizens paraded through town waving Bolivian flags in honor of their nation's independence.

My first visit to the Pantanal convinced me to expand the scope of my project to include Brazil. I was eager to experience and learn more about the Pantanal as an ecological region and how its environment – people, plants, animals, and water – shaped its human history. The next time I came to Mato Grosso was in August 2012 but this time I headed north to Cuiabá, the state's political and administrative center for most of its history. In contrast to Corumbá and the Bolivian border towns, Cuiabá seemed far removed from the Pantanal. Situated along the upper reaches of the Cuiabá River, it emerged as a mining center during the colonial period but struggled to maintain relevance after the boom faded and the economic center of gravity shifted south to Corumbá. Today, it is a bustling metropolitan area with a population of close to a million people and an economy that has been rejuvenated by the surge of industrial soybean production.

In October 2012, I traveled to Cáceres which, despite its population of over 90,000 people, still maintained a small-town feel. Like Corumbá, its main plaza sat on the edge of the Paraguay River and was lined with restaurants with outdoor seating and industrial fans to manufacture breeze on typical hot and humid evenings. As in Corumbá, Bolivian citizens were highly visible and many operated market stalls where they sold produce and other goods carried from across the border. Instead of cars, many residents traveled to work on bicycles and on many roads they outnumbered motorists. In the nineteenth century and for most of the twentieth century, towns like Corumbá and Cáceres were important economic centers and gateways to the Pantanal with its isolated network of ranches. Today they are gateways for ecotourism and the headquarters of national and international conservation

organizations. Instead of commercial ships loaded with cattle hides, jerky, ipecacuanha, and wild animal skins, “barco hotels” now carry tourists on overnight sightseeing trips through the Pantanal and motorboats shuttle sportsmen to the best fishing spots.

With its pastures and lagoons, dense scrub growth, winding rivers, cattle, and visible populations of wildlife, the Pantanal seemed wild and exotic to those who experienced it in the past and it continues to fascinate people today. Indeed, many believe that ecotourism and community-based conservation hold the key to the Pantanal’s future and can create new sources of wealth for property holders. Many of the same ranches that hosted and outfitted field scientists and sport hunters during the first two-thirds of the twentieth century now provide lodging for ecotourists, wetland ecologists, and conservation biologists. Instead of hunting wild animals with rifles, bullets, and spears, today’s adventurers and knowledge creators hunt them with tranquilizer darts, camera traps, and telescopic lenses. I got a taste of this new geography of ecotourism during a trip to the SESC Pantanal Ecological Reserve, located along the Cuiabá River at Porto Cercado. Not only did I experience wildlife on guided boat tours and horseback rides, but I did so in style with resort-like amenities, including air-conditioned rooms, electricity, a restaurant, and a swimming pool. While other ecolodges operate at much smaller scales, the inspiration is the same and illustrates that conservation and development are two sides of the same coin.

The same variables that attract scientists and tourists to the region – its isolation and its low population density – also presented challenges for researching and writing this dissertation. Transportation across the region is still difficult. For example, while only 325 kilometers separate Cáceres and Corumbá as the crow flies, a car or bus trip between the two cities requires a circuitous journey of over 1,200 kilometers around the perimeter of the flood

zone. Documenting the lives of rural populations was also difficult because only a few ranches have preserved written records. As a result, I had to filter most of my descriptions of rural society through the lenses of travelers and officials who observed their lives and wrote about them. Though many questions remain unanswered, I hope that this dissertation captures some of the dynamism of this ecological and national borderland and the vitality and resilience of rural populations who cocreated the Pantanal landscape.

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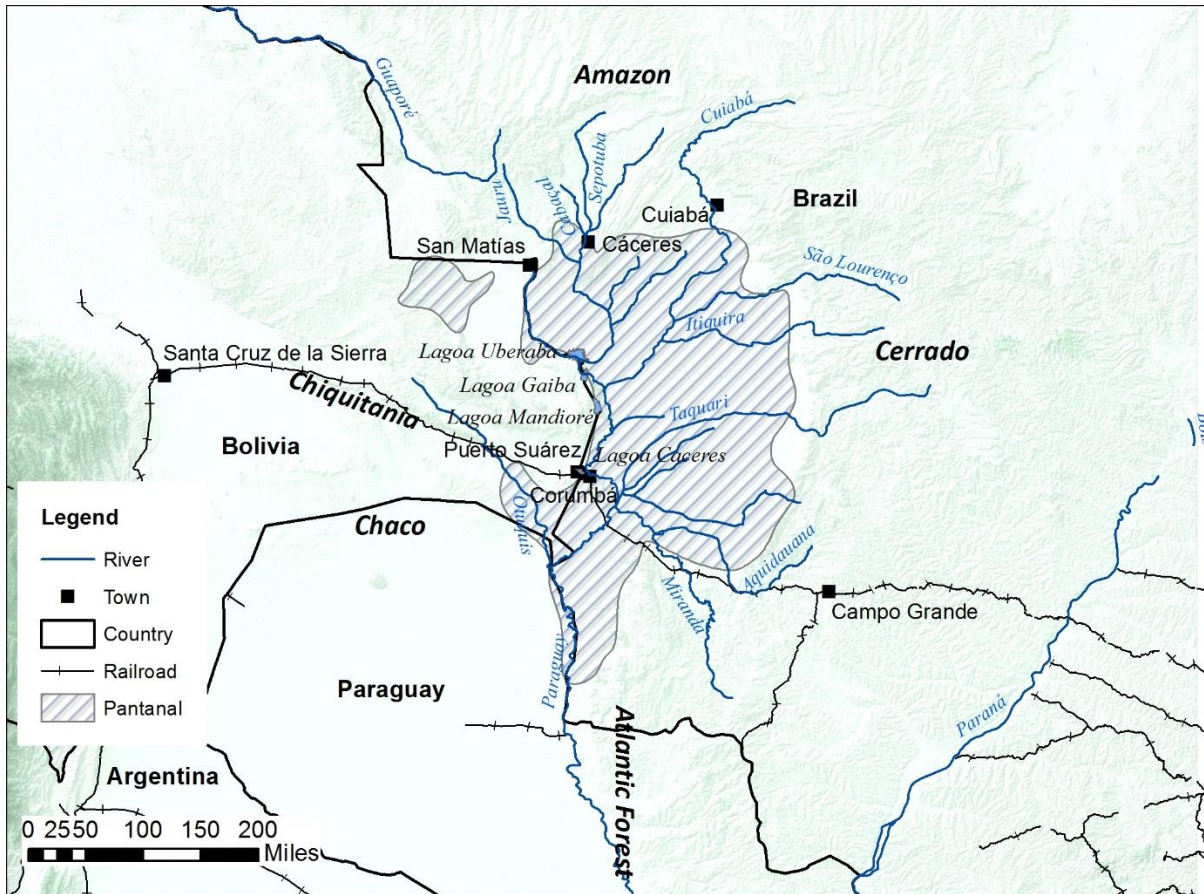
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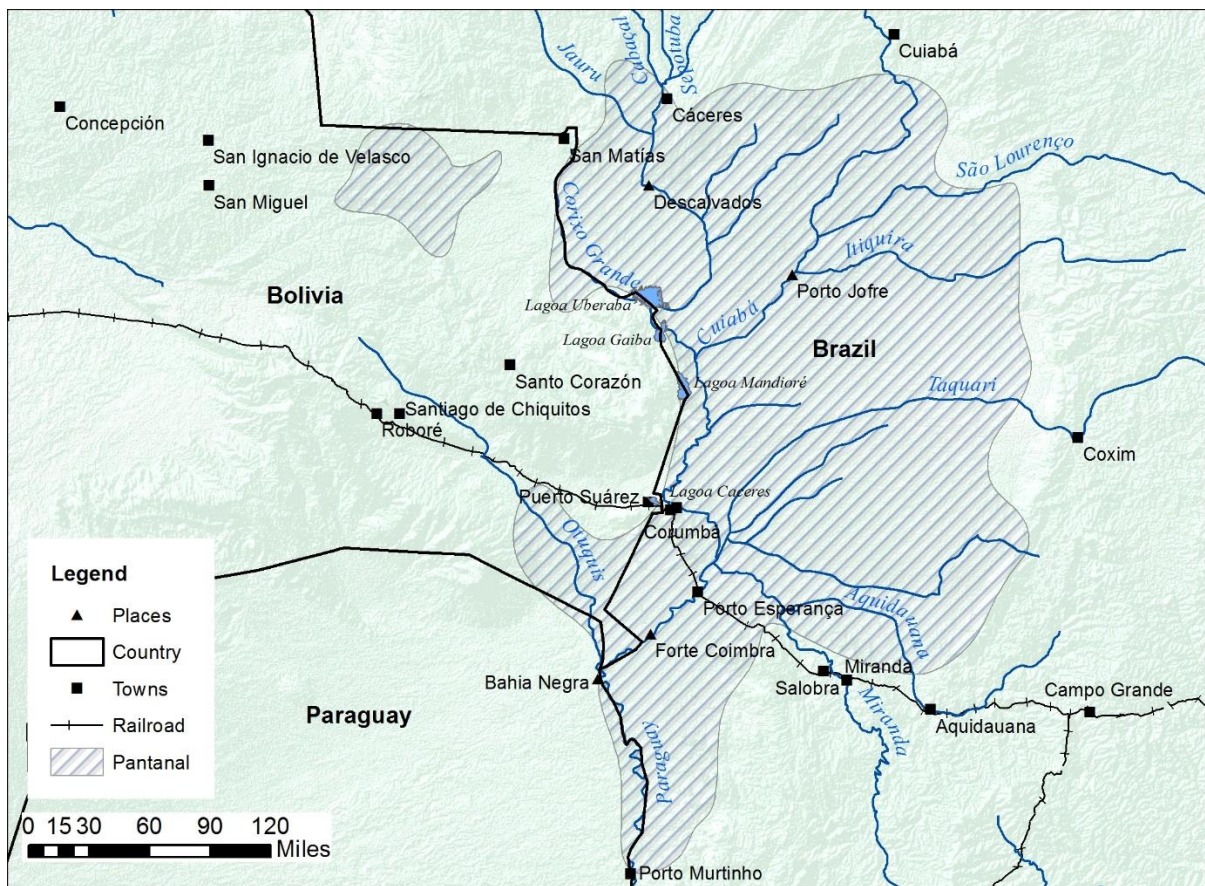
## LIST OF ABBREVIATIONS

AHI	Arquivo Histórico do Itamaraty
AMNH	American Museum of Natural History
AMRE-Bo	Archivo del Ministerio de Relaciones Exteriores de Bolivia
APM-Ca	Arquivo Público Municipal de Cáceres
APMT	Arquivo Público do Estado de Mato Grosso
CFE	Conselho de Fiscalização das Expedições Artísticas e Científicas no Brasil
CLTEMTA	Comissão de Linhas Telegráficas do Estado de Mato Grosso
CMFBB	Comissão Mista Ferroviária Brasileiro-Boliviana
DCP	Divisão de Caça e Pesca
EFNB	Estrada de Ferro Noroeste do Brasil
IBGE	Instituto Brasileiro de Geografia e Estatística
IHGB	Instituto Histórico e Geográfico Brasileiro
IHGMT	Instituto Histórico e Geográfico de Mato Grosso
MAST	Museu de Astronomia e Ciências Afins
MRE	Ministério das Relações Exteriores (Brazil)
NDIHR	Núcleo de Documentação e Informação Histórica Regional
NHC	National Hunting Council
NUDHEO	Núcleo de Documentação de História Escrita e Oral
RREE	Ministerio de Relaciones Exteriores (Bolivia)
UFMT	Universidade Federal de Mato Grosso
UNEMAT	Universidade do Estado de Mato Grosso

## MAPS



**Map 1** – Map of Pantanal and Neighboring Ecoregions, drawn by Amanda Tickner, University of North Carolina at Chapel Hill



**Map 2** – Detailed Map of the Upper Paraguay River Basin, drawn by Amanda Tickner, University of North Carolina at Chapel Hill

## INTRODUCTION

### A Synopsis of the Argument

Modern scholarship maintains that landscapes are created by humans, but in the Pantanal it is easy to forget.<sup>1</sup> The unrelenting rise and fall of seasonal floodwaters seem to wash away all signs of human habitation, save for lonely ranches perched on scraps of high ground that punctuate a landscape ten times larger than the Florida Everglades. When the waters eventually recede, parching drought grips the region, threatening the existence of both domestic and wild animals. These extreme seasonal rhythms have inspired opposing images of the Pantanal throughout its history as a region of both astounding abundance and one of unsettling scarcity, a place where, in the words of one nineteenth century explorer, “nature reign[ed] with full dominion.”<sup>2</sup>

At first glance, it would be hard to argue otherwise. In a modern map of central South America, the Pantanal appears as a blank space, hemmed in by a ribbon of roads that hug its periphery before branching off to form an intricate highway network that crisscrosses the rest of the continent like a spider web. The few roads that do lead into the Pantanal end abruptly, paths to nowhere that remain as a testament to hard-won – but incomplete – struggles on the

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<sup>1</sup> For an influential edited volume organized around this premise, see William Cronon, ed., *Uncommon Ground: Rethinking the Human Place in Nature* (New York: W.W. Norton & Company, 1996).

<sup>2</sup> The quotation comes from Hercules Florence, who traveled through the Pantanal in the 1820s. Hercules Florence, *Viagem fluvial do Tietê ao Amazonas de 1825 a 1829*, 2<sup>a</sup> ed., translated by Alfredo d’Escagnolle Taunay (São Paulo: Edições Melhoramentos, 1948), 239. On opposing images of tropical environments in South America, see Candace Slater, *Entangled Edens: Visions of the Amazon* (Berkeley: University of California Press, 2002), 8 and Seth Garfield, *In Search of the Amazon: Brazil, the United States, and the Nature of a Region* (Durham: Duke University Press, 2013), 1-2, 8, 84.



part of man to impose his will over nature.<sup>3</sup> For the last two hundred years, most humans have regarded the Pantanal and its seasonal cycles of flood and drought as problems to be overcome. More often than not, their efforts to establish infrastructure – telegraphs, roads, railroads – to facilitate the efficient movement of goods and people and integrate the Pantanal into regional, national, and international networks of exchange and commerce met with only partial success. Indeed, by the standards of most people in power, the Pantanal has never reached its full potential.

### ***The Pantanal as Historical Actor***

This dissertation establishes the Pantanal wetland itself as a central actor in the history of the region. Its cycles of rain, flood, and drought dictated the possibilities of humans, forcing them to adapt to its seasonal rhythms.<sup>4</sup> This was true for its original inhabitants and it remained true for people of European and African descent during the colonial and post-independence period. The ecology of the Pantanal also influenced historical patterns of occupation in the region. Its flood regime militated against permanent settlement and prevented the establishment of communication and transportation infrastructure necessary for economic development. Moreover, its low population density and its geographical distance from centers of economic and political power made radical

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<sup>3</sup> The most famous example is the *transpantaneira* highway, an effort on the part of the military government of Brazil to build a road through the Pantanal linking Cuiabá with Corumbá in the 1970s that never reached completion. Ironically, the earthworks and ditches that workers constructed along the route now provide year-round access to water, making it one of the best places in the Pantanal to view wildlife. For historical background on the *transpantaneira* highway, see Vic Banks, *The Pantanal: Brazil's Forgotten Wilderness* (San Francisco: Sierra Club Books, 1991), 23-27 and Antonio Pádua Bertelli, *O paraíso das espécies vivas: pantanal de Mato Grosso* (São Paulo: CERIFA Editora, 1984), 150 and 188.

<sup>4</sup> While this is common knowledge in Mato Grosso and the Pantanal, the historical contours of this relationship have not been adequately studied.

transformations of the environment – dredging, drainage projects, roadbuilding, etc. – both difficult and impracticable.

### ***Undoing Isolation***

This did not stop humans from trying. This dissertation examines how people and institutions sought to integrate the Pantanal into regional and national networks of communication and commerce through the establishment of roads, railroads, telegraphs, and ports. Despite the repeated efforts of national governments and investors to capitalize on the natural abundance of the Pantanal, geography and ecology have thwarted such efforts throughout the region's history. Within the calculus of "progress" and economic development that guided powerful stakeholders in the Pantanal for much of its post-independence history, the region was indeed "isolated," a place better suited for wild animals and cattle than for humans.

### ***A Human Landscape***

From the perspective of outsiders, the lives of local inhabitants seemed backward and inefficient. However, rural populations in the Pantanal benefitted from a lived knowledge of the landscape, one gained through sustained observation of and adaptation to the flood regime. While outsiders regarded cycles of drought and flood as obstacles to be overcome, I argue that local people used these same dynamics to their advantage. Rural laborers lived mobile lives, practicing strategies of subsistence – including ranch labor, small-scale agriculture, fishing, hunting, and migratory extractive labor – that capitalized on the ecological resources and economic opportunities of the broader Pantanal.<sup>5</sup> The Pantanal is uniquely situated at the center of multiple ecological zones of transition – known as *ecotones*

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<sup>5</sup> I use the term "broader Pantanal" to refer to areas subject to seasonal flooding as well as the ecological transition zones on its perimeter that stretch into the broader region.

– between several major South American biomes, including the Amazon to the northwest, the Cerrado to the north and east, the Chiquitania to the west and the Chaco and Atlantic Forest to the south. Several products of economic value thrived in these zones. For example, the transition zone between the Pantanal and the Amazon was home to one of the densest stands of *ipecacuanha* (*Carapichea ipecacuanha*) – a shrub with roots of medicinal and emetic properties – in South America. In the southern transition between the Pantanal, the Chaco, and the Atlantic Forest, *yerba mate* (*Ilex paraguariensis*) and *quebracho* (*Schinopsis lorentzii*) also grew in abundance. These ecological characteristics facilitated the creation of a regional economy that transcended national borders and was driven by a mobile population of rural laborers who combined subsistence strategies that carried them throughout the region to ensure their livelihoods.

This does not mean that the inhabitants of the Pantanal lived in a utopia, unrestrained by the limitations imposed by landholders, merchants, and provincial and national governments. After 1870, technological advances in transportation (steamships and, later, railroads) and a growing worldwide demand for central South America's natural resources facilitated the movement of people and goods through the region at unprecedented scales. It is clear that economic development, integration of the Pantanal into the world market, and the inequalities of power that come with those things impacted local societies in discernable, often negative, ways. Indeed, many rural workers embraced the same linear notions of progress that many powerful stakeholders attempted to impose upon the landscape. This was most evident in the Pantanal's zones of transition, where rural workers radically transformed the landscape in response to international demand for extractive goods such as quebracho and ipecacuanha. In the floodplain itself, however, many of these same workers adapted their

lives to the Pantanal and the seasonal rise and fall of its floodwaters in a more cyclical pattern that was out of step with the logic of development. A closer look at relationships between people, labor, and ecology in the Pantanal helps to reveal how rural populations used mobility and multiple subsistence strategies to avoid many of the pernicious effects that international capitalism – particularly extractive industries – has had for rural laborers in much of South American history. Throughout the period of study, from the 1820s to the 1960s, rural society in the Pantanal proved remarkably resilient and adaptive to the booms and busts of the extractive economies that prevailed across the continent.

### ***Continuity in Spite of Change: The Myth of Isolation***

These are the realities behind the pervasive and adaptable myth of isolation, a myth that has persisted in spite of an almost two-century effort to bring the Pantanal into the fold of civilization. In fact, I argue, this myth directly influenced the actions of both people and institutions in their efforts to make the region “known,” to implement development policies, and to profit from its resources. For example, it is a major reason why nineteenth century naturalists and explorers traveled there in an effort to produce data about its topography, flora, fauna, and economic potential that would be useful to fledgling empires and nation-states. It also helps to explain why boundary officials spent years trudging through its swampy landscape to fix it in geographical space and to stake out territorial claims for their respective governments. Their writings placed a particular image of the Pantanal in the minds of government officials and the reading public which, in turn, inspired further exploration and economic development. In the twentieth century, national governments and investors attempted to solve the problem of the Pantanal’s isolation by carrying out a variety of

infrastructure projects, an incomplete task that occupies stakeholders in the region to this day.

The Pantanal's reputation for isolation also attracted sport hunters and field scientists who came to regard the region as a "paradise" for hunters and one of the best places in South America for the collection of zoological specimens. As such, they were some of the first stakeholders to regard the Pantanal as something other than an obstacle to be overcome. At the same time, growing international demand for exotic leather and furs led to the commodification of wild animals in the Pantanal between 1930 and the 1960s. In response to the abuses of commercial hunters, sport hunters articulated some of the first calls for wildlife conservation in the Pantanal and began to think of it as a unique ecological region worth preserving in its own right. As I seek to show in this dissertation, this tension between development and preservation has deep historical roots in the Pantanal that are tied to an enduring myth of isolation that has shaped the writings and actions of stakeholders throughout the post-independence period.

### **Historiographical Review**

Historical scholarship on the Pantanal region is fragmented along both regional and national lines. In Brazilian historiography, the Pantanal only surfaces within broader studies of Mato Grosso, a region which has figured prominently in national narratives that focus on *bandeirantes* and frontier expansion during the colonial period and frontier development during the national period.<sup>6</sup> Other early studies focused on the role of cattle ranching in the

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<sup>6</sup> For example, Sérgio Buarque de Holanda devoted a significant portion of his work to the colonial history of frontier expansion in Mato Grosso. Sérgio Buarque de Holanda, *Caminhos e fronteiras* (Rio de Janeiro: Livraria José Olympo, 1957); *Monções* (Rio de Janeiro: Casa do estudante do Brasil, 1945); and *O extremo oeste* (São Paulo: Secretaria de Estado de Cultura, 1986).

settlement and establishment of a regional economy on the Brazilian frontier.<sup>7</sup> These works inspired the development of a vigorous regional tradition of frontier studies by historians affiliated with federal and state universities in Mato Grosso and Mato Grosso do Sul.<sup>8</sup>

By far, the most studied period in the history of Mato Grosso is from 1870 to 1930, the period after the Paraguay War but before Getúlio Vargas and the *Estado Novo* regime. During this period, the region experienced rapid change as a result of increased commercial navigation and subsequent integration into national and international economies. Brazilian historians have studied a diversity of topics, including the reconstruction of Corumbá after its destruction during the Paraguay War; African slavery in the region during the colonial period and the nineteenth century; political authority and violence in Mato Grosso during the Old Republic (1889-1930); the construction of the railroad linking São Paulo with Mato Grosso; labor organizing among merchant marine sailors who worked on ships traveling between Montevideo, Buenos Aires, Asunción, and Corumbá; and the efforts of Corumbá's elite merchant class to impose its vision of "modernity" on a far-flung frontier.<sup>9</sup>

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<sup>7</sup> Nelson Werneck Sodré, *Oeste: ensaio sobre a grande propriedade pastoril* (São Paulo: Secretaria do Estado da Cultura, 1941) and Virgílio Corrêa Filho, *Fazendas de gado no pantanal mato-grossense* (Rio de Janeiro: Serviço de Informação Agrícola, 1955).

<sup>8</sup> For example, the Universidade Federal de Grande Dourados and the Universidade Federal de Mato Grosso both publish journals devoted to Brazilian frontier history and the Corumbá campus of the Universidade Federal de Mato Grosso do Sul and the Universidade do Estado de Mato Grosso in Cáceres both offer degrees in "frontier studies." Mato Grosso do Sul separated from Mato Grosso and became its own state in 1977.

<sup>9</sup> João Carlos de Souza, *Sertão cosmopolita: tensões da modernidade de Corumbá (1872-1918)* (São Paulo: USP, 2008); Zilda Alves de Moura, *Cativos nas terras dos pantanais: escravidão e resistência no sul do Mato Grosso, séculos XVIII e XIX* (Passo Fundo, RS: Universidade de Passo Fundo, Editora Universitária, 2008); Valmir Batista Corrêa, *Coronéis e bandidos em Mato Grosso, 1889-1943* (Campo Grande, MS: Editora UFMS, 1995); Vitor Wagner Neto de Oliveira, *Nas águas do Prata: os trabalhadores da rota fluvial entre Buenos Aires e Corumbá (1910-1930)* (Campinas, SP: Unicamp, 2009); Paulo Roberto Cimó Queiroz, *Uma ferrovia entre dois mundos: a E.F. Noroeste do Brasil na primeira metade do século 20* (Bauru, SP: EDUSC, 2004); and Fernando Tadeu de Miranda Borges, *Esperando o trem: sonhos e esperanças de Cuiabá* (São Paulo: Scortecci, 2005).

While the above works highlight various aspects of the region's social, cultural, and political history, the most sustained research has been on its economic history. Fernando Tadeu de Miranda Borges was a pioneer in this regard, synthesizing quantitative data to trace the shift from extractive economies to livestock raising in Mato Grosso between 1870 and 1930.<sup>10</sup> Two North American scholars, Zephyr Frank and Robert Wilcox, expanded on this work, combing through national and regional archives to document the economic history of the region during the late nineteenth and early twentieth centuries. Frank's work provided an exhaustive portrait of the social, economic, and political structures that defined life in Mato Grosso during Brazil's First Republic. In a critique of traditional Marxist scholarship and dependency theory, Frank argued that "endogenous" factors such as land tenure patterns, oligarchic politics, and geography better explained the region's lack of economic development than "exogenous" factors such as dependence on exports or foreign capital.<sup>11</sup> Integrating environmental history with agricultural and economic history, Wilcox demonstrated how soil type, access to water, climate, and vegetation influenced property-holding patterns and the development of the ranching industry in the Cerrado and Pantanal of Mato Grosso.<sup>12</sup>

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<sup>10</sup> Fernando Tadeu de Miranda Borges, *Do extrativismo à pecuária: algumas observações sobre a história econômica de Mato Grosso*, 4ª edição revisada (São Paulo: Scortecci, 2010).

<sup>11</sup> Zephyr Frank, "Exports and Inequality: Evidence from the Brazilian Frontier, 1870-1937," *Journal of Economic History* 61:1 (March 2001): 37-58 and Zephyr Frank, "Elite Families and Oligarchic Politics on the Brazilian Frontier: Mato Grosso, 1889-1937," *Latin American Research Review* 36:1 (2001): 49-74. Frank further develops these arguments in his dissertation, "The Brazilian Far West: Frontier Development in Mato Grosso, 1870-1937" (PhD diss., University of Illinois – Urbana-Champaign, 1999).

<sup>12</sup> Robert Wilcox, "Cattle and the Environment in the Pantanal of Mato Grosso, Brazil, 1870-1970," *Agricultural History* 66 (1992): 232-56; "'The Law of the Least Effort': Cattle Ranching and the Environment in the Savanna of Mato Grosso, Brazil, 1900-1980," *Environmental History* 4:3 (July 1999): 338-68; "Ranching Modernization in Tropical Brazil: Foreign Investment and Environment in Mato Grosso, 1900-1950," *Agricultural History* 82 (2008): 366-92; "Ranching and Market Access in the Backlands: Mato Grosso, Brazil, ca. 1900-1940s," *Historia Crítica* 51 (Sept.-Dic. 2013): 71-96. While most of Wilcox's published work has focused on the relationship between ranching, economic development, and the environment, his dissertation

In contrast to western Brazil, historical scholarship on eastern Bolivia is extremely underdeveloped. Although a small scholarly community in Santa Cruz de la Sierra has been producing historical scholarship on eastern Bolivia for decades, the number of studies on the region to date is not proportional to the region's importance in Bolivia's twentieth century history.<sup>13</sup> The historiography that does exist weighs heavily toward studies of the Jesuit missions in the Chiquitania during the colonial period.<sup>14</sup> Studies of the national period in eastern Bolivia focus on regional identity formation and aspects of its economic and cultural history.<sup>15</sup> Ethnohistorians have also found fertile ground for research in eastern Bolivia and

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also includes analysis of the impact that ranching had on society in Mato Grosso. See Wilcox, "Cattle Ranching on the Brazilian Frontier: Tradition and Innovation in Mato Grosso, 1870-1940" (PhD diss., New York University, 1993). For an examination of the impact of Paraguayan immigration on western Brazil, see Wilcox, "Paraguayans and the Making of the Brazilian Far West, 1870-1935," *The Americas* 49:4 (April 1993): 479-512. For another recent analysis of ranching and land tenure patterns in Mato Grosso, see Carlos Alexandre Barros Trubiliano, "A 'civilização do couro': desenvolvimento do capital transnacional no sul do Mato Grosso (1870-1920)," *Cadernos do Tempo Presente* 16 (Maio/Julho 2014): 64-75. For a study of ranch labor and social conditions that extends beyond the 1930s, see Cezar Benevides and Nanci Leonzo, *Miranda Estância: ingleses, peões, e caçadores no Pantanal mato-grossense* (Rio de Janeiro: Editora Fundação Getúlio Vargas, 1999). Another important study focusing on economic aspects of the history of southern Mato Grosso is Lucía Salsa Corrêa, *História e fronteira: o sul de Mato Grosso, 1870-1930* (Campo Grande, MS: Editora UCDB, 1999).

<sup>13</sup> This is, in part, a reflection of the historically entrenched and continued divide between the lowlands and political centers of power in the highlands in Bolivia.

<sup>14</sup> For example, Roberto Tomichá Charupá examines the history of evangelization and the settlement of various ethnic groups into missions during the seventeenth and eighteenth century. Roberto Tomichá Charupá, *La primera evangelización en las reducciones de Chiquitos, Bolivia, 1691-1767: protagonistas y metodología misional* (Cochabamba: Editorial Verbo Divino, 2002). Cynthia Radding's comparative study of the Chiquitanía and northern Mexico highlights the role of geography and the physical environment in influencing the social, cultural, and economic changes that Chiquitano Indians experienced during the region's transition from colony to republic. Cynthia Radding, *Landscapes of Power and Identity: Comparative Histories in the Sonoran Desert and the Forests of Amazonia from Colony to Republic* (Durham: Duke University Press, 2005).

<sup>15</sup> For example, Oscar Tonelli Justiniano demonstrates how the late-nineteenth century rubber boom drew migrants into the Amazon and further depopulated the ex-mission towns of the Chiquitania; Víctor Hugo Limpías Ortiz examines the impact of highways and railroads on the integration of eastern Bolivia into international markets; and Paula Peña Hasbún examines the historical creation of a regional identity in eastern Bolivia. Oscar Tonelli Justiniano, *El caucho ignorado* (Santa Cruz de la Sierra: Editorial El País, 2010); Víctor Hugo Limpías Ortiz, *Las ferrovías y la carretera que transformaron el oriente boliviano, 1938-1957* (Santa Cruz de la Sierra: Editorial El País, 2009); Paula Peña Hasbún, *La permanente construcción de lo cruceño: un estudio sobre la identidad en Santa Cruz de la Sierra* (La Paz: PIEB, 2003).



have produced innovative studies on the former mission towns of the Chiquitania, Velasco, and Guarayos as well as studies focused on the semi-nomadic peoples of the Chaco Boreal. Their research constitutes the most vibrant and active scholarship currently being conducted on lowland Bolivia.<sup>16</sup>

Although several studies, especially those focused on the colonial period, make fleeting references to cross-border dynamics between Brazil and Bolivia, historical studies of the border region are restricted mainly to broad-scale diplomatic and political histories focused on the establishment of international borders.<sup>17</sup> While many works by Bolivian scholars note the commercial importance of Brazil and the Paraguay River, historians of Mato Grosso almost completely ignore the role of Bolivia in the history of the broader region. Despite the tendency of historians to segment the region's history to fit within national containers, scholarship in other disciplines documents how historical linkages between eastern Bolivia and western Brazil have shaped the societies that developed in central South America. For example, a growing number of anthropologists, geographers, and archaeologists have produced important studies that examine cultural practices of subsistence and territoriality among indigenous peoples such as the *Chiquitanos*, *Guató*, *Terena*, *Kadiwéu*, *Chamacoco (Ishir)*, and *Bororo*. Many of these people made use of resources and

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<sup>16</sup> See, for example, Pilar García Jordán, "*Yo soy libre y no indio: soy guarayo*": para una historia de Guarayos, 1790-1948 (Lima: Instituto Francés de Estudios Andinos, 2006); Isabelle Combès, *Etno-historias del Isoso: Chané y chiriguano en el Chaco boliviano (siglos XVI a XX)* (La Paz: Programa de Investigación Estratégica en Bolivia, 2005); Diego Villar and Isabelle Combès, eds., *Las tierras bajas de Bolivia: miradas históricas y antropológicas* (Santa Cruz de la Sierra: Editorial El País, 2012).

<sup>17</sup> Humberto Vázquez Machicado, *Para una historia de los límites entre Bolivia y el Brasil* (La Paz: Librería Editorial "Juventud", 1990); Valerie Fifer, *Bolivia: Land, Location, and Politics since 1825* (Cambridge: Cambridge University Press, 1972); and Pilar García Jordán, *Cruz y arado, fusiles y discursos: la construcción de los Orientes en el Perú y Bolivia, 1820-1940* (Lima: Instituto de Estudios Peruanos, 2001). Several other studies also focus on the colonial boundary demarcations carried out under the Treaties of Madrid and San Ildefonso.

networks of trade that moved freely across international boundaries between Bolivia, Paraguay, and Brazil.<sup>18</sup> The Pantanal and its river networks figure prominently in this history because it was a center of gravity, both for indigenous populations and for people of European descent who came after them.

Research on the history of the Pantanal as an ecological region is still in its infancy. Maria de Fátima Costa's study on the colonial history of the Pantanal is a pioneering work in this regard. Although her work does not examine relationships between people and the environment, it is the first to analyze the historical creation of the Pantanal as a region.<sup>19</sup> Costa analyzes the accounts and cartographic representations produced by chroniclers and missionaries who traveled through the upper Paraguay River beginning in the sixteenth century. They told tales of a vast inland sea – the *Laguna de los Xarayes* – populated by strange indigenous people at the heart of the continent and these images circulated in maps throughout Europe. It was not until the eighteenth century when *bandeirantes*, traveling through the region in search of mineral wealth, began to refer to the region as *os pantanais*. According to Costa, the eighteenth century boundary demarcations carried out by representatives of Spain and Portugal in fulfillment of the treaties of Madrid (1750) and San Ildefonso (1777) shattered the Xarayes myth once and for all.<sup>20</sup>

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<sup>18</sup> Joana A. Fernandes Silva, ed., *Estudos sobre os Chiquitanos no Brasil e na Bolívia: história, língua, cultura e territorialidade* (Goiânia: Editora da UCG, 2000); José Eduardo F. Moreira da Costa, *A coroa do mundo: religião, território, e territorialidade Chiquitano* (Cuiabá, MT: Editora de Universidade Federal de Mato Grosso, 2006); Isabelle Combès, ed., *Definiciones étnicas, organización social y estrategias políticas en el Chaco y la Chiquitania* (Santa Cruz de la Sierra, Bolivia: IFEA, El País, 2006); Mario Blaser, *Storytelling Globalization from the Chaco and Beyond* (Durham: Duke University Press, 2010); and Jorge Eremites de Oliveira, *Guató: Argonautas do Pantanal* (Porto Alegre: EDIPUCRS, 1996).

<sup>19</sup> A precursor to her study was Virgílio Corrêa Filho, *Pantanais matogrossenses (devassamento e ocupação)* (Rio de Janeiro: Serviço Gráfico do IBGE, 1946).

<sup>20</sup> Maria de Fátima Costa, *História de um país inexistente: O Pantanal entre os séculos XVI e XVIII* (São Paulo: Estação Liberdade, 1999). I argue in this dissertation that the colonial myth was recreated in the post-

Robert Wilcox's scholarship represents the only sustained effort by a historian from North or South America to analyze historical relationships between people and their environment in the Pantanal. His publications on the subject span over two decades and demonstrate how environmental factors such as drought, flood, soil composition, vegetation, and pathogens influenced and, ultimately, determined the development of ranching (including breeding practices, planting of pasture, technological innovation, the use of fire, labor patterns, and land tenure patterns) as an industry in the Pantanal and Cerrado of Mato Grosso. Wilcox's ability to combine an intricate understanding of the Pantanal ecology with his analysis of historical sources is a model I seek to emulate and build upon in this dissertation.

In the last two decades, Brazilian scholars in Mato Grosso and Mato Grosso do Sul have built upon Wilcox's scholarship to examine various aspects of environmental history in the Pantanal. Carolina Joana da Silva and Joana A. Fernandes Silva's anthropological study of *ribeirinhos* established an important baseline for the study of rural populations in the Pantanal.<sup>21</sup> More recently, Ana Carolina da Silva Borges examined the role of the Pantanal flood cycle in her effort to reconstruct the "habitus" of *ribeirinhos* who lived independently of ranches and sugar mills along the Cuiabá River.<sup>22</sup> Both of these studies emphasized the powerful role that seasonal flooding played in structuring the lives of rural populations.<sup>23</sup>

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independence period and lived on in the writings of naturalists, explorers, travelers, government officials, economic developers, field scientists, and sportsmen.

<sup>21</sup> Carolina Joana da Silva and Joana A. Fernandes Silva, *No ritmo das águas do pantanal* (São Paulo: NUPAUB/USP, 1995).

<sup>22</sup> Ana Carolina da Silva Borges, *Nas margens da história: meio ambiente e ruralidade em comunidades "ribeirinhas" do Pantanal Norte, 1870-1930* (Cuiabá: EdUFMT, 2010).

<sup>23</sup> For a study of the impact of floods in the Pantanal during more recent years and municipal attempts to control them, see Ilsyane do Rocio Kmitta, "Experiências vividas, naturezas construídas: enchentes no Pantanal (Porto Murtinho – 1970-1990)," (Dissertação de mestrado, Universidade Federal de Grande Dourados, 2010). Both

This dissertation bridges historiographies of western Brazil and eastern Bolivia and uses the tools of environmental and social history to demonstrate the important role that ecology played in the history of the Pantanal. Although ranching was a critical part of this process, my research expands upon Wilcox and others to trace the interrelationships between multiple institutions, social actors, and economic pursuits that carried people throughout the region and the competing claims they made on the landscape and its resources. While earlier works have demonstrated the value of case studies focused on distinct social groups within defined sub-regions, the broad approach employed in this dissertation helps to lay the groundwork for a “bioregional” history of the Pantanal that extends beyond national borders.<sup>24</sup>

My approach draws inspiration from Dan Flores, a historian of the American West, who urged environmental historians in a 1994 essay to research and write the histories of “places,” paying attention to the multiple ways that humans “not only alter environments but also adapt to” the landscapes they inhabit, landscapes that continue to exist “despite the homogenizing forces of the modern world.” To Flores, such “homogenizing forces” included the creation of infrastructure and borders imposed by nation-states in an attempt to consolidate economic and political control. Although historians depend upon documentary trails produced by governments and their agents, Flores maintained that, “with rare exceptions, the politically-derived boundaries of county, state, and national borders are

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Kmitta and Borges are currently conducting dissertation research on the history of the Pantanal, Kmitta at the Universidade Federal de Grande Dourados and Borges at the Universidade Estadual de Campinas (UNICAMP).

<sup>24</sup> This approach reflects my effort to work at the intersection of borderlands and environmental history which I expand upon in the following paragraphs. On the concept of bioregional history, see Dan Flores, “Place: An Argument for Bioregional History,” *Environmental History Review* 18:4 (Winter 1994): 1-18.

mostly useless in understanding nature.”<sup>25</sup> Like Flores, I am aware of the potential drawbacks of this approach, particularly the risk of subsuming subregional particularities and human agency within a rigid conceptual framework that overstates the power of the natural environment to shape history.<sup>26</sup> I remain convinced, however, that a full understanding of the history of the Pantanal demands attention to historical and ecological relationships that spanned the international border.

This dissertation also engages broader debates in the fields of borderlands and Latin American environmental history. Historians of peripheral regions in the Americas have long regarded borderlands as spaces of flux, where local practices prevailed and the power of imperial or national institutions to control space was not absolute. Most often, historians attribute the unfixed nature of frontiers and borderlands to differing conceptions of space, sovereignty, and territoriality on the part of indigenous peoples and local populations. To be sure, it was semi-sedentary and nomadic peoples who most often occupied the spaces most far removed from centers of political and economic power in the Americas. These histories of indigenous interactions with Europeans provide a crucial counterpoint to studies focused on central Mexico or Peru, demonstrating the limits of the colonial project in the rest of Latin America’s vast territorial expanse.<sup>27</sup>

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<sup>25</sup> Flores, “Place,” 3, 5-6.

<sup>26</sup> For example, the Pantanal itself – the land area subject to seasonal inundation – is not simply a homogenous “wetland” but a complex mosaic of “at least 10 different subregions,” each ecologically distinct. See Reinaldo Lourival, Mônica Harris and Jensen R. Montambault, “Introduction to the Pantanal, Mato Grosso do Sul, Brasil,” in Philip W. Willink, et al., *A Biological Assessment of the Aquatic Ecosystems of the Pantanal, Mato Grosso do Sul, Brasil*, RAP Bulletin of Biological Assessment (Washington, D.C.: Conservation International, 2000), 28.

<sup>27</sup> The literature on indigenous interactions with European colonists on the frontiers of Spanish and Portuguese America is vast and spans multiple decades. Some notable recent studies include David Weber, *Bárbaros: Spaniards and their Savages in the Age of the Enlightenment* (New Haven: Yale University Press, 2006); James Brooks, *Captives and Cousins: Slavery, Kinship, and Community in the Southwest Borderlands* (Chapel Hill: University of North Carolina Press, 2002); Juliana Barr, *Peace Came in the Form of a Woman: Indians and*

Only recently, however, have historians begun to consider the role of the environment in shaping frontier and borderland histories. While studies of the colonial period have been attentive to the physical environment and its influence on colonial encounters on the margins of imperial control, environmental histories of post-independence border regions have taken longer to reach the forefront of scholarly agendas.<sup>28</sup> In a 1997 essay, Samuel Truett called for historians of North American borderlands in the post-independence era to pay closer attention to environmental history.<sup>29</sup> In the past decade, historians of the U.S.-Mexico and U.S.-Canada border regions have answered the call, integrating borderlands and environmental history in innovative ways.<sup>30</sup> Historians of South America, however, have not

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*Spaniards in the Texas Borderlands* (Chapel Hill: University of North Carolina Press, 2007); Pekka Hämäläinen, *The Comanche Empire* (New Haven: Yale University Press, 2009); and Hal Langfur, *The Forbidden Lands: Colonial Identity, Frontier Violence, and the Persistence of Brazil's Eastern Indians, 1750-1830* (Stanford: Stanford University Press, 2008).

<sup>28</sup> Cynthia Radding, *Wandering Peoples: Colonialism, Ethnic Spaces, and Ecological Frontiers in Northwestern Mexico, 1700-1850* (Duke, 2005); Steven Hackel, *Children of Coyote, Missionaries of Saint Francis: Indian-Spanish Relations in Colonial California* (Chapel Hill: University of North Carolina Press, 2005). Early works by Richard White were also attentive to the ways in which material realities imposed by physical environments conditioned interactions between European settlers and indigenous peoples in colonial North America. See Richard White, *Roots of Dependency: Subsistence, Environment, and Social Change among the Choctaws, Pawnees, and Navajos* (Lincoln: University of Nebraska Press, 1988) and Richard White, *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650-1815* (Cambridge: Cambridge University Press, 1991).

<sup>29</sup> Through a case study on the U.S.-Mexico borderlands, Truett demonstrated how terrain, access to water, and the availability of natural resources has historically connected people on either side of the border more than it has divided them. Samuel Truett, "Neighbors by Nature: Rethinking Region, Nation, and Environmental History in the U.S.-Mexico Borderlands," *Environmental History* 2 (April 1997): 160–78.

<sup>30</sup> Theodore Binnema, *Common and Contested Ground: A Human and Environmental History of the Northwestern Plains* (Norman: University of Oklahoma Press, 2001); Sterling Evans, *Bound in Twine: The History and Ecology of the Henequen-Wheat Complex for Mexico and the American and Canadian Plains, 1880–1950* (College Station: Texas A&M University Press, 2007); Emily Wakild, "Border Chasm: International Boundary Parks and Mexican Conservation, 1935–1945," *Environmental History* 14 (July 2009): 453–75; Jennifer Seltz, "Epidemics, Indians, and Border-Making in the Nineteenth-Century Pacific Northwest," in *Bridging National Borders in North America: Transnational and Comparative Histories*, ed. Benjamin Johnson and Andrew Graybill, (Durham: Duke University Press, 2010), 91–115; Rachel St. John, "Divided Ranges: Trans-border Ranches and the Creation of National Space along the Western Mexico-U.S. Border," *ibid.*, 116–40; and Lissa Wadewitz, "The Scales of Salmon: Diplomacy and Conservation in the Western Canada-U.S. Borderlands," *ibid.*, 141–64. Lissa Wadewitz develops this research further in her monograph, *The Nature of Borders: Salmon, Boundaries, and Bandits on the Salish Sea* (Seattle: University of Washington Press, 2012). A recent edited volume by Sterling Evans also includes contributions from historians on the

followed suit. Although the study of frontier history is still strong – especially among North American scholars – the existing historiography focuses much more on colonial frontiers than on national borders and has not sought to analyze the environmental consequences that imposing an arbitrary border has had on regions previously united by a shared culture, commercial networks, and ecology.<sup>31</sup>

While historians of South America have not made borderlands history a priority, environmental histories of Latin America have boomed over the last two decades. The region's long history of economies centered upon the extraction of natural resources for export has provided fertile ground for scholars to chronicle the social, economic, and political costs of environmental transformations. Pioneering studies by Alfred Crosby, Warren Dean, and Elinor Melville demonstrated the devastating impact that humans, their animals, and their diseases had on societies and environments in the New World.<sup>32</sup> Recent studies complicate these narratives by demonstrating how humans both shape and are shaped by the ecosystems they inhabit but stories of environmental destruction still figure prominently in the field.<sup>33</sup> While the chapters in this dissertation account for the pressures of

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intersections of environmental and borderlands history in the U.S.-Canada borderlands. See Sterling Evans, ed., *The Borderlands of the American and Canadian Wests: Essays on Regional History of the Forty-Ninth Parallel* (Lincoln: University of Nebraska Press, 2008), 293-344.

<sup>31</sup> For two studies of post-independence border regions in South America, see John Chasteen, *Heroes on Horseback: A Life and Times of the Last Gaucho Caudillos* (Albuquerque: University of New Mexico Press, 1995) and Michael Stanfield, *Red Rubber, Bleeding Trees: Violence, Slavery, and Empire in Northwest Amazonia, 1850-1933* (Albuquerque: University of New Mexico Press, 1998).

<sup>32</sup> Alfred Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport, Conn.: Greenwood, 1972); Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900* (Cambridge: Cambridge University Press, 2004); Warren Dean, *Brazil and the Struggle for Rubber: A Study in Environmental History* (Cambridge: Cambridge University Press, 1987); Warren Dean, *With Broadax and Firebrand*; and Elinor Melville, *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico* (Cambridge: Cambridge University Press, 1994).

<sup>33</sup> Thomas Rogers, *The Deepest Wounds: A Labor and Environmental History of Sugar in Northeast Brazil* (Chapel Hill: University of North Carolina Press, 2010) and John Soluri, *Banana Cultures: Agriculture, Consumption, and the Environment in Honduras and the United States* (Austin: University of Texas Press,

frontier development, market integration, environmental change, and the power of nation-states, they also take seriously the material realities of life in the Pantanal – seasonal cycles of flood and drought – that conditioned the actions of all people, regardless of power or on which side of the border they stood.

Building upon recent work on the environmental history of frontier regions in South America, I conceptualize the Pantanal as an ecological region that transcended national boundaries.<sup>34</sup> In fact, the historical relationships that developed in the Pantanal resulted directly from its geographical position at the contested margins of colonial empires and national states. At the same time, however, the study of borderlands does not imply the absence of nation-states. Rather, it is precisely in these regions, far removed from centers of national power, where the achievements and limitations of states to delimit and control space are set in the sharpest relief. My focus on ecology and the material realities of life in the Pantanal offers a way to move beyond the well-worn trope of borderlands as spaces of flux where the rules and structures imposed by empires, nation-states, and commercial networks do not apply. While such interpretations are grounded in historical evidence, many historical

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2005); Myrna Santiago, *The Ecology of Oil: Environment, Labor, and the Mexican Revolution* (Cambridge: Cambridge University Press, 2006); Reinaldo Funes Monzote, *From Rainforest to Cane Field in Cuba: An Environmental History since 1492* (Chapel Hill: University of North Carolina Press, 2008); Mark Carey, *In the Shadow of Melting Glaciers: Climate Change and Andean Society* (Oxford: Oxford University Press, 2010); Emily Wakild, *Revolutionary Parks: Conservation, Social Justice, and Mexico's National Parks, 1910-1940* (Tucson: University of Arizona Press, 2011); Gregory T. Cushman, *Guano and the Opening of the Pacific World: A Global Ecological History* (Cambridge: Cambridge University Press, 2013); Christopher Boyer, ed., *A Land Between Waters: Environmental Histories of Modern Mexico* (Tucson: University of Arizona Press, 2012).

<sup>34</sup> Garfield, *In Search of the Amazon* and Thomas Klubock, *La Frontera: Forests and Ecological Conflict in Chile's Frontier Territory* (Durham: Duke University Press, 2014). Garfield and Klubock's books are path-breaking studies in the broader field of Latin American history. Both are focused on frontier regions and both incorporate research drawn from an impressive number of local, regional, national archives, and international archives. This dissertation employs a similar methodological approach to Garfield in its effort to highlight the overlapping ways in which various social actors – from representatives of federal institutions to field scientists and migratory laborers – represented the Amazon and made claims upon its territory and resources.



studies on frontiers and borderlands in the Americas read as variations on the same theme.<sup>35</sup>

In the Pantanal, the mobility of local populations and the limited ability of nation-states to control and transform the region to suit its own ends had more to do with ecology, rather than simply reflecting an inherent reality of borderlands writ large.

### **What is the Pantanal? A Short Natural and Human History of a Perpetual Frontier**

The Pantanal is a seasonally flooded freshwater wetland that occupies the headwaters of the Paraguay River system. Draining a land area that stretches to 365,000 square kilometers, it is located mostly in the Brazilian states of Mato Grosso and Mato Grosso do Sul, but also stretches into neighboring Bolivia and Paraguay.<sup>36</sup> Over the past several decades, the Pantanal has been the subject of dozens of studies by members of the scientific community who now regard it as one of the best preserved wetlands in the world. Their studies reveal that the Pantanal is not simply a “wetland” but a complex mosaic of “at least ten different subregions,” each with their own ecological characteristics.<sup>37</sup> As a whole, the Pantanal constitutes a transitional zone between the Amazonian rain forest; the semi-arid Chaco Boreal and Chiquitania of Paraguay and Bolivia; the Cerrado of central Brazil; and the

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<sup>35</sup> Historians Pekka Hämäläinen and Samuel Truett note this phenomenon in a recent review essay on borderlands scholarship in North America. Pekka Hämäläinen and Samuel Truett, “On Borderlands,” *Journal of American History* 98:2 (September 2011): 338-61.

<sup>36</sup> Estimates of the Pantanal’s land surface vary widely and depend upon whether one includes only the flood zone itself or the entire drainage basin. Frederick A. Swarts, “The Pantanal in the 21<sup>st</sup> Century: For the Planet’s Largest Wetland, an Uncertain Future,” in Frederick A. Swarts, ed., *The Pantanal: Understanding and Preserving the World’s Largest Wetland*, Selected Papers and Addresses from the World Conference on Preservation and Sustainable Development in the Pantanal (St. Paul, Minn.: Paragon House, 2000), 2-3. Roughly 80% of the Pantanal lies within Brazil. Another 15% lies within Bolivia and the remaining 5% lies within Paraguay.

<sup>37</sup> Reinaldo Lourival, Mônica Harris and Jensen R. Montambault, “Introduction to the Pantanal, Mato Grosso do Sul, Brasil,” in Philip W. Willink, et al., *A Biological Assessment of the Aquatic Ecosystems of the Pantanal, Mato Grosso do Sul, Brasil*, RAP Bulletin of Biological Assessment (Washington, D.C.: Conservation International, 2000), 28.

Atlantic Forest of southeastern Brazil, making it one of the most biologically diverse places on earth. To date, biologists have identified 3,500 plant species, 264 fishes, 652 birds, 102 mammals, 177 reptiles, and 40 amphibians in the Pantanal.<sup>38</sup> It also boasts a density of fauna unrivaled elsewhere in South America, which has been a key reason for its emergence as a hotspot for ecotourism.

Such facts and figures represent the current state of knowledge about the Pantanal, but how did the region develop in the first place, how does it function as an ecosystem, and how has it influenced the human history of the region? These, too, are questions that scientists have worked diligently to answer, particularly since 1971 when the Ramsar Convention on Wetlands brought the ecological importance of wetlands into the international consciousness.<sup>39</sup> Geologically, the Pantanal is a floodplain of extremely flat relief “created primarily by alluvial deposit during the Cenozoic Era, and especially within the Holocene and Pleistocene epochs.”<sup>40</sup> A network of rivers – most of which originate in the highland range (*Serra dos Parecis*) separating the Paraguay and Amazon basins – drains the Pantanal floodplain, the most important of which is the Paraguay River. It receives the outflow of several other rivers, including the Rio São Lourenço, the Rio Cuiabá, the Rio Taquari, the

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<sup>38</sup> C.J.R. Alho, “The Pantanal,” in Lachlan H. Fraser and Paul A. Keddy, eds., *The World’s Largest Wetlands: Ecology and Conservation* (Cambridge: Cambridge University Press, 2005), 225; Ana Lúcia Lima Barros Dolabella, “The Brazilian Pantanal: An Overview,” in Swarts, ed., *The Pantanal*, 37; and Willink, et. al., *A Biological Assessment*, 28.

<sup>39</sup> Adopted in the city of Ramsar, Iran, in 1971, the Ramsar Convention is an intergovernmental treaty that “provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.” For more information, see the convention’s website: <http://www.ramsar.org/>, accessed 3-30-2015.

<sup>40</sup> Wilcox, “Cattle Ranching on the Brazilian Frontier,” 39. The first chapter of Wilcox’s dissertation provides a comprehensive summary of the “geography, climate, soils, and vegetation” of the Pantanal. For more on the geological history of the Pantanal, see Heckman, *The Pantanal of Poconé*, 33-44 and Carlos N. Ide, et. al., “Soil and Water Conservation in the Upper Paraguay River Basin: Examples from Mato Grosso do Sul, Brazil,” in Ioris, ed., *Tropical Wetland Management*, 100.

Rio Miranda, and the Rio Aquidauana.<sup>41</sup> Weak “topographical gradients” (slope) characterize the region as a whole, with elevations above sea level that range from only 80 to 150 meters. Between the mouths of the Jauru and Apa Rivers (covering a distance of over 600 kilometers) elevation drop has been calculated at only 40 or 50 meters.<sup>42</sup>

Seasonal flooding in the Pantanal results from its flat relief and its subtropical climate. The region is defined by a distinct season of heavy rainfall alternating with a period of protracted drought. During the summer (November to March) heavy rains fall in the headwaters of the Paraguay River basin and drain from north to south through the Pantanal where the water overflows riverbanks and inundates the surrounding countryside. During the winter, or dry season (May to October), cooler temperatures prevail and the flooded countryside gradually dries up through a slow process of drainage and evaporation.<sup>43</sup> These dynamics of flood and drought determine the geomorphological characteristics of the region. As flood waters recede, they reveal a mosaic of topographical features formed as a result of differences in elevation, soil composition, erosion, and sedimentation.<sup>44</sup> These features include fresh and salt water lagoons, streams, canals, and tree-covered hillocks.<sup>45</sup>

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<sup>41</sup> Wilcox, “Cattle Ranching on the Brazilian Frontier,” 40.

<sup>42</sup> The Jauru and Apa Rivers are both tributaries of the Paraguay. Alho, “The Pantanal,” 211 and Wilcox, “Cattle Ranching on the Brazilian Frontier,” 40. Ana Lúcia Lima Barros Dolabella notes that elevation change from north to south is only between one and two centimeters per kilometer and between six and eight centimeters per kilometer from east to west. Dolabella, “The Brazilian Pantanal,” 37.

<sup>43</sup> As multiple authors note, annual cycles of flooding and drought are seldom predictable. The extent and timing of flooding depends on annual rainfall, which varies from year to year and from region to region. On average, the broader region receives 1200 to 1300 millimeters of rainfall per year but can receive as much as 2,000 millimeters during years of heavy rain. For a good overview of the cycle of flood and drought in the Pantanal see, Alho, “The Pantanal,” 211.

<sup>44</sup> In general, soil composition in the Pantanal is characterized by alluvial clays in areas of low elevation and permeable, sandy soils in areas of higher elevation. Wilcox, “Cattle Ranching on the Brazilian Frontier,” 46-47.

<sup>45</sup> *Ibid.*, 41-42. I discuss the topographical particularities of the Pantanal in more detail in chapter one. For more on the geomorphology of the Pantanal, see Alho, “The Pantanal,” 207-10 and M.A. Mercante, S.C. Rodrigues,

Cycles of rain, flood, and drought and resulting geomorphology, in turn, influence the distribution of flora and fauna which adapt their life cycles to the ecological characteristics of the Pantanal. For example, extensive seasonal flooding provides calmer waters for a diversity of fish species which choose these locations to spawn. As water dries up, however, many fish remain trapped in shallow pools with no access to a river or stream. This, in turn, provides reliable food sources for waterfowl and mammals.<sup>46</sup> Soil composition, the distribution of water, and annual cycles of flood and drought also influence plant distribution in the Pantanal. While semi-deciduous tropical forests thrive in areas of higher elevation, native grasses dominate lowland areas subject to flooding. In zones of transition (both within the Pantanal and with neighboring biomes), scrub vegetation and various species of palm are common.<sup>47</sup> As we will see, such ecological zones of transition – or *ecotones* – played a key role in shaping the contours of the regional economy and the subsistence and wage labor activities of rural populations during the period of study.

While we know much about how the Pantanal functions as an ecosystem, its human history is poorly understood. Archaeological evidence suggests that humans have occupied the Pantanal since at least 8,000 years “before present” (BP).<sup>48</sup> At about 5,000 years BP the

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and J.L.S. Ross, “Geomorphology and habitat diversity in the Pantanal,” *Brazilian Journal of Biology* 71:1, suppl. 1 (2011): 233-40.

<sup>46</sup> For an overview on the life cycles of fish and their relationship to other fauna, see Alho, “The Pantanal,” 217. On the diversity of wildlife in the Pantanal, see Swarts, “The Pantanal in the 21<sup>st</sup> Century,” 6-8.

<sup>47</sup> For a detailed description of the distribution of vegetation in the Pantanal, especially grasses, see Wilcox, “Cattle Ranching on the Brazilian Frontier,” 48-56. On the role of soil type in determining vegetation cover in zones of transition between the Pantanal and neighboring biomes, see Alho, “The Pantanal,” 207.

<sup>48</sup> “Before present” is a time scale employed by geologists to position events in the past determined by radio carbon dating. On the arrival of humans in the Pantanal, see Wolfgang J. Junk, et. al., “The Pantanal of Mato Grosso: Linking Ecological Research, Actual Use and Management for Sustainable Development,” in Edward Maltby and Tom Barker, eds., *The Wetlands Handbook* (Chichester, UK: Wiley-Blackwell, 2009), 923 and Pedro Ignácio Schmitz, “Arqueologia do pantanal do rio Paraguai,” *Revista de Arqueologia Americana* 21 (2002): 195-99.

climate of the region approached conditions similar to the present day and people began to move into the region, attracted by its permanent bodies of water and abundant sources of food. Most archaeological research has focused on pottery fragments and other artifacts, including shell fragments unearthed from patches of elevated terrain (*aterros*) located in different parts of the Pantanal. Some archaeologists have even suggested that pre-Columbian societies constructed these earthen mounds in an effort to create patches of land beyond reach of annual floods where they could build dwellings and practice small-scale agriculture. Throughout the Pantanal, archaeologists have excavated mounds, uncovering artifacts – including pottery, animal bones, shell fragments, and burial grounds – that document the material cultures of indigenous peoples before the arrival of European colonists.<sup>49</sup> While most archaeologists agree that ready sources of protein (through hunting and fishing) best explain why human populations first chose to settle in the Pantanal, the existence of *aterros* demonstrates that indigenous peoples in the region did not simply adapt to their wetland environment but that they actively shaped it to suit their own needs.<sup>50</sup> At about 4,000 years BP, humans began to establish permanent settlements in the region and by 2,800 societies began to incorporate the use of pottery.<sup>51</sup>

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<sup>49</sup> Archaeological evidence – in the form of bones and other fish and animal remains – strongly suggests that human populations made regular use of the region’s fauna, through both hunting and fishing. See, for example, the comprehensive lists of animal remains identified by archaeologists in André Osorio Rosa, “Zooarqueologia de alguns sítios do Pantanal sul-matogrossense,” *Clio Série Arqueológica* 14 (2001): 337-38.

<sup>50</sup> Sustained efforts to understand the Pantanal’s human history through archaeological research date to the 1990s. On the significance of *aterros* for pre-Columbian societies in the Pantanal, see Jorge Eremites de Oliveira, *Guató: Argonautas do Pantanal* (Porto Alegre: EDIPUCRS, 1996), 27-35 and Schmitz, et. al., “Aterros da tradição pantanal nas fazendas Sagrado Coração de Jesús e Bodoquena, Corumbá, MS,” *Pesquisas, Antropologia* 67 (2009): 321-74.

<sup>51</sup> Schmitz, “Arqueologia do pantanal,” 197.

Evidence also suggests that the Pantanal served as a zone of interaction between different cultural groups in central South America. For example, in his analysis of rock paintings and carvings in the ranges separating the Pantanal with present-day Bolivia, the archaeologist José Luis dos Santos Peixoto identified striking similarities between the paintings he found there and others he examined at locations further west in the Chiquitania.<sup>52</sup> In the centuries immediately preceding the arrival of European explorers, the Pantanal developed into a crossroad between diverse indigenous societies in the heart of South America, bringing together speakers of languages in the Tupi-Guarani, Arawakan, Guaykurú, Macro-Gê, and Zamucoan language groups.<sup>53</sup>

The Pantanal remained a frontier zone after the arrival of Europeans. The first Spanish explorers arrived in the region in the first quarter of the sixteenth century in search of an overland route from the Rio de la Plata to the Andes and its fabled mineral wealth. Using Asunción as a base, multiple expeditions navigated the Paraguay River northward into the Pantanal before embarking on overland journeys toward the Andean mountain range.<sup>54</sup> In the seventeenth century, Jesuit missionaries made inroads in the region, but were unable to establish any permanent mission settlements within the Pantanal itself. Along with early chroniclers they were, however, critical in creating a number of myths about the region that persisted throughout the colonial period. Impressed by the vastness of the Pantanal and its

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<sup>52</sup> José Luis dos Santos Peixoto, “Limites e continuidades dos registros rupestres na Chiquitania/Bolivia e no Pantanal/Brasil: o estilo Chiquitania/Pantanal,” *Cuadernos del Instituto Nacional de Antropología y Pensamiento Latinoamericano – Series Especiales* 1:2 (2013): 12-22.

<sup>53</sup> For a useful overview of the indigenous peoples who inhabited central South America and their language groups, see Alfred Métraux, *The Native Tribes of Eastern Bolivia and Western Mato Grosso* (Washington: U.S. Government Printing Office, 1942).

<sup>54</sup> The most famous of these were expeditions by Ulrich Schmidl (1535), Álvaro Núñez Cabeza de Vaca (1541), and Ñuflo de Chávez (1557).

watery landscape, they named it the *Laguna* or *Mar de los Xarayes*, describing it as a vast inland sea and a gateway to fabulous cities of gold, which they represented on maps that circulated throughout Europe.

In the eighteenth century, Portuguese colonists – the famous *bandeirantes* – pushed westward from São Paulo and passed through the Pantanal en route to *Cuiabá* and *Vila Bela da Santíssima Trindade*, where they discovered fluvial deposits of gold and diamonds. According to historian Maria de Fátima Costa, Portuguese colonists were the first to recognize the Pantanal as a zone of seasonal flooding rather than an enormous lake. In 1750, the Spanish and Portuguese empires signed the Treaty of Madrid, commissioning expeditions of officials and cartographers to survey and map the agreed upon boundaries. Following the Treaty of San Ildefonso of 1777, another expedition traveled through the region in an effort to finalize boundaries between each empire and, in the process, they created enough geographical knowledge to shatter the *Laguna de Xarayes* myth.<sup>55</sup>

As Costa demonstrates, most Europeans who traveled through the Pantanal during the colonial period considered it a “place of transit” rather than a destination.<sup>56</sup> For example, the final destination for Portuguese colonists traveling from São Paulo was not the Pantanal, but the coveted gold and diamond fields further north. Instead, various indigenous “nations” exercised control over the region throughout the colonial period. This reality often presented problems for European expeditions, which were subject to constant attacks organized by indigenous warriors with a much better knowledge of the region. During the seventeenth

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<sup>55</sup> The best analysis of the colonial history of the Pantanal is Maria de Fátima Costa, *História de um país inexistente: o Pantanal entre os séculos XVI e XVIII* (São Paulo: Estação Liberdade, 1999). For a detailed overview, see pages 31-59. See also Carolina Joana da Silva and Joana A. Fernandes Silva, *No ritmo das águas do Pantanal* (São Paulo: NUPAUB/USP, 1995), 33-38.

<sup>56</sup> “...lugar de passagem.” Costa, *História de um país inexistente*, 180.

century, the *Payaguá* lived within the Pantanal and earned a reputation as expert navigators, often staging attacks on Portuguese expeditions where the Taquari River emptied into the Paraguay.<sup>57</sup> By the beginning of the eighteenth century, they formed an alliance with another indigenous nation, the *Mbayá-Guaykurú*. The Mbayá originally practiced a nomadic lifestyle within the Chaco after adopting horses from Spanish colonists and eventually earned a reputation as formidable mounted warriors. By the eighteenth century, they expanded their range north into the Pantanal. Together with the Payaguá, the Mbayá staged regular attacks against Portuguese colonists traveling through the Pantanal.<sup>58</sup> Thus, on the eve of independence, the Pantanal remained a contested frontier zone between European colonists and powerful indigenous populations.

Independence from Spain and Portugal did little to change this state of affairs. From the late eighteenth century onward, the Portuguese empire acted on its territorial claims to the region, establishing permanent settlements and military outposts in multiple locations near the present-day towns of Corumbá and Miranda. These settlements became the centers of interaction between colonists and indigenous populations and, in the next decades, they worked to establish trade relationships and alliances with various descendants of the Guaykurú.<sup>59</sup> During the first half of the nineteenth century, governments in Brazil and

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<sup>57</sup> The Payaguá were a branch of people within the Guaykurú language group, subjected to a slow process of extinction due to decades of violent conflict with European expeditions.

<sup>58</sup> Accounts of these attacks were preserved in the writings of bandeirantes who traveled through the region in the eighteenth century. See, for example, Costa, *História de um país inexistente*, 49-55, 184, 187, 192, and 194-95. On the history of the Guaykurú, see Antonio de Pádua Bertelli, *Os fatos e os acontecidos com a poderosa e soberana nação dos índios cavaleiros guaycurús no Pantanal do Mato Grosso, entre os anos de 1526 até o ano de 1986* (São Paulo: Uyara, 1987). For a classic work that provides a good overview of colonial conflicts between the Spanish, Portuguese, and indigenous people, see Virgílio Corrêa Filho, *Pantanais matogrossenses (devassamento e ocupação)* (Rio de Janeiro: Serviço Gráfico do Instituto Brasileiro de Geografia e Estatística, 1946), 34-57.

<sup>59</sup> See, for example, Joaquim Ferreira Moutinho, *Notícia sobre a provincia de Matto Grosso seguida d'um roteiro da viagem da sua capital a S. Paulo* (São Paulo: Typographia de Henrique Schroeder, 1869), 195-98.



Bolivia patronized European explorers who led expeditions through the Pantanal, many of which relied upon the labor of these recently “settled” indigenous peoples.<sup>60</sup> While the Pantanal served as a zone of transit during the colonial period, by the nineteenth century Brazilian colonists began to establish ranches, using cattle as one tool among many to dominate territory through a long period of protracted violence against the indigenous peoples of the region.<sup>61</sup>

A major turning point came in the 1860s when the Pantanal became the first battleground for the Paraguayan War. Sparked by geopolitical conflicts over territorial control in the Rio de la Plata, the war lasted six years (1864-1870) and pitted Paraguay against the combined forces of Brazil, Argentina, and Uruguay.<sup>62</sup> Indigenous people were conscripted into the ranks of the Brazilian army and thousands died in combat against the invading Paraguayans or succumbed to disease epidemics that arrived with the troops.<sup>63</sup> After the war, the Paraguay River opened to commercial navigation and the movement of people and goods in and out of the region intensified. Indigenous people continued to live in the region but, as we will see, they were increasingly incorporated into the ranks of a rural population that supplied labor for an emerging regional economy centered on cattle ranching

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<sup>60</sup> I discuss relationships between indigenous people and foreign naturalists in chapter one.

<sup>61</sup> I thank Arturo Escobar for pointing out the importance of cattle as a tool for occupying space in rural South America.

<sup>62</sup> Only the first stages of the war took place in Mato Grosso and the Pantanal. By 1867, Brazilian troops had expelled the Paraguayans from Mato Grosso and the main theaters of war shifted south into Paraguay, Argentina, and Uruguay.

<sup>63</sup> For an analysis of indigenous participation in the Paraguayan War, see Maria de Fátima Costa, “Indigenous Peoples of Brazil and the War of the Triple Alliance, 1864-1870,” in Nicola Foote and René Harder Horst, eds., *Military Struggle and Identity Formation in Latin America: Race, Nation, and Community during the Liberal Period* (Gainesville: University Press of Florida, 2010). For analyses of the impact of the war on the state of Mato Grosso, see chapters in Fernando Tadeu de Miranda Borges and Maria Adenir Peraro, eds., *Brasil e Paraguai: uma releitura da guerra* (Cuiabá: EdUFMT/Entrelinhas, 2012).

and extractive industries. After 1870, the port city of Corumbá established itself as the region's most important commercial hub and Cuiabá remained the center of government for the state of Mato Grosso. At the northern edge of the Pantanal, the town of Cáceres emerged as an important shipping center between eastern Bolivia, the Amazon, and the upper Paraguay River basin.

## **Chapter Organization**

The six chapters in this dissertation follow a loose chronological order and cover a broad time period – from the 1820s to the 1960s – that deemphasizes traditional periodizations. This long view of the region's history enables me to illuminate the historical creation of the myth of isolation, how it changed over time, how it influenced the actions and decisions of humans and institutions, and how local practices persisted in spite of the region's increased integration into broader networks and systems of collective knowledge. At the same time, however, geopolitical events and processes mattered in the Pantanal. As such, each chapter remains attentive to the impacts that regional, national, and international events had at the local level.

The first chapter examines the writings of naturalists, explorers, and boundary officials who traveled through the Pantanal during the nineteenth century and introduces the main themes and arguments of the dissertation. I argue that, despite their efforts to make the region known to the civilized centers of the Americas and Europe, naturalists recreated and perpetuated old myths of isolation with origins in the colonial period. Their writings reveal a diverse and mobile indigenous population that combined temporary periods in fixed locations on the peripheries of towns, settlements, and military garrisons with periods of mobility that carried them throughout the Pantanal and beyond. The correspondence and reports produced

by Bolivian and Brazilian boundary officials document one of the earliest efforts by post-independence governments to solve the problem of the Pantanal's isolation. I demonstrate how the ecology of the Pantanal and geopolitical realities combined to limit the ability of the Bolivian state to establish a port in the region.

Chapter two examines local commercial networks and practices of migratory labor that developed during the Pantanal's integration into the world economy between 1870 and 1930. Far from isolated, the Pantanal was home to a mobile, enterprising, and diverse population made up of merchants, ranchers, tradesmen, and rural laborers from a variety of ethnic and national backgrounds. The upper Paraguay River and its tributaries was the natural outlet for the broader region with an economy centered on the extraction of natural resources, particularly Amazonian rubber (*Hevea brasiliensis*), ipecacuanha, and yerba mate. By the 1930s, cattle ranching established itself as the dominant economic activity in the Pantanal itself. While this story is well known, most historical studies of the region focus on a single commodity and are framed within the context of the nation-state. This chapter uses a variety of sources from archives in both Bolivia and Brazil to offer a new interpretation of this formative period in the region's history. A closer look at the relationship between labor patterns and ecology reveals the development of a broad-ranging population of rural workers who traveled seasonally throughout the Pantanal and adjacent ecological zones – and across international borders – to ensure their livelihoods.

Chapter three examines how provincial and national governments attempted to solve the problem of the Pantanal and its isolation during the first half of the twentieth century. I argue that the region's prohibitive distance from markets can only partially explain the failure to achieve significant economic development in this period. While this certainly

played an important role, throughout the first half of the twentieth century, national governments and private investors funneled large amounts of resources and capital into infrastructure projects designed to improve the movement of people and goods through the Pantanal. Officials from both Bolivia and Brazil hoped that the Pantanal would eventually form a critical link in a transcontinental supply chain stretching from São Paulo to the Pacific Ocean. Others turned their attention to the Pantanal itself, forming organizations and publishing periodicals to promote oil prospecting and other “rational” development projects. Although they achieved some successes, few of these dreams were fully realized. This chapter demonstrates how flood and drought limited the efforts of institutions to develop the region.

The fourth chapter examines the activities of foreign field scientists who traveled to the Pantanal during the first half of the twentieth century. Like those interested in economic development, field scientists initially focused on the region because of its supposed isolation. While nineteenth century naturalists sought to produce ethnographic knowledge about the indigenous populations of the region, by the twentieth century field scientists came to regard them as too degraded by the vices of civilization. Instead, they increasingly recognized the Pantanal as a rich repository of zoological specimens. As such, they were critical in shifting perceptions of the Pantanal from an obstacle to progress to a region worthy of scientific study in its own right. Although their ability to achieve their objectives depended upon local guides who had an intimate knowledge of the landscape, the writings and images field scientists produced about the Pantanal contributed to the discursive erasure of rural populations, thus perpetuating the myth of isolation.<sup>64</sup>

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<sup>64</sup> For recent work on the intersection of environmental history and the history of the field sciences, see Jeremy Vetter, ed., *Knowing Global Environments: New Historical Perspectives on the Field Sciences* (New

Chapter five traces the commodification of wild animals and the changing practices of hunting in the Pantanal from the late nineteenth century through the 1960s. Building on chapter two, it demonstrates the resilience of local populations in spite of the negative impact that changes in the international economy had on local societies. Drawing upon a tradition of subsistence hunting dating to at least the early nineteenth century, rural inhabitants acted quickly in response to the growing worldwide demand for wild animal products (bird feathers, skins, furs, and pelts). Between the 1930s and 1967, exports of wild animal products from the Pantanal and Mato Grosso grew exponentially, establishing the region as one of the most important producers in Brazil.<sup>65</sup> Although federal codes were established to regulate hunting activities, their application in the Pantanal was uneven at best because of the region's vast size and the limited ability (or will) of officials to enforce them. This chapter also offers a preliminary examination of the social and ecological changes that occurred in the Pantanal as a result of the commodification of animals.

The final chapter revisits the myth of isolation in the Pantanal through an analysis of sportsmen who hunted and fished in the region between the 1930s and the 1960s. Their writings echoed those of nineteenth century naturalists who marveled at the dense and teeming population of wildlife to be discovered there. The Pantanal quickly gained a reputation as a "paradise" for hunters and enterprising companies and individuals – most famously Sasha Siemel – capitalized on this perception, marketing the region as the best place in South America to hunt big game and as an experience to be consumed by wealthy

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Brunswick: Rutgers University Press, 2010). For an analysis of the interface between local and scientific knowledge in the field, see Mark Barrow, Jr.'s chapter in the same volume, entitled "On the Trail of the Ivory-Bill: Field Science, Local Knowledge, and the Struggle to Save Endangered Species," 135-61.

<sup>65</sup> Commercial hunting was not outlawed in Brazil until 1967.

clients from the United States, Europe, and urban South America. Over time, however, many sportsmen began to express concern over what they saw as indiscriminate overhunting of the region's diverse animal population. A focus on sportsmen, I argue, helps to reveal both the persistence of a myth as well as the first calls for conservation in the Pantanal. These contradictory impulses – a desire to consume and a desire to protect – echoed strongly in the later growth of ecotourism in the Pantanal.

## CHAPTER 1

### “Where Nature Reigns with Full Dominion”: Myth and Reality in the Nineteenth Century Pantanal

In September 1827, Hercules Florence reached the confluence of the Jauru and Paraguay Rivers. After spending the better part of a year navigating the watery landscape of the Pantanal as a member of the Baron von Langsdorff’s Brazilian scientific expedition, Florence uncovered a piece of history. Standing on a patch of high ground, hidden from view by a dense thicket of trees and undergrowth, sat an enormous limestone monument. Florence immediately recognized it as the *Marco do Jauru*, a boundary marker sculpted in Lisbon and set in place in January 1754 by boundary surveyors in accordance with the terms of the Treaty of Madrid, which established provisions for the demarcation of the territorial borders of the Spanish and Portuguese empires in South America. To Florence, such a grand and imposing monument seemed out of place in such “vast regions, where nature reign[ed] with full dominion.”<sup>1</sup>

Florence was not the last traveler to stumble upon the Marco do Jauru. During the nineteenth century, other explorers and naturalists made it a point to visit this odd imperial monument to territorial sovereignty. In 1845, the French naturalist Francis de Castelnau described the marker as “lost in the desert” and noted that the constant movement of the river current was eroding the bank and would eventually topple the great monument.<sup>2</sup> The marker

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<sup>1</sup> “...no meio dessas vastas regiões, onde sem partilha reina a natureza.” Hercules Florence, *Viagem fluvial do Tietê ao Amazonas de 1825 a 1829*, 2ª ed., translated by Alfredo d’Escagnolle Taunay (São Paulo: Edições Melhoramentos, 1948), 239.

<sup>2</sup> Francis de Castelnau, *Expedição as regiões centrais da America do Sul*, Tomo 2, translated by Oliverio M. de Oliveira Pinto (São Paulo: Companhia Editora Nacional, 1940), 333.

was still there in 1867 when the geologist Rodolfo Waehneltd traveled through the region, commissioned by Brazil's imperial government to scout Mato Grosso's suitability for establishing an iron or gunpowder factory. Although Waehneltd derided the marker as a symbol of "papal arrogance," he nevertheless took pains to clear the foliage and underbrush that obscured it from view, making it visible to other travelers on the river.<sup>3</sup>

Despite its apparent isolation, the Marco do Jauru mattered to naturalists and others who traversed the Pantanal during the post-independence era.<sup>4</sup> They regarded such a large and unpeopled region as a geopolitical liability during a time when territorial sovereignty in South America was anything but settled. Failure to populate and control the territorial expanses of central South America represented not only a military security issue, but also the potential loss of valuable natural resources that could be transformed into revenue for fledgling states and empires. Indeed, one of the central tasks of naturalists during the nineteenth century was to make the region "legible" to central governments with information about its topography, hydrography, navigability, transportation routes, climate, flora, fauna, and indigenous populations, fixing it in geographical space for the benefit of powerful decision-makers.<sup>5</sup> In turn, post-independence governments sought to build upon this

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<sup>3</sup> Rodolfo Waehneltd, "Exploração da provincia de Mato Grosso," *Revista do Instituto Historico e Geografico Brasileiro*, Tomo XXVII, 1ª parte (1864): 212-13.

<sup>4</sup> The Marco do Jauru now rests in the center of the Praça Barão do Rio Branco in Cáceres, Mato Grosso.

<sup>5</sup> Although the journeys of explorers and naturalists in nineteenth century Mato Grosso are well known in the historiography, to date no studies have examined the significance of their activities within the broader trajectory of the region's historical development. A handful of excellent studies do exist, however, for individual expeditions. In this regard, Maria de Fátima Gomes Costa and Pablo Diener have been the most active and have focused on the ways in which foreign naturalists – including Castelnau and various naturalists affiliated with the Langsdorff expedition – represented the landscapes and indigenous people of the region through their writings, artwork, and maps. See, for example, Maria de Fátima Costa and Pablo Diener, *Bastidores da Expedição Langsdorff* (Cuiabá: Entrelinhas, 2014) and Maria de Fátima Costa, "A paisagem do Brasil representada por Francis de Castelnau," in Márcia Naxara and Virgínia Camilotti, eds., *Conceitos e linguagens: construções identitárias* (São Paulo: Intermeios, 2013), 82-95. On the concept of legibility and state formation, see James



information to establish colonies, ports, and boundaries that would enable them to populate, govern, and profit from the region.

This chapter examines the activities and writings of naturalists, explorers, and boundary officials who traveled through the Pantanal during the nineteenth century. Although colonial-era boundary commissions demystified the Pantanal in many ways, nineteenth century travelers encountered an unfamiliar landscape, one where even the earth and water seemed to conspire against them. They relied heavily on informants and guides to make sense of a region where local geographies of settlement, trade, subsistence, and governance had proven more resilient than those that distant governments and officials sought to impose. Their experiences led many to portray the Pantanal as *terra incognita*, breathing new life into a long-standing myth.

Central to their depictions was the assumption that the Pantanal was an isolated region, waiting to be populated by industrious colonists. At the same time, however, the writings of explorers do not overlook the presence of humans in the region. In fact, naturalists had regular interactions with the indigenous populations of the broader Pantanal and took pains to report on their ways of life and histories of interaction with colonists. Their accounts reveal a diverse indigenous population that was undergoing a transformation in response to colonization, disease, and inter-ethnic violence. Despite their increased integration into a new social and economic order, indigenous populations continued to practice mobile lifestyles that carried them throughout the Pantanal and across international borders. The growing importance of extractive industries intensified the practice of migratory

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Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998), 11-52.

labor which, by the late nineteenth century, had become part of the rhythm of life for rural populations in the Pantanal.

By 1870, national governments in Brazil and Bolivia sought to build upon the information that explorers and naturalists generated about the Pantanal. They signed treaties and sent officials to conduct topographical surveys, place boundary markers, and produce maps that would formalize their territorial sovereignty in the region. While the Bolivian government hoped to establish a port with direct access to the Paraguay River, it operated at a disadvantage in comparison with Brazil, which enjoyed a longer history of occupation in the region and a greater collective knowledge of the landscape to be surveyed. Taken together, however, the efforts of boundary officials represent one of the earliest attempts on the part of central governments to solve the problem of the region's isolation.

### **The Rebirth of a Myth**

The nineteenth century was an era of scientific exploration in South America. Newly-independent nation-states from Mexico to Argentina opened their borders to European naturalists on a quest for new species to collect and classify and new people to encounter and describe.<sup>6</sup> Because of its location near the contested borders between the Brazilian empire and the new republics of Paraguay and Bolivia, the Pantanal figured prominently in the efforts of naturalists to create knowledge about a region that had remained on the margins of imperial agendas throughout the colonial period. Within a few years of Brazil's declaration of independence from Portugal, expeditions were striking out across the new empire's vast territories to learn more about the lands that Prince Pedro had inherited. In Bolivia, the new

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<sup>6</sup> The literature on nineteenth century naturalists and the accounts they produced is vast. One of the most influential analyses was authored by Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation*, 2<sup>nd</sup> edition (New York: Routledge, 2007).

Republican government commissioned Alcide d'Orbigny to explore and report on its sparsely populated eastern frontier.<sup>7</sup> Over the following decades, dozens of explorers and naturalists traversed the Pantanal. Although their efforts met with many challenges, especially the inherent difficulties of navigating the flooded landscape, most travelers praised the Pantanal as a fertile region with abundant natural resources that awaited industrious and disciplined colonists to make it productive.

Nineteenth century traveler-naturalists in the Pantanal made sure to acquaint themselves with the region before they arrived. Most had studied the maps and writings produced by the eighteenth century boundary commissions, especially the works of Félix de Azara, Ricardo Franco de Almeida Serra, Antônio Pires da Silva Pontes Lemos, and Francisco José Lacerda e Almeida.<sup>8</sup> Thus, they were well aware of the myths that surrounded the region and were quick to point out the “skewed denominations” of previous geographers who labeled the region as an inland sea.<sup>9</sup> Instead, all recognized the Pantanal as a low-lying floodplain, created by annual rainfall that caused riverbeds to fill up, overflow their banks, and inundate the surrounding countryside. Augusto Leverger (Barão de Melgaço), who traveled through the Pantanal frequently during the nineteenth century in his changing capacities as public official, diplomat, and president of Mato Grosso, was a keen observer of

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<sup>7</sup> I discuss the case of Alcide d'Orbigny in detail below.

<sup>8</sup> On the role of these cartographers and boundary surveyors in the creation of geographic knowledge about the Pantanal during the eighteenth century, see Maria de Fátima Costa, *História de um país inexistente: o Pantanal entre os séculos XVI e XVIII* (São Paulo: Estação Liberdade, 1999), 218-236. See also Jaime Cortesão, *História do Brasil nos velhos mapas* (Rio de Janeiro: Ministerio das Relações Exteriores, 1965).

<sup>9</sup> “...denominação viciosa.” This is a common observation among naturalists. See, for example, Florence, *Viagem fluvial*, 130; Castelnau, *Expedição as regiões centrais*, 314; Henrique de Beaurepaire-Rohan, “Viagem de Cuyaba ao Rio de Janeiro, pelo Paraguay, Corrientes, Rio Grande do Sul e Santa Catharina, em 1846,” *RIHGB*, Tomo IX (1847), 379; Augusto Leverger, “Roteiro da navegação do Rio Paraguay desde a foz do S. Lourenço ate o Paraná,” *RIHGB*, Tomo XXV (1862), 230; and Thomas Jefferson Page, *La Plata, the Argentine Confederation and Paraguay* (New York: Harper and Brothers Publishers, 1859), 184.

the seasonal rhythms of rain, flood, and drought that defined the Pantanal landscape.

Although flooding was a yearly event in the Pantanal, Leverger noted that its extent and impact depended upon the amount of rainfall the broader watershed received, a variable that changed from year to year. He also observed that the timing of flooding varied by region. In the north, near the confluence of the São Lourenço and Paraguay rivers, he explained that flooding occurred earlier, was much more extensive, and covered a much broader territory than in the south near the confluence of the Apa and Paraguay rivers.<sup>10</sup> Leverger identified these patterns through sustained and repeated observation over a period of years, a luxury that most explorer-naturalists did not enjoy.

Leverger and his fellow travelers were creating a new conventional wisdom about the Pantanal. While they understood that much of the region was subject to annual flooding caused by heavy rains and the overflow of river banks in a region of uncommonly flat topographic relief, their writings make it clear that few, if any, of them considered it a unified, geographical region. Their collective knowledge of the upper Paraguay River basin was still too fragmented for that. Instead of using the term *pantanal* to describe the region as a whole, naturalists most often employed the plural *pantanais* to describe a given flooded zone on either side of a specific river.<sup>11</sup> For example, Hercules Florence described the *pantanais* that extended on either side of the São Lourenço River and Francis de Castelnau observed the *pantanais*, or “temporary wetlands” that formed on either side of the Cuiabá

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<sup>10</sup> His observations are some of the earliest to delineate in broad terms what twentieth century scientists have identified as ecologically distinct “sub-regions” in the Pantanal. Leverger, “Roteiro da navegação,” 230-231, 304.

<sup>11</sup> Maria de Fátima Costa traces the usage of the term *pantanais* to the eighteenth century bandeirantes who traversed the region en route to the gold and diamond fields near Cuiabá and points north. Costa, *História de um país inexistente*, 179-205.

River.<sup>12</sup> Naturalists also paid close attention to changes in vegetation and land cover which signified changes in soil content, climate, topography, and the availability of water. For example, travelers on the Paraguay River noted the abrupt change in vegetation as they crossed from Paraguay into Brazil at the southern edge of the Pantanal. While the territory between Asunción and the Brazilian border was defined by park-like expanses of *carandá* palm (*Copernicia alba*), north of the Apa River the landscape changed “before one’s eyes.” Gone were the stands of palm trees, replaced instead by “a sea of vigorous grass” and low-lying scrub vegetation characteristic of the Pantanal.<sup>13</sup> In this way, naturalists had begun to outline both the broad contours and the sub-regional particularities of the upper Paraguay River basin.

Advances in geographical knowledge did not come without challenges. One of the pressing tasks of explorers on the upper Paraguay River was to determine its suitability for commercial navigation. In order to navigate the river system effectively, naturalists sought to collect data about depths, widths, water temperature, the locations of areas of high ground, and the confluences of major tributaries. Although colonial boundary commissions did much to situate the Pantanal in geographic coordinate space, nineteenth century naturalists believed that newer cartographic technologies made it possible for them to determine the region’s

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<sup>12</sup> Florence, *Viagem fluvial*, 149 and Castelnau, *Expedição as regiões centrais*, 225 and 229.

<sup>13</sup> “...a vegetação muda a olhos vistos.” Castelnau, *Expedição as regiões centrais*, 258 and Page, *La Plata*, 170. For other descriptions of the transition zone between the Pantanal and the Chaco, see Beaurepaire-Rohan, “Viagem de Cuyaba ao Rio de Janeiro,” 384 and Leverger, “Roteiro da navegação,” 224. Others noted that the *buriti* palm (*Mauritia flexuosa*), common in the northern transition zone between the Pantanal and the Amazon basin, were sure indicators of water sources. On *buriti* palms and zones of transition, see Castelnau, *Expedição as regiões centrais*, 181. For a later and more detailed description of the *buriti* palm, see Comissão de Linhas Telegráficas do Estado de Mato-Grosso (CLTEMTA), *Relatório dos trabalhos realizados de 1900-1906 pelo Major de Eng. Cândido Mariano da Silva Rondon*, Vol. 4-5 (Rio de Janeiro: Departamento de Imprensa Nacional, 1946), 23.

position with better precision.<sup>14</sup> For example, in the 1850s, the United States naval officer Thomas Jefferson Page conducted a comprehensive hydrographic survey of the Paraguay River between Asunción, Paraguay, and Corumbá, in the southern Pantanal. Page claimed that he was the first person to navigate the Paraguay River in a steamship and, as such, his narrative gives particular attention to the availability of fuel wood and river depths.<sup>15</sup> As a representative of the United States government, sent to create knowledge that would facilitate commercial expansion in the region, Page viewed the region he traversed with “imperial eyes.”<sup>16</sup> Thus, he downplayed any potential difficulty for navigation that the Paraguay River system might present and imagined the space he traversed as South America’s Mississippi River, winding through the “fairest unbroken extent of cultivable land in the world.”<sup>17</sup>

Other travelers were less optimistic. Hercules Florence’s journey through the Pantanal carried him on the same route as the *bandeirantes* of the eighteenth century. Florence began his journey in São Paulo and navigated tributaries of the Tietê and Paraná Rivers into Mato Grosso where they eventually reached the Pantanal. After contending with rapids for weeks, which forced his expedition to disembark and carry canoes and supplies on shoulders, Florence was relieved to reach the Rio Coxim on the eastern edge of the Pantanal.<sup>18</sup> Initially, Florence described the Paraguay River as “the most beautiful canal formed by nature,” which made it possible for men to “penetrate” the region’s “expansive

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<sup>14</sup> Thomas Jefferson Page observed that Félix de Azara’s measurements were “remarkably correct” given the time period in which he worked and the cartographic tools at his disposal. Page, *La Plata*, 184.

<sup>15</sup> Ibid., 160 and 181.

<sup>16</sup> Pratt, *Imperial Eyes*, 1-12.

<sup>17</sup> Page, *La Plata*, 164.

<sup>18</sup> Florence, *Viagem fluvial*, 116.

deserts,” thus promoting “active navigation and immense trade.” Over its entire course, Florence claimed, one encountered calm water with deep and wide channels.<sup>19</sup> By the end of his trip, however, Florence’s view of the river and the region changed dramatically. In the northern Pantanal, the São Lourenço and Cuiabá Rivers became much more circuitous, with repeated curves and oxbows and flooded countryside as far as the eye could see. River travel was slow-going, “arduous” work, complicated by the flood season which made it difficult to discern the course of the river. The slow pace of their progress, the mosquitos, the constant rain, and the “monotony” of the landscape made the circumstances “almost intolerable” for Florence.<sup>20</sup>

Others bemoaned the unfamiliarity of the landscape and their inability to generate reliable statistics about the course of the Paraguay River and its tributaries. Such complaints were integrally linked to the challenges posed by seasonal flooding. Between January and May 1845, Francis de Castelnau traveled twice through the Pantanal, once downstream and once upstream.<sup>21</sup> One of Castelnau’s goals during his journey was to collect data about the Paraguay River and its tributaries, including geographic coordinates of river mouths and key

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<sup>19</sup> “...o mais belo canal que a natureza formou para permitir ao homem devassar desertos tão dilatados, para povoa-los e dar-lhes as regalías de ativa navegação e imenso comercio.” Ibid., 131-132.

<sup>20</sup> Ibid., 142. Complaints about “clouds” of mosquitos are a constant litany in the writings of nineteenth century explorer-naturalists. See, for example, Beaurepaire-Rohan, “Viagem de Cuyaba ao Rio de Janeiro,” 380; Leverger, “Roteiro da navegação do Rio Paraguay,” 233; Castelnau, *Expedição as regiões centrais*, 226, 233; Bartolomé Bossi, *Viage pintoresco por los rios Paraná, Paraguay, Sn. Lorenzo, Cuyaba, y el Arino tributario del grande Amazonas* (Paris: Dupray de la Maherie, 1863), 51; and Herbert H. Smith, *Do Rio de Janeiro a Cuyaba: Notas de uma naturalista* (São Paulo: Companhia Melhoramentos, 1922), 248. Smith traveled through the region in the 1880s.

<sup>21</sup> Castelnau arrived in Mato Grosso overland via São Paulo and Goiás. His first trip through the Pantanal began in January and carried him from Cuiabá southward to Forte Olimpo, on Brazil’s contested border with Paraguay. Castelnau’s requests to travel to Asunción were denied by the President of Paraguay and, as a result, Castelnau was forced to retrace his steps, this time traveling north to Vila Maria (Cáceres) on the northern edge of the Pantanal.

locations along their courses, which would lead to more accurate maps and enable more efficient transportation for commercial shipping. However, Castelnau happened to be traveling during the height of the flood season, a coincidence that made his scientific labors extremely difficult. For example, while navigating the Cuiabá River, Castelnau found it almost impossible to locate a spot of high ground to set up his equipment and, as a result, “no geological survey was possible.”<sup>22</sup> On the return trip, as the expedition passed the mouth of the São Lourenço and continued north on the Paraguay River, Castelnau described the “beautiful landscape” that awaited them, an “immense sheet of liquid” punctuated by islands of vegetation that seemed to float on the horizon. Although Castelnau had contracted the services of a seasoned navigator of the Pantanal in Albuquerque (Corumbá), the expedition soon found itself lost in “one of the thousands of lagoons that the Paraguay River form[ed] during the flood season.”<sup>23</sup> After attempting without success to rejoin the main channel, Castelnau and his crew eventually backtracked through a “tangle of unknown lakes and lagoons.” For the rest of the trip north to Cáceres, Castelnau relied upon a *Guató* guide whose knowledge of the region helped the expedition to avoid additional mishaps. On May 13, after weeks and months of sleeping in their boats, Castelnau and his crew finally reached dry land on the northern edge of the Pantanal, an occasion they greeted with “great joy.”<sup>24</sup>

The challenges that nineteenth century explorers and naturalists faced while navigating the unfamiliar waters of the upper Paraguay River system and its vexing pantanais reflect the dynamism and mutability of a landscape that seemed to present insurmountable

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<sup>22</sup> Castelnau, *Expedição as regiões centrais*, 232 and 329.

<sup>23</sup> “...numa dessas mil baías que forma o rio Paraguai na época das enchentes.”

<sup>24</sup> *Ibid.*, 318-19 and 332.



obstacles to the movement of goods and people. As Castelnau and others discovered, moving across the Pantanal was not as straightforward as they anticipated. Instead, travelers contended with local topographies that changed from year to year, reshaped or washed away completely by the rise and fall of flood waters. Over time, vernacular terminologies developed to describe the Pantanal's unique topography. Augusto Leverger was one of the first to comment upon and define many of these terms with meanings that were unfamiliar to most educated readers outside of Mato Grosso. Moreover, the usage of terms varied according to location and topographical features. For example, the term *bahia* could be used to describe anything from the mouth of a major tributary of the Paraguay River to a "natural canal" or area of low ground that drained and contained flood waters during the rainy season. A *bahia* that was smaller and narrower than normal was called a *corixo*. These were terms created by local populations through lived experience in the Pantanal, vocabularies that reflected the changing relationship between earth and water that defined the rhythms of life in the region. Throughout the course of the nineteenth century, terms such as *bahia*, *corixo*, *barranco*, *capão*, and *estirão* gradually entered into the vocabularies of field scientists and other travelers who began to pass through the region in increasing numbers after 1870.<sup>25</sup>

The same topographical characteristics that made navigation so difficult in the Pantanal also made it an ideal home for dense populations of wildlife. One of the most consistent observations that nineteenth century travelers made about the Pantanal was the beauty of the landscape and its wildlife. The "super-abundance" of wild animals was

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<sup>25</sup> Roughly translated, a *barranco* is a riverbank, but the term is applied differently depending upon its slope and height. A *capão* is a hill, mound, or other area of high ground covered with forest or vegetation. During the flood stage, *capões* looked like islands to many travelers. An *estirão* is a location where the course of the river straightens. For Leverger's definitions, see "Roteiro da navegação do Rio Paraguay," 212-13.

staggering and it seemed to some that the wetland was home to “every species of animal” in existence, including howler monkeys, jaguars, pumas, maned wolves, marsh deer, brocket deer, peccaries, capybaras, tapirs, anteaters, armadillos, and river otters.<sup>26</sup> Travelers paid particular attention to the highly-visible caimans that occupied river banks over the “entire course of the Paraguay River.” Herbert Smith, an American naturalist who traveled through the region in the 1880s, witnessed seventy caimans occupying a stretch of sand twenty meters wide, so densely packed that they were crawling on top of each other.<sup>27</sup> Many were also captivated by *piranhas* (*Characidae*), fish with razor sharp teeth that were attracted to blood and “infested” many lakes and bahias. To illustrate their ferocity, Hercules Florence described the feeding frenzy that ensued when his crew threw the carcass of a capybara into the river.<sup>28</sup> Indeed, nineteenth-century naturalists were instrumental in creating an image of the Pantanal as a “paradise” for non-human animals.

Their conclusions were not unfounded. Seasonal rhythms of flood and drought in the Pantanal made it uniquely suited to support dense populations of wildlife. This was particularly true for the region’s bird populations, whose diversity and quantity observers described as nothing short of spectacular. In the 1840s, when Castelnau camped in the vicinity of Lagoa Gaiba and Lagoa Uberaba near the Bolivian border, he was awestruck by the “unforgettable spectacle” that he witnessed at sunset when “thousands of herons” letting

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<sup>26</sup> “parecia abundarem neste lugar toda especie de animais...”

<sup>27</sup> For descriptions of wildlife, see Leverger, “Roteiro da navegação do Rio Paraguay,” 232; Castelnau, *Expedição as regiões centrais*, 316; Smith, *Do Rio de Janeiro a Cuyaba*, 272, 282-83; and Bossi, *Viage pintoresco*, 50.

<sup>28</sup> Anecdotes about piranhas are ubiquitous in nineteenth century accounts and persist in the writings of twentieth century writers. Florence, *Viagem fluvial*, 128-29; Castelnau, *Expedição as regiões centrais*, 328; and Beaurepaire-Rohan, “Viagem de Cuyaba ao Rio de Janeiro,” 380.

loose “deafening cries” took flight over the water, circling above their heads like a white cloud.<sup>29</sup> Herbert Smith was equally impressed and found it difficult to comprehend the sheer quantity of aquatic birds that populated the Pantanal:

Thousands of aquatic birds congregate here; one could say millions, for wherever one finds flooded land, one always sees them, everywhere dotting the surface, standing in the grass with their feet in the water, taking flight in a cloud whenever they sense our approach. There were so many great egrets that they resembled snowflakes swirling in a winter storm at night. Joining them were roseate spoonbills, tiger herons, and black-headed jabiru storks, forming an army of *pernaltos*.

At the clearing where he made camp for the night, Smith estimated that there were at least 20,000 water birds in the vicinity, forming a “spectacle that [he had] never seen before.”<sup>30</sup>

Although very few travelers recognized why, the reason the Pantanal could support such high concentrations of water birds depended upon the relationship between fish and the seasonal rhythms of flood and drought. During the flood season from November to April, as rising waters overflowed their banks and inundated the surrounding countryside, the fish of the Paraguay River system – estimated by one traveler at 60 different species – swam upstream and into the surrounding countryside to spawn in calmer waters. The Pantanal gradually dried up after May, which left fish trapped in temporary lakes and lagoons cut off from the river and provided an ideal and plentiful source of food for aquatic birds.<sup>31</sup>

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<sup>29</sup> Castelnau, *Expedição as regiões centrais*, 328.

<sup>30</sup> “Milhares de aves aquáticas aqui se congregavam; poderia dizer milhões, pois onde quer que se abria o terreno inundado, viam-se sempre, ponteando a superfície em toda parte, estacionando na relva com os pés na água, revoando em nuvem quando nos sentiam. As garças brancas eram tantas que nos lembravam flocos de neve a revoltear em uma tempestade de inverno do noite; com elas estavam colhereiras de côr de rosa, socós azulados, grandes tuyuyus de cabeça preta, uma phalange de pernaltos.” The term *pernaltos* refers to these “long-legged” birds. Smith, *Do Rio de Janeiro a Cuyaba*, 271-72. Smith and others were also impressed by the quantity of game birds in the nearby gallery forests and plains. See, for example, Castelnau, *Expedição as regiões centrais*, 232 and Leverger, “Roteiro da navegação do Rio Paraguay,” 232.

<sup>31</sup> On nineteenth century estimates of the number of fish species in the upper Paraguay River, see Beaurepaire-Rohan, “Viagem de Cuyaba ao Rio de Janeiro,” 381. The abundance of fish in local rivers led one traveler to cite it as an explanation for Cuiabá’s lack of industry and motivation to cultivate agricultural products. Bossi, *Viage pintoresco*, 139

Such was the nature of this landscape of abundance. The Pantanal seemed to nineteenth century explorers a place where nature truly reigned with full dominion. While they were awed by its raw beauty, its “prodigious” numbers of wild animals, birds, and fish, and its potential as a commercial artery for central South America, their descriptions also contained a persistent thread of unease. Such sentiments found expression in the frequent remarks of frustration that travelers voiced about the difficulty of navigation, the hordes of relentless mosquitos, the constant rain, and the menacing piranhas and caimans that populated the waterways of the upper Paraguay River system. Most of all, however, travelers were anxious about the conspicuous absence of people in the region.

### **A Human Landscape**

To most travelers, the Pantanal seemed an eerie, desolate, and unpeopled landscape. Their accounts are filled with metaphorical images of the vastness of the region with its aquatic landscape that reached as far as the eye could see. After arriving at the Lagoa Uberaba in the northern Pantanal, Castelnau described it as a “boundless ocean” that stretched to the horizon where it melted into the clouds of the sky.<sup>32</sup> Herbert Smith described the odd sensation of traveling through such “endless,” solitary regions and imagined that his steamship had suddenly crossed into a “prehistoric land, where man had never set foot and where nature still dreamed in its primitive purity.”<sup>33</sup> Others likened the supposed emptiness of the Pantanal to an immense desert, with no “sign of human life” or “vestige of civilization.”<sup>34</sup> Many were troubled by the fact that it was possible to travel for days at a time

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<sup>32</sup> Castelnau, *Expedição as regiões centrais*, 326.

<sup>33</sup> “...como se o nosso vapor moderno imergira súbito em algum país prehistórico, onde o homem nunca plantara o pé e a natureza sonhava ainda na castidade primitiva.” Smith, *Do Rio de Janeiro a Cuyaba*, 249-50.

<sup>34</sup> Page, *La Plata*, 186. Rodolfo Waehneltd described the landscape of the northern transition zone between the Pantanal, Cerrado, and Amazon basin as a “sterile desert.” Waehneltd, “Exploração da provincia de Mato

without encountering a single person. In December 1827, after traveling for a week without seeing a sign of human life on the Paraguay River between Corumbá and the mouth of the São Lourenço River, Hercules Florence was “relieved” when he heard crowing roosters and barking dogs, telltale signs that he was approaching a settlement.<sup>35</sup> More often, however, travelers reached settlements only to discover that they were empty, seemingly abandoned by their occupants. Such was the case for Castelnau who traveled for a week on the Rio Miranda before reaching the first settlement. Its occupants nowhere in sight, Castelnau concluded that “birds were more common” than local residents in the Pantanal.<sup>36</sup> All across the region, travelers encountered such “ghosts of empires past,” once-thriving ranches, sugar mills, and settlements whose decadence seemed to signal the triumph of nature over the advances of civilization.<sup>37</sup>

It was precisely because of its low population density and lack of permanent settlements that travelers were tempted to label the Pantanal an “unknown” land.<sup>38</sup> Of course, this is why most explorer-naturalists were there in the first place: to generate information about the region, making it “known” in a way that would solve the problem of its isolation,

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Grosso,” 198. Smith described the Pantanal as a “wide desert of land and water.” See Smith, *Do Rio de Janeiro a Cuyaba*, 268. See also, Florence, *Viagem fluvial*, 131.

<sup>35</sup> “Que consolo!” Hercules Florence, *Viagem fluvial*, 146. See also, Waehneltdt, “Exploração da provincia de Mato Grosso,” 198.

<sup>36</sup> “Tornaram-se mais comuns as aves.” Castelnau, *Expedição as regiões centrais*, 289.

<sup>37</sup> I borrow the phrase “ghosts of empires past” from Samuel Truett, whose analysis of the writings of travelers in the nineteenth century U.S.-Mexico borderlands mirrors the case of the Pantanal in many ways. Samuel Truett, *Fugitive Landscapes: The Forgotten History of the U.S.-Mexico Borderlands* (New Haven: Yale University Press, 2008), 13-32. For descriptions of abandoned ranches and settlements, see Florence, *Viagem fluvial*, 246 and Joaquim Ferreira Moutinho, *Noticia sobre a provincia de Matto Grosso seguida d’um roteiro da viagem da sua capital a S. Paulo* (São Paulo: Typographia de Henrique Schroeder, 1869), 172.

<sup>38</sup> Descriptions of the Pantanal as an “unknown” land were common and only grew in popularity in the twentieth century. For a nineteenth century example, see Castelnau, *Expedição as regiões centrais*, 234.

facilitating permanent, productive settlements and the efficient movement of goods and people between it and other populated centers throughout Brazil. First, however, they had to come to terms with the fact that the Pantanal was not an “empty space” lying in wait for industrious pioneers to settle it and profit from its resources.<sup>39</sup> As discussed in the introduction, the Pantanal was a crossroad for diverse indigenous populations that occupied territory between the Cerrado, the Amazon, the Chiquitanía, and the Chaco biomes.

Although, like most other indigenous people throughout the Americas, their populations had been much reduced, by the nineteenth century they were still an active presence in the region, exercising territorial claims that often clashed with those of colonists. Indeed, despite its apparent lack of “civilized” settlements, the Pantanal was still a human landscape, and almost every explorer made a point to visit its inhabitants, observe them, and collect information about their societies and cultures.

In 1848, Joaquim Alves Ferreira, the *Director Geral dos Indios* in Mato Grosso, estimated the indigenous population of the province at just over 13,000 people.<sup>40</sup> Of these individuals, almost 6,000 occupied territory in the Pantanal.<sup>41</sup> Ferreira further subdivided the

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<sup>39</sup> Zephyr Frank, “The Brazilian Far West: Frontier Development in Mato Grosso, 1870-1937,” (PhD diss., University of Illinois at Urbana-Champaign, 1999), 7.

<sup>40</sup> By way of comparison, in 1842 officials in the province of Chiquitos, Bolivia, estimated the indigenous population at 18,391. See Cynthia Radding, *Landscapes of Power and Identity: Comparative Histories in the Sonoran Desert and the Forests of Amazonia from Colony to Republic* (Durham: Duke University Press, 2005), 252-253.

<sup>41</sup> Given the difficulty of carrying out a census and, thus, generating reliable statistics, the number of indigenous people in the entire province of Mato Grosso at the time was probably much higher. It is likely that Ferreira relied heavily upon reports from travelers and military officials who lived among indigenous people. In the 1870s, João Severiano da Fonseca estimated the indigenous population of the province at 9,000 people. João Severiano da Fonseca, *Viagem ao redor do Brasil, 1875-1878*, vol. 1 (Rio de Janeiro: Typ. de Pinheiro & Cia., 1880), 18. Ferreira’s 1848 report is republished in S. Cardoso Ayala, Feliciano Simon, and Joaquim Augusto da Costa Marques, *Álbum Graphico do Estado de Mato Grosso* (Hamburg: n.p., 1914), 88-97. For the population chart, see page 89.

indigenous inhabitants of Mato Grosso into three groups: “those who live in villages under our supervision; those who continue to live in their primitive state of independence but who still have relations with us; and those who are hostile to us and show themselves unwilling to change their modes of existence.” With the exception of the Bororo of São Lourenço (or *Coroados*), who continued to raid in the northern Pantanal, all other indigenous peoples in the Pantanal fell into one of the first two categories.<sup>42</sup> Ferreira’s system of categorization reflected a particular way of thinking about indigenous people, common at the time, which organized them according to the degree to which they interfered with colonization, settlement, and trade. It also spoke to a reality that had come to define life in the Pantanal by the nineteenth century: in contrast to the colonial period, travelers and officials no longer thought of indigenous people as threats to security and commerce in the region.

By the post-independence period, the four major indigenous “nations” that still migrated seasonally to the Pantanal were people of *Guaykurú*, *Guaná*, *Guató*, and Bororo descent. According to travelers and officials, the most numerous Guaykurú subgroup were the *Kadiwéu* who lived in the environs of Forte Coimbra along the Paraguay River but ranged east to the military outpost of Miranda and as far west as the Chaco. Other less numerous subgroups lived in *aldeias* near the military garrisons of Miranda and Albuquerque in the southern Pantanal. People of Guaná descent included the *Kinikinau*, the *Terena*, and the *Laiana*, all of whom lived “*aldeiado*” near the garrison of Miranda where they interacted regularly with soldiers and priests who sought to protect both their bodies and their souls. Officials identified the Guató as the only remaining indigenous group to lead a permanent

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<sup>42</sup> “...as que vivem aldeiadas sob nossas vistas; as que, vivendo ainda no primitivo estado de independência, todavia relacionam-se conosco; e as que nos hostilizam e mostram-se não disposta a mudarem seu modo de existência.” S. Cardoso Ayala, et. al., *Álbum Graphico*, 94-96.

existence within the Pantanal itself. They followed a migratory pattern, occupying temporary ranches during the dry season but spending most of their time in canoes during the flood stage. Travelers encountered them most frequently near the confluence of the Paraguay and São Lourenço Rivers and near the margins of the Lagoa Uberaba and Lagoa Gaiba near the Bolivian border.

Due to a history of protracted conflict with settlers in the Pantanal's northern transition zone, Bororo populations were fragmented and dispersed into three different subgroups by the nineteenth century. The *Bororo da Campanha* occupied territory between Descalvados, Cáceres, and the Jauru River near the Bolivian border. Multiple accounts note the presence of Bororos in San Matías, the Bolivian frontier garrison, where they interacted with people of Chiquitano descent, settlers, and soldiers. The *Bororo do Cabaçal* occupied territory in the Cabaçal River basin, along the trail that connected Vila Maria (Cáceres) to Vila Bela, the old gold mining town on the banks of the Rio Guaporé.<sup>43</sup> The *Bororo do São Lourenço*, or Coroados, remained "unpacified" for most of the nineteenth century, raiding and trading in the northeast part of the Pantanal between Coxim and Cuiabá. Other indigenous populations with a long-standing presence in the Pantanal included the *Chamacoco* (or *Ishir*), a subgroup of people of the Zamucoan language group, who migrated between the Chaco and the Bahia Negra in the southern Pantanal, as well as people of Chiquitano descent, some of whom lived permanently in the region and others who migrated seasonally between it and the Chiquitanía region of eastern Bolivia.<sup>44</sup>

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<sup>43</sup> The present-day town of Cáceres was known as Vila Maria from its founding in 1778 until 1874 when its name was changed to São Luis de Cáceres, in honor of its founder Luís de Albuquerque de Melo Pereira e Cáceres. Since 1938 the town has been known simply as Cáceres.

<sup>44</sup> A great deal of anthropological and ethnohistorical work has focused on these indigenous peoples. While most nineteenth century travelers interacted with the indigenous peoples of the Pantanal, their primary purpose was not to conduct ethnological research. Some of the earliest people to describe their societies and cultures for



Although officials such as Ferreira organized the Pantanal's indigenous populations neatly into groups, citing population statistics and identifying fixed settlements and territorial ranges, nineteenth century descriptions provide evidence of a much more dynamic and complicated reality. First, because of a long history of captive-taking and intermittent raiding in the region, it is unlikely that all indigenous communities were composed of a single, distinct "ethnic" group or, for that matter that they were of entirely "indigenous" descent. The Guaykurú – especially the Kadiwéu – were most well-known among the region's indigenous populations for the practice of raiding and taking captives. Regarded throughout the Paraguay River basin as "*indios cavaleiros*," the Kadiwéu adopted the use of horses during the colonial period and made regular raids on Spanish and Portuguese settlements and forts throughout the eighteenth and into the nineteenth century, periodically forming and breaking alliances with troops and officials from both empires.

In the early 1800s, they formed an uneasy truce with the Portuguese empire but occasional raids continued.<sup>45</sup> According to travelers, the Kadiwéu regularly took captives from the Guaná and Chamacoco peoples, incorporating them into their own populations. In the 1840s, Hercules Florence met a twelve year old girl of Portuguese descent who was taken captive with her mother by the Kadiwéu as an infant. She had been recently rescued by a

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the purpose of ethnological research include Guido Boggiani, who studied the Kadiwéu and Chamacoco; Karl von den Steinen, who studied the Bororo; Julio Koslowsky, who studied the Bororo and Guató; and Max Schmidt, who studied the Guató. Twentieth century anthropologists include Erland Nordenskiöld, Branislava Susnik, Darcy Ribeiro, Edgar Roquette-Pinto, Herbert Baldus, Claude Lévi-Strauss, Vincenzo Petrullo, Alfred Métraux, and Kalervo Oberg, among others. Cynthia Radding provides the most detailed scholarship on the post-independence history of the Chiquitano Indians. Radding, *Landscapes of Power and Identity*, 242-53, 279-92, 298-311.

<sup>45</sup> For a brief synopsis of this history, see Moutinho, *Notícia sobre a provincia de Matto Grosso*, 195-98. For a more recent history, see Antonio Pádua Bertelli, *Os fatos e os acontecidos com a poderosa e soberana nação dos índios cavaleiros guaycurús no Pantanal do Mato Grosso, entre os anos de 1526 até o ano de 1986* (São Paulo: Uyara, 1987).

Brazilian military official who took her to Cuiabá but she was unable to speak Portuguese.<sup>46</sup>

In the northern Pantanal, the ethnologist Karl von den Steinen met a young man of Portuguese descent who had been taken captive as a boy by the Bororo of São Lourenço in 1873. The Bororo practice of taking captives from settler populations apparently predates the 1870s.<sup>47</sup> When Hercules Florence visited the Fazenda Jacobina (between Cuiabá and Cáceres at the northern edge of the Pantanal) in the 1820s, he learned that the Bororo conducted regular raids, taking captive African slaves who lived there.<sup>48</sup>

These examples challenge the idea that the indigenous populations of the Pantanal could be separated into easily defined and discrete ethnic groups.<sup>49</sup> They also illustrate a second fact about indigenous populations with which officials in the region continued to grapple during the nineteenth century. The extreme and persistent mobility of groups pertaining to various indigenous “nations” continuously undermined the territorial claims of the Brazilian empire and neighboring republics, a constant reminder that their sovereignty

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<sup>46</sup> Florence, *Viagem fluvial*, 120-24. For more descriptions of Kadiwéu and Guaná warfare, shifting alliances, and practices of captive-taking, see Bossi, *Viage pintoresco*, 28-34; Castelnau, *Expedição as regiões centrais*, 244-49; and S. Cardoso Ayala, et. al., *Álbum Graphico*, 88-89.

<sup>47</sup> Karl von den Steinen, *Entre os aborígenes do Brasil Central*, trans. by Egon Schaden (São Paulo: Departamento de Cultura, 1940), 577 and 579. Von den Steinen also noted that Brazilian officers routinely had children with Bororo women who were then incorporated into the community which, as he noted, also included a small Portuguese-speaking population with varying skin tones.

<sup>48</sup> Florence, *Viagem fluvial*, 222-223. Florence also noted the ethnic diversity, created by intermarriage, of Miranda and Albuquerque. See page 135.

<sup>49</sup> Multiple ethnohistorical studies document and analyze the practice of interethnic captive taking in frontier regions across the Americas. For two examples among many, see James Brooks, *Captives and Cousins: Slavery, Kinship, and Community in the Southwest Borderlands* (Chapel Hill: University of North Carolina Press, 2002); Julianna Barr, *Peace Came in the Form of a Woman: Indians and Spaniards in the Texas Borderlands* (Chapel Hill: University of North Carolina Press, 2007); Mary Karasch, “Catechism and Captivity: Indian Policy in Goiás, 1780-1889,” in Hal Langfur, ed., *Native Brazil: Beyond the Convert and the Cannibal, 1500-1900* (Albuquerque: University of New Mexico Press, 2014), 198-224; and Raúl José Mandrini, “Transformations: The Rio de la Plata During the Bourbon Era,” in Julianna Barr and Edward Countryman, eds., *Contested Spaces of Early America* (Philadelphia: University of Pennsylvania Press, 2014), 142-62.

was not absolute. This was one of the major rationales behind the militarization of the border region – symbolized by the establishment of forts, patrols, and permanent detachments of soldiers at strategic points – that began in the eighteenth century and continued into the nineteenth century. Such measures were effective to some extent, especially in the southern Pantanal, where Paraguayan and Brazilian troops made regular patrols in the border region to stave off land encroachment and to limit the activities of the Kadiwéu.<sup>50</sup>

At the same time, however, the writings of naturalists and explorers make it clear that mobility was part of the fabric of life for indigenous people in the Pantanal. Despite official efforts to settle them in *aldeias*, indigenous peoples traveled broadly, both within the Pantanal and into adjacent biomes. For example, while travelers most often encountered the Kadiwéu and Guaná subgroups in the southern Pantanal between the Paraguay and Miranda River watersheds, they also traveled frequently to Cuiabá and Asunción to trade or conduct business with government officials. Even the Guaná, who were known for their sedentary lifestyle and the practice of agriculture, traveled broadly throughout the Pantanal and eventually established a settlement on the outskirts of Cuiabá.<sup>51</sup> Despite a history of violent clashes with Portuguese colonists dating to the eighteenth century, the Bororo (and subgroups thereof) continued to travel across the northern Pantanal between Coxim and the Bolivian border. When Florence passed through the region in the 1820s, his expedition met a

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<sup>50</sup> Almost every travel narrative mentions these dynamics at play, especially in the southern Pantanal near Brazil's border with Paraguay where Brazilian and Paraguayan troops regularly patrolled the region in the years leading up to the Paraguayan War. See, for example, Castelnau, *Expedição as regiões centrais*, 293. Castelnau also mentioned a Guaná man who was prevented from visiting relatives in Paraguay because Brazilian military officials would not give him permission to travel across the international boundary. *Ibid.*, 250.

<sup>51</sup> Castelnau, for example, attempted to contract laborers from the Guaná settlement of Cuiabá to transport supplies and row boats during his first of two expeditions through the Pantanal. *Ibid.*, 224-26.

group of Bororo people at the Fazenda Jacobina. After parting ways, Florence and his expedition continued on to Vila Maria (Cáceres) only to meet the same group six days later.<sup>52</sup>

Although provincial administrators hoped that increased contact and trade would set indigenous people on the path toward civilization and encourage permanent settlement, in many cases such interactions increased patterns of mobility. This was especially true for the Guató. Unlike most other indigenous peoples, by the nineteenth century, the Guató had not established a semi-permanent settlement near a military garrison or town. Instead, they “roam[ed] the rivers” of the Pantanal, especially the Paraguay River between Lagoa Gaiba and Corumbá. Travelers recognized the Guató for their expert ability to navigate the changing watercourses of the Pantanal and for their skill in hunting and fishing, especially their use of long spears (*zagaías*) to hunt and kill jaguars.<sup>53</sup> Descriptions of the Guató and their propensity to flag down and trade with vessels on the Paraguay River are ubiquitous. In exchange for wild animal skins and wax, they sought food items such as flour, salt, *aguardente* and tools such as fishing hooks, iron spear heads, and axes.<sup>54</sup> While they readily engaged in trade with merchants and travelers, the Guató continued to live according to the rhythms of flood and drought in the Pantanal. Castelnau described their mobile way of life as such:

In the middle of vast *pantanaís* or other flooded lands, one sees a small clearing in the middle of the *mata*. There in the shelter of a crude shed is where the Guató makes his home, with a few gourds and jaguar furs his only furniture...They spend almost their whole lives in canoes, which is where the entire family seeks refuge when rising flood waters inundate their homes, forcing them to spend weeks at a time without setting a foot on the earth.<sup>55</sup>

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<sup>52</sup> Florence, *Viagem fluvial*, 216 and 233.

<sup>53</sup> Ibid., 146-50.

<sup>54</sup> Leverger, “Roteiro da navegação,” 216-18.

<sup>55</sup> “No meio de vastos pantanaís ou de terras inundadas, avista-se uma pequena clareira em plena mata. Ali, sob tosco barracão, instala o Guató a sua morada; por mobiliário apenas algumas cabaças e peles de onça...Passam

Along with hunting, fishing, and trading, some Guató families also cultivated bananas and manioc and collected “wild rice” that “[grew] in abundance” during the flood season.<sup>56</sup>

Indeed, the mobility of the Guató and other indigenous people in the Pantanal was integrally related to their access to resources which was, in turn, conditioned by the seasonal ecology of the Pantanal. While the intent of *aldeias* was to settle indigenous people in a fixed location, military and provincial officials were constantly frustrated by the continued practice of seasonal migrations of their charges, who left for months at a time to hunt, fish, or collect. For example, in the 1880s the provincial government of Mato Grosso established a military colony for recently “pacified” Bororo at a site called Teresa Cristina near the São Lourenço River. While administrators hoped that colonists would devote themselves to the cultivation of agricultural products, von den Steinen found the crops abandoned and observed that Bororo men continued to leave the colony during the rainy season for hunting trips that lasted weeks at a time. Unimpressed by the colony’s lack of industry and the inability of the officials to discipline the Bororo, von den Steinen concluded, “If laziness and amusements on the part of both officials and Indians was the goal of this colony, then this one would serve as a brilliant model.”<sup>57</sup>

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quase toda a vida em suas canoas, onde se refugiam com a família inteira quando as enchentes lhes alagam os ranchos, forçando-os a passar semanas inteiras sem descer em terra.” Castelnau, *Expedição as regiões centrais*, 321.

<sup>56</sup> “arroz selvagem” Florence, *Viagem fluvial*, 130, 149, 156-57. Descriptions of wild rice refer to *Oryza latifolia* and *Oryza glumaepatula*, two species of wild rice that grow in the Pantanal. In light of arguments that Judith Carney has made about the relationship between slavery and rice cultivation in the Americas, it would be interesting to research the history of the origins and dispersal of wild rice in the Pantanal. Judith Carney, *Black Rice: The African Origins of Rice Cultivation in the Americas* (Cambridge: Harvard University Press, 2002).

<sup>57</sup> “Se preguiça e divertimentos por parte dos funcionários e índios eram o objeto da colônia – então esta poderia servir de brilhante modelo.” Von den Steinen, *Os aborígenes*, 583, 613.

A similar situation prevailed in the military settlements in the southern Pantanal. During his visit to the Terena *aldeia* near Miranda, Castelnau observed that the men had been gone for a month collecting honey used to concoct liquor that the community used during rituals. He also noted the difficulty of obtaining Guaná laborers in Albuquerque (near Corumbá) for his expedition because most of the men had been gone for months collecting ipecac root near the headwaters of the Paraguay River, more than 1,000 kilometers away. During the dry season, others took to the rivers where they caught thousands of *lambari* fish that they processed into oil.<sup>58</sup> Bartolomé Bossi observed that subgroups of the Guaykurú nation of the southern Pantanal occupied themselves with fishing along the Paraguay River during the dry season but during the flood stage when fish were scarce they moved inland, south and west into the Chaco.<sup>59</sup> The Chiquitano of eastern Bolivia made seasonal trips between the old mission towns and the Pantanal to trade, sell cattle, and collect salt.<sup>60</sup> In all of these ways, local geographies in the Pantanal were linked to practices of subsistence and trade that emphasized mobility and made seasonal use of the resources of the Pantanal and neighboring regions.

The nineteenth century was a period of transition in the Pantanal, a time when post-independence states and empires took active steps to explore and colonize frontier zones across the Americas. As we have seen, a key way in which new governments sought to learn about frontier territories was by patronizing expeditions. Through their writings, travelers

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<sup>58</sup> Castelnau, *Expedição as regiões centrais*, 285-86 and 303. The lambari is a species of tetra (*Astyanax fasciatus*) common in the Pantanal. For an excellent overview of fish in the Pantanal, see Irineu Fabichak, *A pesca no pantanal de Mato Grosso* (São Paulo: Livraria Nobel, 1978).

<sup>59</sup> Bossi, *Viage pintoresco*, 33.

<sup>60</sup> Alcide D'Orbigny, *Viaje a la América Meridional*, Tomo III (Buenos Aires: Editorial Futuro, 1945), 1186, 1190-91.

and naturalists recreated an image of the Pantanal as an isolated region with vast economic potential and strategic importance. At the same time, they confronted a local landscape where the efforts of previous empires to settle the region and profit from its resources remained incomplete. They encountered a place where indigenous people utilized multiple subsistence strategies, leading mobile lifestyles that capitalized on opportunities for labor and trade but also drew upon the natural resources provided by the Pantanal and nearby zones.<sup>61</sup> Such activities clashed with the goals of government officials in Brazil and Bolivia, who hoped that established settlements and regulated commerce would promote the consolidation of territorial sovereignty on sparsely populated frontiers. The tenuous sovereignty of central governments over these regions became even clearer in 1864, when Paraguayan troops invaded the province of Mato Grosso, sparking one of South America's most devastating wars. After 1870, Bolivian and Brazilian officials embarked upon a four-decade process of boundary surveys and demarcation.<sup>62</sup> The following section examines how ecology and geopolitical disparities in power shaped the process of boundary demarcation between Brazil and Bolivia in the Pantanal region from 1870 to the first decade of the twentieth century.

### **Geopolitical Landscapes**

On June 22, 1845, after traveling the entire distance of the Pantanal, from south to north, and into the headwaters of the upper Paraguay River, Francis de Castelnau crossed from Brazil into Bolivian territory. He was immediately struck by the change in the landscape. While in Brazil, he traversed navigable rivers and lush, "virgin" tropical forests

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<sup>61</sup> The development of a regional economy is the subject of chapter two of this dissertation.

<sup>62</sup> The classic work on the diplomatic history of territorial boundaries between Bolivia and Brazil is by Humberto Vázquez Machicado, who served as the head official for the binational boundary commission between Brazil and Bolivia during their ongoing efforts to demarcate their shared border in the twentieth century. Humberto Vázquez Machicado, *Para una historia de los límites entre Bolivia y el Brasil* (La Paz: Librería Editorial "Juventud," 1990).

with fertile soil. As soon as he crossed the “imaginary line” and set foot in Bolivia, Castelnau was confronted with a land of extremes “that sometimes [had] enough water from tropical rains and other times [suffered] terrible droughts. During several months of the year, in fact, one can only traverse the part of Bolivia closest to the border in a canoe and, in other seasons, caravans must carry with them all water necessary for consumption.”<sup>63</sup> Castelnau was traveling through the transition zone between the Paraguay River basin, the Amazon River basin, and the Chiquitanía, a tropical dry forest that covers a large part of southeastern Bolivia. Passing through in June, during the dry season, the lack of water in the regions he traversed and the sparse vegetation led him to describe the region as sterile. His travels carried him to several isolated mission towns founded during the colonial period, where Catholic (now secular) parish priests still held sway, shepherding flocks of industrious indigenous peasants. He contrasted them favorably with the Brazilian settlements he visited, which he described as “miserable and dirty” and full of black people.<sup>64</sup> For Castelnau, the differences between Bolivia and Brazil seemed to be inscribed both on the people and on the landscape itself.

Indeed, for nineteenth century travelers, borders mattered. With some notable exceptions, Castelnau included, before the 1870s few people explored both the Brazilian and Bolivian portions of the Pantanal. In the 1830s, the French geographer and naturalist Alcide d’Orbigny traveled broadly throughout South America, including Argentina, Brazil, Paraguay, Chile, Bolivia, Peru, Ecuador, and Colombia. Although one of his tasks during his

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<sup>63</sup> “...una región que a veces tiene abundante agua por las lluvias tropicales y a veces, sufre terribles sequías. Durante varios meses del año, en efecto, solo se puede recorrer en canoa la parte de Bolivia más cercana a la frontera y, en las otras estaciones, las caravanas deben llevar con ellas el agua necesario para su consumo.” Francis de Castelnau, *En el corazón de América del Sur (1843-1847)* (La Paz: Editorial Los Amigos del Libro, 2001), 45-46.

<sup>64</sup> Castlenau, *En el corazón de América del Sur*, 49.



time in eastern Bolivia was to determine for the national government a suitable port of access to the Paraguay River, geopolitical restrictions kept him from conducting a thorough survey. Instead of searching for inlets or tributaries along the Brazilian-controlled Paraguay River and following their courses, d'Orbigny was forced to reconnoiter from Bolivian territory. After tapping the knowledge of local informants and traversing small rivers that emptied into swamps, d'Orbigny made a recommendation to the government that amounted to an educated guess.<sup>65</sup>

The history of international borders between Brazil and Bolivia dates to 1777 when Spain and Portugal signed the Treaty of San Ildefonso. The original line of demarcation followed the course of the Paraguay River, imposing an artificial dividing line in the middle of the Paraguay River basin. Over the next century, however, Portuguese – and later Brazilian – settlers continued to push west into territory claimed by Spain (and later Bolivia). While Bolivian efforts to populate and control space in lands bordering the Paraguay River date to the first decade following independence, by the 1860s the republic had still not established a permanent settlement in the region. During the last third of the nineteenth century, key events in South America – the Paraguay War and the War of the Pacific – made the task of legitimizing claims to ports on the Paraguay River extremely urgent in the eyes of Bolivian statesmen. This section uses archival and published sources to examine how international treaties, boundary commissions, and the ecology of the Pantanal combined to limit Bolivia's access to the Paraguay River. By the 1910s, after a series of boundary surveys dating to the 1870s, international borders in the Pantanal were finalized, ensuring that

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<sup>65</sup> Alcide d'Orbigny, *Viaje a la América Meridional*, 1202-03.

Bolivia's access to global commerce on its eastern borders would always be mediated by Brazil.

The Pantanal's legacy as a pre-Columbian and colonial frontier figured prominently during the post-independence era. With territorial control of the region already assured through the establishment of military outposts and settlements on both sides of the Paraguay River – colonial treaties notwithstanding – the Brazilian empire held a distinct advantage over newly-independent Bolivia. With precarious access to international networks of trade and commerce on both its western and eastern borders, the Bolivian state's preoccupation with frontier expansion and territorial control began early. Like many Latin American countries, post-independence Bolivia struggled with a protracted period of political unrest and economic stagnation. Although scholars have rightly pointed to the dominance of the highlands in post-independence Bolivian society, the continued power of creole elites depended upon their ability to control national sources of wealth and to maintain access to commercial networks that could carry this wealth to the international market.<sup>66</sup> While most trade and commerce during this period was oriented to the Pacific Coast ports of Arica and Antofagasta, the Bolivian government initiated its first colonization projects in eastern Bolivia as early as 1832. Throughout the nineteenth century, the Bolivian government granted large tracts of land to individuals and firms in an effort to colonize and populate its far-flung eastern frontier. Statesmen believed that thriving agricultural colonies – aligned with the interests of the government – would reinforce the post-independence government's claim to a region that was only nominally part of Bolivia. The broader geopolitical goal,

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<sup>66</sup> For a widely-used historical overview of Bolivian history that focuses almost exclusively on the highlands, see Herbert Klein, *A Concise History of Bolivia* (Cambridge: Cambridge University Press, 2003).

however, was to reestablish Bolivia's claims to the Paraguay River, thus opening the region to foreign commerce.<sup>67</sup>

Yet, this renewed interest in Bolivia's eastern frontier could not undo over three centuries of neglect on the part of a colonial administration squarely focused on the Andes. The region's historical legacy as a political frontier endowed postcolonial Bolivia with a territory characterized by a sparse and mobile population of rural laborers with closer ties to economic and cultural networks in Brazil and Paraguay than to national centers of power in Sucre and La Paz. Throughout the nineteenth century, both Brazil and Paraguay resisted Bolivian colonization efforts and denied Bolivia's claims to territory along the Paraguay River.

Nevertheless, statesmen persisted in their efforts, charged by their belief in the vast economic potential of Bolivia's eastern territories. Between 1832 and the 1860s, the Bolivian government supported – either directly or indirectly – multiple efforts to establish permanent settlements on its eastern borders with Brazil and Paraguay.<sup>68</sup> In each case, the designs of

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<sup>67</sup> On the reasons for Bolivia's renewed interest in its eastern territories, see Valerie Fifer, *Bolivia: Land, Location and Politics since 1825* (Cambridge: Cambridge University Press, 1972), 170-71 and Pilar García Jordán, *Cruz y arado, fusiles y discursos: la construcción de los Orientes en el Perú y Bolivia, 1820-1940* (Lima: Instituto Francés de Estudios Andinos/Instituto de Estudios Peruanos, 2001).

<sup>68</sup> For more detail on Oliden, see Valerie Fifer, *Bolivia*, 170-75; Jordán, *Cruz y arado*, 270-71; and Radding, *Landscapes of Power*, 298-302. As Radding notes, most of what we know about the Otúquis concession is from Moritz Bach, *Descripción de la nueva provincia de Otúquis en Bolivia*, 2a ed. (Buenos Aires: J. Peuser 1885). Around the same time, Sebastián Ramos, a Bolivian official with a long and infamous history in the contested borderland between Brazil, Bolivia, and Paraguay, established the *Tremedal* colony in the northern Pantanal near the confluence of the Paraguay and Jaurú rivers and the present-day Bolivian border town of San Matías. The colony included both Bolivian and Brazilian military officials from garrisons on both sides of the border, as well as mestizos, fugitive slaves from Brazil, and Chiquitano and Bororo laborers who engaged in small-scale agriculture, trade, and cattle ranching. Although the colony's diverse population reflected a transnational region where mobility reigned and international borders mattered little, for officials like Ramos, the Tremedal colony served as a way for him to advance the interests of the Bolivian state, enhancing his own status within the government administrative apparatus in the process. In his correspondence, Ramos appealed to his superiors' attempts to legitimize claims to antiquity in the region, noting that the location of his colony corresponded closely to the boundary markers originally placed by royal cartographers during the treaties of Madrid and San Ildefonso in 1750 and 1777. By the 1840s, however, Brazilian territorial claims had expanded well beyond these boundaries, a reality evident in the colony's diverse and transient population and of which Ramos was

colonists and statesmen clashed with competing claims for territorial control from Brazil and Paraguay as well as local geographies and ecologies that militated against permanent settlement and economic productivity. The most striking – and earliest – case is the Otúquis land concession, granted by the Bolivian Congress to Manuel Luis de Olíden on November 5, 1832, just seven years after Bolivia achieved its independence from Spain. Born in Buenos Aires, Olíden was an affluent merchant in Upper Perú (Bolivia) in the years before the wars for independence. For his support of the independence cause, the postcolonial Bolivian republic granted him twenty five square leagues of land (over 77,000 hectares or 190,000 acres) in the southeastern corner of the new national territory. Officials believed that two rivers – Tucavaca and Otúquis – crisscrossing the territory and emptying into the Rio Negro, a tributary of the Paraguay, would provide the colony (and Bolivia, by extension) direct access to foreign markets. Acting on positive initial reports about the region, Olíden devoted years to attract colonists and establish the infrastructure necessary for the colony to function. However, later surveys revealed that the Otúquis River did not flow into the Paraguay River. Instead, it flowed into a low-lying, unnavigable swamp as did so many other rivers and streams in the Pantanal. This prospect caused considerable anxiety for Olíden, who sent his son José León de Olíden on an expedition down the Paraguay River – through Brazilian territory – to reconnoiter from the other direction. Unable to locate the mouth of the Rio Negro, Olíden drifted south into territory claimed by Paraguay, only to be greeted with

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well aware. While he knew that a Bolivian colony in contested territory on the western edge of the Pantanal would appeal to the Bolivian state and, perhaps, attract financial and military support, Ramos's interests were much more pragmatic and local. In the broader picture, however, the Tremedal colony failed to solve the enduring question of access to the Paraguay River and a substantial Bolivian presence in the northern Pantanal failed to materialize. For the story of Ramos who, as governor of the province of Chiquitos during the independence era, attempted to annex it to Mato Grosso, see Radding, *Landscapes of Power*, 283-284. Radding notes the fluidity of economic, cultural, and political landscapes that defined the region during the post-independence period and suggests that the Tremedal colony represented this reality in microcosm. *Ibid.*, 304-307.

cannon fire and forced to return to Bolivia. Faced with such bad news, Olíden must have been acutely aware of how geopolitical tension over territory and the shifting ecology of the Pantanal had contributed to the demise of his ambitious venture.

These early attempts to colonize and populate Bolivia's eastern frontier did not significantly change the balance of power between Bolivia, Brazil, and Paraguay in their rival claims to territory in the upper Paraguay River basin. Instead, they maintained preexisting geopolitical power relationships that had developed since the colonial period. Although Bolivia negotiated throughout the nineteenth century for navigational rights to the Paraguay River, it met stiff resistance from Paraguay which sought to restrict the free flow of international trade, despite pressure from economic powers such as the United States, Britain, and France. The death of President José Gaspar Rodríguez de Francia in 1840 helped to alleviate many of Paraguay's isolationist policies, opening up the river to free navigation, but continued tension with neighboring countries led to the Paraguayan War, which lasted from 1864 to 1870.<sup>69</sup>

Binational efforts between Brazil and Bolivia to survey and demarcate their shared border in the Pantanal began in 1867 when diplomats signed the Treaty of Ayacucho. Several months later, Emeterio Villamil de Rada traveled overland from La Paz across the eastern slope of the Andes to the lowland town of Santa Cruz de la Sierra (Santa Cruz). A well-traveled politician, diplomat, and man of letters, Villamil had been named earlier that year as Bolivia's first post-independence boundary commissioner. When he arrived in Santa Cruz in August 1868, Villamil learned that the destruction of Corumbá at the hands of Paraguayan

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<sup>69</sup> On navigational rights and international pressure from Britain, the United States, and France, see Fifer, *Bolivia*, 178-79 and Boris Fausto, *A Concise History of Brazil* (Cambridge: Cambridge University Press, 2014), 119-20.

troops and the continued instability of the region had delayed the arrival of his Brazilian counterparts. Taking advantage of the delay, Villamil decided to travel across the province of Chiquitos to its capital, Concepción, during which time he intended to explore and conduct surveys in the territories near Bolivia's shared border with Brazil.<sup>70</sup>

In April 1869, eight months after he left Santa Cruz, Villamil was still in Concepción and the labor of demarcation had still not commenced. During the intervening months, however, Villamil managed to conduct multiple exploratory surveys in the mountain ranges of eastern Bolivia, which he reported had high potential as sources of gold and other valuable minerals. He also spent time following the courses of rivers to determine whether or not they flowed into the Paraguay River and he laid the groundwork for a road-building project between Santo Corazón – an important ranching hub near the Brazilian border – and Corumbá. He assured his superiors that he soon planned to travel to Corumbá where he would meet his Brazilian counterparts in July to start the process of demarcation.<sup>71</sup>

Villamil's next correspondence with the Ministry of Foreign Relations did not come until November 1869 from Rio de Janeiro. Demarcations had still not begun and, this time, Villamil felt obligated to provide a detailed explanation. Since his last correspondence, Villamil planned to reach Corumbá by traveling south from Concepción through San José and Santiago de Chiquitos. However, Villamil deemed the conditions on this route too "dangerous" and instead opted for an itinerary that carried him east along a portion of the proposed line of demarcation to San Matías at the Brazilian border. From there, Villamil

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<sup>70</sup> Emeterio Villamil de Rada to Ministerio de Relaciones Exteriores de Bolivia (RREE), Santa Cruz de la Sierra, 19 August 1868, "Comisión Demarcadora entre Bolivia y el Brasil, con cuatro informes, Años 1868 a 1879," LIM-1-219, Archivo del Ministerio de Relaciones Exteriores y Culto (AMRE-Bo), La Paz, Bolivia.

<sup>71</sup> Villamil to RREE, Concepción, 25 April 1869, LIM-1-219, AMRE-Bo.

traveled to Cuiabá, the provincial capital of Mato Grosso, before descending by river through the Pantanal to Corumbá.<sup>72</sup> Finding no Brazilian boundary officials there, Villamil traveled onward, descending the Paraguay River to the Rio de la Plata via Asunción, Corrientes, and Buenos Aires en route to Rio de Janeiro.<sup>73</sup>

Although he achieved few tangible results in his first year as boundary commissioner, Villamil's circuitous journey from La Paz to Rio de Janeiro provided his first encounter with the Pantanal landscape. His assessment of the economic potential of the region for Bolivia was not optimistic. According to Villamil, "almost the entire western bank of the Paraguay [was] swampy, malarial, unhealthy, and unfit for agricultural production, ranching, or industry." Although they contained rich pastures during the dry season, almost every territory near Bolivia's border with Brazil – from Bahia Negra in the south to San Matías in the north – was "regularly flooded for eight to nine months" each year. He concluded that Bolivia had inherited a territory of "deserts and inaccessible regions, unsurveyable by land and of no value." He reasoned that his time would be better spent opening roads between isolated settlements than trudging through an uninhabited swamp, "an inaccessible den for jaguars," to place boundary markers that few people would ever see.<sup>74</sup> It was more than clear to him that the labor of demarcating the border would be anything but easy.

Villamil's experiences in the Pantanal and those of his predecessors highlight several interrelated factors – some natural, some geopolitical – that influenced the results of demarcation. First, although boundary officials often wished otherwise, the seasonal rhythms

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<sup>72</sup> In Cuiabá, Villamil met and consulted with Augusto Leverger who shared his knowledge of the Paraguay River and its hydrography.

<sup>73</sup> Villamil to RREE, Rio de Janeiro, 29 November 1869, LIM-1-219, AMRE-Bo.

<sup>74</sup> Ibid.

of the Pantanal dictated their progress. Because seasonal flooding made demarcation difficult, if not impossible, officials usually had a window of six months (from June to November) when the terrain was dry enough to calculate geographical coordinates and fix boundary markers. Local events, foot-dragging, and poor communication only compounded these problems. For example, political upheaval resulting from the Paraguayan invasion of Mato Grosso interrupted Villamil's journey to the border in August 1868. By the time he finally reached Corumbá the next year, his Brazilian counterparts were missing and he was forced to travel to Rio de Janeiro to await further instructions. By then, the rainy season had begun and it was too late to begin surveying the boundary. As a result, the first act of demarcation was not concluded and signed until September 1870 almost two years after Villamil began his job as commissioner.

Luis Ipiña, who served as the head official for Bolivia's second boundary commission with Brazil in the first decade of 1900s, shared a similar experience. After being named commissioner in April 1905, Ipiña spent most of the year traveling between Bolivia, Buenos Aires, and Rio de Janeiro to finalize the instructions for carrying out the terms of the new treaty. By the time he was able to meet with his Brazilian colleagues it was November and the coming rainy season meant that the labor of demarcation would have to wait until at least April 1906. He also noted his frustration with Brazilian officials and their lack of urgency in the matter.<sup>75</sup> Ipiña finally reached Corumbá in May 1906 only to discover that a revolution had erupted in the province, interrupting navigation on the Paraguay River and telegraph communications between cities. Finally resigned to the fact that demarcations would likely take longer than he expected, Ipiña decided to make himself useful in the meantime. If

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<sup>75</sup> Luis Ipiña to RREE, Buenos Aires, 16 August 1905 and Ipiña to RREE, Buenos Aires, 15 November 1905, "Comisión de límites con el Brasil, 1905-1909," LIM-1-190, AMRE-Bo, La Paz.



demarcations were delayed until 1907, he planned to conduct exploratory surveys of the border region. Although he managed to complete a preliminary survey of the region surrounding Puerto Suárez, by 1907 Ipiña resigned his position as commissioner and the task eventually fell under the responsibility of the General and ex-president José M. Pando.<sup>76</sup>

As the cases of Villamil and Ipiña demonstrate, the seasonal rhythms of the Pantanal, coupled with inter-commission politics, inefficient communication, and local events led to significant delays in demarcation which, in turn, resulted in high rates of turnover. Indeed, it took over ten years for the first binational commission to fully demarcate and legalize the shared boundary between Bolivia and Brazil. During this period, three separate commissioners worked to delimit and formalize boundaries on various sections of the border.<sup>77</sup> Over twenty five years later, in 1905, Ipiña's boundary commission began the process a second time in order to implement new demarcations outlined in the Treaty of Petrópolis.<sup>78</sup> This time, it only took four years to complete the task, but the process was still punctuated by multiple transitions in leadership.<sup>79</sup>

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<sup>76</sup> For the history of political upheaval and revolution in Mato Grosso during the First Republic, see Valmir Batista Corrêa, *Coronéis e bandidos em Mato Grosso, 1889-1943* (Campo Grande: Editora UFMS, 1995). Ipiña to RREE, Corumbá, 12 July 1906; Ipiña to RREE, Puerto Suárez, 6 September 1906; and Juan B. Vaudry to RREE, Puerto Suárez, 25 January 1907, LIM-1-190, AMRE-Bo, La Paz.

<sup>77</sup> After surveying and demarcating the territory between Bahia Negra and the Laguna Mandioré, Villamil resigned. Juan Mariano Mujia managed to complete demarcations beyond the northern edge of the Pantanal at San Matías, acting as commissioner in 1875 and 1876, before resigning for health reasons. John B. Minchin and Manuel José Jiménez spent most of the last two years in border regions north of the Pantanal in the Amazon River basin. Before the acts of demarcation were finalized, Minchin undertook one final trip in 1878 through the entire region of demarcation to double check calculations of geographical coordinates and to verify that boundary markers had indeed been placed in accordance with the provisions of the treaty. Juan Mariano Mujia to RREE, Corumbá, 12 June 1875 and Mujia to RREE, Corumbá, 15 February 1876, LIM-1-219, AMRE-Bo.

<sup>78</sup> Brazil and Bolivia signed the Treaty of Petrópolis (1903) in the aftermath of Brazil's annexation of Acre territory in the Amazon basin. The treaty upheld Brazil's territorial sovereignty over Acre in exchange for several concessions favorable to Bolivia. I discuss the treaty in more detail in the next sections.

<sup>79</sup> As mentioned above, Ipiña served as commissioner from 1905 to early 1907. Before José Pando was named as the replacement in 1908, Juan Vaudry, the chief engineer, served as provisional commissioner.

High turnover and lack of continuity in leadership resulted in conflicts of opinion and fragmented knowledge about the region to be demarcated. For example, Villamil believed that the Laguna Cáceres offered the best possibility for the establishment of a Bolivian port with access to the Paraguay River and was pessimistic about the suitability of the Bahia Negra to the south. However, his successor Juan Mariano Mujia disagreed and, in 1875, proposed a completely new survey of the Bahia Negra to determine its suitability for a port.<sup>80</sup> Three years later, the next commissioner, John Minchin, rejected both the Bahia Negra and Laguna Cáceres as locations for the establishment of a port. Both, in his opinion, were “no more than pasture lands,” fed by temporary canals that depended upon the seasonal rise of the Paraguay River and were, thus, unsuitable for navigational purposes. After traveling the entire length of the region of demarcation, Minchin concluded that a third location on the banks of the Laguna Gaiba offered the most promising site for a port.<sup>81</sup>

Due, in part, to the fragmented nature of knowledge production about the region, the debate was still not resolved in the first decade of the twentieth century when a second boundary commission conducted new surveys of the entire region. Luis Ipiña, the first commissioner, was convinced that none of the locations in question would ever achieve the status of a true port because the hydrological characteristics of the Pantanal meant that none could receive commercial vessels year-round.<sup>82</sup> José Pando, on the other hand, was much more optimistic. He believed that all three locations – Bahia Negra, Laguna Cáceres, and

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<sup>80</sup> Villamil to RREE, Rio de Janeiro, 29 November 1869 and Mujia to RREE, Corumbá, 8 July 1875, LIM-1-219, AMRE-Bo, La Paz.

<sup>81</sup> Juan B. Minchin to RREE, Corumbá, 5 April 1878 and “Informe sobre la demarcación de los límites entre Bolivia y el Brazil presentado al Supremo Gobierno por Juan B. Minchin,” La Paz, 11 November 1878, LIM-1-219, AMRE-Bo, La Paz.

<sup>82</sup> Ipiña to RREE, Corumbá, 12 July 1906, LIM-1-190, AMRE-Bo, La Paz.

Laguna Gaiba – offered favorable conditions for the establishment of a Bolivian port and that dredging of the access canals linking them to the Paraguay River would enable year-round navigation of commercial vessels.<sup>83</sup> These conflicts of opinion were a direct result of the high turnover in leadership caused, in part, by the inherent challenges of demarcating a wetland region far removed from centers of power in Bolivia and Brazil.

The lack of continuity in leadership coupled with Bolivian officials' collective deficit of knowledge about the region to be demarcated (in comparison with their Brazilian counterparts) put them at a distinct disadvantage during the process of fixing boundaries. Bolivian commissioners were well aware of this fact. Even before the process of demarcation was underway, Emeterio Villamil criticized the Bolivian and Brazilian diplomats who agreed upon territorial boundaries with virtually no personal knowledge of the region in question.<sup>84</sup> Mujia echoed this criticism in a letter to the sub-prefect of Chiquitos, claiming that the terms of the treaty were "erroneous and ambiguous" and failed to reflect realities on the ground.<sup>85</sup> While the first boundary commission eventually achieved its goal, subsequent surveyors relied heavily upon the reports and maps they produced, many of which were scattered between repositories and government ministries as a result of the discontinuity of leadership. For example, when Luis Ipiña undertook the task of organizing

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<sup>83</sup> José Pando to RREE, Corumbá, 14 September 1908 and Pando to RREE, Corumbá, 7 October 1908, LIM-1-190, AMRE-Bo, La Paz.

<sup>84</sup> Villamil to RREE, Rio de Janeiro, 29 November 1869, LIM-1-219, AMRE-Bo, La Paz.

<sup>85</sup> In this letter, Mujia referred to demarcations on the northern edge of the Pantanal which, following the provisions of the treaty, would have annexed the Bolivian settlement of San Matías to Brazil. Mujia to Sub-prefecto de Chiquitos, Corumbá, 15 February 1876, LIM-1-219, AMRE-Bo, La Paz.

and carrying out the second boundary commission, he spent over one year tracking down all of the maps he needed to examine before he could begin.<sup>86</sup>

However, the consequences of this knowledge deficit extended beyond these minor frustrations. In 1885, less than ten years after Bolivian and Brazilian officials ratified the demarcation of their shared border, Juan Francisco Velarde, then Bolivian ambassador to Brazil, called into question the results, alleging that Brazilian officials had taken advantage of their superior knowledge of the region to cheat Bolivia out of land. He blamed this situation partially on the lack of financial support, resources, and manpower provided by the Bolivian government, but mostly on the “incompetence” of the Bolivian commissioners, who conducted no preliminary topographical surveys and were thus at the mercy of the Brazilian commission and their recommendations. As a result, the Bolivian commission had been “forced to assent to the opinion of the Brazilian [officials] who, with excessive anticipation, an abundance of resources, and lavish representation sought to serve the interests of their country to the detriment of ours.”<sup>87</sup> Specifically, he claimed that the Brazilian commission had intentionally chosen the seasons of most extensive flooding to survey the temporary lakes that formed the border between Brazil and Bolivia in the Pantanal region. While the treaty stipulated that these lakes were to be divided in half in equal area, Velarde believed that placing the markers during flood stage enabled Brazil to claim more land than was rightfully theirs. He also claimed that Brazilian officials took advantage of the Bolivian commissioners’ ignorance of local place names, falsely identifying toponyms to extend the

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<sup>86</sup> Ipiña to RREE, Buenos Aires, 14 June 1905 and Ipiña to RREE, Corumbá, 26 July 1906, LIM-1-190, AMRE-Bo, La Paz.

<sup>87</sup> Juan Francisco Velarde to RREE, Rio de Janeiro, 30 November 1885, LIM-1-219, AMRE-Bo, La Paz.

line further into Bolivian territory.<sup>88</sup> However, because the acts of demarcation had already been ratified, there was little Bolivia could do.

Luckily, Bolivia soon won a second chance to correct the “irregularities” produced as a result of the first commission when diplomats signed the Treaty of Petrópolis in 1903. Along with the regions surrounding their four shared lakes, one of the goals of the Bolivian commission was to re-survey the lowland region between the Laguna Cáceres and Bahia Negra to the south. According to the 1867 treaty, the line of demarcation was to follow the course of the main channel of the Bahia Negra to its terminus, before continuing north and east in a straight line through the middle of the Laguna Cáceres. However, the terminus of the channel varied depending upon the season. During the wet season, it was navigable for a much further distance than during the dry season. According to Luis Ipiña, during the first commission Brazilian officials took advantage of this knowledge and arranged for the demarcation to take place during the dry season. In 1906 he accused his Brazilian counterparts of attempting this trick a second time when they advocated for April, the end of the flood season, as the best date to begin surveys of the Bahia Negra.<sup>89</sup> By this time, however, Bolivian officials had achieved a better understanding of the region and were, thus, less dependent upon the Brazilian officials.

These examples demonstrate how knowledge of the landscape – or lack thereof – had geopolitical consequences in the Pantanal. They also highlight how disparities of power

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<sup>88</sup> Ibid. Velarde likely reached this conclusion from a report produced by John Minchin, who determined that Bolivia lost a total of twenty six square miles of territory on the Lagunas Mandioré and Gaiba as a result of demarcations that favored Brazil. Minchin noted that the reason the boundaries were changed was because rising flood waters made it impossible to place a marker at the designated spot. See Juan B. Minchin, “Informe sobre los mapas levantados por los dos primeros comisiones mixtas demarcadores de límites, entre el Imperio del Brazil y la República de Bolivia según el tratado del 27 de Marzo de 1867,” 6 March 1877, LIM-1-219, AMRE-Bo, La Paz.

<sup>89</sup> Ipiña to RREE, Buenos Aires, 28 March 1906, LIM-1-219, AMRE-Bo, La Paz.

between Brazil and Bolivia determined, in large part, the capabilities and actions of government representatives in the region. The task of demarcation was much less urgent for Brazil than it was for Bolivia. Brazilian officials benefitted from the presence of established towns, military outposts, solid control of the upper Paraguay River and its tributaries, and first-hand knowledge of the region produced by explorers, naturalists, and provincial officials. As mentioned above, they also benefitted from better financial resources and the manpower to sustain the necessary labors of demarcation. In contrast, Bolivian officials were expected, not only to demarcate the border, but to undertake expeditions across eastern Bolivia to calculate geographical coordinates for watercourses, mountain ranges, settlements, and possible ports and to make observations on eastern Bolivia's potential for commercial development, agricultural production, mining production, and colonization.

The correspondence and reports produced by Bolivian officials also make it clear that they held much different goals than their Brazilian counterparts and that these goals evolved in response to broader geopolitical events between 1870 and the first decade of 1900. For example, while both commissions placed a premium on establishing a viable port with access to the Paraguay River, this task gained much more urgency during the second commission. Following the War of the Pacific (1879-1883), Bolivia lost unrestricted commercial access to ports on the Pacific coast of South America and, as a result, the Bolivian state increasingly turned its attention to the establishment of commercial outlets in the Amazon and Paraguay River basins.

One of the concessions of the Treaty of Petrópolis was the annexation of elevated land to Bolivia on the banks of the Canal Tamengo, which linked the Laguna Cáceres with the Paraguay River. Diplomats hoped that the establishment of a national port – Puerto Sucre

– there would help to solve Bolivia’s problem of commercial access to international markets on its eastern frontier. In 1908, Commissioner José Pando conducted a comprehensive topographical survey of the area in question and concluded that the location provided the necessary conditions for a port. While he admitted that the Canal Tamengo was likely too narrow to receive ships as large as those docked at Corumbá, Pando believed that dredging and removal of 16,000 cubic meters of earth could make it navigable year-round.<sup>90</sup> He also believed that the location was ideally situated to serve as a stop on the projected railroad that would eventually link São Paulo and Santa Cruz de la Sierra.<sup>91</sup> Pando’s observations represent the growing faith on the part of public officials in the power of technology to overcome the natural challenges posed by the Pantanal flood regime.

Along with repeated efforts to determine the best location for the establishment of a port, Bolivian boundary officials undertook multiple expeditions across eastern Bolivia to catalog its topography, social geography, and economic potential. For example, during the first boundary commission Juan B. Minchin embarked on an expedition that lasted for over six months and carried him throughout eastern Bolivia.<sup>92</sup> On top of his duties as a boundary official, Minchin produced a report with detailed information about the countryside that he traversed, including geographical coordinates of towns, mountains, and streams as well as the

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<sup>90</sup> This is one of the earliest proposals in Bolivian documentation making reference to the need to alter the environment of the Pantanal to better suit the needs of humans in the region. Brazilian documents make earlier references to draining wetlands and constructing earthworks to accommodate railroads in the region. José Pando to RREE, Corumbá, 14 septiembre 1908, Comisión de Limites con el Brasil, 1905-1909, LIM-1-190, AMRE-Bo, La Paz.

<sup>91</sup> This goal was not achieved until much later, in the 1950s. I discuss the history of the binational railway commission in chapter three.

<sup>92</sup> Aside from surveys of the shared border region between Brazil and Bolivia (between San Matías in the north and Bahia Negra in the south), Minchin also traveled extensively through the province of Chiquitos between Puerto Suárez and Santa Cruz.

most promising terrain for cattle ranching, agricultural production, and mining. He also developed recommendations for the best transportation routes between Santa Cruz de la Sierra, eastern Bolivia's most important commercial center, and potential ports on the Paraguay River.<sup>93</sup>

Indeed, the Bolivian state regarded the knowledge produced by its first boundary commission as the foundation for further settlement and development in its eastern territories. Reports produced by boundary commissions directly inspired subsequent efforts to improve transportation infrastructure between Santa Cruz de la Sierra and the Brazilian border and to establish settlements and towns along the Paraguay River. One well-known example was the foundation of Puerto Suárez in 1875 on the banks of the Laguna Cáceres by Miguel Suárez Arana. Suárez also labored to survey and build a road between the new settlement and Santa Cruz with the hope that it would make eastern Bolivia's commerce more efficient.<sup>94</sup> Others, such as Antonio Quijarro, sought to promote the Laguna Gaiba as the most suitable entrepôt for eastern Bolivia's foreign commerce. Relying upon reports submitted by John Minchin in the 1870s, Quijarro argued that a route from the Laguna Gaiba offered a more direct route to the interior of Bolivia, traversing a region of higher ground that was free from periodic flooding. In 1888, Quijarro produced a formal recommendation for

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<sup>93</sup> Juan B. Minchin, "Informe sobre la demarcación de los límites entre Bolivia y el Brazil presentado al Supremo Gobierno por Juan B. Minchin," La Paz, 11 November 1878 and "Informe sobre ciertos estudios en el oriente de Bolivia," La Paz, 22 November 1878, LIM-1-219, AMRE-Bo, La Paz. In 1907, chief engineer Juan Vaudry undertook an expedition with a similar itinerary and similar goals. Apart from the requisite calculations of geographical coordinates, Vaudry established a meteorological station at Puerto Suárez and generated an extensive, annotated catalog of natural resources in the region. He also paid close attention to the problem of labor scarcity, providing population estimates for major towns and an exhaustive list of inhabited and uninhabited settlements (including geographical coordinates) that he encountered on his journey from the border to Santa Cruz. Juan Vaudry, "Informe del Ingeniero Vaudry sobre las cabeceras del río Tarvo," Buenos Aires, 28 March 1907, LIM-1-191, AMRE-Bo, La Paz.

<sup>94</sup> For useful background on the history of Puerto Suárez, see Cristián Suárez Arana, *Exploraciones en el oriente boliviano*, edited by Daniel Dory (Santa Cruz de la Sierra: Fundación NOVA, 2007).



the establishment of an agricultural colony at Laguna Gaiba and the construction of a railroad linking the colony with the rest of eastern Bolivia. In 1900, Quijarro supported the expedition of Henry Bolland who completed a comprehensive survey of the region surrounding the Laguna Gaiba and established Bolivia's first settlement there.<sup>95</sup>

## Conclusion

In December 1928, diplomats from Bolivia and Brazil signed a third boundary treaty, the latest effort on the part of both republics to revise and refine the border dividing their national territories. A few months later, Julian Duguid embarked upon the expedition through the Pantanal and across eastern Bolivia that inspired him to write *Green Hell*. While boundary officials, naturalists, and explorers spent years surveying the region and producing statistics and information about the region, the publication of Duguid's popular account in 1931 demonstrated the continued power of the myth of isolation to influence popular perceptions of the Pantanal. Despite over a century of exploration the Pantanal remained, in the minds of many, an unknown land.

This chapter demonstrated how history, ecology, and geopolitical dynamics influenced the creation of knowledge about the Pantanal during the nineteenth century. As a result of their explorations, nineteenth century naturalists conveyed an image of the Pantanal as a beautiful and unknown region where nature reigned supreme. In doing so, they recreated a persistent myth of isolation with origins in the colonial period. At the same time, however,

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<sup>95</sup> Antonio Quijarro and Emilio Reus, *Bolivia, construcción de ferrocarriles, y establecimiento de colonias agrícolas en la región oriental: propuestas formalizadas* (Buenos Aires: J. Peuser, 1888) and Henry Bolland and Antonio Quijarro, *Exploraciones practicadas en el Alto Paraguay y en la laguna Gaiba por el capitán de marina Enrique Bolland* (Buenos Aires: Compañía Sud-Americana de Billetes de Banco, 1901). Efforts to explore and re-establish colonies in the region of Bahia Negra also continued during the last third of the nineteenth century. Moritz Bach, *Descripción de la nueva provincial de Otuquis en Bolivia* (Buenos Aires: J. Peuser, 1888). Originally published in 1842, the 1888 edition includes a preface (pages v-xvi) by Antonio Quijarro with useful background on the history of colonization attempts in the Bahia Negra.

they believed that their explorations served a valuable purpose for the governments they represented. Indeed, the goal of exploration was to generate information and statistics that governments could use to promote commerce, settlement, and control of the region. This was especially true of boundary officials who spent years traversing the Pantanal landscape – from the 1870s onward – to demarcate the borders between Brazil and Bolivia. While Brazilian officials benefitted from a longer history of occupation in the border region and established political and economic networks, Bolivian officials struggled to overcome their government’s tenuous control of the region. Thus, the task of the Bolivian commission extended beyond implementation of the terms of the 1867 boundary treaty. The Bolivian government also expected officials to explore its poorly integrated eastern territories and to determine the most suitable location for a port on the Paraguay River.

Along with their reflections on the natural resources and economic potential of the Pantanal, naturalists and explorers also devoted considerable attention to the indigenous inhabitants of the region.<sup>96</sup> While colonial accounts depicted the Pantanal’s diverse indigenous populations as obstacles to settlement and trade, by the mid-nineteenth century travelers were optimistic about their potential to serve as “productive” members of local society. Their descriptions typically ignored the long history of protracted violence between settlers and indigenous populations in the Pantanal and its adjacent regions. By the late nineteenth century, many indigenous people had been incorporated into social, economic, cultural, and political systems dominated by people of European descent and ethnographers increasingly regarded them as “degraded” by the vices of civilization.

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<sup>96</sup> Significantly, boundary officials mentioned indigenous populations with much less frequency than naturalists and other explores, fixated as they were on describing and quantifying the topographical features of the region.

The Paraguayan War of 1864 to 1870 marked a turning point in the history of the Pantanal region. At the conclusion of the war, the Paraguay River was opened up to commercial navigation and international demand increased for a variety of regional products, especially rubber, *yerba mate*, and *ipecacuanha*. The increasing worldwide demand for natural resources and new technologies such as the steamship and the railroad facilitated the movement of people, goods, and pathogens into the region at unprecedented scales. By the early 1900s, international boundaries were finally completed, agreed upon in treaties signed by officials representing national governments on the Brazilian littoral and the highlands of Bolivia. The Pantanal, it seemed, had finally been incorporated into international and national networks of commerce and systems of governance. People of indigenous descent increasingly joined the ranks of a wider rural population who labored for ranchers and other political elites who came to dominate landholding and extractive industries in the broader Pantanal.

At the same time, however, local geographies persisted in spite of such rapid changes after 1870. While rural populations adapted and responded to the growing commercial importance of ranching and extractive industries in the region, they continued to draw upon practices of mobility and trade that were rooted in a much longer history of subsistence. The next chapter focuses on the period between 1870 and 1930, using ecology as a lens through which to examine the development of a regional economy in the Pantanal that transcended national borders. Although explorers and boundary officials interpreted the region's sparse population and abandoned settlements as signs of its decadence and isolation, a closer examination of labor and subsistence strategies reveals the importance of mobility to rural populations who synchronized their lives with the seasonal rhythms of the Pantanal.

## **CHAPTER 2**

### **Landscapes in Motion: Labor, Commerce, and Ecology in the Pantanal Borderlands**

In August 1886, Modesto Moscoso arrived in Bolivia's remote, eastern frontier after a long journey from La Paz. Newly appointed by the national government, Moscoso was on his way to Corumbá, Brazil, to establish Bolivia's first consular office in a town that was quickly establishing itself as a major inland port. His first impression of the region, however, was not favorable. Due to a recent outbreak of cholera, the Brazilian government imposed a sanitary cordon, temporarily restricting the movement of people and goods between Corumbá and eastern Bolivia. Brazil's control over access to the Paraguay River – recently formalized through the efforts of a binational boundary commission – meant that Bolivian merchants had no way to ship their products to market. Moscoso himself was forced to remain in Santiago de Chiquitos – over 200 kilometers from Corumbá – until the threat of the epidemic passed. To make matters worse, the province of Chiquitos was in the midst of a prolonged drought and many farmers had lost entire crops and were unable to travel to Corumbá for provisions.<sup>1</sup>

Over the next few years, Moscoso developed a clearer picture of the challenges that the region posed for the Bolivian government in its efforts to populate, govern, and profit from its lowland territories. First, Brazil's control over access to the Paraguay River

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<sup>1</sup> Letter from Modesto Moscoso to Ministerio de Relaciones Exteriores (RREE), Santiago de Chiquitos, 6 Agosto 1886, 26 diciembre 1886, and 15 enero 1887, Consulados de Bolivia en Norte y Sud América, Año de 1887 a 1889, CONS 2-E-14, Archivo del Ministerio de Relaciones Exteriores de Bolivia (AMRE-Bo), La Paz, Bolivia.

presented a serious obstacle for commercial and agricultural development in eastern Bolivia. Instead of shipping export goods directly from a port on Bolivian soil, merchants were forced to undergo inspections at customs offices in Corumbá, a time-consuming process which made their businesses less profitable. Second, eastern Bolivia suffered from a severe labor shortage. Because of increased opportunities for work on ranches, sugar plantations, and the rubber regions of Brazil, a significant number of the region's already sparse population were migrating outside of Bolivia. Moscoso estimated that as many as 1,500 Bolivians resided in the neighboring Brazilian state of Mato Grosso in 1888. Finally, the region suffered from inadequate infrastructure. Only a few isolated military garrisons existed to police Bolivia's shared border with Brazil over a distance that spanned hundreds of kilometers. There were few roads to put these outposts in communication, most of which were impassable during the rainy season. As a result, banditry, cattle rustling, contraband, and unregulated migration were rampant.<sup>2</sup>

Moscoso would not be the last consular official to lament the Bolivian government's tenuous control over its southeastern frontier. In the 1940s, over half a century later, the most common complaints that consular officers registered continued to revolve around labor,

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<sup>2</sup> For Moscoso's estimate of Bolivian nationals resident in Mato Grosso, see Moscoso to RREE, Corumbá, 1 enero 1888, Consulados de Bolivia en Norte y Sud América, Año de 1887 a 1889, CONS 2-E-14, AMRE-Bo, La Paz. For Moscoso's assessment of the challenges facing eastern Bolivia, see Moscoso to RREE, 14 Marzo 1887, Corumbá; Moscoso to RREE, 30 junio 1887, Corumbá; and Moscoso to RREE, 28 octubre 1887, Corumbá, Consulados de Bolivia en Norte y Sud América, Año de 1887 a 1889, CONS 2-E-14, AMRE-Bo, La Paz. Despite these challenges, Moscoso was optimistic about the region's potential to contribute to the growth and prosperity of the Bolivian nation. With proper planning and government investment, Moscoso believed that eastern Bolivia and its fertile territories were ripe for a transformation that would establish it as South America's premier agricultural center. To replace the region's current "lazy and inert" population of rural laborers, Moscoso advised the government to set in place incentives for European immigrants who wished to establish agricultural colonies. Moscoso to RREE, 30 junio 1887, Corumbá, Consulados de Bolivia en Norte y Sud América, Año de 1887 a 1889, CONS 2-E-14, AMRE-Bo, La Paz.

contraband, and lack of government support.<sup>3</sup> Despite decades of efforts to implement measures to control and profit from the movement of people and goods in the region – including the establishment of agricultural colonies and customs offices, an increased military presence, and, by the 1940s, the construction of a railroad – by the 1940s eastern Bolivia’s frontier region had yet to live up to its potential. Bolivian citizens continued to migrate east into Brazil for work and many never returned. To make matters worse, merchants from both sides of the border continued to conduct a steady and unregulated trade in regional commodities such as rubber (*Hevea brasiliensis*), *ipecacuanha* (*Carapichea ipecacuanha*), and cattle products, all of which represented lost revenue for government coffers.

This chapter uses new sources from Bolivian archives to examine the creation of a regional network of subsistence and trade that drew upon the resources of the Pantanal and its rivers as well as the resources of adjacent ecological zones. By the 1880s, central South America was becoming increasingly integrated into the global economy and demand for extractive commodities in the broader region provided wage labor opportunities that drew rural inhabitants across international borders in search of subsistence. Operating under the logic of state formation and economic development, Bolivian officials in the region bemoaned this state of affairs, which they regarded as a lack of civic duty and patriotism. They believed that the labor and economic activities of Bolivian citizens should benefit the nation and implored their government to establish customs houses, military detachments, and police forces to better regulate the border region.

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<sup>3</sup> For one example among many, see the report authored by Reyes Maldonado (Bolivian vice-consul in Cáceres) on January 24, 1946, particularly the section entitled “Frontera desguarnecida.” Letter from Reyes Maldonado to RREE, 24 enero 1946, Cáceres, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1946, CONS-2-E-569, AMRE-Bo, La Paz.

Rural populations, on the other hand, responded to more immediate needs than a sense of national belonging. Opportunities for labor and subsistence in the broader Pantanal region depended, in part, upon the ecological characteristics of the region. The seasonal rhythms of flood and drought in the Pantanal provided ideal conditions for ranching which, by the late nineteenth century, had become the region's most important economic activity. At the same time, however, ranch labor was a highly seasonal activity, especially in the Pantanal where flooding made year-round work impossible. As a result, many ranch workers migrated during the flood season to areas of higher ground on the perimeter of the floodplain. The Pantanal's location at the transition of three major ecological zones – Amazon, Cerrado, and Chaco – facilitated the growth of several valuable commodities, the extraction of which provided multiple opportunities for seasonal laborers. I argue that, while government officials viewed the region's flood-prone topography, sparse population, and poor infrastructure as impediments to economic progress and development, local populations used these same things to their advantage, adopting a mobile way of life that drew upon the resources of the Pantanal and neighboring ecological zones. Between 1870 and 1930, the Pantanal – with its dominant ranching economy, abundant natural resources, and navigable rivers – developed into a natural center of gravity for a transnational network of commerce and labor that adapted to but was not defined by the region's integration into the global market.

### **Historiography and Historical Context**

The economic history of the period between 1870 and 1930 in the broader Pantanal is well-documented, especially for the portions contained within the Brazilian state of Mato Grosso. After the Paraguay War ended in 1870, the Paraguay River opened to international

commerce which, coupled with the advent of steamships, facilitated the movement of people and goods through the region at unprecedented scales. These developments aided the integration of the Pantanal into regional, national, and international markets where demand for commodities such as ipecacuanha, *yerba mate* (*Ilex paraguariensis*), and rubber was growing. By the turn of the century, Corumbá, a port city situated on the Paraguay River in the southern Pantanal, had become an important shipping center in the interior of South America and a major outlet for Amazonian rubber before the establishment of the Madeira-Mamoré railroad in 1912.<sup>4</sup> The frenzied pace of commerce attracted merchants and immigrants from both near (neighboring South American republics) and far (Europe) so that, by the 1910s, Corumbá and Cuiabá, the state capital, hosted consular officials from ten different nations.<sup>5</sup>

Improvements in transportation infrastructure also spurred the development of the cattle industry. While cattle served as a tool for occupying space for early settlers, by the first few decades of the twentieth century, ranching dominated the regional economy and ranchers established themselves as the state's landed elite.<sup>6</sup> Rising demand – mainly for hides and dried beef – in Argentina, Uruguay, and urban Brazil gave ranchers in Mato Grosso ready markets for their products, despite the difficulties of distance and transportation. The completion of the *Estrada de Ferro Noroeste do Brasil* (EFNB) in 1914 enabled ranchers and

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<sup>4</sup> For a concise description of the economic history of Mato Grosso between 1870 and the 1930s, see Zephyr Frank, "Exports and Inequality: Evidence from the Brazilian Frontier, 1870-1937," *The Journal of Economic History* 61:1 (March 2001): 37-58.

<sup>5</sup> For a list of consular officials in Corumbá in the 1910s, see S. Cardoso Ayala, Feliciano Simon, and Joaquim Augusto da Costa Marques. *Álbum gráfico do Estado de Matto-Grosso (E.E.U.U. do Brazil)* (Corumbá, Brazil: s.n, 1914), 307.

<sup>6</sup> For a classic study on the shift from extractivism to cattle ranching in Mato Grosso, see Fernando Tadeu de Miranda Borges, *Do extrativismo à pecuária: algumas observações sobre a história econômica de Mato Grosso, 1870 a 1930* (São Paulo: Scortecci, 2001).



middlemen to ship goods – including live cattle – to market much more efficiently which, when coupled with soaring global demand for rubber and beef during the First World War, ushered in a period of economic prosperity for the region’s landholding elite. After the war, global demand for rubber plummeted and the market for cattle products returned to prewar levels, plunging the region into an economic crisis from which it never fully recovered.<sup>7</sup>

In the Pantanal, however, ranching continued to dominate the local economy and increasingly defined the rhythms of life for the rural populations of the region. As historian Robert Wilcox explains, widespread flooding in the Pantanal forced ranchers to acquire vast properties to ensure both access to pasture and refuge from rising floodwaters. At least in the early years of the industry, ranchers made little effort to string fences or build corrals and, as a result, semi-feral cattle ranged freely across the landscape. Moreover, it was not until the 1940s and 1950s that ranchers made any regular effort to introduce veterinary technology – such as treatment for parasites or the administration of vaccines – to improve the health of their livestock. As a result, ranching was a highly seasonal activity and “less labor-intensive” than other rural pursuits.<sup>8</sup>

The most active period of ranch labor fell during the dry season, between May and January, when most roundups, branding, castration, and slaughter took place. Since most ranches in the Pantanal did not export live animals between 1870 and 1930, ranch hands also processed a variety of cattle products for export (such as dried beef, hides, tallow, hair, and horns). According to Wilcox, in the Pantanal there was an informal division of labor between cowboys (*vaqueiros*), who often worked year-round and dealt exclusively with

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<sup>7</sup> Frank, “Exports and Inequality,” 43 and Robert Wilcox, “Cattle Ranching on the Brazilian Frontier: Tradition and Innovation in Mato Grosso, 1870-1940,” (PhD diss., New York University, 1993), 179-81.

<sup>8</sup> Wilcox, “Cattle Ranching on the Brazilian Frontier,” 417, 424, 426.

livestock, and ranch hands (*camaradas*), who worked seasonally under contracts with ranchers to perform semi-skilled labor such as fence repair, hide tanning, meat processing, and other maintenance tasks. Although some rural laborers lived permanently on ranch properties as tenants (*agregados*) or squatters, ranch labor in the Pantanal was marked by a high degree of mobility and, as a result, labor shortages were “a constant lament” for ranchers.<sup>9</sup> Instead of staying put, seasonal workers often left to seek employment in “other sectors of the regional economy” and vaqueiros moved frequently between different ranches throughout the region.<sup>10</sup>

This chapter builds upon Wilcox’s research to examine the activities of rural laborers during periods away from the ranch. It extends the period of study beyond 1930 to examine how the regional economy responded to diminishing demand for products such as rubber, ipecacuanha, and cattle products.<sup>11</sup> A focus on labor mobility reveals how interactions between a variety of social groups shaped the contours of subsistence and commerce in the broader region. The dynamism and resilience of the local economy during the first half of the twentieth century resulted from the region’s geographic location and the ecological

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<sup>9</sup> For a discussion of ranch labor in Mato Grosso and the Pantanal, see *Ibid.*, 417-43.

<sup>10</sup> Wilcox, *Ibid.*, 417, 442-43. Wilcox offers a brief description of other regional industries, such as sugar cane production in the north and the extraction of yerba mate in the south, but argues that these industries depended upon access to a year-round and dependent labor force. For another study of rural laborers in the Pantanal – specifically *ribeirinhos* – see Ana Carolina da Silva Borges, *Nas margens da história: meio ambiente e ruralidade em comunidades “ribeirinhas” do Pantanal Norte, 1870-1930* (Cuiabá, MT: EdUFMT, 2010). Borges’s work also includes a fascinating discussion of the various labels given to rural laborers in the Pantanal and the blurred distinctions between them.

<sup>11</sup> As mentioned above, most studies on the social and economic history of the Pantanal focus on the period between 1870 and 1930. One exception to this trend is the work of Robert Wilcox, who examines the evolution of the ranching industry both during and after the era of prosperity. See, for example, Robert Wilcox, “Cattle and the Environment in the Pantanal of Mato Grosso, Brazil, 1870-1970,” *Agricultural History* 66 (1992): 232-56; “‘The Law of the Least Effort’: Cattle Ranching and the Environment in the Savanna of Mato Grosso, Brazil, 1900-1980,” *Environmental History* 4:3 (July 1999): 338-68; and “Ranching Modernization in Tropical Brazil: Foreign Investment and Environment in Mato Grosso, 1900-1950,” *Agricultural History* 82 (2008): 366-92.

characteristics of the broader region. While it is clear that macroeconomic forces also shaped the lives of rural workers, this chapter examines how rural populations used mobility as a tool, exercising a degree of agency that made use of both international and ecological borders.

## **Ecotones**

As discussed in chapter one, the Pantanal's network of rivers made it a key artery for Europeans and missionaries who sought to explore and settle the interior of South America beginning in the sixteenth century. In the eighteenth century, *bandeirantes* used the Paraguay River and its tributaries to reach the gold and diamond mines of Mato Grosso. By the late eighteenth century, the Pantanal had developed into a contested imperial borderland at the center of Portuguese and Spanish claims to territorial control over South America's immense lowland expanses. The Treaties of Madrid (1750) and San Ildefonso (1777), although contested over several decades, formalized Portuguese control over most of the Pantanal region and established a geopolitical border that remained in place after independence.

The Pantanal is (and was) also an ecological borderland, or *ecotone*, situated in the transition zone between four major South American biomes.<sup>12</sup> In the northwestern portion of the upper Paraguay River basin, the Pantanal merges with and contains elements of the flora of the Amazon basin; in the east and southeast, the upland headwaters feeding into the Pantanal contain flora characteristic of the Cerrado and Atlantic forest; and the western fringes of the floodplain merge into the Chaco Boreal and Chiquitania dry forests of

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<sup>12</sup> An ecotone is a "transition zone of tension between two or more [plant] communities." See Ralph W. Tiner, *Wetland Indicators: A Guide to Wetland Identification, Delineation, Classification, and Mapping* (Boca Raton, FL: Lewis Publishers, 1999), 34.

neighboring Paraguay and Bolivia.<sup>13</sup> According to wetland ecologist Ralph Tiner, ecotones are characterized by “an increased variety and diversity of organisms.” This is especially true for a wetland region as large as the Pantanal, “where environmental conditions change gradually over considerable distances, creating transitional communities where plant species from adjacent habitats intermix.”<sup>14</sup>

The ecological diversity of these zones of transition between the Pantanal and neighboring biomes created natural conditions for the growth of several different plants species that merchants began to commodify during the nineteenth and twentieth centuries in response to their growing value on international markets. For example, the northern transition zone between the Pantanal and the Amazon basins was home to one of the largest and densest stands of ipecacuanha in the Americas. Extraction of this medicinal root to meet consumer demand dates to the early nineteenth century and its export constituted one of the first profitable economic ventures in the state of Mato Grosso after independence.<sup>15</sup> Several different species of rubber-producing trees also grew in the northern transition zone.

Although their latex was never as valuable as the famous *Hevea brasiliensis* of the Amazon

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<sup>13</sup> C.J.R. Alho, “The Pantanal,” in Lachlan H. Fraser and Paul A. Keddy, eds., *The World’s Largest Wetlands: Ecology and Conservation* (Cambridge: Cambridge University Press, 2005), 225.

<sup>14</sup> Tiner, *Wetland Indicators*, 35. As discussed in chapter one, nineteenth century naturalists were well aware of these zones of transition that separated the Pantanal floodplain from areas of higher elevation. During their travels, many remarked on the predominance of various species of palm in the ecotones between the Pantanal and neighboring biomes. By the twentieth century, Brazilian botanists began a more systematic effort to catalog Mato Grosso’s plant species and to map the “phyto-physiognomic” characteristics of its landscape. See, for example, F.C. Hoehne, *Phytophysionomia do Estado de Matto-Grosso e ligeiras notas a respeito da composição e distribuição da sua flora* (São Paulo: Companhia Melhoramentos de São Paulo, 1923). One of the first natural scientists to use the term “ecotone” to describe an ecological transition between the Pantanal and neighboring regions was the Brazilian botanist Henrique P. Veloso, who traveled through the region in 1946 with the support of the Instituto Oswaldo Cruz. Henrique P. Veloso, “Considerações gerais sobre a vegetação do Estado de Mato Grosso: notas preliminares sobre o Pantanal e zonas de transição,” *Memórias do Instituto Oswaldo Cruz* 45:1 (1947): 259-61.

<sup>15</sup> Henrique P. Veloso, “As condições ecológicas da *Cephaelis ipecacuanha* Rich,” *Memórias do Instituto Oswaldo Cruz* 45:2 (1947), 362-363.

basin, during World War II they achieved enough economic value to attract the attention of merchants and tappers.<sup>16</sup> The southeastern and southern transition zones – in land between the Paraguay and Parana rivers – created ideal growing conditions for yerba mate, which developed into one of southern Mato Grosso's most important export commodities during the nineteenth century. By the twentieth century, merchants began to employ workers to extract *quebracho* – a dense hardwood valued for tannins used in leatherworking – that grew naturally in the transition zone between the Pantanal and the Chaco of present-day Paraguay.

While the concept of the ecotone is common in the scientific community, few environmental historians have sought to examine how ecological borderlands have shaped historical processes in the Americas. Of these scholars most, if not all, draw upon the methodologies and theoretical insights of geography and anthropology, two disciplines with a longer history of paying attention to the ways in which the material conditions of life impact the human experience. For example, in a pioneering volume on Latin American environmental history, several contributors use the concept of the ecotone to explore how environmental conditions shaped subsistence patterns for semi-nomadic indigenous people in Mexico and South America.<sup>17</sup> The concept of “ecological frontiers” is also central to Cynthia Radding's work on the cultural and environmental histories of indigenous peoples in northern Mexico during the colonial period. While most people generally regard deserts as static and

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<sup>16</sup> Fausto Vieira de Campos, *Retrato de Mato Grosso* (São Paulo: n.p., 1955), 81.

<sup>17</sup> Significantly, those who employed the concept of the ecotone were trained in anthropology and geography. Wayne Joseph Robins uses colonial and post-Independence travel accounts to examine the subsistence strategies of Guaraní populations in Paraguay and Alfred Siemens used a variety of colonial documents in an attempt to recreate the historical landscape of lowland Veracruz, Mexico, and the impact of colonization on indigenous land use patterns. Wayne Joseph Robins, “Indígenas guaraníes y ecotonos acuático-terrestres en el Paraguay oriental,” Bernardo García Martínez and Alba González Jácome, eds., *Estudios sobre historia y ambiente en América I: Argentina, Bolivia, México, Paraguay* (Mexico City: Instituto Panamericano de Geografía e Historia, 1999), 37-54 and Alfred Siemens, “Extrayendo ecología de algunos documentos novohispanos de la época temprana,” 219-64.

unchanging, Radding demonstrates how rural indigenous populations actively shaped the Sonoran desert in ways that blurred distinctions between wild and cultivated landscapes. This perspective also challenges the notion of “ecological Indians” and the idea that their lives of subsistence did little to transform the environments that they inhabited.<sup>18</sup>

As discussed briefly in chapter one, the indigenous populations of upper Paraguay River basin also made use of the Pantanal ecology, exercising seasonal practices of subsistence that carried them hundreds of kilometers, from the Chaco and Chiquitania in the west to the Amazon and Cerrado in the north and east. During the nineteenth century, many of these peoples suffered from population loss as a result of disease, participation in the Paraguay War, and violent conflict with colonists. While some indigenous people were able to secure land rights from the Brazilian government, those who remained were incorporated into the ranks of a rural laboring population that devoted itself to subsistence agriculture, hunting, ranch labor, and the extraction of natural resources.<sup>19</sup> Yet, indigenous people were not the only individuals who used mobility to capitalize on opportunities for labor and subsistence in the transition zones between the Pantanal and neighboring biomes. Indeed, such patterns persisted among rural laboring populations even after the region was integrated into the global market economy and ranching established itself as the dominant industry.

Although the period between 1870 and the 1930s introduced lasting changes to the region

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<sup>18</sup> Radding defines ecological frontiers as “changing landscapes produced by human occupation and to the values that different sets of social actors ascribe to the land.” Cynthia Radding, *Wandering Peoples: Colonialism, Ethnic Spaces, and Ecological Frontiers in Northwestern Mexico, 1700-1850* (Durham: Duke University Press, 1997), xviii. In a more recent article, Radding develops these ideas further through an examination of agave cultivation and the production of desert landscapes in northern Mexico. She argues that “the distribution of biomes helps us to understand the production of historical spaces and their cultural meanings as these evolve in the discernible relationships between peoples and plants.” Cynthia Radding, “The Children of Mayahuel: Agaves, Human Cultures, and Desert Landscapes in Northern Mexico,” *Environmental History* 17 (January 2012): 85.

<sup>19</sup> For a good synopsis of the history of relationships between indigenous people, colonists, and the Brazilian government in Mato Grosso, see Wilcox, “Cattle Ranching on the Brazilian Frontier,” 462-88.

through technology and focused attention to global markets, rural populations continued to orient their lives and work practices around the Pantanal and its seasonal rhythms of flood and drought, regularly crossing geopolitical and ecological boundaries in search of their livelihoods.

### **Ecologies of Commerce: Flows of Goods in the Broader Pantanal**

After Bolivia's first binational boundary commission with Brazil concluded its labors in 1878, the national government established a foreign consulate in Corumbá and a national customs office ten miles away in the town of Puerto Suárez, which was founded by Miguel Suárez Arana on the elevated bank of the Laguna Cáceres on November 10, 1875.<sup>20</sup> The government also established a military garrison in San Matías, 300 hundred kilometers to the north along Bolivia's border with Brazil.<sup>21</sup> The federal government recognized Puerto Suárez and San Matías as key locations to monitor and regulate the movement of goods and people across Bolivia's border with Brazil. Customs houses, consulates, and military garrisons, officials reasoned, would enable the Bolivian government to tax this growing trade and harness some of its profits for the benefit of the nation.<sup>22</sup>

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<sup>20</sup> Suárez received a concession from the Bolivian government to establish a port with access to the Paraguay River and to colonize and promote commerce in eastern Bolivia.

<sup>21</sup> As discussed in chapter one, Laguna Cáceres was a lake that communicated with the Paraguay River by way of a canal. For more background on the origins of Puerto Suárez, see Daniel Dory's introduction in Cristián Suárez Arana, *Exploraciones en el oriente boliviano* (1888), edited by Daniel Dory (Santa Cruz de la Sierra: Fundación NOVA, 2007).

<sup>22</sup> As described in chapter one, the Bolivian government also hoped that surveyors and officials could determine a suitable location for the establishment of a Bolivian port on the Paraguay River. After Bolivia's loss of direct access to the Pacific Ocean following the War of the Pacific (1879-83), Bolivian officials increasingly eyed the region as a critical outlet for export products on the international market. Around the same time, foreign merchants quickly established themselves as dominant players in a trade network that linked Corumbá and southeastern Bolivia with Santa Cruz de la Sierra – eastern Bolivia's most important city – and the rubber tapping regions of the Brazilian and Bolivian Amazon. For background on the commercial development of eastern Bolivia, see Mario Gabriel Hollweg, *Alemanes en el oriente boliviano: 1535-1918*, vol. 1 (Santa Cruz de la Sierra: Editorial Sirena, 1995).

Significantly, Puerto Suárez and San Matías were two of the only areas of high ground suitable for the establishment of a town over the entire span of Bolivia's shared southeastern border with Brazil, a distance of over 400 kilometers. The two towns were situated at the extreme northern and southern edges of the Pantanal with only a few isolated ranches and villages in the space between. Although the Bolivian government made multiple efforts to promote colonization projects on one of the three lakes that it shared with Brazil (Gaiba, Uberaba, and Mandioré), widespread seasonal flooding made it impractical to establish permanent populations and to create the infrastructure necessary to connect them to other regional centers. Even in the centers of population at Puerto Suárez and San Matías, seasonal flooding interrupted trade routes every year for months at a time. This section examines how ecological and geopolitical borders shaped the face of commerce in the broader Pantanal. Although previous scholarship on the economic history of the region focuses on the north-south axes of regional trade that followed the Paraguay River and its tributaries, this chapter provides further detail on east-west commercial relationships that spanned the international border.

Between November and March, heavy rains fell in the headwaters of the Paraguay River basin. While the resulting inundation made it difficult for merchants in Mato Grosso to discern the courses of rivers, the flood stage often aided those conducting business in eastern Bolivia. Rising waters ensured that depths would be sufficient to reach Puerto Suárez by way of the canal leading from Corumbá. At the same time, however, the rainy season presented two other complications that posed challenges for merchants in eastern Bolivia. First, floating mats of aquatic vegetation – locally called *camalotes* – often threatened to impede navigation



between Corumbá and Puerto Suárez.<sup>23</sup> Such was the case in 1895 when the Bolivian customs officer in Puerto Suárez complained that an enormous camalote 600 meters in length, the “largest and most compact that [he had] seen to date” was blocking the entrance to the Canal Tamengo. He worried that, once the flood waters receded, more vegetation would collect, further interrupting commerce in the region.<sup>24</sup>

Second, while heavy rain and flooding normally facilitated river transportation, it made overland travel between the Paraguay River and Santa Cruz de la Sierra extremely difficult, if not impossible. At least until the second decade of the twentieth century, imported goods destined for Santa Cruz were usually carried on the backs of mules for a distance of over 600 kilometers. During the rainy season, low-lying sections of the road flooded and impeded traffic for up to six months at a time. Merchants and muleteers who wished to conduct business in eastern Bolivia faced “long journeys over wetlands, insurmountable quagmires, vast flooded plains, and flowing rivers, all of which present[ed] imminent dangers to the traveler and his merchandise.”<sup>25</sup> A similar situation plagued merchants operating between eastern Bolivia and Brazilian towns and outposts on the northern edge of the floodplain. Before the arrival of the Madeira-Mamore railroad in 1912,

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<sup>23</sup> Camalotes were formed mainly by water hyacinths (*Eichhornia crassipes*) which were widespread and prolific in the upper Paraguay River basin. During the dry season they remained stationary and grew on the banks of rivers and streams but during the flood stage, they broke free because of the increased current and floated downstream. According to Augusto Leverger, camalotes accumulated other material as they floated such as grass, fallen trees, shrubs, and dirt and could span the entire width of the river. They tended to congregate in canals, lakes, and pools (*bahias*) in communication with the main river channel. Augusto Leverger, “Diario do reconhecimento do Rio Paraguay desde a cidade da Assumpção ate o Rio Paraná,” *Revista Trimensal do Instituto Histórico, Geográfico, e Etnographico do Brasil*, II Trimestre de 1862, 234.

<sup>24</sup> “Aduana Nacional de Puerto Suárez,” segundo cuerpo, desde Junio, 1895, p. 22-24, 3/132-01, Sección Hacienda, Serie Aduana (H-AD), Fondo Prefectural del Archivo del Museo de Historia Regional de la Universidad Gabriel René Moreno (MHSC-FP), Santa Cruz de la Sierra, Bolivia.

<sup>25</sup> “Aduana Nacional de Puerto Suárez, segundo cuerpo, desde Junio, 1895, p. 21, 3/132-01, H-AD, MHSC-FP, Santa Cruz de la Sierra, Bolivia.

many merchants transported goods – especially rubber – from the Amazon basin to ports on the upper Paraguay River, making stops in the eastern Bolivian villages of San Ignacio de Velasco and San Matías to acquire cattle hides. However, merchants often had to suspend operations for up to five months during the rainy season because the 138 kilometer section between Descalvados and San Matías was underwater.<sup>26</sup>

The dry season presented a new set of challenges for merchants in eastern Bolivia. While networks of overland transportation were normally free of flood waters by May or June, these same routes offered few, if any, natural springs and suffered such parching drought that pack animals often perished before they reached their destination. Drought conditions also posed serious obstacles for river transportation. In many years, the natural canal leading from the Paraguay River to Bolivia's port on the Laguna Cáceres lost enough depth to make the passage of merchant boats impossible. Instead of shipping goods directly to port, merchants were forced to unload their cargo in Corumbá and ship them sixteen kilometers overland to the customs office in Puerto Suárez before they could resume their journey. In some years the lake dried up completely so that even smaller vessels could not reach Puerto Suárez by water.<sup>27</sup> By the 1940s, consular officials in Corumbá reported that the Laguna Cáceres had been dry for almost a decade and, over the next several years, many sought to convince the Bolivian government of the need to dredge both the canal and the lake

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<sup>26</sup> O. Lozano Cueto to RREE, Corumbá, 6 diciembre 1912, Correspondencia recibida de los Cónsules Nacionales en América, 1912, CONS-2-E-92, AMRE-Bo, La Paz.

<sup>27</sup> Moscoso to RREE, Corumbá, 1 enero 1888, Consulados de Bolivia en Norte y Sud América, Año de 1887 a 1889, CONS 2-E-14, AMRE-Bo, La Paz. See also, Walter Salinas R. to RREE, Corumbá, 14 septiembre 1903, and Walter Salinas R. to RREE, Corumbá, 16 octubre 1903, Correspondencia recibida del Cuerpo Consular de Bolivia en América, 1903, Tomo II, CONS-2-E-51, AMRE-Bo, La Paz.

to restore fluvial navigation.<sup>28</sup> Thus, environmental conditions constrained the activities of merchants in both the dry and the flood season. Writing in 1902, Walter Salinas R., Bolivian consulate in Corumbá, complained that annual cycles of flood and drought limited the operations of merchants to a small window of only four months each year.<sup>29</sup> Needless to say, these delays made it extremely difficult for merchants to operate at a profit and for government officials to levy taxes and collect revenue on imported and exported goods.

While many merchants and government officials struggled to synchronize their activities with the Pantanal and its seasonal rhythms of flood and drought, others used the ecological characteristics of the region to their advantage. For example, government officials registered constant complaints about merchants, ranchers, and other individuals who exploited the region's porous borders to conduct a lively contraband trade. Since most of the length of Bolivia's shared southeastern border with Brazil was sparsely populated and subject to seasonal flooding, local populations found it easy to bypass customs offices in Puerto Suárez and San Matías, thus avoiding onerous import and export duties. In the south, government officials accused merchants of unloading goods by land after departing Corumbá but before they reached the Bolivian customs office in Puerto Suárez.<sup>30</sup> In 1895, a Bolivian

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<sup>28</sup> It is not clear exactly what caused the gradual desiccation of the Canal Tamengo and the Laguna Cáceres. According to historical data on flood levels in the Pantanal, the region did experience several years of drought during the 1930s, but multi-year, cyclical patterns of heavy flooding and pronounced drought were common in the region. For these statistics, see Sérgio Galdino and Robin T. Clarke, *Levantamento e estatística descritiva dos níveis hidrométricos do rio Paraguai em Ladário, MS – Pantanal. Período 1900-1994* (Corumbá, MS: EMBRAPA-CPAP, 1995), 68. For references to drought conditions and their impact on river navigation, see Humberto Valdez to RREE, Corumbá, 22 octubre 1941, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1941, CONS-2-E-489, AMRE-Bo, La Paz. On the need to dredge the canal and lake, see Reyes Maldonado to RREE, Cáceres, marzo 1950, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1950, CONS-2-E-623, AMRE-Bo, La Paz.

<sup>29</sup> Walter Salinas R. to RREE, Corumbá, 24 junio 1902, Cuerpo Consular América, Tomo 1, 1902 (no code on cover), AMRE-Bo, La Paz.

<sup>30</sup> See, for example, Leon Velasco to RREE, Corumbá, 28 enero 1898, Correspondencia recibida del Cuerpo Consular en America, 1895-1898 (no code on cover), AMRE-Bo, La Paz.

customs official claimed that a merchant ship had attempted to unload its goods in the middle of the night on an unguarded section of the Laguna Cáceres.<sup>31</sup> When asked to explain how it was possible for such abuses to occur with such frequency, one hapless official blamed “the lack of personnel, the harsh climate, and the horrible plague of mosquitos, [which] force[d] employees to lock themselves in their homes, abandoning all surveillance.”<sup>32</sup>

Cross-border cattle rustling was also a perennial problem in the Pantanal. Widespread flooding in the region meant that ranchers needed to secure large tracts of land with access to high ground that could provide refuge for cattle during the rainy season. Cattle thus ranged widely over hundreds of hectares with minimal supervision. This, in turn, provided multiple opportunities for rural dwellers to steal cattle, either for their own use or for sale on regional markets. For example, in 1898, the owner of the Acurizal ranch, on the Bolivian border near the Laguna Gaiba, complained that a Bolivian family had settled in the region and was systematically stealing and slaughtering cattle and attempting to sell the hides in Corumbá.<sup>33</sup> The weak presence of the Bolivian state often compelled landowners to take matters into their own hands. On at least one occasion, Jaime Civils, the owner of the Descalvados ranch armed a group of his employees and sent them across the border on a punitive expedition to bring Bolivian cattle rustlers to justice.<sup>34</sup> Such cross-border theft took place in both

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<sup>31</sup> Letter dated 27 diciembre 1895, Aduana Nacional de Puerto Suárez,” Segundo cuerpo, desde Junio, 1895, p. 145, 3/132-01, H-AD, MHSC-FP, Santa Cruz de la Sierra, Bolivia. This document was contained within a bundle of correspondence and reports authored by government officials at the Aduana Nacional de Puerto Suárez in 1895.

<sup>32</sup> Leon Velasco to RREE, Corumbá, 5 febrero 1898, Correspondencia recibida del Cuerpo Consular en América, 1895-1898 (no code on cover), AMRE-Bo, La Paz.

<sup>33</sup> Attached letter from Leon Velasco to Prefecto del Departamento de Santa Cruz attached to Velasco to RREE, Corumbá, 28 enero 1898, (no code on cover), AMRE-Bo, La Paz.

<sup>34</sup> See, for example, Modesto Moscoso to RREE, Corumbá, 28 octubre 1887, Consulados de Bolivia en Norte y Sud América, Año de 1887 a 1889, CONS 2-E-14 and Walter Salinas to RREE, Corumbá, 28 septiembre 1903,

directions, however, and Brazilian citizens were also accused on multiple occasions of raiding Bolivian ranches to steal cattle.<sup>35</sup>

The nature of ranching in the region also meant that property holding and the movement of cattle did not always respect the boundaries drawn by international governments. For example, widespread flooding in the region prompted some Brazilian ranchers to acquire properties on the Bolivian side of the border, where areas of high ground were more abundant. Writing in 1903, Walter Salinas explained that many large Brazilian ranches near the Bolivian border, such as Descalvados and Acurizal, controlled property and grazed cattle on land within Bolivian territory. Although he was unsure whether these owners possessed legitimate titles to their properties, he estimated that a significant portion of the 25,000 head of cattle processed at Descalvados in 1902 had been fattened in Bolivian pastures.<sup>36</sup> Others took advantage of the porous borders and limited government presence in the region to winter their cattle on elevated territory in Bolivia during the flood season.<sup>37</sup>

While the weak presence of the Bolivian state was an important reason for the prevalence of contraband in the region, it is also evident that ecology and geography played major roles.<sup>38</sup> For example, many merchants who conducted business in Bolivian territories

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Correspondencia recibida del Cuerpo Consular de Bolivia en América, 1903, Tomo II, CONS-2-E-51, AMRE-Bo, La Paz.

<sup>35</sup> See, for example, Carlos Melquíades Barbary to RREE, Corumbá, 4 marzo 1925, Correspondencia recibida de los Consules Nacionales en América, 1925, Tomo I, B-G, CONS-2-E-195, AMRE-Bo, La Paz.

<sup>36</sup> Walter Salinas to RREE, Corumbá, 28 julio 1903, Correspondencia recibida del Cuerpo Consular de Bolivia en América, 1903, Tomo II, CONS-2-E-51, AMRE-Bo, La Paz.

<sup>37</sup> Darío Vaca Díez to RREE, Corumbá, 2 febrero 1940, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1940, CONS-2-E-467, AMRE-Bo, La Paz.

<sup>38</sup> For example, the documents make it clear that government officials and merchants in Puerto Suárez and Corumbá engaged in a considerable amount of collusion and corruption. For one example among many, see José Reiche to Moscoso, Santo Corazón, 12 diciembre 1887, Consulados de Bolivia en Norte y Sud América, Año de 1887 a 1889, CONS 2-E-14, AMRE-Bo, La Paz.

in the Amazon basin bypassed the customs office in Puerto Suárez altogether by continuing north on the Paraguay River before disembarking their cargo in Descalvados. From there, they shipped their goods on the overland path to San Ignacio de Velasco before continuing north into the Amazon basin. Merchants followed the same route on the return trip, this time loaded with valuable export items such as rubber and *ipecacuanha*.<sup>39</sup> During the dry season there was steady commerce in cattle products and other goods on the road between Descalvados and San Ignacio de Velasco, a situation that one consular official called a “small, surreptitious trade.” In exchange for foodstuffs, tools, and other merchandise, rural populations in eastern Bolivia traded cattle hides, wild animal skins, and gold. The official described these trade relationships as “a habitual contraband, imposed by the perpetual neglect of [Bolivia’s] eastern territories.”<sup>40</sup>

In spite of a sustained litany of complaints registered by government officials, unregulated trade continued to cross the border between Brazil and Bolivia. During the period between 1870 and 1930 the main items of trade included exports such as rubber, *ipecacuanha*, and cattle products and imported goods such as wheat flour, rice, and wine. By the 1940s, however, merchants involved in the trade of illegal commodities such as cocaine and vicuña wool began to route their goods through the Pantanal.<sup>41</sup> Indeed, over the course of

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<sup>39</sup> Walter Salinas R. to RREE, Corumbá, 28 julio 1903, Correspondencia recibida del Cuerpo Consular de Bolivia en América, 1903, Tomo II, CONS-2-E-51, AMRE-Bo, La Paz.

<sup>40</sup> Carlos S. Chávez to RREE, Corumbá, 9 agosto 1937, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1937, CONS-2-E-401, AMRE-Bo, La Paz

<sup>41</sup> For references to cocaine and vicuña wool, see Humberto Valdez to RREE, Corumbá, 24 febrero 1944, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1944, CONS-2-E-538, AMRE-Bo, La Paz and Humberto Valdez to RREE, Corumbá, 11 septiembre 1941, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1941, CONS-2-E-489, AMRE-Bo, La Paz. Today, the Pantanal is a major base of operations for drug smugglers in South America precisely because of its porous borders and low population density. For a recent article, see Eva Hershaw, “In Brazil’s wetlands, jaguars face a new threat: Drug traffickers,” *Al Jazeera America*, 7 September 2014, available at

many decades, the Pantanal established itself as an ideal conduit for smugglers to move commodities across international borders. The following section examines the role of rural migratory workers from Bolivia (and elsewhere), whose labor made possible the commercialization of extractive commodities in the broader Pantanal region.

### **Migratory Labor and Ecology in the Broader Pantanal**

On April 17, 1887, Ángel Colombo appeared before the president and members of the *junta provincial de Chiquitos* with a request. As the foreman of operations at the newly-established Descalvados ranch and packing plant in neighboring Brazil, Colombo had been tasked earlier in the year with securing a seasonal labor force to work during the dry season.<sup>42</sup> Unable to obtain an adequate pool of laborers in Brazil, Colombo struck west, traveling over 340 kilometers (or 213 miles) to San Ignacio de Velasco, then the capital of the Bolivian province of *Chiquitos*. He hoped that the council would authorize him to contract (*enganchar*) fifty “peons,” drawn from San Ignacio and neighboring San Miguel, for a period of seven months, from May to November. In exchange for their services, Colombo agreed to pay each worker eight *bolivianos* per month and guaranteed their safe return after their terms expired. The local property holder Crisanto Roca agreed to set forth his house and landholdings as collateral.<sup>43</sup> Colombo managed to recruit 45 workers and, with formalities

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<http://america.aljazeera.com/articles/2014/9/7/in-brazil-s-wetlandsjaguarsfaceanewthreatdrugtraffickers.html>, accessed 3-17-15.

<sup>42</sup> The ranch headquarters of Descalvados is located along the Paraguay River, about 75 kilometers (or 46 miles) south of the town of Cáceres. Its landholdings encompassed thousands of hectares stretching between the Paraguay River and the Bolivian border. The first owner of Descalvados was Jaime Civils Buxareo, a Uruguayan citizen of Catalan descent, who purchased the property in 1881. Domingos Sávio da Cunha Garcia has written the most comprehensive history of the ranch. See Domingos Sávio da Cunha García, *Território e negócios na “Era dos Impérios”: os belgas na fronteira oeste do Brasil* (Brasília: Fundação Alexandre de Gusmão, 2009).

<sup>43</sup> The Rocas were an elite family that enjoyed political, social, and economic influence in the Chiquitania since the colonial period.

concluded, he returned to Descalvados with his labor force. Evidently this arrangement worked well, both for the ranch and for provincial authorities in Chiquitos, because Colombo returned twice more in subsequent years for the same purpose.<sup>44</sup>

At first glance, the documented exchange between Colombo and provincial authorities from Chiquitos appears to be a classic example of how the labor process functioned in the interior of South America during the era of extractive industries and export booms. Potential profits were significant, cheap and reliable labor was in short supply, and prospective employers were willing to go to great lengths (literally) to secure it. The isolated villages and ex-mission towns of the *Chiquitanía* made ideal targets for labor contractors because they contained established populations of people who were accustomed to periodic terms of communal labor under the supervision of landholding patrons and municipal officials.<sup>45</sup> With few opportunities available to them besides a life of rural subsistence in a region dominated by ranching and large property holding, Chiquitano laborers simply went where they were needed. Indeed, regional historians point to this time period to explain the depopulation of southeastern Bolivia.<sup>46</sup> Opportunities for work in the rubber producing

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<sup>44</sup> Poder de Crisanto Roca a Arístides Romero para que garantice ante la prefectura o la subprefectura de Velasco a Ángel Colombo para que pueda enganchar cien peones para los trabajos en el establecimiento del Descalvado (imperio de Brasil), 3/117-34, Sección Consulados y Países Extranjeros, Serie Brasil (CPE-BR), Fondo Prefectural del Archivo del Museo de Historia Regional de la Universidad Gabriel René Moreno (MHSC-FP), Santa Cruz de la Sierra, Bolivia. For subsequent years, see documents 3/118-20 and 3/128-27, contained within the same series.

<sup>45</sup> Indeed, communal labor was a tradition for Chiquitano communities that dated to the colonial period when they lived in missions under the guidance of Jesuit missionaries. Cynthia Radding, *Landscapes of Power and Identity: Comparative Histories in the Sonoran Desert and the Forests of Amazonia from Colony to Republic* (Durham: Duke University Press, 2005). For histories of Chiquitano communities after the expulsion of the Jesuits, see Ana Maria Lema Garrett, ed., *La voz de los chiquitanos: historias de comunidades de la provincia Velasco* (Santa Cruz de la Sierra: APAC/Fundación AVINA, 2006) and Diego Villar and Isabelle Combès, eds., *Las tierras bajas de Bolivia: miradas históricas y antropológicas* (Santa Cruz de la Sierra: Editorial El País, 2012).

<sup>46</sup> See Oscar Tonelli Justiniano, *El caucho ignorado* (Santa Cruz de la Sierra: Editorial El País, 2010) and Gary Van Valen, *Indigenous Agency in the Amazon: The Mojos in Liberal and Rubber-Boom Bolivia, 1842-1932* (Tucson: University of Arizona Press, 2013).



regions of Brazil, Peru, and northern Bolivia led to an exodus of wage laborers to lands outside Bolivia, many of whom never returned. The situation became so dire that, in 1883, the Bolivian government passed a law designed to protect Bolivian workers and regulate their interactions with potential foreign employers. Colombo followed the provisions of this law when he requested the authorization of provincial authorities to enter into “free and spontaneous” contracts with Bolivian citizens and guaranteed their return to their villages.<sup>47</sup>

At the same time, however, these Chiquitano laborers were not simply responding to new opportunities made possible by the nineteenth-century expansion of the international market economy and its demand for labor and extractive commodities. When Colombo traveled to the Chiquitania in search of labor, he was tapping into a regional network of trade, work, and sociability between it and Mato Grosso established over a century before he arrived. For example, of the 161 witnesses present for the founding of *Vila Maria* – in Portuguese-controlled territory on the banks of the Paraguay River – in 1778, 78 were Chiquitano Indians.<sup>48</sup> In the 1830s, enterprising Portuguese colonists sold African slaves to

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<sup>47</sup> Officials referred to this legislation in their letters as the *ley de 24 de Noviembre de 1883*. The full text of this law can be viewed at the following website: <http://www.lexivox.org/norms/BO-L-18831124.xhtml>, accessed 1-15-2015.

<sup>48</sup> Although the scribe labeled these individuals as “recently-defected, Spanish Indians,” their decision to take up residence in Portuguese dominions was likely less motivated by a sense of imperial belonging (or lack thereof) than by their more immediate need to secure a means of material subsistence, opportunities for which shifted according to the season. Vila Maria was the original name given to the present-day town of Cáceres, on the northern edge of the Pantanal. The full text of the original act of foundation is recopied in S. Cardoso Ayala, Feliciano Simon, and Joaquim Augusto da Costa Marques. *Álbum graphico do Estado de Matto-Grosso*, 350-351. Interest in colonial and post-independence relationships between Brazil and Bolivia is fairly recent and includes a growing and interdisciplinary network of anthropologists, archaeologists, and historians. For a recent edited volume that establishes new lines of inquiry, see Joana A. Fernandes Silva, ed. *Estudos sobre os Chiquitanos no Brasil e na Bolívia: história, língua, cultura e territorialidade* (Goiânia: Editora da UCG, 2000). Others contend that lowland South America served as a pre-Columbian gateway on a continental trade route that connected the Inca Empire of the Andes with lowland groups such as the Tupi-Guaraní, Arawak, and Macro-Gê speakers. See Oscar Tonelli Justiniano, *El Peabirú chiquitano: ensayo sobre el ramal chiquitano de una ruta interoceánica prehistórica* (Santa Cruz de la Sierra : Editorial El País, 2007).

buyers in Bolivia, despite its formal abolition there in 1826.<sup>49</sup> When Francis de Castelnau traveled to Vila Maria (present day Cáceres) in May 1845, he estimated that, of a total population of 1,800 people, 200 were African slaves and 600 were indigenous people of Chiquitano descent, presumably descendants of the original founders.<sup>50</sup> Racial and ethnic heterogeneity was also a defining feature of local populations in Corumbá, 320 kilometers south, a town composed of mixed populations of people of indigenous, African, and Portuguese descent.<sup>51</sup> After the Paraguayan War, the town experienced an influx of merchants, landowners, and laborers from Europe, Argentina, Uruguay, and, especially, Paraguay.<sup>52</sup> In an effort to escape the devastation caused as a result of the war, many people from rural Paraguay fled to nearby Corumbá and quickly established themselves as the region's most important workforce. Their presence left a social and cultural mark on the region that is evident to this day.<sup>53</sup>

While the historical experiences of Paraguayans in Mato Grosso are well-documented, there are few, if any, studies which document the experiences of Bolivians in

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<sup>49</sup> Many of the buyers involved were priests who presumably used African slaves as agricultural laborers or domestic servants. The notarial archives in Santa Cruz de la Sierra record multiple sales of slaves between buyers and sellers in Brazil and eastern Bolivia in the 1830s and after. In 2012, these notarial documents were still being processed and cataloged by archivist Luis Enrique Rivero Coimbra at the Museo de Historia in Santa Cruz. The documents in question were labeled 186/721/13 (1834) and 186/724/19 (1836), respectively.

<sup>50</sup> Francis de Castelnau, *Expedição as regiões centrais da América do Sul*, Tomo II, translated by Oliverio M. de Oliveira Pinto (São Paulo: Companhia Editora Nacional, 1940), 336-37.

<sup>51</sup> Zilda Alves de Moura, *Cativos nas terras dos pantanais: escravidão e resistência no sul do Mato Grosso, séculos XVIII e XIX* (Passo Fundo: Editora Universitária, 2008) and Divino Marcos de Sena, "Matrimônios e batismos na freguesia de Nossa Senhora da Conceição de Albuquerque – Província de Mato Grosso (1836-1862)," *Diálogos* (Universidade Estadual de Maringá) 17:1 (Jan.-Abril 2013): 185-225.

<sup>52</sup> João Carlos de Souza, *Sertão cosmopolita: tensões da modernidade de Corumbá (1872-1918)* (São Paulo: USP, 2008) and Lucía Salsa Corrêa, *História e fronteira: o sul de Mato Grosso, 1870-1930* (Campo Grande, MS: Editora UCDB, 1999).

<sup>53</sup> Robert Wilcox, "Paraguayans and the Making of the Brazilian Far West, 1870-1935," *The Americas* 49:4 (Apr. 1993): 479-512.

the region.<sup>54</sup> This section uses new archival sources to examine the role of Bolivian laborers in the creation of a broader regional economy defined by seasonal labor on ranches and the extraction of natural resources for export. Once they arrived in Brazil, Chiquitanos joined the diverse pool of rural laborers who fueled the Pantanal's ranch economy, its agricultural production, and its extractive industries. As with most rural societies in Latin America at the time, this was a system defined by unequal relationships of power between landholding elites and their managers on one side and the laboring poor on the other. To be sure, the expanding international market and its appetite for labor and extractive commodities introduced real changes to the lives of rural populations in the interior of South America. At the same time, however, Chiquitanos and other rural laborers were not helpless pawns subject to forces beyond their control. The seasonal nature of labor in the broader Pantanal – imposed by the ecology of the wetland and its cycles of flood and drought – gave rural inhabitants the option of mobility. Moreover, the existence of valuable commodities in the transition zones between the Pantanal and neighboring biomes gave rural populations multiple and varied opportunities for wage labor.

### ***A Shadow Population: Bolivian Laborers in the Pantanal***

The documents recording Colombo's recruitment of workers from eastern Bolivia provide little detail about the experiences of Chiquitano laborers after they arrived in Brazil. However, of the names included on the first list of conscripts in 1887, few were duplicated six years later in 1893 when Colombo returned on another recruiting trip. This suggests that

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<sup>54</sup> More than simply filling a blank space in the historiography, this is a task that carries significant importance for many Chiquitano communities today in their ongoing efforts to establish rights to land in Brazil. For a recent analysis of Chiquitano communities and the politics of indigenous identity in the region, see Joana A. Fernandes Silva, "Identidades e conflito na fronteira: poderes locais e os Chiquitanos," *Memoria Americana* 16:2 (2008): 119-48.

many of the men who accompanied Colombo on the first trip chose not (or were unable) to return to their villages after their contracts expired. Fortunately, reports and correspondence authored by Bolivian consular officials and contained in the archive of the Bolivian Ministry of Foreign Relations yield more information about the activities of Bolivian laborers who resided in Brazil. Although these documents provide an incomplete picture, they indicate that most Bolivians who migrated to Brazil chose to do so indefinitely. In the decades following Colombo's visit to San Ignacio, labor migrations between eastern Bolivia and western Brazil intensified as the Pantanal and its navigable rivers became the center of gravity for a regional economy centered on cattle ranching and the extraction of natural resources – chiefly ipecacuanha, yerba mate, and quebracho – all of which continued to grow in value on regional and international markets. Although Bolivian government officials viewed these developments with concern, their efforts to control the movement of people between eastern Bolivia and western Brazil met with little success.

One of the main jobs of the Bolivian consular representative in Corumbá was to serve as an advocate for Bolivian citizens living in Brazil. According to consular officials, Bolivians residing in Brazil were overwhelmingly composed of poor, rural workers. Although they practiced a variety of subsistence activities in the broader region, their presence was most prominent on cattle ranches or on one of the sugar mills along the Cuiabá River. Others established small communities on the outskirts of Corumbá where they practiced small-scale agriculture and engaged in petty commerce. According to one consular official, many Bolivian citizens from the lowland provinces of Chiquitos and Velasco chose the Pantanal region as an alternative to the harsh working conditions that prevailed at home and the exploitation of labor brokers who recruited them for grueling work in the rubber

tapping regions of the Amazon basin. If they stayed in Bolivia, they faced a life of abuse, “subjected to the exploitation of individuals and authorities.” In the Pantanal, however, they were “prized and valued like gold dust for their constancy in work, their honesty, and *buenas costumbres*.”<sup>55</sup>

Consular officials resented the loss of eastern Bolivia’s already slight labor force to Brazil. Over the years, they registered regular complaints claiming that unscrupulous labor brokers and greedy landowners were exploiting the natural “submissiveness” and “ignorance” of eastern Bolivia’s rural inhabitants and subjecting them to “slave-like” conditions. According to Moises Santiváñez, who served as the Bolivian consul in Corumbá during the 1890s, there were at least two “houses” in Corumbá that specialized in contracting Bolivian and Paraguayan laborers for work in Brazil. After “encouraging” them with the prospect of “amazing deals,” brokers delivered workers to the isolated ranches and sugar mills of the Pantanal, far from the protective reach of Bolivian consular officials. There they labored under “onerous contracts” and amassed debts that made it impossible for them to return home. Santiváñez also claimed that municipal officials in Bolivia – including priests, *corregidores*, and *caciques* – colluded with Brazilian labor brokers, who granted them “premiums” in exchange for the labor of their “*indiada*.”<sup>56</sup>

In spite of these rumors of corruption and abuse, Bolivian consular officials found it difficult to convince expatriates that they needed an advocate after they arrived in Brazil. In

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<sup>55</sup> Moscoso to RREE, Corumbá, 30 junio 1887, Consulados de Bolivia en Norte y Sud América, Año de 1887 a 1889, CONS 2-E-14, AMRE-Bo, La Paz and Walter Salinas R. to RREE, Corumbá, 24 junio 1902, Cuerpo Consular America, Tomo 1, 1902, AMRE-Bo, La Paz.

<sup>56</sup> It is likely that Colombo and municipal officials in San Ignacio and San Miguel reached a similar agreement, although the surviving documents do not provide details. Moisés Santiváñez to RREE, Corumbá, 1 enero 1894 and 25 julio 1894, Correspondencia recibida del Cuerpo Consular Boliviano en América, Año de 1894, CONS-2-E-28, AMRE-Bo, La Paz.

an effort to better monitor their activities and to protect their interests, officials kept a register of Bolivian citizens living in Mato Grosso and reported regularly on what they were doing in Brazil. From their earliest reports, however, it is clear that the majority of Bolivians who came to Brazil did not bother to register with their designated consular officials. For example, in 1888 Modesto Moscoso estimated that there were 1,500 Bolivian citizens living in Mato Grosso. By 1894, Moscoso and his successor, Moises Santiváñez, had only managed to register 34 people. Of those registered 25 were single males, all but two were born in the Department of Santa Cruz, and almost half were from Santiago and Santo Corazón, the two centers of population closest to the Brazilian border.<sup>57</sup> By the 1940s, Reyes Maldonado – the Bolivian vice-consul in Cáceres – estimated that between 4,000 and 6,000 Bolivians were making residence in the northern part of Mato Grosso on either a seasonal or permanent basis.<sup>58</sup> Another 2,000 citizens lived in the vicinity of Corumbá in the southern Pantanal. In total, the population of Bolivian citizens living in Mato Grosso by the end of the 1930s almost quadrupled that of Puerto Suárez, southeastern Bolivia's most important town.<sup>59</sup>

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<sup>57</sup> Moscoso to RREE, Corumbá, 1 enero 1888, Consulados de Bolivia en Norte y Sud América, Año de 1887 a 1889, CONS-2-E-14 and Moises Santiváñez to RREE, Corumbá, 1 enero 1894, Correspondencia recibida del Cuerpo Consular Boliviano en América, Años de 1894, CONS-2-E-28, AMRE-Bo, La Paz. Another consular official writing in 1918 described Bolivians as the “preferred workers, sought after with the most frequency for all types of work.” Ernesto Carvajal to RREE, Corumbá, enero 30 1918, Correspondencia recibida de los Consulados Nacionales en América, primer semestre, 1918, CONS-2-E-126, AMRE-Bo, La Paz.

<sup>58</sup> Letter from Reyes Maldonado, sub-consulado de Cáceres, to Ministerio de Relaciones Exteriores de Bolivia, 24 January 1946, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1946, CONS-2-E-569, Archivo del Ministerio de Relaciones Exteriores de Bolivia (AMRE-Bo), La Paz, Bolivia.

<sup>59</sup> Carlos Chávez to RREE, Corumbá, 4 junio 1937, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1937, CONS-2-E-401 and Darío Vaca Díez to RREE, Corumbá, 31 diciembre 1940, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1940, CONS-2-E-467, AMRE-Bo, La Paz. Chávez claimed that most of the Bolivians living in Corumbá when he wrote were ex-combatants of the Chaco War. In 1946, the population of Puerto Suárez was estimated at 2,000 people. Humberto Valdez to RREE, Corumbá, 12 agosto 1946, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1946, CONS-2-E-562, AMRE-Bo, La Paz.

Despite their good intentions, only a few consular officials managed to produce statistics about Bolivians citizens in Brazil that provided more detail beyond population estimates.<sup>60</sup> The example of Reyes Maldonado stands as an exception to this rule. Over a period of almost three decades, between 1944 and 1973, he managed to register 277 people [see Appendix 1].<sup>61</sup> While this number represents a fraction of the overall population of Bolivians living in Mato Grosso at the time, the information he gathered helps to put a face on the lives of rural workers and their presence in the broader Pantanal. Of these individuals, the overwhelming majority were young men born in towns or rural settlements within 50 kilometers of the Brazilian border.<sup>62</sup> Although there were a significant number of men who

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<sup>60</sup>Officials were hard-pressed to explain why so few Bolivian citizens chose to seek out their aid and “consular protection.” In order to encourage them to register, most officials offered their services free of charge to Bolivian citizens, to little avail. While some blamed Brazilian employers for preventing employees from contacting consular offices, most bemoaned the “indifference” of rural Bolivian peons who, because of their “ignorance,” were unable to appreciate the “advantages of registration.” To remedy the situation, officials offered to undertake annual inspection tours to rural properties, during which time consular officials would compile lists of Bolivian citizens. See, for example, Moisés Santiváñez to RREE, Corumbá, 25 julio 1894, Correspondencia recibida del Cuerpo Consular Boliviano en América, Año de 1894, CONS-2-E-28, AMRE-Bo, La Paz. See also Ernesto Carvajal to RREE, Corumbá, 1 enero 1918, Correspondencia recibida de los Consulados Nacionales en América, primer semestre, 1918, CONS-2-E-126, AMRE-Bo, La Paz. Others blamed a lack of civic duty and patriotism triggered, in part, by the federal government and its neglect of its eastern territories. For example, the region had so few schools that most Bolivian schoolchildren traveled across the border to receive instruction from Brazilian teachers. As a result, officials reasoned, Bolivians in the region had “forgotten any notion of citizenship to the point of wanting to renounce Bolivia and to adopt Brazil as their own.” Jerjes Vaca Díez to RREE, Corumbá, 22 mayo 1941, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1941, CONS-2-E-489, AMRE-Bo, La Paz; Darío Vaca Díez to RREE, Corumbá, 2 enero 1940, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1940, CONS-2-E-467, AMRE-Bo, La Paz. For more descriptions of the perceived lack of education, patriotism, and civic duty, see Walter Arce to RREE, Corumbá, 31 mayo 1932, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1932, Tomo V., C-F, CONS-2-E-310; Reyes Maldonado to RREE, Cáceres, 22 enero 1946, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1946, CONS-2-E-569; and Maldonado to RREE, Cáceres, 22 agosto 1951, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1951, CONS-2-E-644, AMRE-Bo, La Paz.

<sup>61</sup> Reyes Maldonado, Libro de matrículas, 1944-1973, Caixa 3, Acervo Reyes Maldonado, Núcleo de Documentação de História Escrita e Oral (NUDHEO), Universidade do Estado de Mato Grosso (UNEMAT), Cáceres, Brasil.

<sup>62</sup> The most common places of birth were San Ignacio, San Miguel, Las Petas, Ascensión, and San Matías, all located in close proximity to the Brazilian border. Significantly fewer people were born in towns or settlements near Corumbá in the southern Pantanal, which suggests that migratory labor had a sub-regional character, divided between the north (with ties to the Amazon) and the south (with stronger ties to Argentina and urban Brazil).

practiced skilled trades, most listed their occupation as “*labrador*,” a generic term for rural workers likely assigned by Maldonado.<sup>63</sup> Maldonado also recorded the last place of residence for each individual he registered, which included ranches in the Pantanal, centers of population, and various locations in the zone of ipecac extraction north of Cáceres.<sup>64</sup> By the 1960s and 70s, many Bolivian citizens had lived in Brazil for decades and had children that were Brazilian citizens.

Why did rural Bolivians migrate across the border to Brazil and what did they have to gain or lose from it? Were all 8,000 Bolivians in the region duped by conniving labor contractors and forced to work on isolated ranches? Or did these people migrate of their own free will? The answer to these questions likely rests somewhere in the middle. While the evidence suggests that labor brokers and landowners used their power to secure and retain Bolivian citizens as workers, the lives they left in rural Bolivia were likely not much better.<sup>65</sup> Aside from demands for their labor, a portion of their income, and their military service, membership in the Bolivian nation carried no positive benefits in their daily lives and conferred upon them few, if any, of the rights of citizenship. The words of one consular official are telling in this regard. When asked to explain why so few people chose to register at his office in Corumbá, he blamed previous consuls who had neglected the Bolivian “subjects” under their jurisdiction. He later crossed out the word “subjects” and replaced it

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<sup>63</sup> Maldonado usually specified if the individual in question practiced a trade other than unskilled rural labor, such as *ganadero*, *vaquero*, *carpintero*, *mecánico*, or *comerciante*, for example.

<sup>64</sup> Unfortunately, Maldonado’s ledger does not provide details about employers or the frequency with which Bolivian citizens migrated or changed jobs.

<sup>65</sup> The existing literature makes it clear that debt peonage to powerful land-owning patrons was a fact of life for most rural laborers in the Chiquitania in the nineteenth and twentieth centuries. See, for example, Ana María Lema Garrett, *El sentido del silencio: la mano de obra chiquitana en el oriente boliviano a principios del siglo XX* (Santa Cruz de la Sierra: Editorial El Pais, 2009) and Lema, ed., *La voz de los chiquitanos*.



with “citizens.”<sup>66</sup> Indeed, in the minds of most state officials in this borderland region, rural inhabitants were subjects from which the state could profit and extract labor, not citizens with rights to be protected. Faced with exploitation and lack of opportunity at home, during the first half of the twentieth century increasing numbers of people chose to leave their *terra patria* to seek their livelihoods in the broader Pantanal which, by the twentieth century had become a center of gravity for the regional economy.

***Living on the Edge: Labor Patterns in the Northern and Southern Transition Zones***

In the 1950s, Manoel Cavalcanti Proença, a writer and literary critic born in Cuiabá, described the seasonal migration of “*caboclos*” as one of the “defining features of the human geography” of the Pantanal. During a journey on the Paraguay and Cuiabá rivers between Corumbá and Cuiabá, Proença observed how rural populations retreated to areas of high ground during the flood season. During the dry season, he explained, *pantaneiros* returned to the river beds to fish, grow crops, and trade with passing vessels. Drawing parallels with cattle ranching, the region’s most important economic industry, Proença lamented that he could not produce a better term than “transhumance” to describe such a “picturesque seasonal journey.”<sup>67</sup> Virgílio Corrêa Filho, another prominent intellectual from Mato Grosso, explained how the Pantanal and its seasonal cycles of flood and drought, conditioned the “work processes, means of subsistence, and habits of life” of rural populations in the region.<sup>68</sup> Both imagined *pantaneiros* as a population of rural dwellers living outside of time, in tune with their environment and adapted to its seasonal rhythms.

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<sup>66</sup> Ernesto Carvajal to RREE, Corumbá, 30 enero 1918, Correspondencia recibida de los Consulados Nacionales en América, primer semestre, 1918, CONS-2-E-126, AMRE-Bo, La Paz.

<sup>67</sup> Manoel Cavalcanti Proença, *No têrmo de Cuiabá* (Rio de Janeiro: Instituto Nacional do Livro, 1958), 22.

<sup>68</sup> Virgílio Corrêa Filho, *Pantanais matogrossenses (devassamento e ocupação)* (Rio de Janeiro: Serviço Gráfico do Instituto Brasileiro de Geografia e Estatística, 1946), 32-33.

While it is true that all humans (regardless of power or profession) were forced to adapt to cycles of widespread flood and drought, both writers underestimated the ways in which the seasonal migration of rural workers responded to changes in global demand for the natural products of the broader region in the transition zones between the Pantanal and neighboring biomes. Such patterns of migration were evident during the earliest stages of the region's integration into international networks of commerce. For example, when Francis de Castelnau traveled through the region in 1845, he noted that indigenous people of Guaná descent living near Albuquerque – the Brazilian military fort in the southern Pantanal – traveled seasonally to the headwaters of the Paraguay River to collect ipecacuanha, a distance of 1,000 kilometers.<sup>69</sup> Indeed, ipecac root was one of the first commercially important products in the region, valued for its emetic properties and medicinal use in the treatment of dysentery.<sup>70</sup> After its initial discovery in the 1830s, ipecacuanha found ready markets in urban Brazil and, later, European cities struggling to treat ailments caused by inadequate urban sanitation.<sup>71</sup> Although pockets of ipecacuanha grew in other regions of Brazil, including the Rio Doce River valley (Espírito Santo and Minas Gerais) and parts of Bahia, the densest and highest-yielding stands grew in the upper Paraguay River valley in the transition zone between the Pantanal and the Amazon River basin.<sup>72</sup> By the late nineteenth

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<sup>69</sup> Castelnau, *Expedição as regiões centrais*, 285-86. Common names for the plant include ipecac and, in Brazil, *poaia*.

<sup>70</sup> Gabriel Pinto de Arruda, *Um trecho do oeste brasileiro: São Luiz de Cáceres, Mato Grosso* (Rio de Janeiro: Borsoi & Cia, 1938), 71-72.

<sup>71</sup> Although there is no consensus regarding who first “discovered” the plant, most agree that José Marcelino da Silva Prado was the first to market it to urban consumers in Brazil and Europe. By the late nineteenth century, the most important European markets for ipecacuanha were Germany and Great Britain. Castelnau, *Expedição as regiões centrais*, 338-39 and S. Cardoso Ayala, et. al., *Album graphico do Estado de Matto-Grosso*, 259, 353.

<sup>72</sup> Veloso, “As condições ecológicas da *Cephaelis ipecacuanha* Rich,” 362-63. Veloso's study examined how topography, slope, soil acidity, drainage, and moisture, and shade interacted to determine the distribution of

century, ipecacuanha was Mato Grosso's most economically valuable export and depended upon the labor of hundreds of seasonal workers from the broader region, including people of indigenous, Bolivian, Paraguayan, Brazilian, and European descent.<sup>73</sup>

The annual timing of ipecac extraction depended upon the growing conditions of the plant, seasonal cycles of rain and drought, and the demands for labor imposed by the broader economy, all of which changed over time. For most of the nineteenth century, the ideal location for the extraction of ipecac was along one of the multiple tributaries that formed the headwaters of the Paraguay River, including the Rio Sepotuba, the Rio Jauru, the Rio Cabaçal, the Rio Vermelho, and the Rio Paraguai itself. These regions were characterized by dense forests with thick underbrush, similar to those of the Amazon basin. In the early years of the industry, before the ranching economy took hold, most ipecac extraction took place in the dry season between the months of March and September. Such was the case when Castelnau traveled through the region in the 1840s. Hoping to secure indigenous laborers in Albuquerque for an expedition through the Pantanal in March 1845, Castelnau arrived to discover that all of the men of the village had traveled north to extract ipecac.<sup>74</sup> By the late nineteenth century, however, the ranch economy made increasing demands on the labor of rural populations during the dry season, which was the busiest time of year for ranch work. Thereafter, the most intense annual period of ipecac extraction occurred during the rainy

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ipecacuanha and noted that it almost always occurred in zones of transition (ecotones) between humid and dry regions. Judy Bieber briefly discusses the activities of indigenous people who extracted poaia in the Rio Doce region of Minas Gerais in "Catechism and Capitalism: Imperial Indigenous Policy on a Brazilian Frontier, 1808-1845," in Hal Langfur, ed., *Native Brazil: Beyond the Convert and the Cannibal, 1500-1900* (Albuquerque: University of New Mexico Press, 2014), 183-84 and 189.

<sup>73</sup> For the importance of ipecacuanha exports to the Mato Grosso economy, see Borges, *Do extrativismo à pecuária*, 51-53.

<sup>74</sup> Castelnau, *Expedição as regiões centrais*, 285-86.

season, from November to March, when ranch workers and other “*sertanejos*” were free to seek out other opportunities for wage labor. Although laboring in the forest during the rainy season was a grueling prospect, the moist and muddy conditions made it easier for workers to extract the plant from the soil without losing or damaging its valuable roots.<sup>75</sup>

The actual labor of ipecac extraction was the stuff of legend in Mato Grosso. For example, Gabriel Pinto de Arruda described *poaieiros* as the “new *bandeirantes* of the municipal forests” who struck out north by river from Cáceres every October in search of “black gold,” as ipecacuanha was known. Alfredo Marien labeled *poaieiros* as “a people apart, perhaps more heroic than even diamond miners (*garimpeiros*) or rubber tappers (*seringueiros*).” He went on to describe them as “tough and fearless, every day facing and overcoming all kinds of dangers...treading alone in the worst possible weather [through] immense virgin forest, similar to the Amazon.” Gone for periods lasting up to five months, *poaieiros* carried with them enough food and supplies to sustain themselves during the harvest. A typical diet consisted of jerked beef, beans, rice, manioc flour, lard, sugar, *yerba mate*, and *guarana*. Aside from clothes and bedding, supplies included hunting rifles, a machete for clearing underbrush, and a revolver for self-defense. *Poaieiros* also carried with them two specialized tools: one, the *saraquá*, was made of iron and used to extract the plant and its roots from the soil and the other, the *sapicuá*, was a sack (*bornal*) made of woven cotton used to store the roots and keep them dry.<sup>76</sup>

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<sup>75</sup> Ibid., 338; Joaquim Ferreira Moutinho, *Noticia sobre a provincia de Matto Grosso seguida d’um roteiro da viagem da sua capital a S. Paulo* (São Paulo: Typographia de Henrique Schroeder, 1869), 151; Alfredo Marien, *Era um poaieiro* (São Paulo: Livraria Técnica, 1944), 234; and Arruda, *Um trecho do oeste brasileiro*, 73-74.

<sup>76</sup> Arruda, *Um trecho do oeste brasileiro*, 73; Marien, *Era um poaieiro*, 234. For descriptions of the *saraquá* and *sapicuá*, see Arruda, *Um trecho do oeste brasileiro*, 73-74; Marien, *Era um poaieiro*, 248; Cordeiro de Lima, “Terra da poaia,” *O Estado de Mato Grosso*, 30 outubro 1940, 2; and Ernani Silva Bruno, *As selvas e o pantanal: Goiás e Mato Grosso* (São Paulo: Editora Cultrix, 1959), 20. Ernani Silva Bruno described the

During their times in the forest, poaieiros adhered to a strict labor regime composed of crews (*turmas*) of eight to twelve men that were headed by a chief and formed before the departure of the expedition.<sup>77</sup> Travel between regional towns – chiefly Cáceres and *Barra dos Bugres* – and the *mata de poaia* lasted up to two weeks. Upon their arrival, the chief of the expedition, along with one or two experienced poaieiros (*práticos*) set off on a scouting expedition, cutting a “master trail” into the heart of the forest in an effort to locate the densest stands of ipecacuanha. Near the center of the chosen location, often several kilometers from the point on the river where they disembarked, work crews set up a base camp, or *feitoria*, where they constructed temporary dwellings made of wood and covered with thatched palm leaves. Each morning crew members set out alone or in pairs, cutting their own paths that radiated outward in all directions from the master trail. To orient themselves and to avoid becoming lost in the dense forest, poaieiros called out from time to time to alert their companions to their presence. This communication was especially important at dusk, when the coming darkness further limited visibility.<sup>78</sup>

The amount of ipecac workers were able to harvest depended upon the density of the plant, which varied between locations. According to Arruda, in some locations the plant was

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saraqua as an “iron cone with a wooden handle.” For a more detailed description of the tool and the technique workers employed when using it, see Arruda cited above.

<sup>77</sup> See, for example, oral history interview with Francisco de Paula, conducted by Maria do Socorro Araújo, 6 maio 2005, p. 219-20 and oral history interview with Joao de Deus Ribeiro, 3 maio 2005, p. 324-25, in João Edson de Arruda Fanaia, Adson de Arruda Fanaia, and Maria do Socorro Araújo, *Relatos de memória e lembranças da cidade*, Cáceres, October 2006, unpublished transcriptions in possession of the author. I would like to thank Maria do Socorro Araújo for making these transcribed oral histories available to me.

<sup>78</sup> Arruda provides the most detailed description of the process of ipecac collection. The accounts of other authors confirm most his observations. See Arruda, *Um trecho do oeste brasileiro*, 75-76, Castelnau, *Expedição as regiões centrais*, 339-40; and Cordeiro de Lima, “Terra da poaia,” 2. Joaquim Ferreira Moutinho gives one of the earliest descriptions of the labor regime. Writing in 1869, he claimed that the chiefs of the expeditions usually supplied all necessary food, supplies, and tools to workers and, as a result, most poaieiros went into debt. Moutinho, *Notícia sobre a provincia de Matto Grosso*, 28-29.

so thick that workers could remain in the same spot for an entire day to fill their quota. Within a few hundred meters, however, the ipecac plants could be so sparse that poaieiros were forced to walk for kilometers before they filled their sacks. Poaieiros were normally expected to collect a certain quantity of ipecac each day. For example, in the 1840s, Castelnau explained that the *tarifa diária* for each poaieiro was twelve pounds of ipecac root which, when dry, weighed five pounds. Twenty years later, Joaquim Ferreira Moutinho claimed that each poaieiro was expected to collect ten to sixteen pounds per day which, when dry, was reduced to “less than half” of the original weight.<sup>79</sup> The value of ipecac, however, varied significantly and depended upon fluctuating demand on the world market. For example, observers noted that during World War I demand for ipecac soared in Europe. While the normal price for ipecac fell somewhere between 30 and 50 contos de reis per *arroba*, ipecacuanha fetched “fabulous prices,” rising to as much as 750 contos de reis per *arroba*.<sup>80</sup> As with most extractive industries, however, it is unlikely that most poaieiros shared much in any of these profits. As contemporary observers explained, the bulk of the profit created as a result of the commodification of ipecacuanha went first to expedition chiefs and, ultimately, to the commercial firms that purchased the product and shipped it to consumers in urban Brazil and Europe. For example, Castelnau estimated that, even after the cost of shipping ipecac to Rio de Janeiro, expedition chiefs earned a net profit of up to 4,000 reis per worker, per day.<sup>81</sup> One writer aptly described the ipecac industry as one

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<sup>79</sup> Arruda, *Um trecho do oeste brasileiro*, 75; Castelnau, *Expedição as regiões centrais*, 340; Moutinho, *Notícia sobre a província de Matto Grosso*, 151.

<sup>80</sup> The arroba was a standard unit of measurement in Brazil roughly equivalent to 32 pounds. Antonio Carlos Simoens da Silva, *Cartas matogrossenses: viagens do Rio de Janeiro a Porto Esperança, Corumbá, Cuyaba e Assumpção* (Rio de Janeiro: Imprensa Nacional, 1927), 91-92 and Arruda, *Um trecho do oeste brasileiro*, 71-72.

<sup>81</sup> Castelnau, *Expedição as regiões centrais*, 340.

“accomplished by a legion of unfortunate [ones] for the benefit of a few lucky ones,” a situation that he claimed was “both sad and heroic.”<sup>82</sup>

Indeed, details about the places of origin and identities of poaieiros are notoriously difficult to establish from the historical record. Although government officials were keen to know the identities of merchants who shipped ipecac to the exterior and, thus, paid taxes on exports, they were much less concerned with the individuals whose labor produced the commodities in question. As ipecac exports increased in importance over the years, the government of Mato Grosso implemented a handful of measures designed to better regulate and profit from the trade in ipecac. For example, in the 1920s, the government levied a tax on all individuals engaged in the extraction of ipecac and charged a public official with its collection. Given the mobility of workers and their vast territory of operations, collecting taxes from them was an ambitious goal. According to Manoel Pedro de Oliveira, who served as *fiscal* in the ipecac zones (*zonas poayeiras*) until 1931, workers routinely and “maliciously” evaded the payment of taxes. Instead of remaining in his “comfortable” offices in Cáceres and Barra dos Bugres, Oliveira traveled for months through the “vast, unhealthy, and abandoned” territories under his jurisdiction, during which time he managed to collect the tax from almost 700 individuals for the 1931 fiscal year.<sup>83</sup>

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<sup>82</sup> Cordeiro de Lima, “Terra da poaia,” 2. For more details on work regimes, debt obligations, and the division of labor for the extraction of ipecac, see Marcel Jules Thiéblot, *Poaia, ipeca, ipecacuanha: a mata da poaia e os poaieiros do Mato Grosso* (São Paulo: Escola de Folclore, 1980), 27-48. Thiéblot carried out ethnographic research with poaieiros in Mato Grosso during the 1970s. His work provides one of the most detailed accounts of the ipecac industry and includes valuable details about relationships between laborers, merchants, and expedition chiefs.

<sup>83</sup> Memorial apresentado ao Snr. Dr. Director do Thesouro, pelo cidadão Manoel Pedro de Oliveira, sobre a sua reintegração no cargo de Agente Fiscal da 1ª e 2ª zonas poayeiras nos municípios de Cáceres e Matto-Grosso, 15 Maio 1931, Caixa 9F, 1931, Latas Avulsas, Arquivo Público do Estado de Mato Grosso (APMT), Cuiabá, Brazil. For the list of individuals from whom Oliveira collected taxes, see Lançamento do Imposto de Industria e Profissão, 1931, Livro 2, Caixa 1, Coletoria e Agencia Fiscal da 1º e 2º Zonas Poayeiras, 1929-1937, APMT, Cuiabá, Brazil. Not surprisingly, this ledger lists no more information than the name of each individual and the amount collected.

It is difficult to determine how many of these seven hundred people lived year-round in the mata da poaia and how many migrated seasonally from other places in the region. One writer claimed that, in 1939, as many as 400 “*ribeirinhos*” carved out a permanent existence in the forests of the upper Paraguay River basin.<sup>84</sup> Arruda claimed that, “with rare exceptions,” poaieiros were “sons of these shores,” born and raised on or near the upper Paraguay River or one of its tributaries.<sup>85</sup> Most contemporary observers, including Arruda, agreed that ipecac work was a highly seasonal activity that drew workers from Cuiabá, Cáceres, and Barra dos Bugres. While one observer claimed that many poaieiros were defectors from “farming and other rural industries” in search of higher wages, another noted that, after the harvest, most poaieiros returned home to their families during the dry season where they tilled the soil, labored on ranches, and recuperated their energy after extended and difficult periods of ipecac extraction.<sup>86</sup> Given their history of migration to the Pantanal and northern Mato Grosso, it is likely that many of the ipecac workers were recent or long-time migrants from Bolivia. For example, of the Bolivian citizens that Reyes Maldonado recorded in his ledger, many listed their previous residence as spots along the Jauru, Vermelho, Sepotuba, or Cabacal rivers, all well-known sites for ipecac collection.<sup>87</sup>

Oral histories also highlight the seasonal nature of ipecac extraction and provide more clues about the origins of the workers. For example, Arino Pinto de Arruda, a long-time

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<sup>84</sup> No author, “A proteção as matas poaieiras,” *O Estado de Mato Grosso*, 15 October 1939, 5.

<sup>85</sup> Arruda, *Um trecho do oeste brasileiro*, 73.

<sup>86</sup> Octavio Pitaluga, “Necessidades e vantagens da proteção a ipecacuana [1918],” *Instituto Histórico e Geográfico de Mato Grosso*, Publicações Avulsas, No. 8 (1998), 12 and Marien, *Era um poaieiro*, 234.

<sup>87</sup> Reyes Maldonado, *Libro de matrículas, 1944-1973*, Caixa 3, Acervo Reyes Maldonado, NUDHEO, UNEMAT, Cáceres, Brasil.



resident of Cáceres knew two poaieiros who had “one foot here [in Cáceres] and the other there [in the mata da poaia].”<sup>88</sup> Others, such as Natalino Fontes, noted that almost all poaieiros left their families behind for months while they traveled north to collect ipecac root.<sup>89</sup> Another long-time resident of Cáceres, Francisco de Paula, provided further details about the seasonal migration of workers between the northern Pantanal and the mata da poaia. According to Paula, poaieiros only migrated north during the rainy season to harvest ipecac, when the wet conditions and soft ground made it easier to extract the coveted roots. During the dry season, most men headed home to “toil in the fields.” When the ipecac harvest called again, they bid farewell to their families and left their crops “for the women to tend.”<sup>90</sup>

In the southern transition zones between the Pantanal, the Chaco, and the Atlantic Forest, two other plant species with economic value thrived: yerba mate and quebracho.<sup>91</sup> Although yerba mate was common in Paraguay, Argentina, and other parts of Brazil, it also grew in the southeast transition zone between the Pantanal and the Atlantic Forest in an expanse of land between the Paraguay and Paraná River valleys. In response to the growing continental demand for yerba mate leaves – used to brew a tea widely consumed in South

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<sup>88</sup> Oral history interview with Arino Pinto de Arruda, conducted by Maria do Socorro Araújo, 20 abril 2005, p. 94, in João Edson de Arruda Fanaia, Adson de Arruda Fanaia, and Maria do Socorro Araújo, *Relatos de memória e lembranças da cidade*, Cáceres, October 2006, unpublished transcriptions in possession of the author.

<sup>89</sup> Oral history interview with Natalino Fontes, conducted by Maria do Socorro Araújo, 27 abril 2005, in Fanaia, et. al., *Relatos de memória*, 368.

<sup>90</sup> “*Lutar com a roça*.” Oral history interview with Francisco de Paula, conducted by Maria do Socorro Araújo, 6 maio 2005, in Fanaia, et. al., *Relatos de memória*, 221. Thiéblot’s account corroborates most of these testimonies. Thiéblot, *Poaia, ipeca, ipecacuanha*, 51-60.

<sup>91</sup> Merchants shipped several different species of quebracho. The most valuable species, however, were red quebracho (*Schinopsis lorentzii*) and white quebracho (*Aspidosperma quebracho-blanco*).

America – in the 1880s, the Brazilian government granted an official monopoly to Thomaz Larangeira whose company, *Matte Larangeira*, eventually dominated the industry in Mato Grosso by the twentieth century. In turn, the company was a key motor in the development of the region during this period as well as a major employer for rural laborers, especially Paraguayans searching for work in the decades following the Paraguayan War. According to Wilcox, however, most of the laborers employed by Matte Larangeira worked on a permanent basis and, thus, had fewer connections to the broader economy of the Pantanal. Indeed, Matte Larangeira is most well known in the history of Mato Grosso for its alleged exploitation of laborers and its expropriation of indigenous land.<sup>92</sup>

While the exportation of yerba mate, along with cattle products, dominated the economy of the southern Pantanal for almost half a century after 1880, by the 1930s another plant with economic potential, the quebracho tree, began to attract the attention of investors. Quebracho is a dense hardwood tree that grows in the Chaco region of Argentina, Paraguay, and Bolivia, as well as the zone of transition with the Pantanal. The two most economically important species were the red and white quebracho (*Schinopsis lorentzii* and *Aspidosperma quebracho-blanco*) both of which were rich in tannins used in the preservation of leather.<sup>93</sup> Since cattle ranching and leather production were two major industries in Argentina, investors were confident that Argentina's quebracho reserves were ripe for commodification. As early as 1895, merchants and investors in Buenos Aires established rights to quebracho

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<sup>92</sup> I have chosen not to focus as much on the yerba mate industry, partly because more has been written about its history and partly because migratory labor was not as prominent. For the history of Matte Larangeira and its controversial legacy in Mato Grosso, see Virgílio Corrêa Filho, *A sombra dos herveas matogrossenses* (São Paulo: Editora Ltda., 1925); Gilmar Arruda, *Frutos da terra: os trabalhadores da Matte Larangeira* (Londrina: Editora UEL, 1997); Odaléia da Conceição Deniz Bianchini, *A Companhia Matte Larangeira e a ocupação da terra do sul de Mato Grosso, 1880-1940* (Campo Grande: Editora UFMS, 2000).

<sup>93</sup> Their popular names were *quebracho colorado* and *quebracho blanco*, respectively.

forests and began to fell timber for shipment to factories where tannins could be extracted. By the 1920s, Argentine businesses established twenty different quebracho extraction operations in Argentina and four additional “factories” in Paraguay with shipping centers at points along the Paraguay River. By then, the industry had a production capacity of over 400,000 tons per year and employed up to 25,000 people.<sup>94</sup>

For the neighboring republics of Brazil and Bolivia, the expansion of the Argentine quebracho industry represented more than the simple expansion of Argentina’s economic influence in South America. Writing in 1926, Carlos Blanco Galindo, Bolivia’s “National Delegate” and military commander in the republic’s eastern territories provided a detailed description of each quebracho factory that had been established in Paraguayan territory along the Paraguay River. For each location, Blanco noted the productive capacity of each plant, the number of individuals it employed, and, most significantly, the length of each railroad spur, most of which stretched at least 65 kilometers from the Paraguay River into the interior. With hostilities mounting between Bolivia and Paraguay over territorial claims to the Chaco region, Blanco was rightly worried that quebracho factories would establish infrastructure and give Paraguay an advantage in the event of war.<sup>95</sup>

While the Brazilian government did not fear territorial loss, it did consider Argentina’s dominance of the quebracho industry an issue of “national security.” According to quebracho boosters, many of whom hailed from Rio Grande do Sul and had connections to

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<sup>94</sup> “Petición de los fabricantes,” sent to Juan B. Fleitas, Ministerio de Agricultura de Argentina, Buenos Aires, 6 Nov 1928, included as attachment in letter from Amadeu dos Santos e Silva to Filinto Müller (Interventor Federal no Estado de Mato Grosso), Porto Murtinho, 14 junho 1938, Antiga Lata F, 1939, Latas Avulsas, APMT, Cuiabá, Brazil.

<sup>95</sup> Carlos Blanco Galindo, *Algunos documentos e informes del delegado general Carlos Blanco Galindo, 1926-1927* (La Paz: Impr. y Encuadernación Intendencia Central del Ejercito, 1927), 2-5.

Getúlio Vargas, Brazil was home to at least 600 hundred tanneries by the 1930s, all of which depended upon access to tannins to produce leather products. Before the establishment of quebracho production in Brazil, these tanneries imported 3,500 tons of tannins per year. During times of crisis or war, they argued, Brazil needed the capacity to produce its own leather products, such as shoes and boots.<sup>96</sup> Unfortunately, according to surveys carried out in Argentina, Paraguay, and Brazil, only five percent of existing quebracho reserves lay within Brazilian territory. As a result, boosters advocated for heavy government investment in the industry and strict regulations that would make illegal the export of quebracho tannin to destinations outside of Brazil.<sup>97</sup>

The first Brazilian company devoted to the extraction of tannin from quebracho was founded in 1935 by César Augusto Bordallo, a businessman from southeastern Brazil with ties to the leatherworking industry. The company called itself Florestal Brasileira, S.A., and made its headquarters in Porto Murtinho on the southern edge of the Pantanal. There it established a factory, “excellently installed” with facilities and equipment for blacksmith work, carpentry, lumber milling, and brickmaking, as well as a laboratory to conduct scientific analyses of the tannins produced. By 1938, the factory was up and running and a crew of four hundred workers was employed to cut and transport quebracho trees over 22 kilometers of railroad track for processing in the factory.<sup>98</sup>

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<sup>96</sup> No author, “Memorial referente a instalação d’uma fábrica para extracto de quebracho no Brasil,” n.d. This document was included within a bundle of correspondence about efforts to establish quebracho tannin production in Mato Grosso contained within Unmarked Caixa #1, 1935, Latas Avulsas, APMT, Cuiabá, Brazil. This bundle also included letters addressed from ranchers and tanners in Rio Grande do Sul to Getúlio Vargas and other politicians in Mato Grosso.

<sup>97</sup> Letter from Amadeu dos Santos e Silva to Filinto Muller, Porto Murtinho, 14 junho 1938, Antiga Lata F, 1939, Latas Avulsas, APMT, Cuiabá, Brazil.

<sup>98</sup> No author, “Histórico da Florestal Brasileira S.A.,” *O Estado de Mato Grosso*, 7 dezembro 1941, 1, 2, 4.

Unfortunately, there are even fewer sources that document the backgrounds of those employed in the extraction of quebracho and their experiences as workers than for ipecac or yerba mate. One writer, describing the Argentine quebracho industry, described factory headquarters in terms of a company town, with “hygienic accommodations,” medical services, one day of rest per week, and an eight-hour work day.<sup>99</sup> A Brazilian author claimed that the arrival of the quebracho industry in Porto Murtinho brought running water and electricity to the town for the first time.<sup>100</sup> Other sources reveal that the experiences of quebracho workers were likely less idyllic. For example, in an attempt to justify the need for quebracho production in Brazil and to prove its long-term profitability, one writer noted that the cost of labor in Mato Grosso was 40% cheaper than it was in Argentina.<sup>101</sup> Other observers noted that Brazilian quebracho operations commonly recruited Paraguayan citizens to labor on their properties because of their willingness to work for less, a practice which further depressed wages. As a result, quebracho workers were normally paid “very little for their work,” but most were content to earn “only that necessary for their sustenance.”<sup>102</sup> While more research is necessary to adequately document the social, economic, and labor histories of quebracho production in the upper Paraguay River basin – including patterns of

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<sup>99</sup> “Petición de los fabricantes,” sent to Juan B. Fleitas, Ministerio de Agricultura de Argentina, Buenos Aires, 6 Nov 1928, included as attachment in letter from Amadeu dos Santos e Silva to Filinto Müller (Interventor Federal no Estado de Mato Grosso), Porto Murtinho, 14 junho 1938, Antiga Lata F, 1939, Latas Avulsas, APMT, Cuiabá, Brazil.

<sup>100</sup> No author, “Histórico da Florestal Brasileira S.A.,” *O Estado de Mato Grosso*, 7 dezembro 1941, 1, 2, 4.

<sup>101</sup> No author, “Memorial referente a instalação d’uma fábrica para extracto de quebracho no Brasil,” n.d., Unmarked Caixa #1, 1935, Latas Avulsas, APMT, Cuiabá, Brazil.

<sup>102</sup> No author, “Organização Industrial,” n.d., Antiga Lata G, 1940, Latas Avulsas, APMT, Cuiabá, Brazil and “Resumo do parecer: referente a vistoria procedida durante 4 meses nas terras da fazenda ‘Tres Barras’ e fazenda limítrofes a esta, quanto a existencia de quebracho tanto ‘femea’ como ‘coronillo’ pelo Dr. A Luescher,” Unmarked Caixa #1, 1935, Latas Avulsas, APMT, Cuiabá, Brazil.

seasonal labor migration – it is clear that its extraction was an important economic activity that relied upon the labor of rural populations in the transition zone between the Pantanal and the Chaco.

While environmental change in the Pantanal itself was much less perceptible to observers in the early twentieth century, by the 1920s and 1930s, stakeholders noted with increasing alarm that the activities of ipecac workers in the north and quebracho workers in the south were beginning to produce radical transformations of the landscape. In the north, instead of leaving behind root fragments so that the ipecacuanha stands could send out new shoots, poaieiros routinely extracted the entire plant.<sup>103</sup> After World War I, when international demand sparked a surge in production, many poaieiros began to operate year-round, which further prevented ipecacuanha stands from regenerating after the harvest. To make matters worse, colonists began to invade the region, cutting hardwoods that provided necessary shade for ipecacuanha and setting fires that laid large swaths of land to waste, practices which one politician decried as “crimes against nature.” Although the state government established laws to regulate the industry and prevent its collapse, as discussed above, officials found it difficult to control the activities of rural laborers in the region. Thus, at the hands of “short-sighted” poaieiros and colonists, the mata da poaia with its valuable ipecac plants was being transformed into sterile fields overrun by invasive grasses and tangled thickets characteristic of the cerrado.<sup>104</sup>

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<sup>103</sup> Arruda, *Um trecho do oeste brasileiro*, 74.

<sup>104</sup> Pitaluga, “Necessidades e vantagens da proteção a ipecacuana,” 8 and 14. One long-time resident of Cáceres remembered taking trips with her family to the mata da poaia and described it as a beautiful forest with luxurious vegetation. As she grew older and the extraction of ipecac became more intensive, however, such beauty gradually disappeared so that today, “there is only grass for cows” (...tem só o capim pro boi.). See oral history interview with Aida Figueiredo, conducted by Maria do Socorro Araújo, 20 abril 2005, in Fanaia, et. al., *Relatos de memória*, 12.

A similar scene unfolded in the southern Pantanal in the quebracho reserves that grew in the transition zone with the Chaco. Quebracho trees are extremely slow-growing and, according to those in the industry, required between 80 and 100 years of growth to reach maturity and to achieve the highest potential concentration of tannins.<sup>105</sup> Despite this knowledge, however, quebracho operations did little to conserve existing stands or to promote replanting programs after reserves had been harvested. Instead, when the reserves closest to the river port had been depleted, companies simply laid more railroad tracks into the interior. When Grace Thompson Seton visited a quebracho operation at Puerto Sastre (in Paraguayan territory) in 1926, she reported that the company had already exhausted “great forests of the beautiful wood” closest to the river and were presently shipping raw material on a railroad that stretched seventy miles into the interior.<sup>106</sup> This was evidently the case in Brazil as well because, by 1940, state government officials had initiated efforts to promote replanting of quebracho and outlawed the sale of export-quality logs outside of Brazilian territory.<sup>107</sup>

## Conclusion

The examples developed here for ipecacuanha, yerba mate, and quebracho, illustrate the kinds of economies that developed around the commercialization of forest products, the

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<sup>105</sup> “Petición de los fabricantes,” sent to Juan B. Fleitas, Ministerio de Agricultura de Argentina, Buenos Aires, 6 Nov 1928, included as attachment in letter from Amadeu dos Santos e Silva to Filinto Müller (Interventor Federal no Estado de Mato Grosso), Porto Murtinho, 14 junho 1938, Antiga Lata F, 1939, Latas Avulsas, APMT, Cuiabá, Brazil.

<sup>106</sup> Grace Thompson Seton, *Magic Waters: Through the Wilds of Matto Grosso and Beyond* (New York: E.P. Dutton & Co., Inc., 1933), 137.

<sup>107</sup> No author, “Organização Industrial,” n.d., Antiga Lata G, 1940, Latas Avulsas, APMT, Cuiabá, Brazil. On the environmental history of leatherworking and quebracho extraction in Argentina, see Adrián Gustavo Zarrilli, “El oro rojo: la industria del tanino en la Argentina (1890-1950),” *Silva Lusitana* 16:2 (2008): 239-59 and “Historia y economía del bosque chaqueño: la mercantilización de los recursos forestales (1890-1950),” *Anuario IEHS* 19 (2004): 255-85.

central role of labor migration to the economy of the Pantanal, and the linkages between this seemingly marginal region and world markets of the early twentieth century. Between 1870 and 1930, the upper Paraguay River basin developed into a major artery for the movement of both people and goods in the interior of South America. While ranching developed into the most important economic activity within the Pantanal itself, several other extractive industries continued to attract merchants and workers on a seasonal basis to the ecotones between the wetland and neighboring biomes. This chapter's focus on Bolivia demonstrates how the development of a regional economy in the broader Pantanal drew upon preexisting networks of trade and labor between eastern Bolivia and western Brazil. The increased pace of commerce presented new opportunities for rural workers throughout the region, many of whom migrated seasonally and utilized multiple subsistence strategies aside from ranch labor.

By the 1930s, an increasing number of stakeholders in the broader region began to note with alarm that reserves of ipecac and quebracho were disappearing. Although they called on state and national governments to pass laws to protect these resources, rural workers continued to extract the commodities, merchants continued to ship them to consumers around the world, and natural reserves continued to dwindle. Significantly, however, most stakeholders were little concerned about environmental degradation or the negative ecological consequences of deforestation. Instead, they lamented the loss of a valuable source of profit for merchants and revenue for state governments. A few forward-thinkers devised schemes to promote the rational management of natural resources through replanting and cultivation. Their actions fit into the broader logic of economic development that guided the policies of national governments in both Brazil and Bolivia. After 1930, both



governments launched major campaigns designed to integrate their respective frontier territories into national networks of commerce by constructing infrastructure and promoting regional industries. The following chapter examines how seasonal flooding conditioned the efforts of states and investors to achieve these goals in the Pantanal during the middle of the twentieth century.

### CHAPTER 3

#### Undoing Isolation: Seasonal Floods and the Limits of Economic Development in the Pantanal

In July 1941, Brazilian President Getúlio Vargas underwent a whirlwind tour of the state of Mato Grosso, making stops in Campo Grande, Corumbá, and Cuiabá. The occasion marked the first time a Brazilian President had ever visited the state and citizens turned out in droves to welcome him. One of the principal reasons for his trip was to inaugurate the first section of tracks constructed under the direction of the *Comissão Mista Ferroviária Brasileiro-Boliviana* (CMFBB).<sup>1</sup> The CMFBB was a binational commission created in 1938 and charged with constructing a railroad from Corumbá, Brazil, across the Chiquitanía to Santa Cruz de la Sierra, eastern Bolivia's largest city. During his time in Mato Grosso, Vargas took part in multiple receptions organized in his honor, met with officials, inspected the progress of the commission by airplane and from the ground, and met with the Brazilian and Bolivian citizens who made up the majority of the labor force.<sup>2</sup>

On the day he arrived, a boat loaded with hundreds of passengers from the surrounding countryside arrived in Corumbá to greet the President, some of whom carried pictures with his likeness that they hoped he would autograph. Journalists used the story to illustrate how the message of the Estado Novo had managed to reach even the remotest corners of Brazil's national territory. During another meeting with workers on the Bolivian

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<sup>1</sup> In Spanish, the *Comisión Mixta Ferroviaria Brasileño-Boliviana*. In English, the Brazilian-Bolivian Joint Railway Commission.

<sup>2</sup> According to one report, Vargas even planned to take part in an obligatory jaguar hunt in the Pantanal on the property of his host, Irineu Sampaio. See, n.a., "Sobrevoou a ponte do rio Paraguai," *A Noite*, 29 julho 1941, 3.

side of the border, Vargas met a young man who had traveled from his home state of Minas Gerais to work on the railroad. When Vargas asked him why he had chosen to travel so far from his home, the man reportedly responded: “I followed your Excellency’s advice. On to the west!”<sup>3</sup> Indeed, for *pantaneiros* and migratory workers alike, Vargas’s presence was clear proof that, in the March to the West, the Pantanal would not be forgotten.<sup>4</sup>

During his official visit, Vargas spent a considerable amount of time interacting with Bolivian officials and diplomats. Like their Brazilian counterparts, these officials were working to carry out their own “march to the east.” After almost a half-century of failed efforts, Bolivia’s dream of integrating its lowland territories into South American commercial networks through the construction of a railroad was finally becoming a reality. Their efforts would establish the missing link in a transcontinental supply chain stretching from the Atlantic port of Santos, São Paulo, to the Pacific Ocean. Vargas, too, recognized the transcontinental significance of the CMFBB. In a speech given at *Arroyo Concepción* on the border between Brazil and Bolivia, he hailed the CMFBB as a shining example of inter-American collaboration and predicted that the completion of the railroad would usher in a new era of prosperity for eastern Bolivia and the rest of central South America. More specifically, Vargas envisioned that Bolivia would become a new consumer market for agricultural products and manufactured goods generated by Brazil’s expanding industrial

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<sup>3</sup> “Segui o conselho de V. Ex.: Rumo ao oeste!” N.a., “O valor econômico e estratégico da ferrovia Brasil-Bolívia,” *A Noite*, 30 julho 1941, 1 and 3.

<sup>4</sup> N.a., “Fase definitiva da renovação da Marinha brasileira: inaugurada a base fluvial de Ladário pelo Presidente Getúlio Vargas,” *Gazeta de Notícias*, 31 julho 1941, 4.

economy. In return, Brazil would gain access to Bolivia's coveted fossil fuels and mineral wealth.<sup>5</sup>

Despite the heady optimism of officials from both Bolivia and Brazil, the railroad was still under construction over thirteen years later, in August 1954, when President Getúlio Vargas took his own life. Although officials proclaimed the railroad complete and inaugurated it in 1955, it was not until the late 1960s when engineers and workers finalized all necessary bridges and earthworks.<sup>6</sup> Throughout the long period of construction, multiple obstacles confronted the commission, including the high cost of acquiring the necessary supplies and materials, labor scarcity, world events (chiefly World War II), and the difficulties imposed by the terrain itself. The case of the CMFBB thus illustrates the many ways in which nation-states and individuals struggled in their efforts to shape the Pantanal and central South America into the mold of progress.

The officials and engineers who headed the CMFBB were not the first people to confront the problem of seasonal flooding in the Pantanal and they would not be the last. This chapter examines the long history of economic development in the Pantanal during the first half of the twentieth century. Despite sustained efforts that spanned over half a century, by the 1950s neither Brazil nor Bolivia had realized such dreams of development in the Pantanal. Although geopolitics and distance from markets were important, these variables alone cannot explain the repeated failure of economic development projects in the region. While most studies focus exclusively on Mato Grosso and the Brazilian Pantanal in the

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<sup>5</sup> N.a., "A estada do Presidente em Corumbá," *O Estado de Mato Grosso*, 1 agosto 1941, 1 and 4 and N.a., "A viagem do Presidente Getúlio Vargas," *Jornal do Brasil*, 31 julho 1941, 6 and 10.

<sup>6</sup> For the chronology of the CMFBB and its many phases of construction, see Víctor Hugo Limpías Ortiz, *Las ferrovías y la carretera que transformaron el el oriente boliviano, 1938-1957: vías de integración y desarrollo*. (Santa Cruz de la Sierra: Editorial El País, 2009).

period between 1870 and 1930, this chapter utilizes a transnational approach and examines the period before and after 1930 to consider how seasonal flooding influenced continental processes of economic development in the decades following the Chaco War (1932-1935). I argue that the ecology of the Pantanal – its cycles of flood and drought – impeded the efforts of states and private investors to solve the problem of the region’s isolation, thus limiting the achievements of each nation in their respective marches to the west and east.

### **The Rewards of Crossing Temporal and National Divides**

Historical scholarship on economic development in the Pantanal has focused almost exclusively on the period between 1870 and 1930. This was, indeed, a formative period in the history of the region. As discussed in chapter two, the end of the Paraguay War inaugurated a period of rapid commercial expansion and growth, which produced a growing number of extractive commodities for consumption on national and international markets. While this economic growth created wealth for provincial elites and led to general improvements in quality of life for most people, Mato Grosso and eastern Bolivia still lagged behind the urban centers of Brazil and Bolivia, despite the region’s economic potential and its reliable connections to commercial networks. As a result, historians have generated a variety of arguments to explain the region’s apparent lack of economic development.<sup>7</sup>

Historian Zephyr Frank’s dissertation sought to explain the underlying causes of underdevelopment in Mato Grosso between 1870 and 1937. Based upon a meticulous examination of archival and published sources, Frank concluded that local, or “endogenous,”

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<sup>7</sup> The question of “economic development” in Mato Grosso has interested North American scholars far more than Brazilian or Bolivian scholars. Those who have taken up the question most often attribute the lack of economic development on the frontier to neglect on the part national governments and unjust patterns of land tenure. For a recent analysis by a Brazilian historian, see Carlos Alexandre Barros Trubiliano, “A ‘Civilizacao do couro’: desenvolvimento do capital transnacional no sul do Mato Grosso (1870-1920),” *Cadernos do Tempo Presente* (Sergipe) 16 (maio/julho 2014): 64-75.

factors such as oligarchic politics, land tenure patterns, and distance from markets were more important than the region's heavy reliance on exports revenues, foreign investment, or government neglect as causes of underdevelopment.<sup>8</sup> Although he mentioned geography (i.e. distance from markets) as a determining factor of Mato Grosso's underdevelopment, Frank's study did not consider the role that the ecological characteristics might have played in shaping patterns of economic development. In contrast, Robert Wilcox's study of cattle ranching in the region suggests that the differing ecologies of the Pantanal, *Cerrado*, and *Campo Limpo* of Mato Grosso influenced the development of the ranching industry on the frontier. Wilcox argues that material realities such as soil type, access to water, and vegetation dictated the possibilities of ranchers in the region and shaped land tenure patterns (*latifundio*, extensive grazing) in ways that militated against economic development. In the final analysis, however, Wilcox argues that distance from markets and prohibitive costs made innovation in technology and breeding impractical and led ranchers to follow the "law of the least effort."<sup>9</sup>

Both Frank and Wilcox offer compelling and sophisticated arguments to explain the lack of economic development in Mato Grosso. Given the high cost and time necessary to conduct business in the region between 1870 and 1930, it would be difficult to argue that distance from markets and lack of infrastructure did not hamper the Pantanal's economic development. While these were important reasons – ones that continue to impact the region

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<sup>8</sup> Zephyr Frank, "The Brazilian Far West: Frontier Development in Mato Grosso, 1870-1937" ( PhD diss., University of Illinois – Urbana-Champaign, 1999). For a condensed version of this argument, see Zephyr Frank, "Exports and Inequality: Evidence from the Brazilian Frontier, 1870-1937," *Journal of Economic History* 61:1 (March 2001): 37-58.

<sup>9</sup> Robert Wilcox, "Cattle Ranching on the Brazilian Frontier: Tradition and Innovation in Mato Grosso, 1870-1940." PhD diss., New York University, 1993 and Robert Wilcox, "'The Law of the Least Effort': Cattle Ranching and the Environment in the Savanna of Mato Grosso, Brazil, 1900-1980," *Environmental History* 4:3 (July 1999): 338-68.

today – they alone cannot explain the repeated failures on the part of national governments to achieve the economic development necessary to integrate the Pantanal into broader networks of commerce and national structures of power. This chapter examines how, despite unprecedented amounts of capital investment and the official support of two national governments, the CMFBB struggled for years to overcome the engineering and technological challenges imposed by the Pantanal flood regime. The challenges it posed delayed construction, leading to further tension in the binational commission that, when combined with the scarcity of labor, supplies, and events beyond their control (World War II), caused the construction process to drag on for decades. Other economic development efforts during the same period met with similar frustrations. A longer view of the history of economic development in the upper Paraguay River basin reveals the important role that ecology played in limiting the achievements of nation-states and capital investors in their efforts to solve the problem of isolation in the Pantanal.

Along with crossing the temporal divide between Brazil's Old Republic (1889-1930) and the Estado Novo, this chapter also crosses historiographical divides between the national narratives of Brazil and Bolivia.<sup>10</sup> The post-1930 period was a critical one for both Brazil and Bolivia. Lowland Bolivia crashed violently onto the national stage during the Chaco War (1932-1935), which served as a stark reminder that the dream of economic development in the Bolivian lowlands had not been fulfilled.<sup>11</sup> In the aftermath of this disastrous war,

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<sup>10</sup> A more common start date for studies of Mato Grosso is 1870, which was the end of the Paraguay War. Because of the war's impact on the region, historians give its conclusion much more significance than 1889 and the beginning of the first republic.

<sup>11</sup> There has been a recent surge of interest on the history of the Chaco War. Some recent studies include Nicolás Richard, ed., *Mala guerra: los indígenas en la Guerra del Chaco, 1932-1935* (Asunción: ServiLibro & CoLibris, 2008); Elizabeth Shesko, "Constructing Roads, Washing Feet, and Cutting Cane for the *Patria*: Building Bolivia with Military Labor, 1900-1975," *International Labor and Working-Class History* 80:1

national officials redoubled efforts to solve the problem of isolation and lack of transportation infrastructure – two variables that had proven costly during the course of the war – by renewing their efforts to integrate eastern Bolivia with political and economic centers in the highlands. As part of the hemispheric “Good Neighbor Policy” that guided inter-American relations in the years leading up to World War II, Bolivia depended upon the expertise of government consultants from the United States who advised officials that the future of the country lay to the east.<sup>12</sup> Beginning in the late 1930s, the Bolivian government undertook a new series of efforts to connect eastern Bolivia with the highlands by rail and by highway. It is within this context that the Bolivian government agreed to form the CMFBB, in an effort to link Santa Cruz de la Sierra, eastern Bolivia’s most important city, with the Brazilian border and the Paraguay River.

The post-1930 period was also one of turmoil in Brazilian society, with political and economic power fragmented between regional oligarchies across the country who pledged only nominal allegiance to the central government. The rise to power of Getúlio Vargas and the institutionalization of the Estado Novo in 1937 inaugurated a long process of political centralization, national integration, and economic growth powered by industrialization in urban centers on the Atlantic coast.<sup>13</sup> One of the centerpieces of the Vargas regime was the

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(2011): 6-28; and Stephen Cote, “A War for Oil in the Chaco, 1932-1935,” *Environmental History* 18:4 (2013): 738-58.

<sup>12</sup> The most famous U.S government consultant was Merwin Bohan who conducted a study of Bolivia for several months in 1941 and 1942. Bohan’s main recommendation to the Bolivian government was to improve and establish transportation infrastructure necessary to integrate centers of population in the highlands with the nation’s immense and untapped eastern territories. For more analyses of Bohan and his efforts to promote economic development in eastern Bolivia, see Ronald Bruce Palmer, “Politics and Modernization: A Case Study of Santa Cruz, Bolivia,” (Ph.D. Dissertation, University of California – Los Angeles, 1979), 125-29 and Paula Peña Hasbún, *La permanente construcción de lo cruceño: un estudio sobre la identidad en Santa Cruz de la Sierra* (La Paz: Fundacion PIEB, 2003), 85-88.

<sup>13</sup> For a detailed account of the Estado Novo, see Leslie Bethell, ed., *Brazil since 1930* (Cambridge: Cambridge University Press, 2008).



March to the West, a program of frontier expansion and economic development designed to integrate frontier Brazil into the political, cultural, and economic life of the nation. While historical scholarship on the Vargas era portrays the March to the West as an inward-looking project of national integration and the consolidation of territorial sovereignty, this chapter's focus on the CMFBB complicates such conclusions.<sup>14</sup>

The binational project to construct a railroad between the Pantanal and eastern Bolivia was the outgrowth of Vargas's vision for Brazil as a continental power.<sup>15</sup> The Vargas regime intended to use the CMFBB as a tool to extend Brazil's geopolitical influence into Bolivia in order to gain access to fossil fuels that would facilitate its continued industrial growth.<sup>16</sup> A focus on the CMFBB also reveals the growing tension that developed between Brazil and Argentina after 1930 as both jockeyed for geopolitical influence in South America. At the same time that Brazil sought to expand its economic influence in Bolivia, Argentina laid plans of its own to build a railroad to link Santa Cruz de la Sierra with Yacuíba on the Argentine border. Placed in this broader context, the March to the West was anything but inward-looking. The CMFBB thus illustrates how the Brazilian March to the

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<sup>14</sup> For a concise description and analysis of the role of the March to the West under the Estado Novo, see Seth Garfield, *Indigenous Struggle at the Heart of Brazil: State Policy, Frontier Expansion, and the Xavante Indians, 1937-1988* (Durham: Duke University Press, 2001), 26-34. For more on the March to the West in relation to the Amazon and a brief discussion of Brazil's growing power among South American republics, see Seth Garfield, *In Search of the Amazon: Brazil, the United States, and the Nature of a Region* (Durham: Duke University Press, 2013), 19-23, 31, 105-11, 117-23, and 206-11.

<sup>15</sup> For an early analysis of Brazil's foreign policy in South America, see Mário Travassos, *Projeção continental do Brasil* (São Paulo: Companhia Editora Nacional, 1935).

<sup>16</sup> Fossil fuels became the defining issue for eastern Bolivia during the second half of the twentieth century, propelling its economic growth and establishing the department of Santa Cruz as the most economically important in Bolivia. Eastern Bolivia's fossil fuels also figure prominently in Brazilian history during the second half of the twentieth century. A pipeline between Bolivia and Mato Grosso now ships considerable quantities of natural gas to markets in Brazil. Derrick Hindery, *From Enron to Evo: Pipeline Politics, Global Environmentalism, and Indigenous Rights in Bolivia* (Tucson: University of Arizona Press, 2013).

West transcended geopolitical boundaries, intersecting with other national narratives in significant ways and illuminating historical processes that nation-centered analyses overlook.

### **Historicizing Flooding in the Pantanal**

The Marches to the West and the East have deep historical antecedents in both Brazil and Bolivia, stretching back to the first decades of the nineteenth century. As discussed in chapter one, economic progress and development in the upper Paraguay River watershed was an obsession of foreign explorers, Bolivian officials, and Brazilian officials ever since the wars for independence redrew the lines of authority and territorial sovereignty in South America. Throughout the nineteenth century naturalists, travelers, and boundary officials from Bolivia and Brazil traveled through the Pantanal in an effort to produce knowledge about the region that governments could use in their efforts to establish infrastructure and to integrate it into broader networks of commerce and political control. Through their efforts to establish railroads, ports, steamship service, and telegraph lines in the Pantanal, public officials regularly confronted the formidable challenges imposed by the flood regime.

For government officials, merchants, and travelers, the Pantanal's cycles of flood and drought were sources of frustration, posing obstacles to the establishment of infrastructure, the movement of goods and people, economic development, and permanent settlement. These were realities that ranchers and local populations knew well from decades and centuries of carving out an existence in the region. Yet, flooding in the Pantanal was not always as predictable as it seemed. While alternating rainy and dry seasons and the topographical characteristics of the region (especially its flat relief) made periods of flooding and drought annual events, their length and extent varied drastically from year to year, depending upon a complex set of variables including the amount of rainfall, the timing of

rainfall, and broader climate patterns in South America.<sup>17</sup> As mentioned in the introduction, actual patterns of flood and drought varied according to the sub-region. For example, flooding occurred earlier in the northern Pantanal and rising flood waters took longer to reach Corumbá in the south. It was not until the first decade of the twentieth century that the naval base at Ladário (near Corumbá) began to collect meteorological data about the Pantanal (including annual rainfall, temperatures, barometric pressure, and river levels). Reading anecdotal evidence in light of this historical data makes it possible to assess the impact that flooding and drought had on commercial and economic development activities since 1900.<sup>18</sup>

Between 1900 and 1970, the highest peak river level was 6.62 meters, recorded on May 11, 1905, and the lowest peak river level was 1.33 meters, recorded on April 1, 1964. The average peak river level during this 70 year period was 3.95 meters.<sup>19</sup> The lowest recorded levels during this period occurred in 1964 when the river only reached .61 meters below the zero of the ruler.<sup>20</sup> According to contemporaries, any river level above 5.5 meters was considered a “catastrophic” flood, capable of inflicting widespread damage.<sup>21</sup> Between 1900 and 1970 such floods occurred on ten separate occasions.<sup>22</sup> It is important to note that

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<sup>17</sup> The impact of broader climate patterns such as El Niño and climate change on flooding in the Pantanal is still poorly understood. For a recent study on the impact of climate change in the Pantanal, see Antonio Augusto Rossotto Ioris, “Approaches and Responses to Climate Change: Challenges for the Pantanal and the Upper Paraguay River Basin,” *Alternate Routes* (Toronto) 25 (2014): 119-45.

<sup>18</sup> A study conducted in 1995 by Sérgio Galdino and Robin T. Clarke reproduces these statistics in their entirety. Sérgio Galdino and Robin T. Clarke, *Levantamento e estatística descritiva dos níveis hidrométricos do rio Paraguai em Ladário, MS – Pantanal. Período 1900-1994* (Corumbá, MS: EMBRAPA-CPAP, 1995).

<sup>19</sup> Galdino and Clarke, *Levantamento e estatística descritiva*, 68.

<sup>20</sup> *Ibid.*, 64.

<sup>21</sup> Lécio Gomes de Souza, “Pantanal inundado,” *Brasil-Oeste* 4:39 (Agosto 1959), 30-32. Gomes de Souza authored this article in 1959, in the midst of the worst flood the Pantanal had seen in 27 years.

<sup>22</sup> 1905, 1906, 1913, 1920, 1921, 1923, 1931, 1932, 1935, and 1959. See Galdino and Clarke, *Levantamento e estatística descritiva*, 68 and Gomes de Souza, “Pantanal inundado,” 30-31.

damaging floods often occurred in successive years. In these instances, water levels were already elevated and remained higher than normal during the dry season before a second devastating flood swept through the Pantanal during the following rainy season. Such was the case in 1905 and 1906 when Cândido Rondon was in the Pantanal carrying out the construction of the telegraph. In 1905, the flood levels reached 6.62 meters only to be followed the next year by another that reached 5.61 meters in May 1906. Locals informed Rondon that the region had not seen such devastating floods in forty years.<sup>23</sup> Another series of heavy floods occurred between 1920 and 1923 and again in 1931 and 1932.

The irregularity and unpredictability of flood levels from year to year often had devastating consequences for cattle ranchers. Caught off guard, many were unable to move their herds to high ground before rising flood waters swept them away. At least 30,000 head of cattle drowned during the heavy flooding of 1905 and, between 1920 and 1923 some municipalities lost up to 50% of the entire herd.<sup>24</sup> In 1959, one writer estimated that flooding had claimed up to 300,000 head of cattle, “dead and drowned in the vast sea of waters [formed by] the Paraguay River.”<sup>25</sup> These events had a discernable impact on local and regional economies, sparking recessions in the ranching industry that forced some ranchers out of business entirely. On the other hand, as historian Robert Wilcox points out, extended periods of drought created opportunities for ranchers to make a variety of improvements on

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<sup>23</sup> Comissão de Linhas Telegráficas Estratégicas de Mato Grosso ao Amazonas (CLTEMTA), *Relatório dos trabalhos realizados de 1900-1906 pelo Major de Eng. Cândido Mariano da Silva Rondon*, Vols. 4-5 (Rio de Janeiro: Departamento de Imprensa Nacional, 1946), 88.

<sup>24</sup> Robert Wilcox, “Cattle and Environment in the Pantanal of Mato Grosso, Brazil, 1870-1970,” *Agricultural History* 66:2 (Spring 1992): 243-44.

<sup>25</sup> N.a., “Enchentes em Mato Grosso,” *Brasil-Oeste* 4:37 (Junho 1959): 52.

their properties (i.e. digging wells, expanding pasture, increasing herds, etc.), which led to increased profits.<sup>26</sup>

The impact of flooding and drought on economic development and commerce in the Pantanal was not limited to ranching. As discussed above, the heavy floods of 1905 and 1906 delayed the efforts of Rondon and his crew to construct a telegraph through the Pantanal. Although they finally concluded their labor in 1906 after a six-year ordeal, the task of keeping open lines of communication was an ongoing process. Traveling through the Pantanal in 1912, Anibal Amorim noted with frustration that recent flooding had damaged the telegraph line, severing communication between towns on the periphery of the Pantanal and the rest of Brazil.<sup>27</sup> The officials and engineers who constructed the *Estrada de Ferro Noroeste do Brasil* (EFNB) between São Paulo and the Pantanal also struggled with the unpredictability of the Pantanal flood regime. In 1908, in the midst of a five-year period of drought, construction began on the fifty kilometer stretch that ran through the Pantanal between Porto Esperança and the *Serra da Bodoquena*. With water levels lower than normal, engineers found it difficult to predict the necessary size for earthworks and to design adequate drainage channels for floodwaters. The next significant flood washed away embankments and damaged the line so badly that engineers were forced to start from scratch.<sup>28</sup> In 1912, only a few years after the completion of the section through the Pantanal, Anibal Amorim described flooding as a “constant threat” to the railroad.<sup>29</sup>

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<sup>26</sup> Wilcox, “Cattle and Environment,” 245-46.

<sup>27</sup> Anibal Amorim, *Viagens pelo Brasil: do Rio ao Acre – aspectos da Amazonia – do Rio a Matto Grosso* (Rio de Janeiro: Livraria Garnier, 1917), 456.

<sup>28</sup> S. Cardoso Ayala, Feliciano Simon, and Joaquim Augusto da Costa Marques, *Álbum Graphico do Estado de Mato Grosso* (Hamburg: n.p., 1914), 156-57.

<sup>29</sup> Amorim, *Viagens pelo Brasil*, 458.

In the decades following the completion of the railroad, travelers experienced frequent service interruptions and delays because of flooding. During the heavy floods of 1920, the director of the EFNB reported to the Ministry of Transportation and Public Works that rising waters had completely covered the railroad running through the Pantanal between Porto Esperança and Salobra. Although the rainy season ended in May, regular service was not resumed that year until the end of August and, even then, operated on a reduced schedule while crews continued repairs. Officials from the EFNB urged the Brazilian government to consider further earthworks to raise the line beyond the threat of floodwaters.<sup>30</sup>

After heavy floods between 1920 and 1923, the Pantanal saw only moderate flooding for almost a decade until damaging floods again forced the EFNB out of service in 1932. During a collecting expedition to Mato Grosso that year, Brazilian ornithologist Oliverio Mario de Oliveira Pinto, never made it to the Corumbá because heavy flooding forced the railroad company to suspend service between Salobra and Porto Esperança.<sup>31</sup> Even in years of normal flooding, the rise and fall of water in the region eroded embankments and required constant maintenance and repairs. This reality was not lost on Claude Lévi-Strauss who, while traveling to the Pantanal in 1933, was unimpressed with the quality of construction and described the railroad as “precarious” and “flimsy.”<sup>32</sup>

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<sup>30</sup> N.a., “O restabelecimento do tráfego em um trecho da Noroeste do Brasil,” *Correio da Manhã* (Rio), 20 agosto 1920, 5.

<sup>31</sup> Oliverio Mario de Oliveira Pinto, “Resultados ornitológicos de uma excursão pelo oeste de São Paulo e sul de Matto-Grosso,” *Revista do Museu Paulista* 17 (1932), 692.

<sup>32</sup> Grace Thompson Seton, *Magic Waters: Through the Wilds of Matto Grosso and Beyond* (New York: E.P. Dutton & Company, Inc., 1933), 55-56 and Claude Lévi-Strauss, *Tristes Tropiques*, translated by John Weightman and Doreen Weightman (New York: Penguin Books, 2012), 164.

Flooding also threatened the lives and livelihoods of local populations who conducted business between river ports throughout the region. As discussed in chapters one and two, seasonal floods dictated the locations of ports and settlements in the Bolivian Pantanal and restricted the activities of merchants who sought to ship goods from eastern Bolivia and the Paraguay River.<sup>33</sup> Indeed, heavy flooding was particularly damaging to municipalities that were located close to the Paraguay River and its tributaries. For example, after heavy rains led to widespread flooding in 1935, newspapers in Cáceres reported that rising waters had overtaken the town's main commercial port and inundated the city.<sup>34</sup> In 1940, Francisco de Barros Junior arrived in Corumbá on the heels of the worst flood the town had seen in five years.<sup>35</sup> He claimed that when he disembarked, the boat floated at the same level as the rest of the port. As he made his way into the surrounding countryside, he witnessed homes where rising waters had reached the level of windows and ranches where the tops of fences barely rose above the surface of the water.<sup>36</sup> In 1956, flooding in Aquidauana, on the eastern edge of the Pantanal, damaged as many as 80 different buildings.<sup>37</sup>

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<sup>33</sup> Much fewer printed materials – newspapers, magazines, etc. – exist to document the history of far-eastern Bolivia after 1930 than do for Brazil. Aside from archival sources – including correspondence and reports produced by consular officials, boundary officials, and public officials in eastern Bolivia – few other sources consulted at the dissertation stage provide evidence for the impact of seasonal flooding on economic development efforts in the Bolivian Pantanal. Further research at archives and libraries in Bolivia will likely uncover more materials and enable historians to analyze more fully the historical impact of seasonal flooding on colonization, economic development, and commerce in the region.

<sup>34</sup> N.a., “O nosso porto,” *Fronteira* (Cáceres), 26 maio 1935, 2.

<sup>35</sup> Barros Junior claims that the 1940 was the worst in the region in 37 years but this does not square with the historical statistics. Francisco de Barros Junior, *Caçando e pescando por todo o Brasil: Mato Grosso e Goiás*, 2ª série (São Paulo: Companhia Melhoramentos, 1947), 227.

<sup>36</sup> Barros Junior, *Caçando e pescando*, 256.

<sup>37</sup> Pedro Nogueira, “Transbordou o rio Aquidauana,” *Brasil-Oeste* 1:4 (Julho 1956), 19.

The flood of 1959 was so destructive that the state of Mato Grosso declared a state of emergency and the federal government organized a special commission to organize the relief effort. Those most directly affected included ranchers, who lost an estimated 300,000 head of cattle, and rural populations (*ribeirinhos*) who carried out lives of fishing, subsistence, and trade along the many watercourses of the Pantanal. As early as January 1959, newspapers in Cuiabá noted with alarm that heavy rains were causing the level of the Cuiabá River to rise and had already displaced many fishing families who made their homes near the port. By May, the flooding had taken on “catastrophic proportions” in the rest of the Pantanal, causing “terrible injury” to the state economy.<sup>38</sup> State politicians described the flood as an “extreme disturbance” in the region, destroying homes and crops, drowning cattle, and paralyzing communication between towns and cities.<sup>39</sup> Another reporter noted that the floods had interrupted railroad service between Corumbá and the rest of Brazil.<sup>40</sup>

Faced with such destruction, politicians and many in the business community were quick to place blame, decrying the neglect on the part of the Brazilian government. According to one author, citizens of Mato Grosso and the Pantanal were forced to endure “pain and suffering” year after year as annual flood waters destroyed their property and threatened their livelihoods. The author called on the federal government to eliminate these threats by investing in improved port facilities and by carrying out dredging, dam, and drainage projects that would finally harness the “destructive” and “uncontrolled waters” of

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<sup>38</sup> N.a., “Chuvás,” *O Estado de Mato Grosso* (Cuiabá), 21 janeiro 1959, 2.

<sup>39</sup> Nogueira Paim, “Parlamento e parlamentares,” *Brasil-Oeste* 4:36 (Abril-Maio 1959), 78-82.

<sup>40</sup> N.a., “Enchentes em Mato Grosso,” *Brasil-Oeste* 4:37 (Junho 1959), 52 and N.a. “Fúria das águas,” *O Estado de Mato Grosso*, 7 maio 1959, 4.



the Pantanal.<sup>41</sup> Although such support was not often forthcoming, at least on the scale that local businesspeople and regional politicians desired, the federal government of Brazil did make an effort to offer relief to those most affected by the flooding. In the aftermath of the 1959 flood, the Brazilian government sent a parliamentary commission to investigate and quantify the economic losses suffered by ranchers and other property-holders, and eventually disbursed “millions of cruzeiros” in indemnifications in collaboration with the Banco do Brasil.<sup>42</sup> The government also sent direct relief and the Brazilian Air Force put an amphibious airplane and helicopter at the service of regional authorities to conduct aerial surveys of the Pantanal and fly supplies to those stranded by the flooding.<sup>43</sup> Thus, even by the 1950s, national and state governments responded to flooding in the Pantanal more often than they managed to overcome it through development policies and infrastructure projects designed to undo isolation.

### **The March to the West Meets the March to the East: The Case of the CMFBB**

Although the dream of economic development in the Pantanal never faded, it took on new meanings between 1930 and the 1960s. In both Bolivia and Brazil, sustained national campaigns for frontier development – the March to the West in Brazil, the March to the East in Bolivia – gave many hope that the problem of isolation in the Pantanal would finally be solved. In Brazil, the Vargas administration created the *Fundação Brasil Central* (FBC) in 1943, an autarchic organization charged with promoting and carrying out the settlement and colonization of the interior Brazilian states of Goiás and Mato Grosso. While most studies

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<sup>41</sup> N.a., “Notas e fatos,” *Brasil-Oeste* 4:37 (Junho 1959), 57. N.a., “Retificação e dragagem do rio Paraguai,” *Brasil-Oeste* 4:43 (Dezembro 1959), 41.

<sup>42</sup> No author, “Retificação e dragagem do rio Paraguai,” 41.

<sup>43</sup> No author, “Aconteceu em Corumbá,” *O Estado de Mato Grosso*, 31 maio 1959, 6.

have focused on the controversial role the FBC played in contacting and “pacifying” the region’s semi-nomadic indigenous populations, the March to the West united multiple objectives, including the improvement of infrastructure between eastern Brazil and the interior, centralization of regional political authority, consolidation of territorial control in border regions, and other economic development projects.<sup>44</sup>

In the Pantanal, the March to the West meant economic development, more than in the Amazon basin, where the main focus was to promote settled agriculture and ranching among semi-nomadic indigenous peoples. By the 1930s, available land had long been claimed and most (if not all) of the semi-nomadic indigenous groups who occupied territory in the Pantanal had been settled and integrated – through a protracted process of violence and sustained contact with settlers – into the ranks of the rural laboring poor.<sup>45</sup> During the early stages of the March to the West, individual elites and businessmen built upon a long tradition of economic boosterism, using their connections to publish books about Mato Grosso and the endless opportunities it presented for economic development. Such was the case for Gabriel Pinto de Arruda, a prominent judge in Cáceres who, in 1938, published a book to publicize his *município* in an effort to make it better known to citizens in the rest of Brazil, especially those in positions to invest in and develop the region.<sup>46</sup> In eastern Bolivia, Plácido Molina

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<sup>44</sup> Seth Garfield, *Indigenous Struggle*, 45-46.

<sup>45</sup> I discuss this process briefly in chapters one and two. For a classic work on the “assimilation” of Mato Grosso’s indigenous populations, see Roberto Cardoso de Oliveira, *Do índio ao bugre: o processo de assimilação dos Terêna* (Rio de Janeiro: Livraria F. Alves Editora, 1976). See also Joana A. Fernandes Silva, ed., *Estudos sobre os Chiquitanos no Brasil e na Bolívia: história, língua, cultura e territorialidade* (Goiânia: Editora da UCG, 2000).

<sup>46</sup> Gabriel Pinto de Arruda, *Um trecho do oeste brasileiro: São Luiz de Cáceres, Mato Grosso* (Rio de Janeiro: Borsoi & Companhia, 1938). See also, Otto Willi Ulrich, *Nos sertões do rio Paraguay* (São Paulo: Empresa Editora J. Fagundes, 1936); Virgílio Corrêa Filho, *Pantaneais matogrossenses (devassamento e ocupação)* (Rio de Janeiro: Serviço Gráfico do IBGE, 1945); and Fausto Vieira de Campos, *Retrato de Mato Grosso* (São Paulo: n.p., 1955). The most well-known early publication designed to promote economic development in the

Mostajo and members of the *Sociedad de Estudios Geográficos e Históricos de Santa Cruz* were tireless promoters of economic development in the lowlands. As part of Bolivia's collaboration with economic advisors in the United States, in 1941 the *Corporación Boliviana de Fomento* was created and, in the same year, the department of Santa Cruz created the *Comité de Obras Públicas*. Both entities sought to carry out development projects in the southeast part of the country.<sup>47</sup>

Most stakeholders during this period underestimated the limitations that the Pantanal and its flood regime posed for lasting economic development. Instead, they believed that the economic potential of the upper Paraguay River basin was obvious and that continued underdevelopment in the region was a function of official neglect on the part of state and federal governments. The periodic and devastating floods that swept through the region were evidence, not of the power of nature to dictate the activities of humans, but of a history of neglect and strained relationships between frontier provinces and the federal government.

Between 1938 and the 1960s, however, federal governments in both Brazil and Bolivia funneled unprecedented amounts of resources into the region precisely to promote economic development and integration in the heart of South America. Despite the support of various government agencies, seasonal flooding and the ecological characteristics of the Pantanal continued to impede the establishment of infrastructure and significant economic growth in the region. This section examines the history of the binational railroad

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Pantanal and Mato Grosso was the *Álbum Graphico do Estado de Mato Grosso*, published in 1919 and cited above.

<sup>47</sup> Historian Hernán Pruden's recently published dissertation examines in detail the historical relationships between regional identity formation and economic development in eastern Bolivia, with a special focus on the period after 1930. Hernán Pruden, "Cruceños into Cambas: Regionalism and Revolutionary Nationalism in Santa Cruz de la Sierra, Bolivia, 1935-1959" (Ph.D. Dissertation, Stony Brook University, 2012). See also, Peña, *La permanente construcción de lo cruceño*, 85-88.

commission, the *Comissão Mista Ferroviária Brasileiro-Boliviana* (CMFBB), which labored between 1938 and 1955 to construct a railroad across the Pantanal and Chiquitania of eastern Bolivia between Corumbá, Brazil, and Santa Cruz de la Sierra, Bolivia.<sup>48</sup> While officials in charge most often blamed labor scarcity, bureaucratic red tape, and the mismanagement of contracting firms for construction delays, I argue that the engineering challenges posed by the Pantanal in the early phases of construction had lasting consequences for the duration of the project.

The dream of linking eastern Bolivia to western Brazil through the construction of a railroad dates to the nineteenth century when investors and statesmen, inspired by the booming global market for rubber and other extractive commodities, believed that the establishment of infrastructure in far-flung regions would usher in a new period of economic development and prosperity (and the acquisition of fortunes) for central South America. Not surprisingly, the enormous economic potential of the Amazon and the limited presence of national governments there led to political conflicts over territory, most notably the Acre War (1899-1903) which resulted in the loss of 191,000 square kilometers for Bolivia. As stipulated in the Treaty of Petrópolis (1903), one of the concessions for this loss was the construction of a railroad that would link rubber tapping regions in Bolivia with a navigable portion of the Madeira River in Brazil. This project was carried out with substantial foreign investment but, shortly after it was completed in 1912, the rubber industry collapsed and the route never reached the potential investors had hoped for.<sup>49</sup>

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<sup>48</sup> The railroad was officially inaugurated in 1955 but construction of bridges and earthworks continued into the 1960s. Víctor Hugo Limpías Ortiz, *Las ferrovías y la carretera que transformaron el Oriente boliviano, 1938-1957: vías de integración y desarrollo* (Santa Cruz de la Sierra: Editorial El Pais, 2009), 32-36.

<sup>49</sup> As discussed in chapter two, the labor of rubber tapping took place outside of the Pantanal, drawing workers from eastern Bolivia into the Amazon basin. Until 1912, much of the rubber produced in the Bolivian Amazon was shipped through the Pantanal to international markets by way of the Paraguay River. For a recent

Because various stipulations of the Treaty of Petrópolis were never met, diplomats continued to search for ways that Brazil could fulfill its treaty obligations and, in the process, promote economic integration with Bolivia. In 1928, Brazil and Bolivia signed the Treaty of Natal, which established their mutual interest in connecting markets in Bolivia with those in Brazil through the construction of a railroad. Instead of the Amazonian route, diplomats advocated for a route that would connect southeastern Bolivia to a port on the Paraguay River. Also by 1928, initial construction was underway on a highway to link Santa Cruz de la Sierra with Cochabamba in the Andean highlands, which made the lowland city the logical terminus of any railroad to be constructed. The Chaco War (1932-1935) put all of these plans on hold but in 1936, only a year after the conclusion of the war, Brazil and Bolivia established an exploratory commission to conduct initial surveys for the railroad and, on February 25, 1938, both nations signed the *Tratado de Vinculación Ferroviária y de Salida y Aprovechamiento de Petróleo Boliviano* and preliminary studies began in September of the same year.<sup>50</sup>

Rapid changes in global and regional geopolitics in the 1930s likely explain why, after decades of inaction and unfulfilled promises, Brazilian diplomats now acted with such speed to improve transportation infrastructure between it and Bolivia. The Chaco War made

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examination of the impact of the rubber boom on the Bolivian territories in the Amazon basin, see Gary Van Valen, *Indigenous Agency in the Amazon: The Mojos in Liberal and Rubber-Boom Bolivia, 1842-1932* (Tucson: University of Arizona Press, 2013). Valerie Fifer provides a useful synopsis of Bolivia's history of territorial loss, including the Acre episode. See J. Valerie Fifer, *Bolivia: Land, Location, and Politics since 1825* (Cambridge: Cambridge University Press, 1972). For the full text of the Treaty of Petrópolis, see <http://www.rree.gob.bo/webmre/dglfai/Tratados%20HTML/brasil/Tratado%20de%20Petropolis.html>, accessed 9-1-2014.

<sup>50</sup> Ortiz, 20-24. For the full text of the 1928 treaty, see [www.rree.gob.bo/webmre/dglfai/Tratados%20HTML/brasil/Tratado%20de%20limites%20y%20comunicacion%20ferroviaria.html](http://www.rree.gob.bo/webmre/dglfai/Tratados%20HTML/brasil/Tratado%20de%20limites%20y%20comunicacion%20ferroviaria.html), accessed 9-1-2014. For the full text of the 1938 treaty, see [http://dai-mre.serpro.gov.br/atos-internacionais/bilaterais/1938/b\\_3/](http://dai-mre.serpro.gov.br/atos-internacionais/bilaterais/1938/b_3/), accessed 9-1-2014.

abundantly clear the disastrous consequences that underdeveloped infrastructure could have for the territorial security of a modern nation-state. However, Bolivia's inadequate transportation networks held consequences that extended beyond its poorly-integrated territorial limits. By the 1930s, Argentina had emerged as a formidable political power in South America and it used that power to its advantage during the Chaco War, siding with Paraguay to influence the outcome of the war.<sup>51</sup> In the aftermath of the war, Argentina was poised to extend its economic and political power northward into Bolivia, a prospect which Brazil regarded as a major threat to its own ambitions in the interior of South America. Although Argentina and Brazil were key players in the South American economic and political landscape long before the Chaco War, by the 1930s the stakes were much higher because of the growing global importance of fossil fuels and the critical role they played in economic development and industrialization. Indeed, one of the main reasons why Brazil acted so quickly to set the railroad project in motion was to stake economic claim to regions in the Andean foothills of Bolivia that were reportedly rich in oil and natural gas.

These motivations – access to fossil fuels and geopolitical competition with Argentina – were evident from the earliest stages of planning for the construction of the railroad. After establishing a binational commission in 1936, engineers from Brazil and Bolivia met in La Paz for the first time in July 1937. The 1936 agreements stipulated that no third parties would be involved in plans to promote economic integration and the shipment of oil by railroad between Brazil and Bolivia. In 1937, however, Bolivia signed a similar

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<sup>51</sup> For Argentina's influence during the Chaco War, see Matthew Hughes, "Logistics and the Chaco War: Bolivia versus Paraguay, 1932-1935," *Journal of Military History* 69:2 (April 2005): 423-25. For more on the efforts of the Bolivian state to improve transportation infrastructure during the twentieth century, and especially after the Chaco War, see Elizabeth Shesko, "Constructing Roads, Washing Feet, and Cutting Cane for the *Patria*," 14.

agreement with Argentina for the construction of a railroad that would pass directly through Bolivia's oil prospecting regions. This development called into question Bolivia's intentions regarding its oil deposits and weighed heavily on the minds of Brazilian engineers and diplomats during the initial period of surveys and negotiations and even after construction began in 1938. Domingos Fleury da Rocha, the chief engineer for the joint commission on the study of petroleum, worried that an Argentine-controlled railroad in Bolivia would "allow it to project its economic influence" beyond the Río Grande and into the middle of the Amazon basin, a region which Brazil had long considered to be within its own domain.<sup>52</sup> In a letter written to military officials in Mato Grosso, Luiz Alberto Whately, the chief Brazilian railroad engineer, explained that one of the three main goals of the project was to ensure Brazil's "national defense" against the economic expansion of Argentina. Even if Argentina managed to win access to Bolivia's southern oil fields through political pressure and diplomatic maneuvering, a Brazilian-controlled railroad running east to west would put a halt to any northward advances. According to Whately, the construction of the railroad would form a "veritable wall," blocking the "imperialist" and "expansionist" aspirations of Argentina, thus solidifying Brazil's economic influence in the region.<sup>53</sup>

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<sup>52</sup> The Río Grande, also known as the Río Guapay, is the principal water course that separates Santa Cruz de la Sierra from the Chiquitano shield to the east. It empties into the Amazon River basin. Domingos Fleury da Rocha, Francisco Belisario Tavora, and Nestor Figueira Pegado, "Relatório confidencial apresentado a sua excellencia o Senhor Mario Pimentel Brandao, pela Delegação Brasileira que integra a Comissão Mista Brasileiro-Boliviana," 28 Dezembro 1937, 4-5, 61. Serie Documentação Interna, Informações e Relatórios, Comissão Mista Brasileiro-Boliviana de Estudos de Petróleo, Estante 134, Prateleira 5, Volume 18, Relatório confidencial da Delegação Brasileira, 1938, Arquivo Histórico do Itamaraty (AHI), Rio de Janeiro.

<sup>53</sup> The other two goals were to establish economic access to oil in Bolivia and to fulfill Brazil's financial obligations to Bolivia, as stipulated in the Treaty of Petrópolis. Luiz Alberto Whately to Ministério das Relações Exteriores do Brasil (MRE), 16 Agosto 1939, Correspondencia recibida dos Ministérios e Repartições Federais, Ministério da Viação e Obras Públicas, Comissão Mista Ferroviaria Brasileiro-Boliviana, Ofícios recibidos, 1937-1958, Estante 109, Prateleira 1, Volume 8 (1937-1941), AHI. The letter addressed to military officials in Mato Grosso is included as a copy. Throughout the early stages of planning, Bolivia remained noncommittal on the question of oil, preferring instead to administer the resource directly through the state-owned *Yacimientos Petrolíferos Fiscales Bolivianos* (YPFB). With Brazil's rights to oil still undecided, Luis

Despite these concerns, Brazilian officials remained optimistic. On August 7, 1937, Fleury da Rocha, along with several other Brazilian officials and their Bolivian counterparts, conducted an aerial survey between Santa Cruz de la Sierra and Corumbá along the projected route for the construction of the railroad.<sup>54</sup> After completing the journey, Rocha was confident that the labors of construction would follow a “relatively easy route, through a flat and slightly hilly region.” Although he noted that the sparse population of the region and its distance from markets would pose problems for the commission, the only part of the route that presented any sort of technical challenge was a low-lying stretch of roughly 100 kilometers between Corumbá and El Carmen in the Bolivian Pantanal. Convinced of the providential nature of his mission, Fleury da Rocha envisioned the railroad project as a direct response to Getúlio Vargas and his calls to March to the West, leaving behind the littoral in search of “new and varied sources of wealth” in the vast, “untouched” territories of eastern Bolivia that “still await[ed] the peaceful and fruitful labor of its children.”<sup>55</sup> One year later in September 1938, with the treaty signed, Luiz Alberto Whately and his binational crew of engineers, geologists, and surveyors were already on the ground conducting topographical

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Albert Whately spent a considerable amount of time worrying about Argentina and the threat it posed to Brazil’s economic influence in eastern Bolivia. In a letter written in 1941, Whately even speculated that the Bolivian customs office in Puerto Suárez was acting under orders to delay the arrival of construction materials, thus giving Argentina the upper hand in the race to complete the railroads. See Whately to MRE, 1 Abril 1941, Estante 109, Prateleira 1, Volume 8 (1937-1941), AHI.

<sup>54</sup> The commission also conducted an aerial survey of the oil fields of southern Bolivia and a survey of the Pantanal between the Bahia Negra and the Laguna Mandioré by both land and water. The purpose of the surveys of the Pantanal was to determine a suitable river port for Bolivia. In his report, Fleury da Rocha concluded that no viable port existed for Bolivia on the upper Paraguay River, either north or south of Corumbá and Puerto Suarez, a conclusion which bolstered his opinion that construction for the railroad should begin in Corumbá.

<sup>55</sup> Fleury da Rocha, et. al., “Relatório confidencial,” 28 dezembro 1937, 20-21, 26, 70, Estante 134, Prateleira 5, Volume 18, AHI.



surveys and in the air conducting aero-photogrammetric surveys to finalize the route for construction.

From the ground and from the sky, it was clear at an early date that the *Tacuaral* – the 100 km section of the Pantanal closest to the Brazilian border – would pose challenges for the commission. When Whately first arrived there at the height of the dry season in October 1938, he reported that it was almost “completely uninhabited and lacked perennial springs” so that one could travel for great distances without encountering a “single drop of water.”<sup>56</sup> To address this problem, he recommended that the CMFBB use heavy machinery to construct the first stretch of railroad, which would reduce the need for laborers and the commission’s water needs. Heavy machinery would also enable the commission to overcome the technical challenges posed by seasonal flooding. Whately thus remained confident that sound planning and modern technology could overcome any obstacles that the Tacuaral presented. He predicted that the CMFBB would easily complete construction of the entire railroad in no more than six years. To Whately, the railroad represented not only a link between two friendly countries, but the decisive factor in the future prosperity of a “vast and practically uninhabited region, making possible the extraction, transformation, and transport of the wealth latent in both its soil and subsoil, where new cities will emerge and forestry and agriculture will flourish.” Most importantly, Whately emphasized that the railroad would solve the growing problem of Brazil’s access to fossil fuels, a “raw material indispensable to the rhythms of economic activities around the world.”<sup>57</sup>

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<sup>56</sup> Whately to MRE, 12 outubro 1938, Corumbá, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI.

<sup>57</sup> For early reports on the terrain of the Bolivian Pantanal and his prediction about the duration of the project, see Whately to MRE, 2 dezembro 1938, Corumbá and Whately to MRE, 7 dezembro 1938, Corumbá, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI.

As is often the case, the actual construction of the railroad proved much more difficult in practice. According to the terms of the treaty, construction of the railroad was to take place in stages, under the direction of Whately and his Bolivian counterpart Juan Rivero Torres. While the binational commission was in charge of overseeing the operations, the actual construction fell to private companies who offered bids and won contracts to clear forest along the route, to supply materials such as railroad ties and steel rails, and to carry out the actual construction of the railroad. The firm in charge of construction on the first stretch through the Tacuaral was Carneiro, Resende & Companhia from the state of Minas Gerais. After winning the contract and finalizing it in July 1939, the firm began the process of deforestation and the clearing of brush along the chosen route through the Bolivian Pantanal between Corumbá and El Carmen. Unfortunately, by April 1940, Whately reported that, because of heavy rains and flooding in the Tacuaral, the situation of the railroad was “singularly embarrassing” and that construction was proceeding “with extreme slowness.”<sup>58</sup>

Indeed, for the first several years of construction the commission and its contracting firms faced a handful of interrelated obstacles that combined to create significant delays. First, and most significantly, World War II erupted in Europe less than a month after construction commenced. Already in September 1939, Whately wrote to his superiors at the Ministry of Foreign Relations expressing concern that the wartime economy would drive up operation costs and force the commission to alter its budget, which was based upon the British pound sterling.<sup>59</sup> Whately’s fears were justified. In the following years, the

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<sup>58</sup> Whately to MRE, 26 Abril 1940, Corumbá, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI.

<sup>59</sup> Whately to MRE, 13 setembro 1939, Corumbá, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI.

commission faced rising costs for construction materials and the wartime economy made it extremely difficult to acquire items such as steel rails, which were deemed critical for the war effort. As Whately noted in his correspondence, each phase of construction needed to be timed to account for the ecological and climatological characteristics of the region. Writing in May 1940, Whately worried that a delay in the arrival of steel rails would make it impossible for crews to complete construction through the Tacuaral before the onset of the flood season. This, in turn, meant that the commission would be unable to ship supplies to the next zones of construction, forcing crews along the entire line to wait for an additional six to eight months to resume work.<sup>60</sup>

The extremely low population density of the broader Pantanal region and the Chiquitanía of Bolivia also meant that labor scarcity and the provision of water and staple goods were constant problems for the commission and its contracting firms. From the beginning of the project, the majority of manual laborers were Brazilian citizens, most of whom were recruited from states thousands of kilometers away, including Rio de Janeiro, São Paulo, and Minas Gerais. Between July 1940 and February 1941, one contracting firm recruited a total of 2,104 workers. Of this total, 828 were from the north of Minas Gerais (39.4%), 287 were from Belo Horizonte (13.6%), 817 were from Rio de Janeiro (38.8%), and 172 were from São Paulo (8.2%). Due to the difficult working conditions in the swamps of the Tacuaral and outbreaks of malaria and beri-beri, hundreds of workers deserted their posts during the flood season of 1940. According to the author, workers from the north of Minas

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<sup>60</sup> Whately to MRE, 3 maio 1940, Corumbá, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI and Luiz Alberto Whately and Juan Rivero Torres, *Relatório da Comissão Mista Ferroviária Brasileiro-Boliviana, 1940-1941* (Rio de Janeiro: Companhia Carioca Artes Gráficas, 1942), 13. For more details on delays in shipments of steel rails and the early obstacles faced by the CMFBB, see Juan Rivero Torres to MRE, 18 julio 1942, Correspondencia recibida de la Comisión Mixta Ferroviaria Boliviano-Brasileña, 1942-1946, VRE-2-385, Archivo del Ministerio de Relaciones Exteriores de Bolivia (AMRE-Bo), La Paz.

Gerais were most likely to stay because they had experience laboring under difficult conditions and had already developed resistance to the most common tropical diseases. Workers from Rio de Janeiro and São Paulo, on the other hand, were more likely to leave because they could easily find work for similar wages closer to their places of origin.<sup>61</sup> Writing in 1942, Juan Rivero Torres, the chief Bolivian engineer, explained that the commission preferred to contract Bolivian workers because they were “more disciplined and efficient” and would work for lower wages, but that the small, sparsely populated villages of eastern Bolivia could not supply the necessary number of laborers. At the time, only 33.5% of the workforce was composed of Bolivian citizens.<sup>62</sup> In any case, continued desertions of laborers forced the commission to invest growing amounts of time and resources to the recruitment of workers. The time associated with recruitment of workers and paying for their transportation to the job site contributed to delays in construction and unforeseen costs that impeded the progress of the commission.

Providing laborers with reliable access to food and water posed equally pressing challenges for the CMFBB. As mentioned above, during the dry season the Tacuaral was completely devoid of water. In November 1940, Whately reported that crews were transporting 50,000 liters of water daily from Corumbá to the zone of construction to supply the needs of workers and their families and to meet the water requirements of steam powered locomotives.<sup>63</sup> Initial attempts to drill wells failed and it was not until April 1941 that the

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<sup>61</sup> Companhia Comercio e Construções, SA, to Whately, 25 Abril 1941, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI. For more labor statistics, see Whately and Torres, *Relatório da Comissão Mista*, 70-71.

<sup>62</sup> Juan Rivero Torres to MRE, 31 julio 1942, Correspondencia recibida de la Comisión Mixta Ferroviaria Boliviano-Brasileña, 1942-1946, VRE-2-385, AMRE-Bo, La Paz.

<sup>63</sup> Whately to MRE, 11 novembro 1940, Corumbá, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI.

commission managed to establish its first well, drilled to a depth of 94 meters and yielding 9,000 liters of water per hour. The commission drilled a second well in December of the same year that was 135 meters deep and yielded 4,000 liters per hour.<sup>64</sup> Access to sufficient quantities of food staples and produce, however, remained an ongoing problem. Agricultural production in eastern Bolivia was notoriously insufficient to supply the needs of thousands of railroad workers who came to the region to work on the railroad. Instead, all provisions were shipped to the worker barracks by rail from Corumbá. Although Bolivian ranchers initially greeted the CMFBB as a new source of demand for their cattle, Jerjes Vaca Diez (then Bolivian Consul in Corumbá) reported that the commission was even importing live cattle from Brazil to supply its workers.<sup>65</sup> According to the Brazilian official Renato Diniz Hanriot, even the most basic foodstuffs were arriving from much further distances than Corumbá. He claimed that beans, eggs, and potatoes were being shipped from São Paulo, manioc flour from Cuiabá, vegetables from Campo Grande, bacon fat from Rio Grande do Sul, and butter from Minas Gerais. Hanriot believed that such a state of affairs was ridiculous given eastern Bolivia's immense agricultural potential. Instead of shipping basic agricultural goods at such great distances, he advocated for the establishment of colonies along the route of construction devoted to agricultural production and light industries that would supply both the CMFBB and the regional market.<sup>66</sup>

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<sup>64</sup> Whately and Torres, *Relatório da Comissão Mista*, 16 and 31.

<sup>65</sup> Jerjes Vaca Diez to MRE, 31 diciembre 1940, Corumbá, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1940, CONS-2-E-467, AMRE-Bo, La Paz.

<sup>66</sup> "Sugestiones sintéticas sobre la creación de núcleos agrícolas en las márgenes del trazo del F.C. Corumbá-Santa Cruz de la Sierra, presentadas por el ingeniero Renato Diniz Hanriot, Ingeniero Auxiliar de la CMFBB, a la consideración de los Jefes de esta repartición," undated, Correspondencia recibida de los Consulados de Bolivia en el Extranjero, 1941, CONS-2-E-489, AMRE-Bo, La Paz. This copied report is included as an attachment to correspondence sent from the Bolivian consul in Corumbá to the Ministry of Foreign Relations in La Paz. From later correspondence, it appears that government officials in Brazil and Bolivia reacted favorably to Hanriot's recommendation, collaborating to establish colonies in Motacucito, Tucavaca, and Roboré, all

In February 1941, construction on the first section of the railroad was well behind schedule and Alberto Whately felt compelled to provide an explanation. Although Whately recognized the negative impact the World War continued to have on operating costs and the timely arrival of construction materials, he placed most of the blame on mismanagement by the contracting firm, Carneiro, Rezende & Companhia.<sup>67</sup> According to Whately, after signing the contract in early July 1939, the firm only managed to initiate construction on August 21, almost two months later.<sup>68</sup> By the time the firm was able to clear and excavate a path for the railroad, the rainy season was upon them and work ground to a halt. By the middle of 1940, the firm had made so little progress that the CMFBB was forced to enlist the help of two additional firms in order to fulfill its contract by the end of December. Despite its best efforts, the CMFBB did not manage to establish a rail line between Corumbá and El Carmen (on the western edge of the Bolivian Pantanal) until the following December (1941), a full year behind schedule.<sup>69</sup>

Defending themselves against accusations of mismanagement, the owners of Carneiro, Rezende & Companhia claimed that they were victims of circumstances beyond their control. Aside from the supply crisis caused by the World War and Corumbá's extreme

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along the route of the railroad. It is unclear, however, how effective these colonies were at reducing the CMFBB's reliance on imported goods. See Whately to MRE, 17 julho 1941, Corumbá, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI; Whately to MRE, 30 março 1944 and Whately to MRE, 10 junho 1944, Corumbá, Estante 109, Prateleira 1, Volume 10, CMFBB, Ofícios recibidos, AHI, Rio de Janeiro; and Whately to MRE, 27 novembro 1945, Corumbá, Estante 109, Prateleira 1, Volume 12, CMFBB, Ofícios recibidos, AHI, Rio de Janeiro.

<sup>67</sup> Whately to MRE, 5 fevereiro 1941, Corumbá, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI.

<sup>68</sup> Whately to MRE, 28 março 1940, Corumbá, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI.

<sup>69</sup> Whately and Torres, *Relatório da Comissão Mista*, 14-15. Even then, however, much work remained to complete the necessary earthworks and bring the level of the track to its final grade.

distance from shipping centers, the owners cited “torrential rains” which began in October and produced an “exceptional period of flooding,” as the main cause of construction delays. Indeed, the rainy season of 1939-1940 produced the worst flood the region had seen in half a decade.<sup>70</sup> As a result, the company found it “difficult, if not impossible” to transport timber and railroad ties to the job site because flooding had rendered all roads and paths unpassable. To make matters worse, the “extremely arduous and hard” working conditions in the Tacuaral led many workers to abandon the job site, “unable to withstand the unfavorable local conditions.” This led to further delays in construction and forced the firm to sink more time and money into the recruitment of new workers.<sup>71</sup>

Whately rejected this explanation and claimed that the company was well-informed when they signed the contract that the zone to be traversed was subject to flooding and that laborers were scarce. The company should have taken these things into consideration, commencing work immediately after signing the contract in order to take full advantage of the first of two dry seasons over the course of its seventeen month contract.<sup>72</sup> Unlike his Brazilian counterpart, Juan Rivero Torres did not underestimate the challenges that the Tacuaral posed to the timely completion of the first section of railroad. Through his interactions with Bolivian merchants and officials, Torres knew that the Tacuaral had impeded efficient transportation in the region for over a century, a zone which he identified

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<sup>70</sup> The high point of flooding that year reached 5.03 meters. The previous four seasons were ones of marked droughts, with water levels never reaching above 2.5 meters. This was the longest period of drought since the naval base at Ladário began keeping statistics in 1900. See Galdino and Clarke, *Levantamento e estatística descritiva*, 68.

<sup>71</sup> The letters from the company are dated 28 março 1940 and 30 março 1940 and are included as attachments to the following letter: Whately to MRE, 5 julho 1940, Corumbá, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI.

<sup>72</sup> Whately to MRE, 5 fevereiro 1941, Corumbá, Estante 109, Prateleira 1, Volume 8, CMFBB, Ofícios recibidos, AHI and Whately and Torres, *Relatório da Comissão Mista*, 14.

as the “most dangerous and critical” for communication between eastern Bolivia and the Paraguay River. Thus, he was not surprised when the firm fell behind schedule. In correspondence to superiors at the Ministry of Foreign Relations in La Paz, Torres reported that delays had arisen “mainly because of the difficulties to be overcome in the region of the Tacuaral.” Low population density and inadequate access to provisions and supplies only aggravated an already unfavorable situation, so that construction continued to advance at a “somewhat retarded pace.”<sup>73</sup>

Indeed, the unpredictability of patterns of flood and drought in Pantanal made it extremely difficult to plan and carry out infrastructural projects which depended upon dry conditions and the efficient movement of materials. Although the CMFBB placed the majority of the blame on Carneiro, Rezende, & Companhia, it is more likely that all parties involved overestimated their own ability to overcome the challenges that the Pantanal would pose for construction through sound administration and modern practices of civil engineering. Throughout the early phases of construction, the ecology of the Pantanal compounded problems that would have existed regardless of the region’s climate and hydrography. The Pantanal’s distance from international markets meant that the raw materials and heavy machinery required for construction often took as long as two months just to reach Corumbá from Rio de Janeiro. Any significant delays in the arrival of materials could throw construction off schedule. In the Pantanal, staying on schedule was critical because crews had only a short window each year to carry out labor during the dry season. Because of delays in 1939, workers were then forced to labor during the flood season. Given the region’s low population density, most of the CMFBB crew was made up of workers from

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<sup>73</sup> Torres to MRE, 25 junio 1942; Torres to MRE, 18 julio 1942; and Torres to MRE, 31 julio 1942, Correspondencia recibida de la CMFBB, 1942-1946, VRE-2-385, AMRE-Bo, La Paz.



other parts of Bolivia and Brazil. Faced with grueling work conditions and exposure to tropical diseases, many quickly abandoned their posts, which led to further delays. Unable to synchronize their labors with the seasonal rhythms of the Pantanal, the CMFBB quickly fell behind schedule. The case of the CMFBB thus illustrates how seasonal flooding shaped the course of economic development in the broader region despite sustained financial support from two national governments.

### **A Dream Renewed: The Changing Face of Economic Development at Midcentury**

Although basic infrastructural improvements – roads, railroads, ports – were ongoing concerns for those who sought to develop the Pantanal, by the middle third of the century, technological advances, national events, and world events introduced changes to the logic of economic development in the Pantanal. By the 1930s, airplanes and gas-powered boats introduced lasting changes in the geographies of transportation and communication in the rural landscape. Instead of taking days to travel between Mato Grosso and São Paulo by rail, for example, ranchers who needed to conduct business in urban Brazil could make the plane trip in a few hours, often returning home on the same day. Gas-powered boats had a similar effect, enabling ranchers and a growing number of merchants to travel quickly between headquarters, towns, and trading posts. Although most of the region's commerce still depended upon the railroad and river transportation, these new technologies presented exciting possibilities for development-minded individuals who had long sought ways to overcome the obstacles that distance from markets and the Pantanal flood regime imposed.

On the global stage, the events of World War I convinced the United States of the need to promote unity between the nations of the Western Hemisphere and in 1933 President Franklin Roosevelt instituted the “Good Neighbor Policy” to promote improved economic

and diplomatic relationships between the U.S. and Latin America. In the years leading up to and during World War II, government officials across the Americas believed that hemispheric security against the Axis Powers depended upon integrated markets and transportation networks that transcended national boundaries. Because these goals had never been completely realized in the broader Pantanal, economic development took center stage in the region by the 1930s. At the regional level, economic development boosters remained convinced that the Pantanal was destined to become the “breadbasket” of Brazil and lobbied for a variety of projects to help the region to reach its potential. Their writings reflect the emerging consensus among stakeholders in the region regarding the power of technology to overcome the challenges of seasonal flooding in the Pantanal.

Promoters of economic development in the Brazilian Pantanal gained a powerful ally in 1956, when Fausto Vieira de Campos launched *Brasil-Oeste*, a magazine designed to publicize opportunities for economic development in western Brazil.<sup>74</sup> The magazine – published between 1956 and 1967 – enjoyed the support of correspondents and contributors from around the state and it was distributed widely across Brazil, but mostly in São Paulo, “where the population centers with the most purchasing power in the country [were] located and where there [was] greater interest in the business of colonization and agricultural pursuits.”<sup>75</sup> While the magazine reported on items of general interest in relation to the state of

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<sup>74</sup> Born in Minas Gerais, Campos began his career as a journalist covering Mato Grosso for the São Paulo newspaper, *Folha de Manhã*, before launching his own magazine. For more background on Campos, see Eduardo de Melo Salgueiro, “Disputas e debates sobre a colonização do estado de Mato Grosso nas páginas da Revista Brasil-Oeste,” *Revista de História Regional* (Ponta Grossa) 16:2 (2011): 630-31.

<sup>75</sup> “...onde se localizam os núcleos populacionais de maior poder aquisitivo do país e onde se verifica maior interesse pelos negócios de colonização e pelas práticas agropecuárias.”

Mato Grosso, pieces designed to promote economic development dominated its pages.<sup>76</sup> The magazine claimed to operate independently of economic and political interests, but it – along with the writings of other travelers and local elites – fit neatly within the broader developmentalist agenda that intensified in Brazil after 1930. Writers were unanimous in their praise of Mato Grosso’s natural wealth and the countless opportunities it presented for investors. Very few, if any, questioned the suitability of the Pantanal as a site for economic development or acknowledged the limitations its flood regime might pose.<sup>77</sup>

Between 1930 and the 1960s efforts to promote economic development in the Pantanal focused on a variety of activities, including ranching, agriculture, the extraction of natural resources, oil prospecting, and the construction of infrastructure. By the 1930s, the Pantanal had already achieved a reputation as home to one of the largest cattle herds in Brazil. According to one author, the município of Corumbá alone raised over 1.7 million heads of cattle. Despite such prodigious production, he believed that ranching in the Pantanal had only begun on the path to reach its true potential and that, with better breeding and management, the vast grasslands of the Pantanal could support at least 16 million heads.

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<sup>76</sup> According to Campos, the goal of the magazine was to make the “vast region” of western Brazil “better known” to the rest of the country, paying particular attention to the activities of agriculture and ranching. No author, “Editorial,” *Brasil-Oeste* 1:1 (Janeiro 1956), 2 and No author, “Coopere conosco,” *Brasil-Oeste* 1:4 (Julho 1956), 25. For more details on the content of this magazine, see Salgueiro, “Disputas e debates” and Eduardo de Melo Salgueiro, ““O maior projeto em prol de Mato Grosso”: uma análise da Revista Brasil-Oeste (1956-1967),” *Diálogos* 15:3 (Set.-Dez. 2011): 711-16.

<sup>77</sup> For example, Otto Willi Ulrich, who traveled through the state in the 1930s in an effort to establish an agricultural colony on the western edge of the Pantanal, described it as a “land of enchantment,” a “picture without parallel, colorful and bright, [as if] painted by nature itself” that was ripe with “economic and industrial possibilities and for colonization.” According to Ulrich, the climate was pleasant, there was no threat of disease, and the Paraguay River was easy to navigate, providing a natural outlet for the products of rich agricultural lands capable of producing any crop imaginable. Ulrich, *Nos sertões*, 7-9. Ulrich’s contemporary, Gabriel Pinto de Arruda, echoed such sentiments, describing the município of Cáceres in the northern Pantanal as “one of the richest in the state,” perfect for the extraction of hardwoods and medicinal plants and the production of fruit and other agricultural commodities. Arruda, *Um trecho do oeste*, 41-42, 47. Arruda briefly discusses the challenges that the Pantanal and its rivers posed for commercial navigation. See 42-45.

This was a number equal to the herd in the entire country of France and two times larger than that in Italy. To him, the Pantanal was, “without a shadow of a doubt, one of the most appropriate regions for cattle ranching that exist[ed] on the planet.”<sup>78</sup>

Boosters voiced these sentiments in an effort to attract foreign investment to the region, individuals or corporations that possessed the capital necessary to improve the industry and streamline the movement of cattle products to market. The October 1958 issue included an insert translated to English, written to attract ranchers and investors from the United States and Europe. According to the insert the Pantanal, with its permanent access to water, its natural salt deposits, and its abundant fodder, provided optimal conditions for ranching and the development of subsidiary industries (processing, tanneries, etc.).<sup>79</sup>

Along with ranching, development-minded individuals began to identify a need to diversify the regional economy, promoting the expansion of agriculture and the “rational” extraction of natural resources.<sup>80</sup> For example, several writers emphasized the need to take economic advantage of the dense fish populations of the Pantanal and its rivers. Although fishing had always been a vital part of the regional economy, supplying food to the cities of Corumbá, Cuiabá, and Cáceres, many envisioned the Pantanal as a logical source of supply for the growing urban markets of São Paulo and the rest of southeast Brazil.<sup>81</sup> By the 1950s,

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<sup>78</sup> Pimentel Gomes, “Os transportes no Pantanal,” *Brasil-Oeste* 2:10 (Fevereiro 1957), 25. A version of this same article was published in the January 8, 1957 edition of the Rio newspaper *Correio da Manhã*.

<sup>79</sup> “N.a., “Brazilian Bulletin,” *Brasil-Oeste* 3:30 (Outubro 1958), 27-30. For the history of foreign investment in Mato Grosso and efforts to modernize the ranching industry, see Robert Wilcox, “Ranching Modernization in Tropical Brazil: Foreign Investment and Environment in Mato Grosso, 1900-1950,” *Agricultural History* 82 (2008): 366-92.

<sup>80</sup> Paulo Pompeu, “Deve a agricultura predatória ceder passo a exploração racional da terra,” *Brasil-Oeste* 1:6 (Outubro 1956), 5-6.

<sup>81</sup> N.a., “Industrialização do pescado,” *Brasil-Oeste* 1:3 (Marco 1956), 14.

the município of Aquidauana on the eastern edge of the Pantanal had become a major supplier of fish for the booming town of Campo Grande and even shipped to municipalities in the western part of São Paulo state.<sup>82</sup> Other articles emphasized the economic potential of a variety of other crops and natural resources, including hardwood extraction, fruit production, the cultivation of jute, the extraction of *carandá* palms (*Copernicia alba*), coffee cultivation, and the agricultural production of a host of crops including corn, rice, beans, cotton, and wheat.<sup>83</sup> Indeed, a growing number of authors dreamed that, in the future, the Pantanal would be known for much more than cattle ranching. One writer predicted that Mato Grosso and the Pantanal would one day be a critical supply source for the rest of Brazil, producing “rice, beans, corn, citrus fruit, sweet potatoes, rubber, *yerba mate*, coffee, cotton, mint, *quebracho*, *ipecacuanha*, babassu oil, dry and salted cattle hides, wild animal skins, jerky, cement, iron, hardwoods, vegetable fibers, mica, gold, diamonds, and manganese ore.”<sup>84</sup> He joined many others who believed that the diversity of climates, soils, and vegetation in the broader Pantanal presented unlimited opportunities for economic development that destined it to become “the future breadbasket of Brazil.”<sup>85</sup>

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<sup>82</sup> N.a., “Cuiabá e Aquidauana os dois maiores produtores de pescado em Mato Grosso,” *Brasil-Oeste* 1:5 (Setembro 1956), 19 and Pedro Nogueira, “Aquidauana: grande centro pastoril do sud-oeste mato-grossense,” *Brasil-Oeste* 3:21 (Janeiro 1958), 34-35. In 1954, Cuiabá produced over 586,000 kilograms of fish and Aquidauana produced 420,000 kilograms.

<sup>83</sup> N.a., “Aumenta a produção de madeiras para construção em Mato Grosso,” *Brasil-Oeste* 1:6 (Outubro 1956), 19; Casimiro Brodziak Filho, “Na fruticultura e no cultivo de juta, a economia de Porto Murtinho encontrara vigoroso esteio,” *Brasil-Oeste* 1:8 (Dezembro 1956), 19-21; Pimentel Gomes, “Os transportes no Pantanal,” 25; Valerio d’Almeida, “Carandá, madeira em potencial,” *Brasil-Oeste* 2:11 (Março 1957), 15-17; José Souto Faria, “Café: nova base econômica do município de Cáceres,” *Brasil-Oeste* 3:29 (Setembro 1958), 26.

<sup>84</sup> N.a., “Notas e fatos: Mato Grosso abastece o Brasil,” *Brasil-Oeste* 4:38 (Julho 1959), 51.

<sup>85</sup> “...o futuro celeiro do Brasil.” For descriptions of Mato Grosso as the breadbasket of Brazil, see Ernesto Vinhaes, *Féras do pantanal: aventuras de um reporter em Mato Grosso* (Rio de Janeiro: A Noite S/A Editora, 1936), 58; Campos, *Retrato de Mato Grosso*, 29; Fernando Adão Schmidt, “Franceses em Mato Grosso,” *Brasil-Oeste* 4:35 (Março 1959), 29; N.a., “Notas e fatos: enchentes no Pantanal,” *Brasil-Oeste* 4:37 (Junho 1959), 57; N.a., “Notas e fatos: retificação e dragagem do rio Paraguai,” *Brasil-Oeste* 4:43 (Dezembro 1959),

Despite their unrestrained optimism, contributors to the magazine were not blind to the damaging consequences that economic development could have on the environment. For example, several writers noted with alarm that uncontrolled burning of pasture in the Pantanal was transforming the landscape, deforesting trees, destroying pasture, and causing wild animals to disappear. To one author, such burning was arbitrary and often unnecessary. Instead of the March to the West, economic development in Mato Grosso was becoming a “march to the desert.”<sup>86</sup> Another author claimed that uncontrolled burning in the forests between Cáceres and the headwaters of the Paraguay River watershed was destroying habitat for the medicinal root ipecacuanha, the export of which formed an important part of the regional economy.<sup>87</sup> Other writers noted with alarm that commercial hunters were operating year-round, disregarding federal laws that restricted hunting to a defined period each year, and that wild animal populations were dropping as a result.<sup>88</sup>

In order to avoid these types of uncontrolled economic development, writers advocated for the “rational” extraction of natural resources, informed by modern agricultural practices and scientific technologies. For example, while the extraction of ipecac root had

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41; and Lécio Gomes de Souza, “Pantanal (Mato Grosso): futuro celeiro do Brasil,” *Brasil-Oeste* 8:88 (Dezembro 1963), 2-3.

<sup>86</sup> N.a., “As queimadas estão estendendo o deserto em Mato Grosso,” *Brasil-Oeste* 4:39 (Agosto 1959), 2-3. For another series of articles discussing the impact of burning on the landscape, see Zilkar C. Maranhão, “Porque as queimadas são prejudiciais,” *Brasil-Oeste* 4:42 (Novembro 1959), 2; Zilkar C. Maranhão, “Porque as queimadas são prejudiciais,” *Brasil-Oeste* 4:43 (Dezembro 1959), 3-4; and Zilkar C. Maranhão, “Porque as queimadas são prejudiciais,” *Brasil-Oeste* 5:44 (Janeiro 1960), 4. For a discussion of the environmental impact of burning pastures in Mato Grosso, see Robert Wilcox, “Ranching and Market Access in the Backlands: Mato Grosso, Brazil, ca. 1900-1940s,” *Historia Crítica* (Bogotá) 51 (Sept.-Dic. 2013): 85 and Shawn Van Ausdal and Robert W. Wilcox, “Hoofprints: Ranching and Landscape Transformation,” in “New Environmental Histories of Latin America and the Caribbean,” edited by Claudia Leal, José Augusto Pádua, and John Soluri, *RCC Perspectives* 7 (2013), 73 and 76.

<sup>87</sup> I discuss this briefly in chapter two. N.a., “Precária a situação da indústria extrativa da ipecacuanha no estado de Mato Grosso,” *Brasil-Oeste* 2:13 (Maio 1957), 16.

<sup>88</sup> N.a., “Exportação de peles de animais silvestres,” *Brasil-Oeste* 1:1 (Janeiro 1956), 2-3.

always been a highly unregulated economic activity, by the 1950s some were calling for the state government of Mato Grosso and the federal government of Brazil to take tighter control over the industry. They called for campaigns to educate migratory laborers about the destructive impact of burning and for federal laws to prohibit and punish uncontrolled burning in the region. They also called for the establishment of an experimental station in Cáceres to study the biological properties of the plant in an effort to promote its rational production and to oversee annual re-plantings.<sup>89</sup> Recognizing the importance of ipecac, ranching, and hunting to the regional economy, writers believed that a more active state and federal regulatory presence and technological innovation could mitigate any potential negative consequences of economic development.

Contributors to *Brasil-Oeste* also had faith in the ability of technology to transform the Pantanal itself in ways that would better promote commerce and agricultural production. During the early stages of the development of ranching in the region, ranchers pastured cattle on the grasses that grew naturally in the Pantanal during the dry season. By the 1930s, however, many observers increasingly focused on the need to “improve” the industry, “rationalizing” cattle ranching to make it more efficient and profitable. Many boosters began to promote new cattle breeds – such as Zebu – that they believed were better adapted to the environment and many ranchers began to experiment with planting non-native grasses that they hoped would provide better forage for cattle.<sup>90</sup> These were the exceptions rather than

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<sup>89</sup> N.a., “Precária a situação da indústria extrativa da ipecacuanha,” 16-18; N.a., “Notas e fatos: estação experimental de ipeca em Cáceres,” *Brasil-Oeste* 4:36 (Abril/Maio 1959), 83-84; and n.a., “Estação experimental de ipecacuanha,” *Brasil-Oeste* 4:41 (Outubro 1959), 38.

<sup>90</sup> N.a., “Criação de búfalos no Pantanal,” *Brasil-Oeste* 2:17 (Setembro 1957), 14-16. For a detailed analysis of ranchers in Mato Grosso and their efforts to improve cattle stocks through the introduction of Zebu breeds, see Robert Wilcox, “Zebu’s Elbows: Cattle Breeding and the Environment in Central Brazil, 1890-1960” in Christian Brannstrom, ed. *Territories, Commodities, Knowledges: Latin American Environmental History in the Nineteenth and Twentieth Centuries* (London: Institute for the Study of the Americas, 2004), 218-46.

the rule, however. According to Robert Wilcox, 74% of land in the Pantanal was still covered in native grasses in 1974 and only 2% was planted to pasture.<sup>91</sup>

By far the most consistent lament in the economic development camp was the Pantanal's continued lack of adequate transportation infrastructure. Writing in 1957, Pimentel Gomes noted that, despite its navigable rivers and its immense agricultural potential, the Pantanal still lacked the highways, roads, and railroads that most other regions in Brazil enjoyed, even though jeeps and other vehicles could easily drive through the region. He envisioned a regional highway system that linked key river ports in the Pantanal with stations along the EFNB. He also proposed changes to the current system of river navigation and operation of the railroad that he believed would better integrate and streamline various modes of transportation.<sup>92</sup> Other writers went further, proposing grand schemes designed to alter the flood regime. After the devastating flood of 1959, one writer called for a comprehensive project to straighten, deepen, and widen the river beds of the Paraguay River and its tributaries. Not only would this improve commercial navigation, but it would help the region to better control the damaging consequences of seasonal flooding. Instead of waiting for another catastrophe to occur, another argued, the federal government needed to exercise foresight to prevent future flooding through a program of dredging and drainage. The author predicted that the 730 kilometer course of the Paraguay River between Corumbá and Cáceres could be cut in half and, absent the fear of destructive flooding, rural populations and investors would transform the Pantanal into a profitable agricultural heartland. In his

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<sup>91</sup> Robert Wilcox, "Cattle and Environment in the Pantanal of Mato Grosso, Brazil, 1870-1970," *Agricultural History* 66:2 (Spring 1992), 240.

<sup>92</sup> Pimentel Gomes, "Os transportes no pantanal," 25-27.



estimation, the amazing economic potential of the Pantanal easily justified the substantial capital outflow required to eliminate the impact of flooding.<sup>93</sup>

## **Conclusion**

This chapter examined the many ways that seasonal flooding limited economic development in the Pantanal, placing special emphasis on the CMFBB. While the ordeal of crossing the Pantanal was over by the end of 1941, construction on the railroad between Corumbá and Santa Cruz de la Sierra dragged on until 1955, when the line was officially inaugurated. For regional elites and national officials who believed that the railroad would finally solve the problem of the region's isolation, ushering in a period of economic prosperity, the completion of the railroad carried mixed results. Military and civilian officials in eastern Bolivia lodged a steady string of complaints, alleging that construction activities were destroying existing roads and that the CMFBB was refusing to cooperate in the transportation of supplies and troops to frontier army garrisons.<sup>94</sup> Moreover, the railroad completely bypassed Puerto Suárez – the most significant center of population between Santa Cruz de la Sierra and Corumbá – prompting vigorous protests from town officials and residents for the duration of the project.<sup>95</sup>

At the same time, the CMFBB failed to attain many of the broad-scale economic and geopolitical objectives that inspired the project in the first place. By the 1950s, it was clear

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<sup>93</sup> N.a., “Notas e fatos: enchentes no pantanal,” 57-58 and n.a., “Notas e fatos: retificação e dragagem do rio Paraguai,” 41.

<sup>94</sup> Juan Rivero Torres responded to such accusations with a long list of improvements that the CMFBB had brought to the region, including the establishment of infrastructure, wells, medical clinics, and the construction of homes and schools. Juan Rivero Torres to MRE, 31 julio 1942 and Juan Rivero Torres to MRE, 8 agosto 1942, Correspondencia recibida de la CMFBB, 1942-1946, VRE-2-385, AMRE-Bo, La Paz.

<sup>95</sup> Torres to MRE, 10 febrero 1942, Correspondencia recibida de la CMFBB, 1942-1946, VRE-2-385, AMRE-Bo, La Paz.

that the national governments of Brazil and Bolivia planned to abandon the extension of the line from Santa Cruz de la Sierra to Cochabamba in the Andean highlands. This meant that the dream of completing a transcontinental line from the Atlantic to the Pacific Oceans would remain unrealized. Writing in 1950, Eduardo Galindo Quiroga, then chief Bolivian delegate to the CMFBB, worried that if the line between Corumbá and Santa Cruz was not extended to Cochabamba, the railroad would serve no point, achieving “no national or international objectives.”<sup>96</sup> On the Brazilian side of the equation regional elites had hoped that the completion of a transcontinental railroad would place Corumbá at the nexus of two major trade networks at the heart of South America. With access to Bolivian oil, it could establish refineries and other industries that would promote further urbanization and modernization. None of these dreams came to fruition. The initial treaty (1938) left the question of oil unclear and twenty years later, in 1958, Bolivian diplomats demanded a renegotiation of the terms of several bilateral agreements – named the Roboré Accords – with Brazil, which placed heavy restrictions on the ability of private companies or state-affiliated entities (such as *Petrobras*) to access Bolivian oil and natural gas.<sup>97</sup>

Faced with such disappointment, those interested in economic development in the broader Pantanal had no choice but to keep the dream alive. As late as the 1950s, government officials and the citizens of eastern Bolivia remained convinced that the establishment of a port on the Paraguay River held the key to the nation’s economic independence and

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<sup>96</sup> Eduardo Galindo Quiroga to MRE, 11 diciembre 1950, Correspondencia recibida de la CMFBB, 1950, VRE-2-389, AMRE-Bo, La Paz.

<sup>97</sup> For more background on the Roboré Accords, see Ramon Casas Vilarino, “Os acordos de Roboré: Brasil, Bolívia e as questões do petróleo, desenvolvimento e dependência no final dos anos 1950,” (Ph.D. dissertation, Pontifícia Universidade Católica de São Paulo, 2006). For the full text of the 1958 act dealing with oil and ratified as part of the Roboré Accords, see [http://dai-mre.serpro.gov.br/atos-internacionais/bilaterais/1958/b\\_26](http://dai-mre.serpro.gov.br/atos-internacionais/bilaterais/1958/b_26), accessed 9-3-2014.

ascendance. In 1950, a Bolivian official affiliated with the CMFBB authored a comprehensive report, detailing the history of Puerto Suárez and the struggles of the Bolivian government to establish it as a commercial entrepôt for the eastern part of the country. According to the author, the only way to solve this problem was through technical studies and modern engineering. He proposed a detailed plan, complete with a budget, to dredge and widen the natural channels linking the Laguna Cáceres with the Paraguay River and to implement port improvements that would deepen the water level to accommodate commercial vessels. With an estimated total cost of between 4.5 and 13.1 million U.S. dollars – depending upon the location chosen for the port – the amount of money invested would easily repay itself through increased tax revenue generated by the rapid growth in commerce.<sup>98</sup>

On the other side of the border, many regional elites in Mato Grosso were convinced that rich reserves of oil lay beneath the Pantanal. In the 1930s, the prominent intellectual José Bento Renato Monteiro Lobato famously called for the Brazilian government to promote the drilling of oil wells in the Pantanal. Monteiro Lobato based his arguments upon early studies conducted by the *Conselho Nacional do Petróleo* which reported the presence of oil near Porto Esperança in the southern Pantanal. He believed that the Pantanal's geological similarities to the Chaco and Chiquitania of eastern Bolivia and northern Paraguay made it highly likely that their fossil fuel reserves extended into Brazilian territory.<sup>99</sup> Lobato quickly

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<sup>98</sup> “La población de Puerto Suárez y el problema de Bolivia de acceso al Rio Paraguay,” name of author illegible, 25 noviembre 1950. See especially pages 34-40. This report is contained within a bound collection of correspondence addressed from the CMFBB to the Ministry of Foreign Relations in La Paz and is included as an attachment to the following letter: Eduardo Galindo Quiroga to MRE, 16 octubre 1951, Correspondencia recibida de la CMFBB, 1950, VRE-2-389, AMRE-Bo, La Paz.

<sup>99</sup> José Bento Monteiro Lobato, *O escândalo do petróleo: depoimentos apresentados a Comissão de Inquerito sobre o petróleo* (São Paulo: Companhia Editora Nacional, 1936). For a brief overview of the history of oil

gained allies in Mato Grosso, especially after 1958 when the Roboré Accords placed limitations on Brazil's access to Bolivian fossil fuels. As a result, stake-holders in Mato Grosso renewed their calls for domestic oil production in the Pantanal. They believed that the development of the oil industry in the Pantanal could reduce Brazil's reliance upon foreign oil imports and make its economy more self-sufficient.<sup>100</sup>

These proposals capped a long history of efforts to solve the problem of isolation in the Pantanal. This chapter examined this history, emphasizing the ways in which seasonal flooding combined with geopolitical realities, national and international events, and economic trends to limit the efforts of individuals and institutions to carry out frontier development in the broader region. During the late-nineteenth century, regional and national governments sought to establish the ports, roads, and river networks necessary for the efficient shipment of extractive goods to the outside world, the region's chief source of wealth. By the 1930s, the dream of economic development continued but the goals of national governments and developers changed. In the years leading up to World War II,

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speculation in Mato Grosso, see Gastão Müller, *Potencialidades petrolíferas de Mato Grosso, especialmente do Pantanal Mato-Grossense* (Brasília: Coordenação de Publicações, 1976).

<sup>100</sup> The debate over oil prospecting in the Pantanal figured prominently in the pages of *Brasil-Oeste*. See, for example, Morel M. Reis, "Nada se sabe sobre as intenções da Petrobras em Mato Grosso: continuam incontestadas as previsões de Lobato sobre a existência de jazidas petrolíferas no grande estado do oeste," *Brasil-Oeste* 1:2 (Fevereiro 1956), 13; N.a., "Construcao de refinaria de petróleo em Corumbá," *Brasil-Oeste* 1:2 (Fevereiro 1956), 14; Dolor de Andrade, "Exploração do petróleo em Mato Grosso," *Brasil-Oeste* 1:4 (Julho 1956), 16; Morel M. Reis, "Petróleo da Bolívia para Mato Grosso," *Brasil-Oeste* 2:15 (Julho 1957), 17-18; Morel M. Reis, "A instalação de uma refinaria de petróleo em Corumbá favorecerá um maior desenvolvimento do comércio entre o Brasil e a Bolívia," *Brasil-Oeste* 2:16 (Agosto 1957), 33; Nogueira Paim, "Parlamento e parlamentares," *Brasil-Oeste* 4:35 (Março 1959), 44-45; Nogueira Paim, "Parlamento e parlamentares," *Brasil-Oeste* 4:38 (Julho 1959), 42; N.a., "A verdade sobre os Acordos de Roboré," *Brasil-Oeste* 4:40 (Setembro 1959), 37; Renato Baez, "Corumba reclama as atencoes da Petrobras," *Brasil-Oeste* 5:48 (Maio 1960), 27-30; N.a., "Retirada estratégica da Petrobras em Mato Grosso," *Brasil-Oeste* 5:49 (Junho 1960), 50; Sizinio Leite da Rocha, "Petróleo em Mato Grosso," *Brasil-Oeste* 5:54 (Novembro/Dezembro 1960), 22-27; N.a., "Pesquisas de petróleo em Mato Grosso," *Brasil-Oeste* 7:70 (Junho 1962), 22-24; N.a., "Petróleo no Pantanal: oito prospecções superficiais num território de mais de 250.000 km<sup>2</sup> bastaram para os testes de Petrobras," *Brasil-Oeste* 7:72 (Agosto 1962), 29-32; and N.a., "Petróleo: pesquisas da Petrobras constituíram uma farsa no pantanal mato-grossense," *Brasil-Oeste* 7:75 (Novembro 1962), 24-25.

questions of national security, hemispheric integration, and access to raw materials – especially fossil fuels – loomed large in the minds of politicians and diplomats in South America. During the Chaco War, Bolivia’s underdevelopment played a key role in the loss of yet more territory on its contested border with Paraguay. In the aftermath of this war, the governments of Brazil and Bolivia combined forces, undertaking an ambitious railroad construction project designed to bridge divides between Andean and lowland Bolivia as well as between Bolivia and Brazil. Although the commission eventually completed the project, it suffered repeated setbacks caused by World War II, labor scarcity, the region’s distance from supply centers, and the difficulties imposed by the climate and ecology of the Pantanal.

It is no coincidence that, by the end of the 1950s, lasting economic development in the Pantanal remained a dream not yet realized. The shipment of commercially valuable goods was still a time-consuming and frustrating process and widespread flooding still militated against permanent settlement, improvements in the ranching industry, and the “rational” development of the region’s natural resources. While the arrival of the railroad achieved integration between western Brazil and eastern Bolivia, the economic benefits of this accomplishment fell well short of expectations. As a result, the broader Pantanal remained a landscape of isolation within the calculus of economic development that guided those in power at midcentury. At the same time, however, improvements in infrastructure during the first half of the twentieth century enabled increasing numbers of people to travel *between* the Pantanal and the outside world. This included a growing number of field scientists who, by the 1920s, regarded the Pantanal as one of the best locations in South America to collect zoological specimens. Although they depended upon the same

commercial networks as other stakeholders in the region, they were one of the first groups to recognize the Pantanal as something other than an obstacle.

## CHAPTER 4

### Foreign Field Scientists and the Social Construction of Wilderness in the Pantanal

When Claude Lévi-Strauss arrived in the Pantanal for the first time in November 1935, he was disappointed with what he found. Acting on the recommendations of colleagues at the Universidade de São Paulo, Lévi-Strauss planned to use the summer holiday to conduct ethnographic research among the remote indigenous tribes of Mato Grosso. To reach the Pantanal, Lévi-Strauss booked a ticket on the *Estrada de Ferro Noroeste do Brasil*, which linked urban São Paulo to Porto Esperança on the eastern bank of the Paraguay River. After a three-day journey through the coffee plantations of rural São Paulo and the *cerrado* of Mato Grosso, Lévi-Strauss finally reached “dismal Porto Esperança,” which he described as one of the “weirdest spot[s] one could hope to find on the face of the earth.” Perched on stilts “in the middle of the swamp,” there seemed to Lévi Strauss “no reason for its existence” beyond its status as a marginally important railroad shipping center.<sup>1</sup> In contrast to its depressing human populations, Lévi-Strauss was struck by the isolated and pristine nature of the Pantanal – which he described variously as a “dream landscape” and an “aquatic desert” – where wild animals outnumbered humans and were “unintimidated” by their presence.<sup>2</sup>

During his visit to the Pantanal Lévi-Strauss enjoyed the hospitality of two Frenchmen who managed a vast ranch property – the *Fazenda Francesa* – situated along the

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<sup>1</sup> Claude Lévi-Strauss, *Tristes Tropiques*, translated by John Weightman and Doreen Weightman (New York: Penguin Books, 2012), 161-63.

<sup>2</sup> For Levi-Strauss’s descriptions of the Pantanal landscape and its wildlife, see Levi-Strauss, *Tristes Tropiques*, 162, 164, 201-02, and 204.

railroad and owned by absentee French investors. The *fazenda* served as the base of operations for Lévi- Strauss and its managers provided food, transportation (draft animals and oxcarts), and guides to accompany him on an arduous overland journey to visit the *Caduveo* people, the last surviving remnant of the once-thriving *Guaycurú* nation.<sup>3</sup> During a trek of 150 kilometers, Lévi-Strauss's "workers" guided him over the *Serra da Bodoquena* to the border of the ranch property before following the "Indian road" across the "campos dos índios" to the tiny Caduveo settlement of *Nalike* in the middle of the Pantanal.<sup>4</sup> In *Nalike*, Lévi-Strauss encountered a "wretched hamlet" composed of 200 people living in conditions "little different from those belonging to the nearest Brazilian peasants." Because of a long history of interactions (or "cross-breeding") with colonists of Portuguese and Spanish descent, Lévi-Strauss observed that the Caduveo now lived a hybrid existence, combining their own cultural practices with those of broader rural Brazilian society.<sup>5</sup>

Although his ethnographic forays into Mato Grosso resulted in the publication of *Tristes Tropiques*, a seminal work in the field of cultural anthropology, the observations Lévi-Strauss made about the human populations of the region were well-known facts to the citizens of Mato Grosso. Indeed, the Pantanal had served as an interethnic crossroads for centuries before the first naturalists and field scientists arrived in the nineteenth century on their quest to discover "primitive" human populations in central South America. By that

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<sup>3</sup> The Portuguese spelling for Caduveo is *Kadiwéu*. Ibid., 165, 168-69.

<sup>4</sup> Ibid., 170-71.

<sup>5</sup> Levi-Strauss found evidence of this fact in the construction of their dwellings, in their material culture, and in their ritual practices. Ibid., 172-77. A comprehensive list of the anthropological artifacts that Levi-Strauss collected among the Caduveo is available in Rio de Janeiro in the history of science archival collections at the Museu de Astronomia e Ciências Afins. See "Inventaire des Pièces Ethnographiques Laissées au Brésil par la Mission Levi-Strauss (Nov. 1936), Claude Lévi-Strauss, CFE.T.2.054, Conselho de Fiscalização das Expedições Artísticas e Científicas no Brasil (CFE), Arquivo de História da Ciência, Museu de Astronomia e Ciências Afins (MAST), Rio de Janeiro, Brasil.



time, war with Paraguay, the expansion of river trade, and the growing economic importance of cattle had drawn most people of indigenous descent into a regional system dominated by ranching and other extractive pursuits, their identities increasingly defined by their relationship to the *fazenda*. Others, such as the Caduveo and *Bororo*, continued to practice a semi-nomadic lifestyle at the margins of the Pantanal from where they migrated seasonally to isolated areas such as the Paraguayan Chaco or the Amazon River basin. The Rondon Telegraph Commission of the 1910s and the infamous “pacification” campaigns thus expanded upon and institutionalized a process which had been occurring in the region for decades (if not centuries), bringing frontier expansion and development under the umbrella of the state.<sup>6</sup>

Lévi-Strauss was well aware of this history, yet the odd juxtaposition of civilization and wasteland that he encountered in the Pantanal surprised him in a region so far-removed from the cultivated centers of Rio de Janeiro and São Paulo. When he returned to Mato Grosso for a second time in 1938, Lévi-Strauss skipped the Pantanal, opting instead to study the more remote *Nambikwara* who ranged between tributaries of the upper Amazon basin. Many of Lévi-Strauss’s contemporaries reached similar conclusions about the Pantanal. Vincenzo Petruccio, an ethnographer from the Pennsylvania Museum of Archaeology and Anthropology, concluded that the indigenous populations of the region were “of little interest for the ethnologist.”<sup>7</sup> Petruccio conducted half-hearted archaeological excavations at *Fazenda Descalvados* (in the northern Pantanal) but devoted most of his energy and resources to short

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<sup>6</sup> I examine this history in detail in chapter two, which focuses on labor and migration in the Pantanal. For an examination of the violent conflict between the Bororo and the various groups of people who made claims on frontier space in Mato Grosso, see Hal Langfur, “Myths of Pacification: Brazilian Frontier Settlement and the Subjugation of the Bororo Indians,” *Journal of Social History* 32:4 (Summer 1999): 879-905.

<sup>7</sup> V.M. Petruccio, *Primitive Peoples of Matto Grosso Brazil* (Philadelphia: University Museum, 1932), 98, 100.

airplane flights to visit and observe the *Bakairi* and other indigenous villages in the Amazon basin. Indeed, by the 1930s, ethnographers in search of research subjects untainted by the corrosive effects of “acculturation” no longer looked for them in the Pantanal.

This chapter examines the role of field scientists – including anthropologists, zoologists, botanists, and others – in the social construction of wilderness in the Pantanal. By the first decade of the twentieth century, field scientists from the United States and Europe came to the Pantanal in increasing numbers. Due to their expertise and authority they held significant power, perhaps more than any other social group, to shape wider perceptions about the Pantanal, its resources, and its people. For example, after Theodore Roosevelt’s highly-publicized expedition – underwritten by the American Museum of Natural History – the Pantanal quickly gained a reputation as one of the best locations in South America for botanical and zoological specimen collection. In the following decades, multiple scientific institutions from both Brazil and the United States undertook collecting expeditions in the Pantanal. Unlike nineteenth century naturalists who came before them, twentieth century field scientists had little interest in studying the region’s rural inhabitants, including the small indigenous populations that remained. The few descriptions that they do give present the rural inhabitants of the Pantanal as a poor and undifferentiated population of rural laborers, unworthy of anthropological study. Through their writings and other emerging tools of mass media, twentieth century field scientists were thus crucial in disseminating and popularizing images of the Pantanal as an unpeopled and exotic landscape.

At the same time, however, field scientists were also instrumental in creating an image of the Pantanal as a biodiverse region worthy of study in its own right. Unlike travelers, government officials, boundary surveyors, merchants, and civil engineers who

regarded the Pantanal and its seasonal cycles of flood and drought as obstacles to be overcome, twentieth century field scientists identified the Pantanal as a place to be understood and appreciated for its unique ecology, awe-inspiring landscapes, and abundant fauna. Rather than searching for ways to make it profitable or to establish the roads, railroads, and ports necessary to integrate the region into national and international networks, field scientists came to regard the Pantanal as a laboratory for scientific research and a vast repository of specimens that could help to advance knowledge about the flora and fauna of the Americas. By the 1920s and 30s, enterprising foreign scientists and other individuals – chiefly from the United States – used new technologies such as radio and moving pictures to publicize the region beyond the walls of scientific institutions, presenting the Pantanal to public audiences as the quintessential Brazilian wilderness.

### **From Ethnography to Specimen Collection, 1900-1930**

By the 1890s and into the twentieth century, ethnologists continued to come to the Pantanal to study the indigenous people of the region. Most notable among them were Guido Boggiani who produced some of the earliest photographs of the Kadiwéu and Chamacoco peoples during his time in the southern Pantanal.<sup>8</sup> The German ethnographer Max Schmidt and the Argentine Julio Koslowsky (representing the Museo de La Plata) traveled further north to conduct studies of the Bororo and the *Guató*.<sup>9</sup> Yet this was the twilight of

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<sup>8</sup> Guido Boggiani, *I Ciamacoco*, (Rome: Presso la Società Romana per l'Antropologia, 1894) and *Os Caduveos*, Translated by Amadeu Amaral Júnior (Belo Horizonte: Livraria Itatiaia, 1975). Most Chamacoco today reject this denomination as one imposed by European colonists and refer to themselves as the *Ishir*. Their language falls within the *Zamuco* language group and shares similarities with those spoken by people of *Ayoreo* descent in southeastern Bolivia and northern Paraguay. Since the early twentieth century the *Ishir* have been one of the indigenous peoples most frequently studied by anthropologists, including Branislava Susnik, Bernd Fischmann, and Isabelle Combès. For two recent anthropological studies of the *Ishir*, see Ticio Escobar, *The Curse of Nemur: In Search of the Art, Myth, and Ritual of the Ishir* (Pittsburgh: University of Pittsburgh Press, 2007) and Mario Blaser, *Storytelling Globalization from the Chaco and Beyond* (Durham: Duke University Press, 2010).

<sup>9</sup> Julio Koslowsky, “Tres semanas entre los indios Guató” and “Algunos datos sobre los indios Bororós,” *Revista del Museo de La Plata*, Tomo VI, Segunda Parte (1895): 221-50 and 375-412; Max Schmidt,

ethnological research in the Pantanal. Most of the informants they met spoke Spanish or Portuguese, worked on ranches for part of the year, and were more interested in trading for rifles than demonstrating rituals. During the first few decades of the twentieth century, most ethnologists recognized this shift and came to regard the “semi-civilized” indigenous populations of the Pantanal as unsuitable research subjects.<sup>10</sup> Thereafter, most foreign ethnologists shifted their focus to regions with a reputation for more isolated and untouched indigenous populations, such as the Chaco or tributaries of the Amazon River, such as the *Xingu*. Instead of serving as research subjects for visiting ethnologists, by the beginning of the twentieth century most people of indigenous descent in the Pantanal came to serve as sources of labor and local knowledge for scientific expeditions from the United States and Brazil who came with increasing frequency to collect zoological specimens.

The first decade of the twentieth century marked a clear turning point in this regard. At the end of the nineteenth century, the Brazilian military tasked General Cândido Mariano da Silva Rondon with surveying and constructing a telegraph line to link Cuiabá, the capital of Mato Grosso, with Corumbá across the Pantanal. Between 1900 and 1906, Rondon commanded a crew of military and indigenous conscripts to establish the telegraph line, which the Brazilian government regarded as an issue of national security because of the

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“Resultados de mi tercera expedición a los Guatós efectuada en el año de 1928,” *Revista de la Sociedad Científica del Paraguay*, Tomo V, n. 6 (1942): 41-75; and Schmidt, “Resultados da minha expedição bienal a Mato-Grosso, de setembro de 1926 a agosto de 1938,” *Boletim do Museu Nacional XIV-XVII* (1938-1941): 241-86.

<sup>10</sup> The distinction between the “traditional” and the “modern” is a classic debate in the field of anthropology. For a useful analysis of this dichotomy and the relationship between anthropology and history, see Michael Herzfeld, *Anthropology: Theoretical Practice in Culture and Society* (Malden, Mass.: Blackwell Publishers, 2001), 80-89. For background on the history of anthropological thought, see Paul Erickson and Liam Murphy, eds., *A History of Anthropological Theory*, 3<sup>rd</sup> edition (North York, Ontario: UTP, 2008), 93-122. For a discussion of Claude Levi-Strauss, see pages 113-15.

region's strategic location in the border region with Bolivia and Paraguay.<sup>11</sup> After this success, the Brazilian government expanded Rondon's responsibility, charging him with the construction of a telegraph line that would link the rural, western Brazilian territories of Mato Grosso and Amazonas with the urban littoral, a task which occupied him for over a decade. In the process, Rondon encountered and "pacified" multiple nomadic and semi-sedentary indigenous groups, many of which then served the Brazilian nation as military conscripts and telegraph officers at stations that dotted the new line.<sup>12</sup> The presence of the Rondon commission in Mato Grosso signified a new period of sustained, federal government-sponsored economic development and state formation programs in western Brazil.

Aside from linking far-flung regions via telegraph with urban and administrative centers, the telegraph commission also cooperated with scientific institutions seeking to build collections and to learn more about the region's flora and fauna. As scholars have demonstrated, for Brazilian institutions, these scientific activities were critical practices in the production of knowledge, ones that aided the process of state-formation, economic development, and national integration.<sup>13</sup> Between 1908 and 1916 alone, the *Museu Nacional* in Rio de Janeiro acquired almost 9,000 botanical specimens, over 5,600 zoological

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<sup>11</sup> For Rondon's report on this experience, see Comissão de Linhas Telegráficas Estratégicas de Mato Grosso ao Amazonas (CLTEMTA), *Relatório dos trabalhos realizados de 1900-1906 pelo Major de Eng. Cândido Mariano da Silva Rondon*, Vols. 4-5 (Rio de Janeiro: Departamento de Imprensa Nacional, 1946).

<sup>12</sup> For the history of Rondon and the telegraph commission, see Todd Diacon, *Stringing together a Nation: Cândido Mariano da Silva Rondon and the Construction of a Modern Brazil, 1906-1930* (Durham: Duke University Press, 2004).

<sup>13</sup> For a good analysis of the role of scientific expeditions in the Rondon Commission, see Dominichi Miranda de Sá, Magali Romero Sá, and Nísia Trindade Lima, "Telégrafos e inventário do território no Brasil: atividades científicas da Comissão Rondon (1907-1915)," *História, Ciências, Saúde – Manguinhos* 15:3 (Jul.-Set. 2008): 779-810. See also, Carlos Haag, "Ciência para criar uma nação," *Revista Pesquisa FAPESP* 195 (Maio 2012): 74-79.

specimens, and over 3,300 anthropological artifacts.<sup>14</sup> The telegraph commission also created similar opportunities for North American scientific institutions. For example, for eight months in 1913 and 1914, Theodore Roosevelt and a delegation of field scientists from the American Museum of Natural History (AMNH) of New York embarked on an expedition that carried them from urban Brazil through the Pantanal and into the unmapped tributaries of the upper Amazon River basin. Roosevelt and his crew arrived at the invitation of Rondon who agreed to co-lead an expedition to explore, survey, and map a river in the Amazon basin that Rondon had not managed to survey, one that he famously christened the “River of Doubt.”<sup>15</sup>

Most accounts of the Roosevelt-Rondon expedition focus on the drama and danger that Roosevelt and his crew experienced during their expedition up the River of Doubt, through unexplored reaches of the Brazilian jungle. While the exploratory portion of the expedition did, indeed, unfold in the Amazon, a significant share of the scientific research and specimen collection took place in the Pantanal. For over a month, between November 20, 1913, and January 5, 2014, George Kruck Cherrie and Leo Edward Miller – both affiliated with Roosevelt and the AMNH – set themselves to the task of hunting, collecting, preparing, and preserving bird and mammal specimens in the Pantanal between the Bahia Negra in the south and Cáceres in the north.<sup>16</sup> An experienced bird collector and amateur ornithologist,

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<sup>14</sup> Dominichi Miranda de Sá, et. al., “Telégrafos e inventário,” 797.

<sup>15</sup> For histories of the Roosevelt-Rondon expedition authored by North Americans, see Candice Millard, *The River of Doubt: Theodore Roosevelt's Darkest Journey* (New York: Doubleday, 2005) and Joseph Ormig, *My Last Chance to Be a Boy: Theodore Roosevelt's South American Expedition of 1913-1914* (Mechanicsburg, PA: Stackpole Books, 1994).

<sup>16</sup> Cherrie's diary, housed in the archive of the AMNH and available digitally online, includes a day-by-day description of his collecting activities in the Pantanal. See George K. Cherrie, “Diary of the Theodore Roosevelt Expedition to Explore the River of Doubt in Brazil, October 1913 to May 1914,” transcribed by Joseph R. Ormig, November 1975, <http://digitallibrary.amnh.org/dspace/handle/2246/6458>, accessed 2-25-15.

Cherrie had traveled extensively throughout Central and South America before taking part in the Roosevelt expedition. Miller, a zoologist, had a similar background, and collected mammals in countries and territories throughout South America.<sup>17</sup>

The two men arrived in Corumbá at the end of November, 1913, at the beginning of the rainy season. With Roosevelt not scheduled to arrive until the end of December, they sought out a good collecting site, finally settling on the region around *Urucúm* in the elevated transition zone between the Pantanal and the Chaco. Although Cherrie noted that this region lacked the characteristic waterfowl of the swampy lowlands, it abounded in “forest- or brush-loving species.” By mid-December, he had secured over four hundred specimens for the AMNH collection, “representing nearly two hundred species.”<sup>18</sup> Between December 16 (when they joined up with Roosevelt) and January 10, Cherrie and Miller collected additional specimens at dozens of other locations in the Pantanal as the Roosevelt entourage made its way north to the Amazon basin. Thus, fauna from the Pantanal was well-represented in the 450 mammal specimens and the thousands of bird specimens that the two naturalists collected by the end of the expedition.<sup>19</sup> Although fauna was arguably more varied in the Amazonian portions of their journey, Miller and Cherrie were especially impressed by the density of avifauna in the Pantanal. During his first week in the region, Miller described the Pantanal as a place where “vast marshes teemed with bird life,” where “countless thousands

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<sup>17</sup> George K. Cherrie, *Dark Trails: Adventures of a Naturalist* (New York: G.P. Putnam & Sons, 1930) and Leo E. Miller, *In the Wilds of South America: Six Years of Exploration in Colombia, Venezuela, British Guiana, Peru, Bolivia, Argentina, Paraguay, and Brazil* (New York: Charles Scribner's Sons, 1918).

<sup>18</sup> Elsie M.B. Naumburg, “The Birds of Matto Grosso, Brazil: A Report on the Birds Secured by the Roosevelt-Rondon Expedition, with Field Notes by George K. Cherrie,” *Bulletin of the American Museum of Natural History*, Volume LX (1930): 9.

<sup>19</sup> These figures tabulated from species lists and collecting sites in Naumburg, “The Birds of Mato Grosso,” and J.A. Allen, “Mammals Collected on the Roosevelt Brazilian Expedition, with Field Notes by Leo E. Miller,” *Bulletin of the American Museum of Natural History*, Volume XXXV (1916): 560.

of cormorants and anhingas took wing,” where “hordes of wood and scarlet ibises” fringed low-lying pools of water, and where “egrets covered the small clumps of trees as with a mantle of snowy white.”<sup>20</sup> As the party journeyed further north into the Pantanal, Miller described the water bird population as “unbelievably large” with such a density of cormorants (*P. brasiliensis*) and anhingas (*A. anhinga*) that “they confused the eye.”

Roosevelt was equally impressed. In his autobiographical account, *Through the Brazilian Wilderness*, Roosevelt was astounded by the biodiversity he witnessed on a single ranch property along the Rio Taquary and claimed that “a naturalist could with the utmost advantage spend six months” collecting and conducting scientific research there. According to Roosevelt, what science could benefit from the most was not the collection of specimens, but “exhaustive observation in the field,” conducted by “trained observers” with the ability to “set vividly before the eyes of others the full life-histories of the creatures that dwell[ed]” in the Brazilian wilderness.<sup>21</sup> Two years later, in 1916, Roosevelt acted on this conviction, joining forces again with the AMNH to send Cherrie on a return trip to the Pantanal.<sup>22</sup> This time, Roosevelt instructed Cherrie to conduct a thorough study of the region’s fauna, focusing on comprehensive observation instead of collection.<sup>23</sup> Cherrie made for his base of

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<sup>20</sup> Miller, *Wilds of South America*, 207. Scientific names for these species are as follows: *Phalacrocoracidae*, *A. anhinga*, *Mycteria americana*, *Ardea alba*.

<sup>21</sup> Theodore Roosevelt, *Through the Brazilian Wilderness* (New York: Charles Scribner’s Sons, 1914), 91, 161-62. In a recent book review, Emily Wakild quotes this section of Roosevelt’s account, calling for more research that integrates environmental history with the study of human-animal relationships. See Emily Wakild. “A Fresh Bestiary: Writing Animals into Latin American History (Book Review of *Centering Animals in Latin American History*, Martha Few, Zeb Tortorici, eds.)” *H-Net Reviews in the Humanities & Social Sciences* (2014): 1-3. Available at: [http://works.bepress.com/emily\\_wakild/13](http://works.bepress.com/emily_wakild/13), accessed 2-25-15.

<sup>22</sup> The results of this expedition are included in Naumburg, “The Birds of Mato Grosso.”

<sup>23</sup> The American Museum of Natural History, *Forty-Ninth Annual Report of the Trustees of the American Museum of Natural History for the Year 1917* (New York: AMNH, 1918): 82.



operations the American-owned Descalvados ranch in the northern Pantanal. He met the ranch manager during his first trip through the region in January 1914.<sup>24</sup> During three months at Descalvados and other parts of the Pantanal, he recorded extensive field notes on the behaviors of various animal species, especially the rhea (*Rhea Americana*), the jabiru stork (*Jabiru mycteria*), and monk parakeets (*Myiopsitta monachus*), which fascinated him with their enormous, communal nests. His efforts built upon those of the AMNH to conduct a definitive “biological survey” of South America. Along with Elsie Naumburg’s comprehensive compilation, “The Birds of Mato Grosso,” which included field notes about species behavior and distribution, Cherrie also published in multiple venues about the “life-histories” of bird populations in the Pantanal.<sup>25</sup>

Despite his idealistic rhetoric, including references to the need to set legislation in place for the protection of Brazilian wildlife, Roosevelt’s trip through the Pantanal was not simply about the creation of scientific knowledge through detached observation of animal behavior. During the three-week period that they traveled through the Pantanal, Roosevelt’s party took multiple hunting trips to secure specimens for the AMNH. These trips provided numerous opportunities for Roosevelt and his companions to observe the curious behaviors of unfamiliar creatures – such as the anteater, the tapir, white-lipped peccaries, armadillos, jaguars, hyacinth macaws, and jabiru storks – but they usually ended in death for the animals

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<sup>24</sup> George K. Cherrie, “Diary of the Theodore Roosevelt Expedition,” 30 and Roosevelt, *Through the Brazilian Wilderness*, 121-23. At Descalvados, Roosevelt witnessed warehouses full of tanned and dried wild animal skins.

<sup>25</sup> George K. Cherrie, “To South America for Bird Study: A Story of Travel and of Strange Habits of Birds – Preliminary Report by the Cherrie-Roosevelt Expedition of the American Museum,” *The American Museum Journal* XVII, n. 4 (April 1917): 268-73; Cherrie, “From Central Matto Grosso Overland to the Coast,” *Bulletin of the Pan-American Union* XLVI, nos. 291-295 (Jan.-June 1918): 759-71; and Cherrie, “South American Field Notes, with Special Reference to the Habits of Two Species of Birds, the Jabiru and the Rhea,” *Natural History* XX, n. 2 (Mar.-Apr. 1920): 193-96.

in question.<sup>26</sup> Indeed, for Roosevelt and his son, Kermit, both noted sportsmen, their time in the Pantanal was also about adventure and the thrill of the chase in one of the “great waste spaces” of South America.<sup>27</sup> Even during the second trip, with its explicitly stated purpose of prolonged scientific observation, Cherrie hunted and collected an additional 750 specimens for the AMNH collection.<sup>28</sup> Its great potential for the study of animal behavior and natural history aside, this was the message that Roosevelt and naturalists from the AMNH impressed upon the American scientific community about the region: with its diverse fauna, navigable rivers, and American-owned ranches, the Pantanal was an ideal staging ground for collecting expeditions. Although naturalists had been traveling through the Pantanal for decades before Roosevelt arrived, his high profile and the publicity given to his expedition helped to cement the region’s reputation as a rich repository for botanical and zoological specimens.

Roosevelt’s writings about central Brazil and the Pantanal were particularly influential among North American natural history museums which, by the 1910s, had begun to expand the scope of their activities beyond the continental United States. In the decade between the Great War and the Great Depression, scientific institutions across the country intensified efforts begun before the war to expand their botanical and zoological collections. They commissioned scientific collecting expeditions that traveled to sites around the globe.<sup>29</sup>

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<sup>26</sup> For descriptions of the mammals and birds secured during the expedition, see Naumburg, “The Birds of Matto Grosso, Brazil” and J.A. Allen, “Mammals Collected on the Roosevelt Brazilian Expedition.” For Roosevelt’s descriptions of the animals his party encountered on hunting trips, see Roosevelt, “Animals of Central Brazil, Together with Mention of the Geographical Work of the Roosevelt-Rondon South American Expedition in Exploring the “River of Doubt,”” *The American Museum Journal* XV, n. 2 (Feb. 1915): 44-48.

<sup>27</sup> Roosevelt, *Through the Brazilian Wilderness*, 162. For an analysis of the intersection of science, recreation, and sport in the field sciences, see Robert Kohler, *All Creatures: Naturalist, Collectors, and Biodiversity, 1850-1950* (Princeton: Princeton University Press, 2006) and Jeremy Vetter, ed., *Knowing Global Environments: New Historical Perspectives on the Field Sciences* (New Brunswick: Rutgers University Press, 2011), 8-9.

<sup>28</sup> The American Museum of Natural History, *Forty-Ninth Annual Report*, 82.

<sup>29</sup> The literature on scientific collecting is vast. For a useful overview, see Robert Kohler, *All Creatures*.

Unlike the AMNH, many of these institutions still lacked the variety and quantity of zoological specimens that each deemed necessary for proper scientific study. Acting on the leads that Roosevelt and the AMNH established, prominent natural history museums across the country – including the Field Museum of Chicago, the Colorado Museum of Natural History, and the Academy of Natural Sciences in Philadelphia – sent expeditions to the Pantanal.<sup>30</sup>

Although the field scientists associated with these expeditions recorded observations about the distribution and abundance of various animal species, most had little interest in understanding the Pantanal itself. Instead, they were interested in collecting, preserving, and shipping back to their patron institutions as many zoological specimens as they could secure in the most efficient way possible. For example, when Frederic Walter Miller first traveled to the Pantanal in 1925 on behalf of the Colorado Museum of Natural History, he and his companions arrived with the goal of “the collection of habitat group material for exhibition in the new James Memorial addition” to the museum.<sup>31</sup> After four months in the field, the expedition yielded 125 “large mammals” and over 750 bird specimens. The expedition was such a success that the museum sponsored a second trip to the Pantanal in 1928 that lasted another three months and produced an additional 25 mammals and 250 birds. It also gave the naturalists further opportunity to conduct observations that would enable them to construct a

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<sup>30</sup> Subsequent expedition members almost always refer to Roosevelt and the AMNH as a forerunner in their writings. See, for example, Field Museum of Natural History, *Annual Report of the Director to the Board of Trustees for the Year 1926*, Report Series, Publication 243, Vol 7, N. 1 (1927), 68 and Frederic Walter Miller, “Notes on Some Mammals of Southern Matto Grosso, Brazil,” *Journal of Mammalogy* 11:1 (Feb. 1930), 10.

<sup>31</sup> Frederic Walter Miller, “Notes on Some Mammals,” 11.

faithful reproduction of the Pantanal landscape.<sup>32</sup> The Captain Marshall Field Brazilian Expedition of 1926 shared similar goals. Headed by the veteran George Cherrie, the expedition was composed of a varied group of businessmen and other members of high society, including Evelyn Field and Grace Thompson Seton, but it also included two field scientists: Colin Sanborn, a zoologist, and Karl P. Schmidt, a herpetologist. The pair netted over four thousand specimens (including mammals, birds, reptiles, amphibians, fish, and insects) for the Field Museum, most of which originated in the Pantanal and adjacent regions of central Brazil.<sup>33</sup> Grace Thompson Seton was so impressed with the wildlife of the Pantanal that she exclaimed, “Nowhere in greater profusion does nature turn out of her life-factory a larger collection of creatures that run and crawl and climb and fly” and imagined that beyond Corumbá lay “the uncontaminated wilds of the interior.”<sup>34</sup>

Notwithstanding Seton’s exclamations, almost every North American expedition that traveled through the Pantanal took advantage of and relied upon connections to North American commercial interests in the region. Indeed, one of the factors which made the Pantanal so appealing as a collecting site was its established network of ranches and the infrastructure necessary to ship supplies and travel quickly between urban Brazil and the interior. For example, the Colorado Museum of Natural History expedition of 1925 chose

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<sup>32</sup> Colorado Museum of Natural History, *Annual Report of the Colorado Museum of Natural History for the Year 1926* (Denver: CMNH, 1927), 9 and Colorado Museum of Natural History, *Annual Report of the Colorado Museum of Natural History for the Year 1928* (Denver: CMNH, 1929), 11.

<sup>33</sup> Karl P. Schmidt, “Notes on South American Caimans,” *Field Museum of Natural History*, Zoological Series, Publication 252, Vol. 12, n. 17 (November 1928): 205-31 and Field Museum of Natural History, *Annual Report of the Director to the Board of Trustees for the Year 1926*, Report Series, Publication 243, Vol. 7, n. 1 (1927): 12, 67-70.

<sup>34</sup> Grace Thompson Seton was the husband of Ernst Thompson Seton and a well-known travel writer. A few years after returning from Brazil, she published a fictionalized account of the expedition based upon her experiences and those of her companions. Grace Thompson Seton, *Magic Waters: Through the Wilds of Matto Grosso and Beyond* (New York: E.P. Dutton & Co., Inc., 1933), 78.

Descalvados as its base of operations.<sup>35</sup> Although Frederic Miller, the expedition's leader, admitted that the ranch property constituted only "a tiny portion of the mighty state of Matto Grosso [sic]," representative fauna was present in such "striking abundance" that the expedition chose to spend the entire four months on the enormous property, which he described as an "unspoiled wilderness."<sup>36</sup> Not coincidentally, Descalvados also hosted the Field Museum expedition of 1926 and the Mato Grosso Expedition of 1931, which was affiliated with the Penn Museum and the Academy of Natural Sciences. Along with lodging, ranch managers at Descalvados supplied expeditions with the oxcarts, guides, draft animals (horses and cattle), equipment, and supplies necessary to sustain them during extended hunting trips away from ranch headquarters.<sup>37</sup>

The case of foreign scientific expeditions in the Pantanal demonstrates how the production of scientific knowledge was embedded within local, national, and international historical processes related to the expansion of the global market economy during the first half of the twentieth century. Indeed, the relative ease with which the Pantanal could be

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<sup>35</sup> Descalvados came under U.S. ownership in 1912 when it was sold to a company owned by the investor and industrial magnate Percival Farquhar. Thereafter, the ranch played host to a series of North American scientific expeditions, including those sponsored by the American Museum of Natural History (1914 and 1916), the Colorado Museum of Natural History (1925 and 1928), the Field Museum of Natural History (1926), and the Penn Museum of Archaeology and Anthropology (1931). For the history of the Descalvados ranch, see Domingos Sávio da Cunha García, *Território e negócios na "Era dos Impérios": os belgas na fronteira oeste do Brasil* (Brasília: Fundação Alexandre de Gusmão, 2009).

<sup>36</sup> Frederic Walter Miller, "Notes on Some Mammals," 10.

<sup>37</sup> See Colorado Museum of Natural History, *Annual Report* (1926), 10 and Field Museum of Natural History, *Annual Report* (1926), 68. Scientists and institutions from Europe and other parts of South America also depended upon connections to landowners in the Pantanal. In 1894, when Descalvados was under the ownership of the Uruguayan Jaime Civils Buxareo, the Argentine Julio Koslowsky made it his base of operations for extended excursions into the Pantanal, where he visited Bororo and Guató communities and acquired artifacts for the Museu de La Plata. The British-owned *Miranda Estância* also hosted multiple travelers and scientists during the first half of the twentieth century. Also, as discussed above, Claude Lévi-Strauss enjoyed the hospitality of the French-owned *Fazenda Francesa* which provided lodging and transportation that enabled him to conduct field studies at a Caduveo settlement in the southern Pantanal. Claude Lévi-Strauss, *Tristes Tropiques*, 165 and Cezar Benevides e Nanci Leonzo, *Miranda Estância: ingleses, peões, e caçadores no Pantanal mato-grossense* (Rio de Janeiro: Editora Fundação Getúlio Vargas, 1999), 56-57, 85.

reached played a critical part in its appeal. Regular rail service between São Paulo and Porto Esperança and rivers navigable for steamships meant that expedition members could travel between civilization and the wilds of Brazil in relative comfort and had lodging and supplies waiting for them when they arrived. Thus, while access to zoological specimens was never a problem, it is also clear that the convenience of established infrastructure also played a major role in attracting American scientific expeditions to the Pantanal. Their focus on specimen collection instead of ethnology also reflected and responded to the recent expansion of the global economy in the region. Through interactions with local indigenous people, it was clear to foreign scientists that growing demands for labor and opportunities for commerce in the region was steadily changing their lives. During a time when the broader anthropological community was engaged in a quest to understand the basic elements of human cultures, the “acculturated” inhabitants of the broader Pantanal region would no longer do. Instead, field scientists began to turn their attention toward the non-human inhabitants of the region. Using new tools of mass communication to reach an ever-widening audience, field scientists increasingly projected an image of the Pantanal to the outside world as a wilderness teeming with exotic wildlife waiting to be explored and discovered.

### **Images for the Outside World: Science and Adventure in the Brazilian Wilderness**

In January 1894, at the height of the rainy season, Julio Koslowsky arrived in Descalvados. A naturalist and collector for the Museu de la Plata of Buenos Aires, Koslowsky’s initial goal was to collect representative zoological specimens from the Pantanal region on behalf of the institution. He soon discovered, however, that the rainy season presented bad conditions for specimen collection, with fewer animals to be hunted and more difficulty reaching them by land due to extensive flooding. Instead, Koslowsky

decided to observe and trade for artifacts with nearby indigenous populations, including the Bororo and the Guató. During a period of several weeks, Koslowsky lived among the inhabitants of the region and recorded observations about their histories, customs, and way of life.

Koslowsky was especially interested in relationships between indigenous peoples and wild animals in the Pantanal. During the course of his visit, Koslowsky questioned his informants at length about their hunting methods and recorded their responses in detail, describing with admiration, for example, the Guató practice of hunting jaguars with a spear.<sup>38</sup> While attending the annual celebration of *Nossa Senhora do Carmo* at Descalvados, an event which united rural populations of “all colors, nationalities, and races,” Koslowsky had his first encounter with the Bororo people. As part of the festivities, the Bororo performed a strange ritual, which Koslowsky called the “tiger dance.” Men and women formed lines around a central figure adorned with a crown of macaw feathers, straw garments, and necklaces made from the claws and teeth of jaguars. On his back the man wore a jaguar skin robe with the fur facing outward and with geometric designs painted on the inside in red and black. According to Koslowsky, the Bororo people performed this dance each time a member hunted and killed a jaguar. The person responsible for the killing performed the role of a man possessed by the soul of the jaguar, who “jumped and thrashed” with movements meant to imitate the animal. Over the course of the dance, Bororo elders and healers sought to “conjure” or appease the soul of the slain jaguar, a process which lasted well into the night. In the days that followed, Koslowsky continued to interview informants about their hunting

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<sup>38</sup> Julio Koslowsky, “Tres semanas entre los indios Guatós,” 228.

practices, particularly focusing on the jaguar which, he concluded, “exert[ed] the greatest influence on the moral life” of the Bororo.<sup>39</sup>

Thirty years later, in 1925, members of the Colorado Museum of Natural History expedition to the Pantanal also witnessed a jaguar dance performed by the Bororo of Descalvados. Rather than forming part of a broader religious celebration – as was the case for the dance that Koslowsky witnessed – this time the Bororo performed the dance exclusively for the benefit of the visiting scientists. To document their experiences, expedition members took photographs recording, not only the dance itself, but the process of preparing the man who wore the jaguar costume.<sup>40</sup> A similar scene unfolded yet again, in 1931, during the Mato Grosso Expedition. This time, expedition members captured moving images of the jaguar dance, which they hoped to incorporate into a feature film designed for audiences in the United States.<sup>41</sup> The jaguar dance was one of the only things that impressed Vincenzo Petrucci, lead anthropologist for the expedition, about the Bororo of Descalvados. He described the inhabitants of their settlement as “miserably poor” and “listless.” Rather than the thriving indigenous culture he hoped to find, only one person still knew how to make

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<sup>39</sup> For Koslowsky’s detailed descriptions of the Bororo jaguar dance and hunting practices, see Julio Koslowsky, “Algunos datos sobre los indios Bororós,” 375-77, 384-87.

<sup>40</sup> Written documentation produced after the expedition makes no mention of the jaguar dance. However, expedition photographs – available from the online Image Archives of the Denver Museum of Nature and Science – include several that depict the jaguar dance. These images are available at the following address: <http://dmns.lunaimaging.com:8180/luna/servlet/view/search?QuickSearchA=QuickSearchA&q=jaguar+dance&search=Search>, accessed 11-12-14.

<sup>41</sup> Other expeditions also produced motion pictures of their expeditions to Mato Grosso, including the Field Museum expedition and the privately-funded expedition of the world traveler Aloha Wanderwell. See George Cherrie and Marshall Field, *The Captain Marshall Field Brazilian Expedition* (New York: American Museum of Natural History, 1926) and Aloha Baker, *Last of the Bororos, 1930-1931* (Washington, D.C.: Smithsonian Institution, 1931). The first film is available for viewing at the Moving Image Collection at the AMNH Research Library and the second is available at the Human Studies Film Archives at the Smithsonian Institution.



pottery, men hunted with guns instead of the bow and arrow, and only a few of the oldest inhabitants could still speak the Bororo language. He regarded the jaguar dance as one of the last vestiges of “primitive” Bororo life – a “definite ritual” – performed by a ramshackle assortment of people with “mixed blood” who had “practically forgotten their original culture.”<sup>42</sup> Nevertheless, the film produced as a result of the expedition described Mato Grosso as “the last refuge of primitive tribes” in South America whose Bororo inhabitants were “protected from the outside world...by impenetrable swamps.”<sup>43</sup>

Koslowsky’s experiences with the Guató and Bororo in 1894 and those of North American expeditions in the 1920s and 30s illustrate how the integration of the Pantanal into broader economic networks transformed the lives of rural populations over the span of only three decades. Whereas Koslowsky viewed the Bororo as worthy ethnographic subjects and made efforts to learn about their histories and way of life, by the late 1920s North American field scientists could only see them as deracinated and destitute rural dwellers victimized by the steady march of civilization. The case of the jaguar dance also reveals something about the praxis of scientific research in the Pantanal by 1930. In the nineteenth century, naturalists and ethnologists used the jaguar dance to shed light on the ceremonial lives and cosmologies of the Bororo.<sup>44</sup> Rather than a spontaneous act tied to the rhythms of their daily lives, by the

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<sup>42</sup> Vincenzo Petrullo, *Primitive Peoples of Mato Grosso*, 98, 121-23. Vincenzo Petrullo, Mato Grosso Expedition, Diary Book 1, IV, V, 1931, p. 143, Folder 2, Box 3, Petrullo Expeditions – Field Notes, Vincenzo Petrullo Expedition Records (VPER), 1126, Penn Museum Archives, Philadelphia, Pennsylvania.

<sup>43</sup> These quotations come from the 1941 film, *Primitive Peoples of Mato Grosso: The Bororo*, which was re-edited from footage shot during the 1931 expedition. According to film archivist Kate Pourshariati, the script for this film was likely authored by Petrullo and represents his “bigoted” views and misunderstandings of Bororo culture and Mato Grosso in general. An earlier film, entitled *Mato Grosso, the Great Brazilian Wilderness* (1931), contained fewer “ethnocentric misinterpretations” of Bororo culture than the 1941 version. The 1941 film and commentary from the archivist are available at [https://archive.org/details/upenn-f16-4012\\_1941\\_Primitive\\_Peoples\\_of\\_Mato\\_Grosso](https://archive.org/details/upenn-f16-4012_1941_Primitive_Peoples_of_Mato_Grosso), accessed 11-12-14.

<sup>44</sup> For descriptions of the jaguar dance written before Koslowsky, see Rodolfo Waehneltdt, “Exploração da provincia de Mato Grosso,” *RIHGB*, Tomo XXVII, 1ª parte, (1864): 218 and Karl von den Steinen, *Entre os*

1920s the jaguar dance had become a staged demonstration performed for the benefit of visiting scientists. The Descalvados Bororo knew what their visitors wanted to see and they were willing to provide it for a price.<sup>45</sup> The jaguar dance thus became a way for foreign expeditions to experience and document “primitive” Bororo life for patron institutions and, increasingly, the American public. Indeed, by the late 1920s, scientific expeditions in the Pantanal were well-funded, orchestrated affairs designed to meet both scientific and non-scientific objectives and to reach North American audiences hungry for knowledge about the outside world.

This section examines what one field scientist dubbed the “modern exploration racket” in the Pantanal.<sup>46</sup> Contrary to the desires of Roosevelt, by the end of the 1920s the enterprise of scientific exploration in the Pantanal had become less concerned with detached, methodical observation of animal behavior and instead linked to a desire for adventure in the remote spaces of South America.<sup>47</sup> While it was clear to any traveler that the Pantanal was

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*aborígenes do Brasil Central*, translated by Egon Schaden (São Paulo: Departamento de Cultura, 1940), 625, 628-29. Von den Steinen spent time among the eastern Bororo of the São Lourenço river valley in 1887 and 1888. For academic studies of the Bororo and cultural practices surrounding jaguars and other animals, see Jon Christopher Crocker, *Vital Souls: Bororo Cosmology, Natural Symbolism, and Shamanism* (Tucson: University of Arizona Press, 1985) and Nicholas J. Saunders, “Architecture of Symbolism: The Feline Image,” in Nicholas J. Saunders, ed., *Icons of Power: Feline Symbolism in the Americas* (New York: Routledge, 2013), 25. For classic anthropological studies of the Bororo, see David Maybury-Lewis, *Dialectical Societies: The Gê and Bororo of Central Brazil* (Cambridge: Harvard University Press, 1979); Sylvia Caiuby Novaes, *Jogo de espelhos: imagens da representação de si através dos outros* (São Paulo: EdUSP, 1993); and Stephen Michael Fabian, *Space-time of the Bororo of Brazil* (Gainesville: University Press of Florida, 1992).

<sup>45</sup> Visiting expeditions usually traded food and supplies to the Bororo following the dance in exchange for artifacts.

<sup>46</sup> This quotation comes from Vincenzo Petruccio and the report he produced about his findings in Mato Grosso. See Petruccio, *Primitive Peoples of Mato Grosso*, 103.

<sup>47</sup> It would be unfair to claim that all of those involved in scientific expeditions chose to participate solely out of a desire for adventure. To be sure, individuals such as Sanborn, Schmidt, Miller, and Petruccio likely believed that their activities would advance scientific knowledge about the flora, fauna, and indigenous populations of central South America. However, because their work depended mostly upon the largesse of private donors who often expected a return on their investment, the activities of field scientists were often overshadowed by those of other members who sought to reach a broader audience.

not beyond the pale of civilization, its low-population density, its sweeping landscapes, and its animal life made outsiders feel as if they were traversing an untouched wilderness. Its ecology and its economic geography thus made it particularly well-suited for individuals and institutions interested in commodifying the experience of scientific exploration. New technologies such as photography, film, and radio provided powerful and efficient mediums through which those affiliated with the expeditions could project an image of the Pantanal to an audience that would likely never visit the region in person. As the case of the jaguar dance makes clear, humans could only fit into this picture as exotic extensions of the natural world. Thus, while field scientists were instrumental in helping the international scientific community to better understand the Pantanal as an ecological region, their activities blurred the lines between scientific research and adventure and directly contributed to the discursive erasure of local populations.

### ***The “Modern Exploration Racket”***

In April 1926, Evelyn Field returned to the United States from Europe with her husband, Captain Marshall Field, Jr. While “lunching” in New York with Stanley Field, the president of the Field Museum, she learned about a series of scientific expeditions that museum staff was undertaking around the globe, from “Mesopotamia” and Central Asia to Patagonia and Perú.<sup>48</sup> According to Field, “each one sounded more thrilling than the last” and she was suddenly “seized with a mad desire to share in one of these great adventures.” After further discussion, Stanley Field concluded that distance and expense made it impractical for Evelyn to join an expedition already underway. Instead, he recommended a trip to “southern Brazil” to collect bird and mammal specimens that the museum lacked and Marshall Field

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<sup>48</sup> These came to be known as the Captain Marshall Field Expeditions.

agreed to underwrite the cost, contributing \$40,000. Two months later, on June 19, Evelyn Field left New York harbor and was on her way to the Pantanal in the company of her cousin Curzon Taylor, friend Grace Thompson Seton, and a team of field scientists from the Field Museum led by the veteran collector George K. Cherrie.<sup>49</sup>

Their time in Brazil combined both scientific and non-scientific objectives. After arriving in Rio de Janeiro, the expedition made sight-seeing stops – filming along the way – at the Rio zoo and in São Paulo, where they visited the *Instituto Butantan*, the research center famous for developing snake anti-venoms. From there, the expedition traveled by rail across Mato Grosso – making stops to collect along the way – to the Pantanal where they boarded a boat that carried them north to Descalvados. During their time on the ranch, the scientists Karl Schmidt and Colin Sanborn continued to collect specimens and Evelyn Field experienced the thrill of “bagging” her first jaguar. Just over a week after their arrival on July 30, the expedition left Descalvados and began the long journey back to the United States. Other than a short paper that Schmidt published about the distribution and behaviors of South American caimans, no scientific publications resulted from the trip.<sup>50</sup> Other members of the expedition, however, reached a much broader audience. Evelyn Field published her tale of adventure in the *Saturday Evening Post* and Grace Thompson Seton published a fictionalized

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<sup>49</sup> Mrs. Marshall Field, “Breaking into a New Game,” *The Saturday Evening Post*, 5 March 1927, 20 and Field Museum of Natural History, *Annual Report* (1926), 12.

<sup>50</sup> Karl P. Schmidt, “Notes on South American Caimans,” *Field Museum of Natural History*, Zoological Series, Publication 252, Vol. 12, n. 17 (November 1928): 205-31.

account of the expedition in 1933.<sup>51</sup> On behalf of the expedition, George Cherrie also produced a travel film marketed to popular audiences in the United States.<sup>52</sup>

The Field Museum was not the only institution to recognize the popular appeal of scientific exploration in the Pantanal. Five years later, the Mato Grosso Expedition of 1931 took the goal of publicizing and profiting from scientific exploration to new levels. Although the Pennsylvania Museum of Archaeology and Anthropology and the Academy of Natural Sciences (ANS) lent it scientific legitimacy, the expedition was organized largely through the initiative of the Russian ex-military captain and artist Vladimir Perfilieff and Sasha Siemel, a man of recent fame for his highly-publicized exploits as a jaguar hunter in Mato Grosso.<sup>53</sup> The expedition depended largely upon the financial support of Eldridge Johnson, the founder of the Victor Talking Machine Company (later RCA) and a major donor to the Penn Museum and the Academy of Natural Sciences of Philadelphia.<sup>54</sup> It united a motley troop of sport hunters, journalists, scientists, and businessmen and its stated purpose was “to create for posterity as complete a popular and scientific record of the human, animal, and plant life and

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<sup>51</sup> Mrs. Marshall Field, “Breaking into a New Game,” *The Saturday Evening Post*, 5 March 1927, 20, 21, 72, 77, 78, and 80 and Seton, *Magic Waters*.

<sup>52</sup> The only known copy of this film is deposited in the research library of the American Museum of Natural History in New York.

<sup>53</sup> Siemel received wide publicity in the North American and British media when the journalist Julian Duguid published *Green Hell* (1931), an account of an expedition Siemel guided across Mato Grosso and eastern Bolivia. Before arranging the institutional support of the Penn Museum and the ANS, Perfilieff and Siemel courted other scientific institutions including the Carnegie Museum of Pittsburgh and the AMNH. See, for example, E.R. Fenimore Johnson to Charles M.B. Cadawalader [sic], Philadelphia, 24 October 1930, Folder 1 – Mato Grosso, Pre-Expedition, 1930, Box 1 - Correspondence, VPER, Penn Museum. I examine the case of Sasha Siemel in more detail in chapter six.

<sup>54</sup> Other financial supporters included F.L. Spalding, of Boston, John S. Clarke, Jr., of New York, and W.E. Green, of Trenton, New Jersey. Press Release for Matto Grosso Expedition, Inc., undated, Folder 1, Box 1, VPER, Penn Museum.

of the scenic and other features of the territory within a radius of 500 miles of Descalvados in Matto Grosso [sic].<sup>55</sup>

One of the expedition's most ambitious goals – and likely the one that won the support of Eldridge Johnson – was to “make the first sound motion picture record of the life of the animals and natives of Matto Grosso.” Johnson's son, Fenimore, believed that the Mato Grosso Expedition would chart a new path for scientific exploration. While the world already knew much about the flora and fauna of South America, it could only experience them in person as “undersized” and malnourished animals in a zoo or as “stuffed and dusty” specimens in a museum display. According to Johnson, the Mato Grosso expedition would introduce the North American public “to the world in action and sound”:

It will be the first to use the talking movie picture as a tool of the ornithologist. It will be the first to bring back and store for posterity a record of the speech and music of a savage people and of the voices of wild animals actually recorded in the field...The public at large will be able to follow at frequent intervals the progress of the expedition for it has made arrangements to wireless a description of its experiences to the New York Times by means of a short wave transmitter located at the headquarters camp. The Times will publish and syndicate these accounts and the National Broadcasting Company will broadcast them.<sup>56</sup>

While sound recordings were, indeed, a breakthrough for field expeditions, it is clear that the goals of the Expedition were not exclusively scientific. In a memorandum, Fenimore Johnson – one of the Expedition's key supporters – outlined the many objectives of the

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<sup>55</sup> Members included Floyd Crosby, then an up-and-coming film producer; David Newell, a journalist famous for hunting pumas in the Everglades; a production crew, including a photographer and sound recorders; and a number of other sport-hunting businessmen from New York and elsewhere. In total, the expedition numbered almost twenty people. For a comprehensive list of expedition members and more background on the expedition, see the online exhibit developed by Kate Pourshariati, film archivist at the Penn Museum, available at the following address: <http://www.penn.museum/sites/mattogrosso/>. See also Alex Pezzati, “Where the Wild Things Are: The Mato Grosso Expedition, 1931,” *The Codex* (Newsletter of the Pre-Columbian Society), Vol. 10, No. 3 (June 2002): 11-16.

<sup>56</sup> The above quotations are taken from an undated press release, written to publicize the expedition and contained within Box 1, Folder 1, Mato Grosso Pre-Expedition, 1930, VPER, 1126, Penn Museum Archives, Philadelphia.

expedition, which included a “popular style” motion picture based loosely upon the life of Siemel; a collection of short film reels documenting the experiences of the expedition; a series of “purely scientific sound picture reels recording the customs and languages of the aborigines and the habits of the native animals”; an illustrated book chronicling the expedition and geared to popular audiences; an illustrated children’s book about the expedition; the publication of a series of scientific papers on the “ethnology, archaeology, wild life, and diseases” of the Pantanal; newspaper and magazine articles about the expedition; an illustrated lecture series geared towards North American audiences; and collections of zoological, botanical, anthropological, and archaeological specimens and artifacts.<sup>57</sup>

Vincenzo Petrullo, a doctoral student at the University of Pennsylvania, was appointed the director of scientific studies and tasked with studying the “ethnology and anthropology” of the region’s indigenous populations and conducting a survey of potential archaeological sites.<sup>58</sup> From his earliest communications with leaders of the expedition, it is clear that Petrullo was concerned about its scientific credibility. In order to ensure that all work conducted by the expedition was “controlled by scientific competency, honesty, and good faith,” Petrullo proposed a series of conditions that defined his role and his relationship to other members. He requested that any member who wished to carry out scientific research

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<sup>57</sup> The list is included in Johnson, “A Description of the Matto Grosso Expedition,” 2. This document also includes a list and brief biography of all expedition members.

<sup>58</sup> Fenimore Johnson, “A Description of the Matto Grosso Expedition,” 8 January 1931, Box 1, Folder 2, VPER, Penn Museum, Philadelphia.

present him first with a written outline of the project and credentials to prove his competency.<sup>59</sup>

After much delay and a long river journey from Montevideo to Corumbá, the expedition finally reached the Pantanal in March 1931. Instead of accompanying the rest of the expedition on a boat to Descalvados, Petrullo flew to Cuiabá where he hoped to secure the permission necessary to conduct research among the indigenous populations of the Amazon basin.<sup>60</sup> He eventually returned to Descalvados where he busied himself with archaeological excavations while he waited for permission to travel into the Amazon. Despite the optimism of his scientific contacts, Petrullo was not impressed with the research prospects at Descalvados and privately complained that, “instead of living in the jungle where we could have been serenaded at night by the roaring of wild beasts, we are living in brick houses and the serenaders [sic] are cows and bulls that sleep in the front yard, about

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<sup>59</sup> Moreover, Petrullo's conditions stipulated that all approved scientific work would be carried out under his direct supervision. If the expedition was unwilling to meet his requests, Petrullo insisted that he would carry out his scientific work independently of the Expedition or any of its members. Despite his reservations, Petrullo agreed to take part in the expedition and set himself to the task of educating himself about the region. Once in South America, Petrullo actively sought to establish connections with the scientific communities, meeting with leaders at the Museu Nacional in Rio, the Museu Paulista, and the Museo de La Plata in Buenos Aires. Although they reported that the indigenous populations in the vicinity of Descalvados had been “greatly influenced by the whites,” many of Petrullo's informants were optimistic that the region still provided excellent opportunities for anthropological research, especially as it pertained to the agricultural practices and “biological knowledge” of the Guató and the Bororo. For correspondence about his reservations about the scientific legitimacy of the expedition, see Vincenzo Petrullo to Vladimir Perfilieff, Philadelphia, 28 November 1930, Box 1, Folder 1, VPER, Penn Museum, Philadelphia. For Petrullo's efforts to prepare and collect information from ethnologists and anthropologists with expertise in the region, including the German, Fritz Krause, and Swede, Erland Nordenskiöld, see correspondence contained within Box 1, Folder 2, VPER, Penn Museum. For details about Petrullo's efforts to establish contact with scientific institutions in South America, see Vincenzo Petrullo to H.F. Jayne, Montevideo, 29 January 1931, Box 1, Folder 2, VPER, Penn Museum.

<sup>60</sup> In Cuiabá, he received a “hostile” reception from officials of the Indian Protection Service (SPI) who initially refused to issue him a research license.



seventy-five dogs that choose the night to settle their daily quarrels, a host of pheasants, some ill-mannered parrots, and an army of roosters...”<sup>61</sup>

From an anthropological standpoint, Petrullo also found the “peons” of Descalvados unsuitable as subjects of research. Far from isolated and primitive, the Pantanal seemed downright civilized to Petrullo, with modern properties that had the “appearance of model ranches.”<sup>62</sup> In his diary, Petrullo claimed that the expedition had become a laughingstock in Brazil for its decision to establish headquarters in Descalvados. According to Petrullo, the expedition had come “10,000 miles to finally stop 300 miles from where [it] should be” which was “like starting for the Canadian wilds and stopping at Maniwaki, or starting for the central of Africa and stopping at Timbuctoo [sic]!”<sup>63</sup> Although he acted upon the advice of Erland Nordenskiöld and Max Schmidt, a German ethnologist, to excavate funeral urns on the Descalvados property, heavy flooding and rain slowed his progress. In a letter to Horace Jayne, director of the Penn Museum, Petrullo complained about the difficult work conditions in the Pantanal. Although he described the Pantanal as “one of the most colorful spots in the world,” for the “hard-minded scientist who has no time for the beauties of nature,” the Pantanal’s extensive flooding presented only a “sea of annoyances” which limited his mobility and slowed his progress.<sup>64</sup>

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<sup>61</sup> Petrullo believed that the SPI denied him research clearance because of a recent media firestorm surrounding George Dyott and others who had undertaken expeditions to solve the mysterious disappearance of Percy Harrison Fawcett. After extensive correspondence between Petrullo, Cândido Rondon, and U.S. diplomats, Petrullo finally received permission to conduct research with indigenous peoples in the upper Amazon basin. Vincenzo Petrullo to H.F. Jayne, Descalvados, 20 April 1931, Box 1, Folder 2, VPER, Penn Museum. For more details on Petrullo’s difficulty securing permission to conduct research, see Vincenzo Petrullo to H.F. Jayne, Cuiabá, 20 June 1931, Box 1, Folder 3, VPER, Penn Museum.

<sup>62</sup> Vincenzo Petrullo to H.F. Jayne, Cuiabá, 20 June 1931, Box 1, Folder 3, VPER, Penn Museum.

<sup>63</sup> Vincenzo Petrullo, Matto Grosso Expedition, Diary Book 1, IV, V, 1931, p. 65-66, Box 3, Folder 2, VPER, Penn Museum.

<sup>64</sup> Vincenzo Petrullo to H.F. Jayne, Cuiabá, 20 June 1931, Box 1, Folder 3, VPER, Penn Museum.

Although Petrullo eventually managed to charter short airplane trips to meet and trade with several indigenous villages in the Amazon basin, most of these lasted less than a day and yielded mixed results. In his official report published by the Penn Museum, Petrullo offered a disclaimer, stating in the introduction that his findings were “not intended as a critical study of the region” and that it did not “purport to be thorough in its treatment of the subjects” under discussion. Instead, Petrullo offered his report as a mere “survey of the possibilities” for anthropological and archaeological research in Mato Grosso.<sup>65</sup> In private correspondence, however, Petrullo blamed expedition leaders for his limited success in the field, citing inter-group tension, mismanagement of funds, and lack of leadership and organization. In the end, Petrullo’s suspicions about the scientific credibility of the expedition were confirmed and he complained bitterly about its leaders, Perfilieff and Siemel, who “directed nothing more than their own publicity” during their time in Brazil.<sup>66</sup>

***The Pantanal “In Action and Sound”: Technologies of Knowledge Production***

The Mato Grosso Expedition was never intended to showcase Petrullo and his scientific research. Because of its accessibility, its established ranching infrastructure, its low population density, and its high populations of wildlife, the Pantanal made an ideal place for North American expeditions to publicize and capitalize on the experience of scientific exploration and adventure. Most people in North America, including Petrullo, knew nothing about central South America so, expedition leaders reasoned, it would not be difficult to create the illusion of wilderness in the Pantanal, despite the fact that the region had long since been engulfed within the steady march of “civilization” that was overtaking the interior

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<sup>65</sup> Vincenzo Petrullo, *Primitive Peoples of Matto Grosso*, 91.

<sup>66</sup> Vincenzo Petrullo to H.F. Jayne, Cuiabá, 20 June 1931, Box 1, Folder 3, VPER, Penn Museum.

of South America. Siemel, Perfilieff, and the rest of the expedition's members thus sought to use new technologies to package the Pantanal as a South American wilderness filled with wild animals and primitive indigenous tribes.

Although previous foreign expeditions also used photography and moving pictures to document their activities in the Pantanal, the Mato Grosso Expedition was one of the first to make publicity an explicit goal. During their time at Descalvados, expedition members sent regular reports to news outlets in the United States about their trials, tribulations, and adventures.<sup>67</sup> Expedition members also took daily hunting excursions to collect specimens (both alive and dead) and to document the wildlife of the region on film.<sup>68</sup> One of the most ambitious goals of the expedition was to capture Sasha Siemel hunting, spearing, and killing a jaguar on film. This proved to be a challenging task, since hunting jaguars in the Pantanal often required days of tracking and travel through uneven and flooded terrain. Because the difficulty of transporting and preparing equipment made it almost impossible to film a jaguar hunt, the expedition attempted instead to replicate a hunt in a more controlled environment. Members spent weeks building a "corral" out of wood with an elevated platform for film crews that would enable the expedition to film Siemel and his standoff with a captured jaguar. The expedition also produced hundreds of photographs designed to document the flora, fauna, and landscape of the Pantanal and surrounding regions.<sup>69</sup>

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<sup>67</sup> For example, David Newell, a hunter and journalist, sent regular reports to the New York Times. For these publications, see the bibliography listed on the Penn Museum's online exhibit devoted to the expedition at <http://www.penn.museum/sites/mattogrosso/credits/>, accessed 11-17-14. For more details on Newell's involvement in the expedition and his career, see his New York Times obituary. Edwin McDowell, "David Newell Dies; a Noted Explorer," *The New York Times*, 6 October 1986.

<sup>68</sup> Petruccio claimed that many expedition members used filming as a pretext for hunting and was appalled by their "fanatical desire" to kill wild animals. See Vincenzo Petruccio, *Mato Grosso Expedition*, Diary Book 1, IV, V, 1931, p. 119, 127-28, Box 3, Folder 2, VPER, Penn Museum, Philadelphia.

<sup>69</sup> Given the propensity of most of them for hunting, most photographs featured expedition members posing with firearms behind their prey. The E.R. Fenimore Johnson papers at the Academy of Natural Sciences and the

Although they remain mostly anonymous in private correspondence and published reports, foreign expeditions depended heavily upon rural laboring populations to track animals and guide scientists and other members through an unfamiliar landscape. Local guides (*campeiros*) accompanied expedition members on almost every excursion into the field. According to Grace Thompson Seton, because of the varied terrain of the Pantanal – with its mosaic of streams, gallery forests, dense undergrowth, pasture, and muddy wetlands – it was almost impossible to travel overland without a guide. While she and fellow members of the Field Museum expedition were in the Pantanal, they always traveled with one or more Bororo guides whom, because of their “hardy and reliable” nature, ranch managers preferred to “the mixed breeds and... trash that comes sneaking over the Bolivian” border.<sup>70</sup>

Rural workers were particularly valuable to expeditions for their knowledge of the Pantanal ecology and the behavior of animals within it. For example, local guides were usually responsible for trapping the specimens that field scientists desired.<sup>71</sup> Since most expeditions only remained in the region for a short period of time, rural workers also served as critical informants, providing details to visitors about the life cycles, distribution, and habits of mammals in the region.<sup>72</sup> Rural workers were especially important for field

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Vincenzo Petrullo Expedition Records at the Penn Museum both include hundreds of photographic reprints documenting various parts of the expedition.

<sup>70</sup> Due to the fictionalized and popular nature of her account, Seton took considerable artistic license to describe the people and places she encountered in the Pantanal. Seton, *Magic Waters*, 82-83, 86-87, 106.

<sup>71</sup> Trapping methods included the use of baits, snares, and empty barrels sunk into the ground and covered with foliage. See, for example, George K. Cherrie, “Diary of the Theodore Roosevelt Expedition,” 17 and J.A. Allen, “Mammals Collected on the Roosevelt Brazilian Expedition, with Field Notes by Leo E. Miller,” *Bulletin of the American Museum of Natural History*, Vol. 35, Article 30 (1916): 591.

<sup>72</sup> For example, Frederic Walter Miller cites multiple pieces of information about mammal species gleaned from local informants in the Pantanal. Miller, “Notes on Some Mammals of Southern Matto Grosso,” 13, 15-16, and 22.

scientists who wished to track and kill jaguars. In the majority of cases, field scientists could not even attempt a hunt until local guides laid the groundwork, often tracking a jaguar for days before they located fresh spoor.<sup>73</sup> Despite their key roles in helping collecting expeditions to meet their objectives, however, most field scientists did not see local guides as anything more than mere “helpers.”<sup>74</sup> Most were skeptical that local populations were capable of producing any useful scientific information at all. For example, after ranch workers guided him to a heron rookery and provided details about nesting habits, George Cherrie could only concede that local guides were “relatively trustworthy zoological observers.”<sup>75</sup>

Indeed, the goal of all of these activities was to highlight the beauty of the Pantanal, its flora and fauna, and its “natural” landscape, not the people who inhabited it. For example, while expedition photographers recorded images of life in regional villages and towns such as Corumbá, Cuiabá, Cáceres, and Descalvados, with few exceptions these were not the images that made it into published reports.<sup>76</sup> Thus, Petrullo’s report of his research activities during the expedition contains just a single photograph of the commercial port of Corumbá, the southern gateway to the Pantanal. The rest of the illustrations feature images of the

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<sup>73</sup> Out of dozens of accounts, spanning a period of decades, I have never encountered a case where a jaguar hunter attempted a hunt without a local guide. For an example of local guides laying the groundwork for a jaguar hunt, see Miller, *In the Wilds of South America*, 218.

<sup>74</sup> This quotation comes from Vincenzo Petrullo’s official report on his activities during the Mato Grosso Expedition of 1931. Ranch workers at Descalvados guided him to burial sites on the property and helped him to excavate them for archaeological artifacts. Although he worried initially that they were unsuited to this “careful and meticulous” work, he was pleasantly surprised to discover that they made “excellent helpers.” Petrullo, *Primitive Peoples of Matto Grosso*, 106.

<sup>75</sup> Cherrie, “To South America for Bird Study,” 273.

<sup>76</sup> Collections at the Penn Museum and the Academy of Natural Sciences contain fascinating images of Carnival-goers in Cáceres, for example, as well as scenes of trade, daily life, and the built environment in regional centers of commerce.

Pantanal's expansive landscape, aerial shots of the Pantanal during flood stage, and photographs of archaeological excavations at Descalvados. Images of local ranch and merchant populations simply did not square with the image the expedition sought to convey to the North American public about life in the South American "jungle."<sup>77</sup>

Significantly, however, Petrullo's report does contain dozens of photographs of his ethnographic subjects, the Descalvados Bororo and the Bororo of the São Lourenço river valley. While the expedition made little effort to describe, understand, or document the rural ranching populations of the Pantanal or the social and economic geography of the Pantanal between Cáceres in the north and Corumbá in the south, it did devote considerable time and effort to visiting and filming the region's indigenous populations. Through these efforts, expedition members sought to portray the Bororo as an exotic extension of the wild landscape of the Pantanal. For example, in May 1931 Petrullo and several of his companions traveled ten hours by horseback to the Bororo settlement of Laguna, located on Descalvados ranch property between the Paraguay River and the Bolivian border. Although he privately lamented the "acculturation" of the Bororo people who inhabited this village, he and his crew shot a significant amount of film there, most of which featured the jaguar dance (described in the introduction to this section). Evidently, Petrullo found the jaguar dance suitably "primitive" because photographs of the dance feature prominently in his report.<sup>78</sup>

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<sup>77</sup> See, for example, Petrullo, *Primitive Peoples of Matto Grosso*, Plate II, Figures 1 and 2; Plate III, Figure 1; Plate IV, Figure 1; and Plate VIII, Figure 2. North American news outlets repeatedly referred to Mato Grosso and the Pantanal as a "jungle." For more on the meanings of jungles in twentieth century American society, see Kelly Enright, *The Maximum of Wilderness: The Jungle in the American Imagination* (Charlottesville, VA: University of Virginia Press, 2012).

<sup>78</sup> Petrullo, *Primitive Peoples of Matto Grosso*, Plate II, Figures 2, 3, and 4.

In September 1931, the expedition visited a second Bororo village located in the São Lourenço river valley southeast of Cuiabá. This village sat at a significant distance from Descalvados and required an airplane to ship personnel and film equipment. The explicit goal of the visit was to capture moving images of the Bororo for inclusion in the motion picture planned about the expedition. Disappointed after their experiences with the Bororo of Descalvados, expedition leaders believed this visit would provide an opportunity to meet an indigenous population less touched by the “influence of European civilization.”<sup>79</sup> However, like their relatives to the west, the São Lourenço Bororo also had a long history of interaction with people of European descent.<sup>80</sup> As a result, the expedition relied upon a selective representation of villagers, seeking out individuals and practices that best conveyed the image of local indigenous populations that it sought to capture and portray to the North American public. For example, E.R. Fenimore Johnson described the chief of the village as a “big disappointment” because he was “old, ugly, [and] insisted on wearing a sort of bathrobe and always carried his gamecock.” Johnson was much more pleased with the Bororo subchief, a “real gem,” who wore bird feather garments and a crown adorned with colorful macaw feathers.<sup>81</sup>

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<sup>79</sup> For Petrullo’s observations on the Bororo of São Lourenço, see Petrullo, *Primitive Peoples of Matto Grosso*, 124.

<sup>80</sup> I discuss this history briefly in chapter one in the context of Karl von den Steinen’s ethnological study of the São Lourenço Bororo in the 1880s.

<sup>81</sup> These quotations come from captions affixed below photographs included in the E.R. Fenimore Johnson Collection. See Photographs entitled “Chief of Bororo Reservation, circa 1929,” Folder 3 and “Sub-chief of Bororo Reservation, circa 1929,” Folder 4, Box 13 - Series 6: Photo Albums of Expedition to Matto Grosso, E.R. Fenimore Johnson Papers, 1929-1970, ANSP.2010.049, Academy of Natural Sciences, Philadelphia, PA. The date of 1929 listed on these folders is incorrect.



**Figure 1** – Bororo Chief, 1931,  
ANSP Archive Collection 2010-049



**Figure 2** – Bororo Sub-Chief, 1931,  
ANSP Archive Collection 2010-049

The Mato Grosso Expedition did not hide the fact that, by 1931, the Pantanal was becoming increasingly integrated into broader patterns of commercial expansion and state formation in central South America. For example, the film produced as a result of the expedition noted the many ways in which Bororo life and culture had changed in recent years due to the forced resettlement programs and “pacification” efforts carried out by Cândido Rondon and officials of the Indian Protection Service. At the same time, however, through their use of new technologies of mass communication – specifically motion pictures and sound recordings – members of the expedition had choices to make about what picture of the Pantanal they wished to convey to consumers in the United States and elsewhere. Since the premise of the expedition was to explore and make known the uncharted territories of central South America, it made little sense for film crews to highlight how infrastructure, state



formation, colonization, and commercial expansion had transformed the lives of people in the region. Instead, they chose to emphasize the wildlife of the Pantanal, its striking natural landscape, and its indigenous populations, all discovered by intrepid scientific adventurers.

## **Conclusion**

This chapter examined the role of foreign field scientists in the creation of knowledge about the Pantanal during a watershed moment in the region's history. Beginning in the first decade of the twentieth century, the Brazilian government undertook a prolonged effort to integrate Mato Grosso into national networks of economic and political power, including the construction of a telegraph line and a railroad linking the region with the urban centers of Brazil and, later, Bolivia. The increased pace of commercial activity and the rise to prominence of cattle ranching gradually took its toll on the indigenous populations of the regions, drawing them into the broader ranks of the laboring poor. At the same time, the establishment of infrastructure and the early efforts of scientists associated with the Museu Nacional and the American Museum of Natural History contributed to the gradual recognition of the Pantanal as an ideal location to collect specimens for scientific study. In the following decades, multiple expeditions came to the Pantanal in search of zoological specimens, creating collections that would eventually form part of the patrimony of major scientific institutions in North and South America.

While nineteenth century naturalists often traveled through the Pantanal with the explicit purpose of studying the indigenous populations of the broader region, by the twentieth century, most anthropologists deemed them unsuitable for ethnological study. Although their search for the “primitive” was consistent with broader trends in anthropology at the time, the rejection of local indigenous peoples as ethnographic subjects did much to

cement the myth of isolation which, because of the region's geographic location and sparse human population, continued to persist in spite of the unprecedented movement of goods and people through the region. Instead of emphasizing the exotic nature of the region's indigenous populations (as many anthropologists continued to do for the Chaco and the Amazon), by the 1920s and 1930s, field scientists had come to regard the Pantanal as an isolated region rich in the characteristic wildlife of the South American jungle.

Field scientists were one of the first social groups to regard the Pantanal as a unique ecological region instead of an obstacle to economic progress. Although they benefitted from and acted within the same networks of infrastructure that made their activities possible in the first place, the writings they produced and disseminated as a result of their experiences portrayed the Pantanal as a place where intrepid scientist-adventurers traveled to uncover the secrets of the South American wilderness. They portrayed the Pantanal as a landscape of abundance, far removed from the destructive encroachments of modern society in its relentless pursuit of natural resources, economic development, and profit. At the same time, however, it is clear that foreign scientists did not regard the Pantanal as a region in need of protection or conservation. During their months of collecting in the field, foreign expeditions expressed no concern over the thousands of zoological specimens they hunted and killed for the sake of science. In this way, they were little different than the hundreds of rural workers who, by the 1930s, had begun to participate fully in the Pantanal's new boom industry: commercial hunting. The next chapter traces how growing international demand for exotic skins and furs led to the commodification of animals in the Pantanal between 1930 and 1967, when commercial hunting was outlawed in Brazil, planting the seeds for a conflict over the region's wildlife that shaped the rest of its twentieth century history.

## CHAPTER 5

### Landscapes of Abundance: Hunting and the Commodification of Wild Animals in the Pantanal

During a hunting trip in August 1945, Francisco de Barros was traveling south on the Paraguay River between Cáceres and Corumbá on a merchant ship loaded with wild animal skins, including capybara, peccary, marsh deer, and jaguar skins.<sup>1</sup> According to Barros, most of the skins were destined for Corumbá, the commercial hub of the Pantanal, where buyers were waiting to claim them for resale on the international leather and luxury fur markets. On hot days in Corumbá, the sidewalks and streets of the waterfront commercial district were covered with wild animal hides drying in the sun. Barros described how pedestrians walking among them could appreciate up close the large dimensions that wild animal skins could reach in the Pantanal. An avid sportsman, the Pantanal seemed to Barros a “paradise” for hunters.<sup>2</sup>

Indeed, by the mid-1940s hunting had become big business in the Pantanal. In the decade leading up to 1940, the trade in wild animal skins grew so rapidly that Brazil’s new federal Division of Hunting and Fishing chose to establish one of its first “inspection posts” in Corumbá in July 1939.<sup>3</sup> In 1935 alone, merchants in the Pantanal exported over 88,000

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<sup>1</sup> A capybara (*Hydrochoerus hydrochaeris*) is a large (weighing as much as 150 pounds), semi-aquatic rodent common in the Pantanal and throughout tropical and sub-tropical South America.

<sup>2</sup> Francisco de Barros Junior, *Caçando e pescando por todo o Brasil: 2ª Série – Mato Grosso e Goiás* (São Paulo: Companhia Melhoramentos, 1947), 340-41.

<sup>3</sup> “*Postos fiscais.*” Álvaro Coutinho Aguirre, *A caça e a pesca no pantanal de Mato Grosso* (Rio de Janeiro: Ministério da Agricultura, 1945), 42.

capybara skins, over 46,000 peccary skins, and over 10,000 deer skins.<sup>4</sup> Even with a federal regulatory presence, the commercialization of hunting and the commodification of wild animals in the Pantanal expanded rapidly over a period of three decades, from the 1930s until the mid-1960s. By 1964, the state of Mato Grosso had established itself as one of the most important producers in Brazil of wild animal products for export to international consumers.<sup>5</sup>

This chapter examines the commodification of wild animals in the Pantanal and assesses the social and ecological impact that these changes had at the local level. During a period of thirty years the meaning of hunting underwent a series of transformations as various animal species were commodified – and often decommodified – in response to changing consumer preference, political events, and economic demand at both regional and international levels. At the local level, hunters, rural laborers, middlemen, merchants, and exporters responded enthusiastically to these new market stimuli, tracking, hunting, killing, skinning, preserving, trading, buying, and selling wild animals. In the process, they transformed the non-human population of the Pantanal into objects with monetary value and forged a “hunting landscape” that shaped the rest of the region’s twentieth century history.

### **The Forgotten History of Hunting in the Pantanal**

Most economic and social histories of Mato Grosso and the broader Pantanal depict hunting as marginal to the broad socioeconomic narrative of western Brazil and eastern Bolivia. This tendency characterizes the historiography for two main reasons. First, in quantitative terms, the value of wild animal skins and hides produced as a result of hunting

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<sup>4</sup> Aguirre, *A caça e a pesca*, 40.

<sup>5</sup> I use the term “wild animal products” to refer to the complete range of animal-derived products subject to commodification, including bird feathers, wings, bird skins, deer antlers, and wild animal skins, hides, furs, and pelts.

paled in comparison with the region's major cash-producing extractive commodities: rubber, *ipecacuanha*, *yerba mate*, and, especially, cattle.<sup>6</sup> In sheer economic terms, hunting and the export of wild animal products was never as lucrative as cattle ranching.<sup>7</sup> The second reason that histories of the Pantanal minimize the role of hunting in the Mato Grosso economy is because of traditional periodizations that focus on the period between 1870 and 1930.<sup>8</sup> While the period between 1870 and 1930 was important for the economic history of the Pantanal, a clear understanding of the role of hunting and the export of wild animal products requires a longer view. Most historical examinations of the period note in passing that hunting was a sporadic and seasonal activity practiced by cowboys during slow periods on the ranch.<sup>9</sup> Ana Carolina da Silva Borges's study of the rural social history of the Pantanal is one of the few

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<sup>6</sup> Ipecacuanha (*Carapichea ipecacuanha*) is a medicinal plant and root common in the transition zone between the Paraguay and Amazon watersheds. A powerful emetic, it was a profitable export item in Mato Grosso from the late-nineteenth century through the mid-twentieth century because of high European demand.

<sup>7</sup> As discussed in chapter two, historians such as Fernando Tadeu de Miranda Borges and Robert Wilcox have amply demonstrated the growing importance of cattle and derived products to the Mato Grosso economy from 1870 to 1930. See Fernando Tadeu de Miranda Borges, *Do extrativismo à pecuária: algumas observações sobre a história econômica de Mato Grosso, 1870 a 1930* (São Paulo: Scortecci, 2001) and Robert Wilcox, "Cattle Ranching on the Brazilian Frontier: Tradition and Innovation in Mato Grosso, 1870-1940," (PhD Dissertation. New York University, 1992).

<sup>8</sup> See, for example, Borges, *Do extrativismo à pecuária*; Wilcox, "Cattle Ranching on the Brazilian Frontier"; Ana Carolina da Silva Borges, *Nas margens da história: meio ambiente e ruralidade em comunidades "ribeirinhas" do Pantanal Norte, 1870-1930* (Cuiabá, MT: EdUFMT, 2010); Domingos Sávio da Cunha Garcia, *Território e negócios na "Era dos Impérios": os belgas na fronteira oeste do Brasil* (Brasília: Fundação Alexandre de Gusmão, 2009); Vitor Wagner Neto de Oliveira, *Nas águas do Prata: os trabalhadores da rota fluvial entre Buenos Aires e Corumbá (1910-1930)* (Campinas: Unicamp, 2009); João Carlos de Souza, *Sertão cosmopolita: tensões da modernidade de Corumbá (1872-1918)* (São Paulo: USP, 2008); Eudes Fernando Leite, *Marchas na história: comitivas e peões-boiaideiros no Pantanal* (Campo Grande: Editora UFMS, 2007); Cezar Benevides and Nanci Leonzo, *Miranda Estância: ingleses, peões, e caçadores no Pantanal matogrossense* (Rio de Janeiro: Fundação Getúlio Vargas, 1999); Lúcia Salsa Corrêa, *História e fronteira: o sul de Mato Grosso, 1870-1920* (Campo Grande, MS: Editora UCDB, 1999); and Zephyr Frank, "The Brazilian Far West: Frontier Development in Mato Grosso, 1870-1937" (PhD diss., University of Illinois – Urbana-Champaign, 1999).

<sup>9</sup> Robert Wilcox discusses hunting in relation to the impact that cattle ranching had on the fauna of the region. See Wilcox, "Cattle Ranching on the Brazilian Frontier," 523-28. For examples of histories that mention hunting in passing, see Lúcia Salsa Corrêa, *História e fronteira*, 27-28 and Fernando Tadeu de Miranda Borges, *Do extrativismo à pecuária*, 136.

academic works that addresses the significance of hunting in the regional economy.<sup>10</sup> She offers a brief discussion of hunting as part of a broader examination of rural society between 1870 and 1930 and concludes that the commercialization of hunting “reached its apogee” by the 1920s and 1930s.<sup>11</sup> While Borges is correct that wild animal products have been exported from Mato Grosso and the Pantanal since at least the 1870s, the commercialization of hunting and the commodification of wild animal products only grew in importance after 1930, expanding rapidly until 1967 when commercial hunting was outlawed in Brazil.<sup>12</sup>

My analysis of primary sources charts an exponential increase in the export of wild animal hides and skins from the mid-1930s onward. After 1930, hunting went from being a supplementary economic activity to one that riverine merchants relied upon to supply a variety of luxury products with high demand from international markets in Europe and, increasingly, the United States. By 1940, the Brazilian national government had targeted the Pantanal as a key point within the nation to implement and enforce the new federal hunting code. The new code restricted hunting of certain species and required individuals and companies involved in the wild fur trade to register with the federal government.<sup>13</sup> In the next few decades, the Pantanal attracted not only commercial hunters but also sport hunters from across Brazil, the United States, and Europe.

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<sup>10</sup> This published work is based upon research that the author completed for her master’s thesis at the Universidade Federal de Mato Grosso. Evidence for the section on hunting includes scattered statistics recopied from state government publications. See Ana Carolina da Silva Borges, *Nas margens da história*, 188-208.

<sup>11</sup> Borges, *Nas margens da história*, 201.

<sup>12</sup> After 1967, hunting continued unabated, this time with the added label of “poaching.” During the 1970s and 1980s, environmental groups estimate that as many as a million caimans were killed annually for their leather. For a discussion of caiman poaching in the Pantanal, see Vic Banks, *The Pantanal: Brazil’s Forgotten Wilderness* (San Francisco: Sierra Club, 1991), 150-56 and Charles W. Heckman, *The Pantanal of Pocone: Biota and Ecology in the Northern Section of the World’s Largest Pristine Wetland* (Dordrecht, Netherlands: Kluwer Academic Publishers, 1998), 493-96.

<sup>13</sup> On national legislation designed to regulate the trade in wild animal skins, see chapter six.

The commercialization of hunting and the export of wild animal skins in the Pantanal represent more than a forgotten piece of the regional economic history. It was this formative period of socioecological change that helps to explain how, when, and why environmental groups and landholders in the Pantanal took the first steps to protect the region and control poaching in the 1980s.<sup>14</sup> As field scientists and sport hunters visited, collected, and hunted in the Pantanal during the course of the twentieth century, they observed, drew attention to, and participated in the unregulated nature of hunting in a wildlife-rich region of South America. Through published reports, accounts, and word of mouth, the Pantanal gained a national and international reputation as a singular environment, one worthy of and in need of conservation. This chapter, along with chapter six, provides the historical context for these later developments.

### **The Business of Hunting in the Pantanal**

As discussed in previous chapters, hunting was deeply entrenched in the lives of the rural population of the Pantanal. However, while *pantaneiros* shared an understanding of the region and its wildlife, it would be wrong to romanticize their relationship with the non-human population of the region. Export records suggest that small-scale commercial hunting of certain animal species was a common practice in the Pantanal since at least the 1870s.<sup>15</sup> The rural poor formed the crucial first link in a supply chain that stretched from the rivers,

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<sup>14</sup> Commercial hunting was not outlawed in Brazil until 1967. Before then, all commercial hunting was nominally regulated and legal.

<sup>15</sup> The date of 1880 is based upon statistical evidence gathered from archival sources. Anecdotal evidence taken from traveler's accounts during the nineteenth century suggest that small-scale commodification of wild animal products was taking place even earlier. See, for example, Francis de Castelnau, *Expédition Dans Les Parties Centrales De L'Amérique Du Sud, De Rio De Janeiro à Lima: Et De Lima Au Para* (Paris: P. Bertrand, 1850), 401.

streams, pools, and grasslands of the Pantanal to the cosmopolitan markets of Buenos Aires, Rio de Janeiro, London, and Hamburg.

Although the overall trend between the 1880s and the 1950 was one of marked growth in the overall quantity of wild animal skins exported, a closer examination of export records and statistics reveals that the commodification of animals in the Pantanal was not an even process. The commercialization of hunting in the Pantanal was closely related to changes in international demand for wild animal products, including skins, hides, and bird feathers. Although the trade in some species, such as the jaguar, remained relatively constant throughout this period, many others were highly sensitive to global changes in demand, rising and falling with the capricious tides of international fashion. Many animals that held no commercial value in the early twentieth century were hunted and killed by the tens of thousands at midcentury only to diminish in importance after new styles or changing sensibilities reduced their commercial value. An examination of a multi-decade time period treating a variety of species illuminates relationships between the local and global historical processes that influenced the commodification of wild animals in the Pantanal. Although local factors such as flood cycles, changing commercial and communications infrastructure, existing hunting practices, and other environmental factors were important, more often than not, the commodification and decommodification of wild animals in the Pantanal were responses to political and macro-economic developments thousands of miles away.<sup>16</sup>

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<sup>16</sup> My analysis of the interplay between local and global historical processes in the Pantanal draws inspiration from Arturo Escobar who develops the concept of “glocality” in his work, which Lynne Davis (a professor of indigenous studies) defines as “a global place locally situated, where the local-global relations are being mutually constituted through socio-spatial practices of power.” Lynne Davis, *Alliances: Re/envisioning Indigenous-non-Indigenous Relationships* (Toronto: University of Toronto Press, 2010), 221. For Escobar’s theoretical discussion of the relationship between local places and globalization, see Arturo Escobar, *Territories of Difference: Place, Movement, Lives*, Redes (Durham: Duke University Press, 2008), 3-6. In another essay, Escobar defines glocalities as “cultural and spatial configurations that connect places with each other to create



### *The Early Years and the Case of the Jaguar*

In the early stages of the commercialization of hunting, wild animal products were of secondary concern to the merchants plying the waters between Corumbá and Cáceres. At the same time, however, export records from state and federal customs offices in Corumbá, the Pantanal's most important river port, demonstrate that the trade in wild animal products was active in Mato Grosso from an early date.<sup>17</sup> These records demonstrate that hunting and the trade in animal skins were integral parts of the socioeconomic landscape in the Pantanal before the development of international demand for specific animal species.

Shipments of wild animal skins began almost immediately following the Paraguayan War. Export records reveal that merchants declared a modest number of wild animal products in 1878, the earliest documented year available at the state level. During that year, merchants exported a total of 37 jaguar furs. The number of furs increased during the following year to 97, fell to 56 furs in 1880, and rose again to 86 in 1881.<sup>18</sup> These early records make it clear that jaguars were one of the few commercially valuable species in the Pantanal at the time. Besides a few scattered references to other species (tapir, anteater, river otter, and deer), jaguars were the only animals consistently listed by name in the export records. All other species were grouped together under the generic category, "various animals," and charged a nominal export tax, signifying their low market value.<sup>19</sup> The only other animals sometimes

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regional spaces and regional worlds." Arturo Escobar, "Culture Sits in Places: Reflections on Globalism and Subaltern Strategies of Localization," *Political Geography* 20 (2001): 166.

<sup>17</sup> I analyzed available records from the Alfândega de Corumbá, the Coletoria Estadual, and the Mesa de Rendas de Corumbá. The Alfândega functioned as a branch of the federal Ministério da Fazenda em Mato Grosso. The Coletoria Estadual and, later, the Mesa de Rendas collected a variety of state-level taxes on behalf of the state Ministério de Fazenda.

<sup>18</sup> Livros 1, 3, 8, and 12, Coletoria Estadual de Corumbá, 1878 a 1880-1881, Caixa 2, Arquivo Público do Estado de Mato Grosso (hereafter APMT), Cuiabá, Brazil.

<sup>19</sup> "Animais diversos."

identified by name were two deer species common to the Pantanal, the marsh deer (*Blastocerus dichotomus*) and the pampas deer (*Ozotocerus bezoarticus*).<sup>20</sup> Their market value was comparable to those included within the category of “various animals.” For example, on September 3, 1881, the merchant firm *Mattos e Companhia* declared 56 pampas deer hides valued at 44\$800 contos de reis and taxed at 9%. Thus, a single deerskin in 1881 was worth only 800 reis. Over twenty years later, in 1905, the value of a single deerskin was still only 1\$000 contos de reis.<sup>21</sup>

By contrast, the value of a single jaguar skin grew steadily between 1880 and 1900. Between 1880 and 1910, a single jaguar skin was worth between 10\$000 and 20\$000.<sup>22</sup> By the 1890s, this figure increased to between 30\$000 to 60\$000 contos de reis per skin. The value of a jaguar skin depended upon a variety of factors but most important was the presence of an intact and preserved skull. Customs officials in Corumbá dutifully recorded this detail – with or without head – when assessing export taxes for the various “products of the state” that passed through the port in the late nineteenth century.<sup>23</sup> During the span of

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<sup>20</sup> The jaguar was the only animal species that was *always* specified. Since deer and jaguars were the two most common species exported during this early period, it is likely that deer were often included in the category of “various animals.” The common names for these species in Mato Grosso are *cervo* and *veado*, respectively.

<sup>21</sup> See, for example, Guia n. 37, Corumbá, 23 Feb 1905, Rolo 24: Guias de Exportação, Alfândega de Corumbá, 1900-1917, Núcleo de Documentação e Informação Histórica Regional (NDIHR), Universidade Federal de Mato Grosso (UFMT), Cuiabá, Brazil.

<sup>22</sup> By way of comparison, in 1879 a typical rural worker in Mato Grosso earned 60\$000 per month. A bushel of rice cost 15\$000 and an arroba of sugar cost 6\$000 during the same period. By 1919, during the height of the Mato Grosso cattle boom, a typical monthly salary ranged between 60 and 90\$000 depending upon the skill of the laborer and type of work performed. However, in 1922, the cost of living was fairly high. In Campo Grande, an arroba of sugar cost 15 to 23\$000, an arroba of beef jerky cost 17 to 21\$000, a kilogram of fresh beef cost 500 to 700 reis, and a single chicken cost 3\$000. Thus, while wages and the cost of goods fluctuated from year to year, selling wild animal skins had the potential to double the monthly income for rural workers. For statistics on salaries and cost of living, see Wilcox, “Cattle Ranching on the Brazilian Frontier,” 430-433. For a detailed analysis of the cost of living in Mato Grosso between 1870 and 1930, see Frank, “The Brazilian Far West,” 239-255.

<sup>23</sup> “*sem cabeça*” or “*com cabeça*.”

two decades, tax rates also rose from 9% in the 1880s to 15% by the turn of the twentieth century.<sup>24</sup> The increased value for a jaguar skin shipped with head intact presumably reflected the preferences of cosmopolitan consumers in Rio de Janeiro, Buenos Aires, and London who considered such a trophy more impressive than a headless skin. At a more prosaic level, however, because of the difficulty of preserving the head, most hunters likely found it more cost efficient to discard it. Both of these things – rising consumer demand and the time and skill required to preserve heads for shipment – contributed to the growing value of jaguars “*com cabeça*.”<sup>25</sup>

The geography of the trade in jaguar and other wild animal skins flowed through the same networks and infrastructure established as a result of the expansion of cattle ranching and extractive industries in the broader regional economy after 1870. Export records from Corumbá document the trans-regional character of the early trade in wild animal products. Although the volume of trade never reached the same proportions as Mato Grosso, merchants in Bolivia began to export wild animal skins (mostly jaguars) as early as 1883.<sup>26</sup> Like their

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<sup>24</sup> These figures are derived from data compiled from export records taken from the following sources: Arquivo da Delegacia do Ministerio da Fazenda em Mato Grosso, Tesouraria da Fazenda Nacional em Mato Grosso, Alfândega de Corumbá, Guias de Exportação, 1877-1916, Microfilm Rolls 1-3 and 21-24, Núcleo de Documentação e Informação Histórica Regional, Universidade Federal de Mato Grosso; Coletoria de Corumbá, Livros de Estatísticas de Exportação, Caixas 2-16, 1878-1903, Arquivo Público de Mato Grosso; Mesa de Rendas de Corumbá, Livros de Estatísticas de Exportação, Caixas 2-56 1904-1942, Arquivo Publico de Mato Grosso; and S. Cardoso Ayala, Feliciano Simon, and Joaquim Augusto da Costa Marques. *Album graphico do Estado de Matto-Grosso (E.E.U.U. do Brazil)*. (Corumbá, Brazil: s.n, 1914), 120-123.

<sup>25</sup> It is unclear from the documents, what exactly constituted a jaguar “with head.” Contemporary sources suggest that the jaguar was completely skinned, including the skin covering the face and skull. The skull was then cleaned out, stuffed with dry grass, and shipped along with the rest of the fur to be reattached for display later on. For a detailed description of the skill required to skin a jaguar and preserve the skull and fur, see H. Pereira da Cunha, *Viagens e caçadas em Matto Grosso: tres semanas em companhia de Th. Roosevelt* (Rio de Janeiro: Livraria Francisco Alves, 1922) 113-16.

<sup>26</sup> It is important to remember that the Bolivian national state did not establish an active presence (i.e. customs offices, state-sponsored schools, etc...) in the border region until 1875 and the foundation of Puerto Suárez. It is likely that trade existed before this date but did not flow through formal government channels. For the first shipment of wild animal products originating in Bolivia registered in the Alfândega de Corumbá, see Guia de

counterparts across the border in Mato Grosso, merchants operating in Bolivia shipped wild animal products as secondary items alongside more profitable goods, especially rubber and cattle hides. As with most commerce in eastern Bolivia at the time, a handful of merchants and public officials dominated the trade. For example, the Brazilian vice-consul in Santa Ana de Chiquitos made multiple shipments of various products – including cattle hides, sugar, hammocks, and jaguar skins – between 1880 and 1884.<sup>27</sup> Other merchants, such as Manoel Cavassa, conducted trade on both sides of the border, buying up items from ranchers and rural populations for export.<sup>28</sup> The majority of skins exported from the broader Pantanal ended up in Buenos Aires, Argentina, or Montevideo, Uruguay, the terminus of the Rio de la Plata river system and two of the largest ports in South America at the time. Of these shipments, most were likely re-exported to destinations in urban Brazil (Rio de Janeiro, São Paulo), Europe, and the United States.<sup>29</sup>

The case of the jaguar illustrates the changing character of hunting and its gradual commercialization in the nineteenth and early twentieth century Pantanal. Between 1880 and 1889, the number of jaguar skins exported from the broader region varied widely from as low as three skins in 1884 and as many as 86 skins in 1881, reflecting the sporadic and secondary

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Exportação, 7 Agosto 1883, Tesouraria da Fazenda Nacional em Mato Grosso, Alfândega de Corumbá, Capatazia, Guias de Exportação, Rolo 1, NDIHR, UFMT, Cuiabá, Brazil.

<sup>27</sup> Guias de Exportação, n. 34, 36, and 97, Rolo 1, Alfândega de Corumbá, NDIHR, UFMT, Cuiabá, Brazil. Two different consuls occupied the post during this period: José Costa Leite and Aristides Romero.

<sup>28</sup> See Guia de Exportação, n. 123, 19 Julho 1893 and unnumbered guias dated 25 Jan 1894, 9 Maio 1894, and 11 Agosto 1894, all taken from Rolo 2, Alfândega de Corumbá, NDIHR, UFMT, Cuiabá.

<sup>29</sup> Unfortunately, export guides do not consistently specify the final destination of products exported from Mato Grosso and Bolivia. While some noted whether the shipment in question was “in transit” to a destination beyond Buenos Aires or Montevideo, most did not. Because of this inconsistency, it was not possible to generate reliable statistics for export destinations. Completing this commodity chain is a necessary step in understanding the changing relationships between the local production and worldwide consumption of wild animal products from the Pantanal.

importance of hunting at the time. In the last decade of the nineteenth century, the overall number of skins increased to an average of 86 skins per year, but exports remained erratic. Between 1900 and 1910, however, exports grew to an average of 145 skins per year with a high of 259 in 1907. Thereafter, yearly exports of jaguar skins continued to grow, reaching as many as 400 in a single year by the mid-1920s.<sup>30</sup> If wild animal products were an occasional addition to a merchant's export roll in the last decades of the nineteenth century, by the first decade of the twentieth century, a growing number of exporters began to make systematic shipments of wild animal products, especially bird feathers.

### ***The Plume Boom Reaches the Pantanal***

At the turn of the twentieth century, a sprawling network of merchants from around the world was buying up bird feathers in unprecedented quantities from local and regional markets in places like Southeast Asia, the Florida Everglades, Africa, and South America. Although the use of feathers as adornment for hats and other fashion accessories was not new, the combination of rapid industrialization in Europe and the United States, the increased buying power of a broader sector of these societies, and the continued integration of world markets transformed bird feathers into items of mass consumption.<sup>31</sup> Although the center for the global plume trade resided in London, feathers found their way to metropolitan markets across Europe and the United States.<sup>32</sup>

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<sup>30</sup> All of these statistics are taken from data compiled from various sources, cited in footnote 24. It is likely that a variety of factors impacted the number of jaguars exported in a given year, including local political and economic circumstances, international demand, flood and drought cycles, etc.

<sup>31</sup> For a good introduction to the broad historical contours of the global plume boom, see [fashioningfeathers.com](http://fashioningfeathers.com), a collaborative and interdisciplinary online exhibit and public history resource - curated by cultural geographer Merle Patchett - that focuses on the relationship between bird feathers and fashion.

<sup>32</sup> Because of dense indigenous populations of egrets in the Florida Everglades, the United States was a secondary destination for bird feathers in the early stages of the trade. By the turn of the twentieth century, after plume hunters had pushed the species to the brink of extinction, the U.S. Congress acted to pass legislation that prohibited hunting. While this curbed the worst effects of plume hunting in the United States, continued

Due to the diversity and density of its avian population, the production and consumption of bird feathers also figured prominently in Brazil during this period. In her study of the efforts of prominent Brazilian scientists to advance legislation protecting the nation's avifauna, environmental historian Regina Horta Duarte examines the conflict that developed between scientists, lawmakers, and broader Brazilian society that centered on the trade in bird feathers. While the general public viewed bird feathers as objects of consumption and strived to imitate new fashions emanating from Europe, scientists noted with alarm the drastic decline in bird populations around the country and worked with limited success to advocate for laws that would protect the most vulnerable species.<sup>33</sup>

Duarte offers a concise analysis of the broad political and cultural dimensions of the plume trade in Brazil. Her work contextualizes the significance of the plume boom to consumers and scientists in urban Brazil in relation to global trends in wildlife conservation. However, her characterization of the local and economic dimensions of the trade in rural Brazil is less precise. For example, Duarte portrays rural Brazil as uniformly lawless and violent. She seems to take at face value the negative reports of field scientists such as Edgar Roquette-Pinto who described the backwardness of Corumbá, Mato Grosso. Traveling through the region in the 1910s as part of Cândido Rondon's famous telegraph commission,

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demand among U.S. consumers led wholesalers to seek new international markets. For useful discussion of the debate surrounding bird feathers in the United States, see Jennifer Price, "When Women Were Women, Men Were Men, and Birds Were Hats," in *Flight Maps: Adventures with Nature in Modern America* (New York: Basic Books, 1999), 57-109.

<sup>33</sup> Regina Horta Duarte, "Birds and Scientists in Brazil: In Search of Protection, 1894-1938," in Martha Few and Zeb Tortorici, eds., *Centering Animals in Latin American History* (Durham: Duke University Press, 2013). For an earlier version of this article see, "Pássaros e cientistas no Brasil: Em busca de proteção, 1894-1938," *Latin American Research Review* 41: 1 (2006): 3-26.

Roquette-Pinto observed what he described as the antiquated customs of the populations, including the “illegal” sale of heron feathers.<sup>34</sup>

In fact, for a span of at least two decades in Mato Grosso and eastern Bolivia, the bird feather trade was systematic, legal, and brisk. Between 1910 and the mid-1930s, no fewer than ten different merchants were exploiting the Pantanal’s incredible density of water birds, buying up feathers and other bird products (wings and skins) from rural hunters to the tune of 80,000 grams (80 kg) every year on average.<sup>35</sup> Far from illegal, the state government of Mato Grosso searched for ways to profit from this newfound source of wealth, taxing merchants as much as 15% on the value of every gram of feathers by the late 1920s. Writing in the 1910s, Roquette-Pinto estimated that a single kilogram of heron feathers was worth 1:000\$000 contos de reis. At 15% per gram, the revenue-strapped state government was poised to gain a steady and significant sum from taxes levied on exported bird feathers. In fact, recognizing that overhunting was threatening the Pantanal’s rookeries, in 1899 the legislature in Mato Grosso enacted a law designed to protect herons during the breeding season.<sup>36</sup> Rather than a notable example of altruistic environmental legislation, the law was more likely motivated by a desire to regulate the industry in order to preserve a lucrative source of wealth for merchants and the state treasury.

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<sup>34</sup> Duarte, “Birds and Scientists,” 279. It is interesting to note that the passage Duarte cites mentions nothing about the legality of the bird trade. In fact, as we will see, there was nothing “illegal” about the trade in bird feathers in Mato Grosso during this period. For the original passage, see Edgar Roquette-Pinto, “Rondônia: Anthropologia, Ethnographia” in *Archivos do Museu Nacional do Rio de Janeiro* 20 (1917): 53.

<sup>35</sup> This is an average calculated from data compiled from export records from various sources, cited in footnote 24, as well as Mato Grosso, *Mensagem à Assembléa Legislativa, 13 de maio de 1927, por Mario Correa, Presidente do Estado de Mato Grosso* (Cuiaba: Typ. Official, 1927), annex.

<sup>36</sup> Letter from Walter Salinas, Vice-Consul of Bolivia in Corumbá to Ministerio de Relaciones Exteriores de Bolivia, 28 July 1903, Correspondencia recibida del Cuerpo Consular de Bolivia en América, 1903, Tomo II (CONS-2-E-51), Archivo del Ministerio de Relaciones Exteriores de Bolivia(hereafter AMRE-Bo), La Paz Bolivia.

As with the case of jaguars and other wild animals, hunting birds has deep roots in the history of the Pantanal. Bird feathers figured prominently in the material cultures of the diverse indigenous groups who passed through and lived within the Pantanal, especially the Bororo who used them to make elaborate headdresses. The dense and varied bird life in the Pantanal was also impressive to outsiders who traveled through the region and descriptions are ubiquitous in the accounts they left behind. Writing in 1945, Álvaro Coutinho Aguirre – traveling under the sponsorship of the newly-formed Division of Hunting and Fishing of the Ministry of Agriculture – described the bird rookery as one of the Pantanal’s “most superb spectacles” of wildlife:

These birds, together with others who share the same habit, form societies made up of thousands of individuals, building rookeries in trees and shrubs scattered along the margins of lakes and pools. Predators who frequent these rookeries find bountiful repast there, eating young birds that fall from their nests. The cries, quarrels, and the constant flights of birds coming and going from their nests, animate the landscape of this riparian vegetation, sometimes reaching to more than a kilometer.<sup>37</sup>

During the early twentieth century, the heron rookeries also became focal points for hunters seeking a reliable source for high yields of feathers and other bird parts. One rookery near the *fazenda* São Miguel north of Porto Jofre was reportedly home to “tens of thousands” of herons and yielded between 10 and 20 kilograms of feathers per year worth between 25

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<sup>37</sup> “Estas aves formam, juntamente com outras, que tem o mesmo hábito, sociedades componentes de milhares de indivíduos para construir seus ninhos em árvores e arbustos disseminados nas margens das lagoas ou baías. Esses ninhos são frequentados pelos animais carnívoros, que ali fazem farto repasto, comendo as aves jovens que caem dos ninhos. Os gritos, as contendas e os constantes vôos das aves de ida e volta aos ninhos, animam o panorama dessa vegetações ciliares, as vezes numa extensão de mais de quilômetro.” Álvaro Coutinho Aguirre, *A caça e a pesca no pantanal de Mato Grosso* (Rio de Janeiro: Ministério da Agricultura, 1958), 28. Writing more than 45 years later, Vic Banks – a naturalist and journalist from North America – described the same phenomenon in similar awe-filled terms. He claimed, in what was likely an exaggeration, that the rookery he visited north of the Descalvados ranch in the northern Pantanal stretched to “several square kilometers” and was home to a “conservative estimate” of 4,000 adult birds, including herons, jabiru storks, roseate spoonbills, and cormorants. As Banks explains, in the Pantanal the breeding season coincided with the beginning of the dry season when flood waters receded, leaving fish trapped within lagoons and other pools of water that dotted the landscape. These pools of water created a perfect food source, providing fuel for dense populations of water birds and their young, year after year. Banks, *The Pantanal*, 124-26.



and 50 contos de reis to the Companhia Rio Branco which operated the ranch.<sup>38</sup> Besides the occasional adventurer, most of the plume hunters were permanent residents of the Pantanal or adjacent regions, ranch laborers or *ribeirinhos* who understood the nesting habits and geography of the region's avian population.<sup>39</sup> For example, during his survey and construction of the telegraph line between Cuiabá and Corumbá, General Cândido Rondon relied upon a native *Uachiri* guide to lead his expedition to an isolated rookery near the Rio Negro in the southern Pantanal.<sup>40</sup> Indeed, most if not all rookeries in the Pantanal were located in remote spots far from centers of population, including the expansive lakes – Gaíba, Mandioré, and Uberaba – fed by the Paraguay River and its tributaries that formed the watery boundary between Brazil and Bolivia.

Sources provide conflicting accounts of the methods hunters used to obtain plumes of commercial value. According to many observers, including Roquette-Pinto, the majority of hunters shot and killed their prey, plucking the feathers they wanted and leaving the rest of the bird to decay. Roquette-Pinto claimed that a single heron yielded only a few grams of feathers.<sup>41</sup> Passing through the region in the 1920s, another traveler, Antonio Carlos Simoens da Silva corroborated Roquette-Pinto's grim assessment. After shooting and killing a heron,

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<sup>38</sup> Antonio Carlos Simoens da Silva, *Cartas matogrossenses: viagens do Rio de Janeiro a Porto Esperança, Corumbá, Cuyaba e Assumpção* (Rio de Janeiro: Imprensa Nacional, 1927), 31.

<sup>39</sup> There are, of course, exceptions. During his travels through the Pantanal in the early 1930s, Claude Lévi Strauss came across a pair of brothers who hailed from the French island of Corsica and had been active heron hunters during the boom period. Claude Lévi Strauss, *Tristes Tropiques*, Translated by John Weightman and Doreen Weightman (New York: Penguin Books, 2012), 206-07.

<sup>40</sup> The *Uachiri* were one of many small indigenous groups in southern Mato Grosso that were later subsumed within the larger *Terena* ethnicity. Cândido Mariano da Silva Rondon, "Relatório dos trabalhos realizados de 1900-1906," *Comissão de Linhas Telegráficas do Estado de Mato Grosso* (Rio de Janeiro: Imprensa Nacional, 1946), 56.

<sup>41</sup> Roquette-Pinto, *Rondônia*, 53. If this is true, then it is likely that tens of thousands of birds were killed each year to produce the figures listed in statistical reports.

hunters extracted “one or two dozen” feathers before throwing the rest of the body into the swamp as a “meal for the worms.” Like Roquette-Pinto, da Silva decried the indiscriminate and short-sighted killing of the Pantanal’s herons and lamented the lack of protective legislation that would regulate the activities of hunters.<sup>42</sup>

Other accounts suggest that hunters employed a range of methods to obtain feathers, not all of them lethal to the animals in question. Walter Salinas, the Vice-Consul of Bolivia in Corumbá, related that plume hunters either shot and killed their prey or camped out near rookeries during the molting season when feathers literally fell from the sky.<sup>43</sup> According to Lévi Strauss, the French plume hunters he met employed a more novel hunting method in which they placed cones of “white paper on the ground in such a way that when the tall birds, fascinated by the immaculate whiteness similar to their own, thrust their beaks into them, they became hoods which blinded the birds and made them easy to capture. The finest feathers were plucked from living birds during the mating season.”<sup>44</sup> Although the latter two methods eliminated the risk of staining the valuable feathers in blood, they required much more time, patience, and tedium, three elements that many hunters were more than willing to sacrifice for the greater efficiency and profits that firearms could provide. Given such labor intensive alternatives to killing, Roquette-Pinto’s stark assessment of the inherent destructiveness of the plume trade likely holds a kernel of truth. Other contemporary

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<sup>42</sup> The author hoped that recent restrictions on the international plume trade in the “civilized world” would de-incentivize these practices and allow state authorities to develop a more rational system of harvesting heron feathers that would guarantee the survival of the species for the enjoyment of “future generations.” Simoens da Silva, *Cartas matogrossenses*, 68-69.

<sup>43</sup> Letter from Walter Salinas, Vice-Consul of Bolivia in Corumbá to Ministerio de Relaciones Exteriores de Bolivia, 28 July 1903, Correspondencia recibida del Cuerpo Consular de Bolivia en América, 1903, Tomo II (CONS-2-E-51), AMRE-La Paz.

<sup>44</sup> Lévi Strauss, *Tristes Tropiques*, 206-07.

observers shared this concern, including Walter Salinas, who noted that, already in 1903 herons were becoming scarce in the Laguna de Cáceres (between the border towns of Puerto Suárez and Corumbá) as a result of hunters who pursued them “relentlessly.”<sup>45</sup>

For hunters and merchants in the Pantanal, the surging demand for feathers and their subsequent spike in value was well worth the sacrifice of the birds. Although there is little evidence to document the amount of money that plume hunters made as a result of their labor, any profit they gained was likely a welcome supplement to the meager wages they earned through ranch labor or selling (or trading) surplus produce from small plots of land. Contemporary sources do, however, provide a reasonably accurate gauge of the overall value of the plume trade during the first three decades of the twentieth century. Walter Salinas estimated that in 1903 a single kilogram of heron feathers sold for between 1,000 and 2,000 francs on the European market and as many as 5,000 francs if the feathers were “very white, small, light, and brilliant.”<sup>46</sup> In the 1910s, Roquette-Pinto estimated the value of a kilogram of feathers at 1,000 contos de reis. In the 1920s, Simoens da Silva estimated the value per kilogram of heron feathers at between 2,500 and 5,000 contos de reis, depending upon the species of heron and the quality of the feathers.<sup>47</sup> By the late 1930s, however, the international market for heron feathers had plummeted and most, if not all, hunters and merchants abandoned the trade.<sup>48</sup> Lévi Strauss’ two French informants reportedly had

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<sup>45</sup> Walter Salinas to MRE, 28 July 1903, AMRE-Bo, La Paz.

<sup>46</sup> Ibid.

<sup>47</sup> Simoens da Silva, *Cartas matogrossenses*, 68. According to historian Robert Wilcox, heron feathers were worth as much as \$1,000 (USD) per kilogram in 1916. It took 200 dead birds to collect this weight in feathers. For the original citation, see Antônio de Pádua Bertelli, *O paraíso das espécies vivas: pantanal de Mato Grosso* (São Paulo: Cerifa, 1984), 280-81.

<sup>48</sup> On the crash in the local market, see Gabriel Pinto de Arruda, *Um trecho do oeste brasileiro: São Luiz de Cáceres, Mato Grosso* (Rio de Janeiro: Borsoi & Cia, 1938), 41. Pinto de Arruda estimated the value of heron feathers during the peak of the trade at 2,500 contos de reis per kilogram.

cabinets full of worthless egret feathers at their home in Cuiabá, tangible reminders of a bygone era and the unstable meanings that birds carried in the Pantanal.<sup>49</sup>

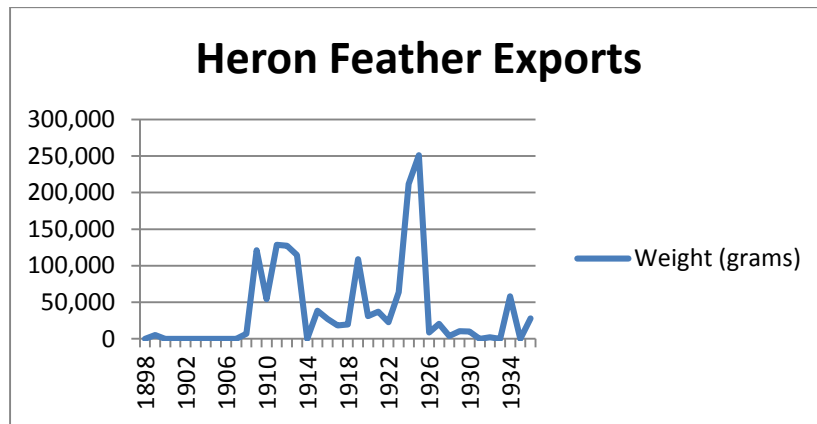
Export records for the state of Mato Grosso provide graphic evidence of the dramatic rise and fall of the plume trade in the Pantanal. Before 1898 there were virtually no legal shipments of heron feathers for export.<sup>50</sup> After this date, the pace of export was moderate and inconsistent until 1908 when the quantity of exported feathers skyrocketed to an average of over 100 kilograms per year between 1909 and 1913. Exports continued at lower levels thereafter before spiking again to over 200 kilograms per year in 1924 and 1925. During this three decade period, regional production and exports were remarkably responsive to global trends and events. During World War I, for example, when international demand for war materiel such as rubber eclipsed luxury products in importance, exports of heron feathers in Mato Grosso dropped drastically, from over 114 kilograms in 1913 to only 38 kilograms in 1915. In 1917 and 1918, the state only shipped an average of about 19 kilograms each year. In 1919, a year after the war ended, that number jumped again to over 100 kilograms. By the end of the 1920s, however, when international restrictions on the plume trade made trafficking in feathers illegal, legal exports became less regular and declined in turn. Between 1926 and 1936, legal annual exports averaged only 1.7 kilograms and some years registered

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<sup>49</sup> Lévi Strauss, *Tristes Tropiques*, 207.

<sup>50</sup> The Alfândega de Corumbá did register a few isolated shipments of bird products earlier than this date. At least two of these were shipments of bird specimens to natural history museums in Europe. See, for example, Guias n. 67 and 68, 10 September 1883, Rolo 1, Alfândega de Corumbá, NDIHR, APMT, Cuiabá, Brazil.

none.<sup>51</sup> After 1936, bird feathers and products disappear from the export records completely.<sup>52</sup>



**Figure 3 - Exports of Heron Feathers, 1898-1936**

While most studies of the trade in bird feathers provide key national and international context at the political and cultural levels, a closer look at the Pantanal brings into relief the economic impact that the trade had at the local level. The plume boom also had an enduring influence on the socioeconomic landscape of the Pantanal. Such a sustained and lucrative trade alerted merchants to the potential of the Pantanal as a dependable source for wild animal products. Due to its reliable networks of transportation and a diverse, highly concentrated wildlife population, hunters and merchants in the Pantanal stood poised to capitalize on the growing international demand for a greater variety of skins and furs. While we know that hunting and commerce in animal skins was part of the social and economic

<sup>51</sup> Hunters and merchants were also active in Bolivia during this same period. Although statistics for Bolivia are less reliable than Mato Grosso, at least 40 kilograms of heron feathers were exported from Bolivia between 1910 and 1922. All of these statistics are taken from data compiled from various sources, cited in footnote six.

<sup>52</sup> The statistics that Alvaro Coutinho Aguirre collected for exports of wild animal products between 1937 and 1942 make no mention of bird feathers. It is also interesting to note that in the 1920s there was apparently a short-lived spike in exports of rhea feathers. In 1928 and 1929, merchants exported 79 kilograms of rhea feathers. In 1957, almost twenty years later, Álvaro Coutinho Aguirre recorded a massive annual export figure of 105 kilograms of rhea feathers, recorded by the Posto Fiscal of the Divisão de Caça e Pesca in Campo Grande. See Aguirre, *A caça e a pesca no pantanal* (1945), 40-43 and Aguirre, *A caça e a pesca no pantanal* (1958), 58.

fabric of the broader Pantanal, from the 1930s onward, the scale and intensity of the trade increased exponentially, carrying with it significant changes for hunters and merchants at the local level.

### ***The Intensification of Hunting in the Pantanal, 1930-1964***

As the international market for bird feathers declined, demand for the furs and skins of other species began to rise. Whereas before, the only skins of commercial value included jaguar furs and deerskins, by the late 1920s merchants in the Pantanal diversified their offerings to supply the skins of tapirs, ocelots, capybaras, collared and white-lipped peccaries, and two species of river otter.<sup>53</sup> By the mid-1940s, when Francisco de Barros witnessed piles of wild animal skins left to dry in the Corumbá sun, the shadow world of hunting in the Pantanal had come fully into the light. Although the federal government established a regulatory presence in the region by the late 1930s, neither it nor the state government took significant steps to curb the activities of hunters and merchants who, by the 1960s, were exporting the second highest volume of wild animal products among Brazilian states.<sup>54</sup> They were too busy profiting from what seemed like an unending supply of wild animals.

As was the case with heron feathers, this stage in the commodification of animals in the Pantanal was closely related to changing international demand in the luxury apparel markets of Europe and United States. This time, consumers demanded fine leather products –

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<sup>53</sup> Local and scientific names for these animal species are as follows, in order listed: anta (*Tapirus terrestris*), jaguatirica (*Leopardus pardalis*), capivara (*Hydrochoerus hydrochaeris*), caititu (*Tayassu tajacu*), queixada (*Tayassu pecari*), ariranha (*Pteronura brasiliensis*), and lontra (*Lontra longicaudis*).

<sup>54</sup> On the quantity of animal skins exported by Mato Grosso in the early 1960s in comparison with other Brazilian states, see Conselho Nacional de Estatística (IBGE), *Anuario Estatístico do Brasil, 1964 XXV* (Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1964): 59-60. In a three year period, Amazonas exported almost 760,000 wild animal products and Mato Grosso exported 680,078.

gloves, handbags, and other luxury garments – made from the skins of wild pigs, capybaras, and river otters, three types of wild animals that happened to be plentiful in the Pantanal.<sup>55</sup>

While London was the main market for herons and bird feathers, New York quickly became the chief importer of peccary and capybara skins by the early 1930s. Most of these skins ended up in one of dozens of tanneries located in the towns of Johnstown and Gloversville, in upstate New York.<sup>56</sup> By the 1940s, factories were treating and preparing skins obtained from markets across Latin America, especially Mexico, Brazil and Argentina.

The government of Mato Grosso was slow to capitalize on this new source of wealth for the state. Export records demonstrate that 1932 was the first year that the treasury established an export tax specifically for capybara skins (see Appendix 6). Two years later in 1934 it established a new category for collared peccaries. By 1936, the state government was charging export taxes for eleven different animal species, not including jaguars and the two commercially valuable deer species.<sup>57</sup> Exports taxed within the category of “animais diversos,” however, show a marked increase much earlier, between 1927 and 1928, from 13,874 kilograms to 62,089 kilograms (see Appendix 5). Thereafter, the quantity of exports increased significantly until 1932 when the state created the category for capybara skins. By 1936, after the state gave each commercially valuable species its own category, the quantity

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<sup>55</sup> For trade journals and other publications with details about the origins and uses of peccary and capybara skins, see *Rohm & Haas Reporter*, Vol. 14-16, pp. 158-60 and John K. Minnoch, *Hides and Skins* (National Hide Association, 1979). For a Brazilian reference see, Francisco de Barros, *Caçando e pescando*, 265-66.

<sup>56</sup> By some estimates, over 90% of the gloves made in the United States between 1890 and 1950 were manufactured in Gloversville or Johnstown. Guy Trebay, “Heir to a Glove Town’s Legacy,” *The New York Times*, 21 October 2009.

<sup>57</sup> This list included two species of peccary, two species of river otter, anacondas, heron feathers, ocelots, black jaguars, pumas, and tapirs.

of non-specified animals decreased in turn to about 3,700 kilograms. Thus, the lag in fiscalization lasted between four and eight years, depending upon the species in question.

One can infer from the export statistics that local merchants and hunters were much more attuned to the new market demand for wild animal products than the state government. Just as the market for heron feathers was beginning to wane, local merchants began to take full advantage of the broader Pantanal's diverse wildlife population, shipping large quantities of rhea feathers in addition to skins and furs of the species mentioned above. The resulting export boom – and its impact on the wildlife populations of the Pantanal – was massive. The most intensely hunted species in the Pantanal during this period was the capybara. Between 1932 and 1939, annual exports of capybara skins averaged over 71,000 kilograms for a total of over 500,000 kilograms during only an eight year period. If we estimate that a single capybara skin weighed about one kilogram, a figure of 500,000 kilograms represents half a million animals of a single species hunted and killed in eight years.<sup>58</sup> Although it seems that World War II temporarily reduced the quantity of legal exports, the scale of the trade increased significantly over the next two decades.<sup>59</sup> Between 1954 and 1957, annual exports averaged over 88,000 capybara skins per year and between 1961 and 1963 the annual figure

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<sup>58</sup> Statistics taken from data compiled from various sources cited in footnote 24, as well as Aguirre, *A caça e a pesca no pantanal* (1945), 40-44; Aguirre, *A caça e a pesca no pantanal* (1958), 56-58, and IBGE, *Anuário Estatístico do Brasil, 1964*, 59-60. On the weight of a single capybara skin see, for example, Guia de Exportação n. 229, 22 August 1942, Mesa de Rendas de Corumbá, 1941-1942, Caixa 56, Livro 8, APMT. According to the declaration, the merchant shipped 4,000 capybara skins weighing 4,322 kilograms, roughly .93 kilograms per skin.

<sup>59</sup> This, according to Aguirre was especially noticeable after 1942, the date when Brazil joined the Allied war effort. Aguirre, *A caça e a pesca no pantanal* (1945), 39, 44.



jumped to over 127,000, establishing Mato Grosso as the single largest exporter of capybara skins in Brazil (see Appendices 7 and 8).<sup>60</sup>

Mato Grosso also became a leading exporter of other wild animal products during this period. Along with capybaras, hunters increasingly began to focus their sights on wild pig and river otter populations.<sup>61</sup> Between 1934 and 1942, Mato Grosso exported an average of 28,500 peccary skins per year. From 1954 to 1957 the average fell to 22,867 skins before climbing again to an average of 46,700 annual exports by the early 1960s.<sup>62</sup> Giant and neotropical river otters were also consistently targeted, with an average of over 1,000 skins exported each year during the same period. During the height of the export boom, seemingly any living creature in the Pantanal was fair game for commodification, including ocelots, anacondas (*Eunectes murinus*), tapirs, anteaters (*Myrmecophaga tridactyla*), and giant armadillos (*Priodontes maximus*). Taken together, the results are staggering. Considering only the incomplete statistics for wild animal products that passed through legal channels, it is likely that the quantity of animal skins exported from the Pantanal between 1930 and 1969 numbered well into the millions.

The state government of Mato Grosso gradually adapted as global demand transformed the wildlife of the Pantanal into commodities with monetary value. Between 1925 and 1928, when wild animals were still combined within the category of “animais diversos,” the state treasury assessed the value of a single skin at 1\$000 contos de reis. Jaguar

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<sup>60</sup> See Aguirre, *A caça e a pesca no pantanal* (1958), pp. 56-58; IBGE, *Anuario Estatístico do Brasil*, 1964, 59-60. The second closest state was Amazonas, which shipped an average of 87,000 capybara skins per year during the same period. The third closest state, Pará, shipped an average of only 15,000 skins per year.

<sup>61</sup> This included two different wild pig species and two different otter species, as mentioned above.

<sup>62</sup> Aguirre, *A caça e a pesca no pantanal* (1958), pp. 56-58; IBGE, *Anuario Estatístico do Brasil*, 1964, 59-60. The states of Maranhão, Amazonas, Acre, and Goiás all exported more peccary skins, on average, between 1961 and 1963.

skins continued to be commercially valuable and were worth as much as 10\$000 per skin.<sup>63</sup> Both were taxed at 10% of the value per skin. Although the value of a single jaguar skin rose to 20\$000 by 1930, it was not until 1931 that the government decided to raise the tax on wild animals to 20%. In 1932, the treasury added a category for capybaras and set the value at 3\$000 per kilogram.<sup>64</sup> By 1934 the state created categories for peccaries and both species of river otters, but peccaries were the only animal assigned a value of more than 1\$000 per kilogram.<sup>65</sup> In 1936 the state government reduced the tax rate to 10% but the fiscal value for each species rose significantly. Capybara skins were now valued at 25 to 32\$000 per kilogram; collared peccary skins were valued at 15 to 17\$000 per kilogram; and white-lipped peccary skins were valued at 14 to 17\$000 per kilogram. Previously regarded with minimal commercial worth, neo-tropical and giant otter skins were now valued from 30 to 50\$000 and 50 to 55\$000 respectively, and ocelot skins were valued at up to 65\$000 per skin.<sup>66</sup> Rising values for animal skins meant rising tax revenue for the state of Mato Grosso. Between 1937 and 1942 the annual value of exported animal skins averaged over 1.4 million contos de reis. Between 1954 and 1957 that figure jumped to an average of over 7.2 million contos de reis per year.<sup>67</sup>

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<sup>63</sup> It is interesting to note that two or three years earlier in 1921 and 1922, a single jaguar skin was valued at 120\$000 with head and 80\$000 without head.

<sup>64</sup> All of the export ledgers for the 1930s list the quantities in kilograms. It is not clear how or why authorities decided to switch the unit of measurement.

<sup>65</sup> They were valued at 3\$000 per kilogram. The value of a capybara skin also rose to 5\$000 per kilogram.

<sup>66</sup> All of these figures are taken from export ledgers housed at the Arquivo Público de Mato Grosso, cited in full in footnote six. For export statistics between 1925 and 1936, see Registros de Exportação contained in Caixas 26-37.

<sup>67</sup> Aguirre, *A caça e a pesca no pantanal* (1945), 40-43 and Aguirre, *A caça e a pesca no pantanal* (1958), 56-58.

## The Socioecological Contours of Commercial Hunting

Although the above discussion elucidates much about the economics of hunting and the monetary gain that merchants and state governments enjoyed, it tells us little about the hunters whose actions transformed the wild animals of the Pantanal from living creatures into hides, furs, and skins with commercial value. Who were the people at the origin of this commodity chain and how did their lives change as a result of the wild animal skin export boom? What impact, if any, did their actions – the hunting and killing of millions of wild animals – have on the ecology of the Pantanal? These, it turns out, are related questions and ones that are difficult to answer in detail. As environmental historian John Soluri points out, historical sources that focus on the lives of hunters are “fragmentary and scattered.”<sup>68</sup> The sources that do exist are almost never written by hunters themselves, but by outside observers commenting on the practices and customs of the local population.<sup>69</sup> Because of the centrality of hunting to the lives of rural populations in the Pantanal, however, enough evidence exists to examine in broad strokes the social and ecological transformations that occurred during the wild animal skin boom between 1930 and 1964, a time when other industries in the region were foundering. Due to the mobility of local populations and their use of multiple strategies of subsistence – discussed in chapter two – it is likely that many rural laborers added commercial hunting to their list of labor possibilities. This section focuses on the

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<sup>68</sup> For more on the methodological challenges and theoretical implications of studying the history of hunting in Latin America, see John Soluri, “On Edge: Fur Seals and Hunters along the Patagonian Littoral, 1860-1930,” in Few and Tortorici, eds., *Centering Animals in Latin American History*, 245-46.

<sup>69</sup> This is a problem common to social histories, amplified in this case by the fact that hunting was an informal part of the economy and was never criminalized during the period of study, making it less likely for such individuals to show up in notarial or judicial archives.

creation of a “hunting landscape” that developed in the broader Pantanal and assesses the impact of the burgeoning trade in animal skins on the lives of the people involved.<sup>70</sup>

### ***Hunting Landscapes: Capivareiros, Mascates, and Merchants***

As discussed in chapter two, river trade formed the lifeline of the Pantanal’s local economy. Regardless of the product, merchants depended upon reliable shipping to get them to market. In turn, otherwise isolated *fazendas* and rural settlements depended upon these same merchants to deliver staple items such as coffee, wheat, textiles, and supplies. The hunting economy of the Pantanal relied upon these same commercial networks as well as the flows of people who labored within them. Almost all of the merchants whose ships plied the waters between the Pantanal and Buenos Aires/Montevideo maintained close business relationships with buyers in England, Germany, and the United States and thus had firsthand knowledge of the changes in fashion trends and market demand in European and North American centers. Like most extractive industries, however, the supply chain for wild animal products that developed in the Pantanal relied upon many more links than those developed between riverine merchants and their European buyers. From the time a given animal was killed and skinned (or plucked, as the case may be) to when it finally reached its consumers thousands of miles away, it changed hands as many as six different times.

Historical sources paint a complicated and often contradictory picture of the role of local populations (variously labeled *caboclos*, *caipiras*, *pantaneiros*, and *ribeirinhos*, among other names) in the emerging hunting economy. Hunting in the Pantanal was not traditionally a full time job. For most individuals, it was an activity performed in combination with a

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<sup>70</sup> For other examples of how environmental historians have used the concept of landscape in their work, see Thomas Rogers, *The Deepest Wounds: A Labor and Environmental History of Sugar in Northeast Brazil* (Chapel Hill: University of North Carolina Press, 2010) and Thomas Andrews, *Killing for Coal: America’s Deadliest Labor War* (Cambridge: Harvard University Press, 2008).

number of other economic or otherwise productive pursuits, including fishing, small-scale agricultural production, ipecac root or yerba mate extraction, or periods of labor on a ranch or sugar mill.<sup>71</sup> Writing in the 1950s, Manoel Cavalcanti Proença defended the rural population of the Pantanal against accusations that it was responsible for the widespread hunting and killing of the region's wildlife: "*pantaneiros* do not hunt indiscriminately. They only kill animals that they need to eat or that they judge harmful to their interests."<sup>72</sup> According to Proença, *pantaneiros* focused their attention on game animals such as *pacas* (*Cuniculidae cuniculus*), various game birds, and deer or animals such as crab-eating foxes (*Cerdocyon thous*) and maned wolves (*Chrysocyon brachyurus*) that were responsible for stealing their chickens.<sup>73</sup> Far from destructive and indiscriminate, the *pantaneiro* was very much a "friend to the animals."<sup>74</sup> Another local writer, Abílio Leite de Barros, echoed the words of Proença, claiming that "*pantaneiros* only hunt sporadically and without a set schedule."<sup>75</sup> Barros attributed the phenomenon of "predatory," or commercial, hunting to the influx of outsiders, especially *nordestinos* (migrants from northeast Brazil) whose poverty drove them to the region.

Although *pantaneiros* continued to practice a combination of economic and subsistence activities after 1930, the evidence also suggests that at least some individuals

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<sup>71</sup> Robert Wilcox, "Cattle Ranching," 524 and Benevides and Leonzo, *Miranda Estância*, 82-95.

<sup>72</sup> "O pantaneiro não caça indistintamente; só abate caça de que precisa para a alimentação ou julga nociva aos seus interesses." Manoel Cavalcanti Proença, *No têrmo de Cuiabá* (Rio de Janeiro: Instituto Nacional do Livro, 1958), 57.

<sup>73</sup> A *paca* is a moderate-sized rodent commonly hunted in the Pantanal and elsewhere as a source of bush meat. The fox and wolf were known locally as the *lobinho* and the *guará*.

<sup>74</sup> Proença, *No têrmo de Cuiabá*, 58-60.

<sup>75</sup> "O pantaneiro não caça, a não ser esporadicamente e sem programação." Abílio Leite de Barros, *Gente pantaneira: crônicas de sua história* (Rio de Janeiro: Lacerda Editores, 1998), 229.

began to devote a greater portion of their time to hunting in response to its increased commercial importance in the broader Pantanal. Whether or not these were long-time inhabitants of the region or “outsiders” from other parts of Brazil and South America is difficult to determine with certainty. We know that ranches in the Pantanal regularly employed workers or professionals to hunt and kill jaguars that were culling calves from their herds. One sport hunter who traveled to the Pantanal in the 1950s talked to a local professional who estimated that he hunted and killed two or three jaguars per week and up to ten ocelots. Many of these hunters were so productive that they “lost count” of the total number of jaguars they killed. During this period, the height of the mid-century export boom, a hunter could earn as much as 500\$000 per jaguar skin.<sup>76</sup>

Other sources demonstrate that the sustained international demand for capybara skins led to the creation of a new category of rural worker, the *capivareiro*, a hunter who specialized in tracking and killing capybaras. Capybara hunting was especially important in the northern Pantanal in the vast, seasonally flooded lands east of the Paraguay River bordered by Cáceres and Descalvados to the north and south and the Bolivian border to the west. As early as 1932, the municipal government of Cáceres created a new tax category for those employed in the profession of capybara hunting. Because capybara hunters worked in isolated, rural areas such as the Lagoa Gaiba and Uberaba near the Bolivian border, the municipality found it almost impossible to regulate and profit from the trade in capybara skins. Only two years later, the municipal council took further action, recognizing the fact that hunters were not paying export taxes owed to the municipality. Noting that the number

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<sup>76</sup> This is a common observation among visitors to the Pantanal. See, for example, Virgílio Corrêa Filho, “Caçadores de onças,” in *Fauna* 15:11 (Nov. 1956): 19; No author, “Entrevista com um ‘sportsman,’” *Caça e Pesca* 22:262 (March 1963): 28; and Ernani Silva Bruno, *As selvas e o pantanal: Goiás e Mato Grosso* (São Paulo: Editora Cultrix, 1959), 21-22.

of hunters and squatters was growing “every day” in the region, it enacted a new decree which established a tax collection station at a small port on the Paraguay River south of Cáceres named Bella Vista.<sup>77</sup> The municipal government hoped that by establishing a formal presence in the region it, too, could profit from the rising commercial value of the capybara.

While it is impossible to prove whether it was *pantaneiros* or others who engaged in this variety of commercial hunting, the evidence suggests that this distinction may not be as simple as some observers suggested. As demonstrated in chapter two, the Pantanal was a world in motion, where people responded both to the rhythms of the Pantanal itself and the multiplicity of economic activities that existed on its fringes to the north, south, and west. Even *ribeirinhos*, those who led a permanent existence in the Pantanal, moved seasonally between low and high ground in response to floods. When Otto Willi Ulrich traveled through the Pantanal in the 1930s, he encountered a “hunting colony” situated on the banks of the Lagoa Uberaba near the Bolivian border called Porto Figueira. He described it as a “peaceful” population of “mestizos” who lived off the land, practicing agriculture and selling capybara skins to passing merchants on the nearby Paraguay River.<sup>78</sup> This description is similar to that given by Proença in his portrayal of the *ribeirinhos* along the Cuiabá River. According to Proença, rural inhabitants often hunted capybaras because they destroyed their crops. It was an added bonus that they could sell their skins or trade them for food or

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<sup>77</sup> For the new tax category and the decree targeting capybara hunters, see Livro n. 2, Decretos e Atos, 1931-1932, p. 8 and Decreto n. 25, p. 35, Livro n. 3, Decretos e Atos, 1931-1935, both in the following location: Caixa 35, Livros de Atas, 1931-1940, Serie Documentos Administrativos, Fundo Prefeitura de Municipio de Cáceres, Arquivo Público Municipal de Cáceres (hereafter APM-Ca).

<sup>78</sup> Otto Willi Ulrich, *Nos sertões do rio Paraguai* (São Paulo: Empresa Editora J. Fagundes, 1936), 95-98.

supplies. Others organized hunting expeditions that lasted between two and four weeks and yielded piles of valuable skins.<sup>79</sup>

Other observers, however, offer more clues about how seasonal patterns of labor changed in response to the growing market for wild animal skins in the Pantanal. Álvaro Coutinho Aguirre, who traveled through the region more than once in the 1940s and 1950s, noted that the number of people employed as capybara hunters was “unknown,” given the fact that hunters worked “clandestinely” in isolated sub-regions of the Pantanal. His description of capybara hunters is similar to that of Ulrich, who notes that they often lived in isolated camps. According to Aguirre, in the 1950s *capivareiros* hunted in groups of two to six men for six months a year, three during the dry season (July-September) and three during the flood stage (December-February). Aguirre estimated that a diligent hunter could kill eighty capybaras per month.<sup>80</sup>

Unfortunately, Aguirre offered no details about what these hunters did during the other six months of the year. Another traveler, Octaviano Cabral, described the capybara trade in terms of a bonanza that attracted “*caboclos cacerenses*” from all over the region, including those who extracted ipecac roots (*poaieiros*) in the forests located in the northern transition zone between the Pantanal and the Amazon as well as those who labored on ranches, sugar mills, and their own agricultural plots.<sup>81</sup> The local chronicler Adolpho Jorge da Cunha provides further evidence for the diverse background of these men, claiming that

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<sup>79</sup> Proença, *No têrmo de Cuiabá*, 13 and 53. It is not clear from his description of “turmas de caçadores” whether he is referring to *ribeirinhos* or “outsiders.”

<sup>80</sup> Aguirre, *A caça e a pesca no pantanal* (1958), 15.

<sup>81</sup> Octaviano Cabral, *Histórias de uma região: Mato Grosso, fronteira Brasil-Bolívia e Rondônia* (Niterói: Editôra Himalaya Ltda., 1963), 367-68.



even townsfolk from Cáceres joined in to try their hand at commercial hunting.<sup>82</sup> If it is true that hunting was not a full time job, as numerous observers assert, it seems reasonable to assume that most *capivareiros* were rural inhabitants of the broader Pantanal who alternated between hunting and some other type of labor on a seasonal basis.

While both Cabral and da Cunha emphasize the diversity of people who “made themselves” *capivareiros* during the skin boom, belying an assumption that anyone could successfully hunt them, other sources imply that the occupation did not come without a learning curve. Success as a capybara hunter required the ability and determination to spend long periods of time (up to three months in some cases) in isolated camps. Because of the difficulty of their job, many writers expressed a certain admiration for the tough conditions under which *capivareiros* worked. As Cabral notes, hunters had to carry with them everything they would need during their time in camp, including a .22 rifle, a lantern, batteries, *guarana*, salt, sugar, flour, a mosquito net, clothes, a machete, needle and thread, a fishing pole and hooks, tobacco and papers, and matches among many other things.<sup>83</sup> Once they reached their destination, hunters set about pitching camp. According to Ulrich, capybara hunters on the shores of Lagoa Uberaba constructed their own temporary houses, made from tree trunks and roofs thatched together with palm branches. Clearly impressed with what he saw, Ulrich claimed that their houses were cleaner and offered better comfort than most houses in big cities.<sup>84</sup> Others led a more mobile existence, especially during the

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<sup>82</sup> Adolpho Jorge da Cunha, *O poaieiro de Mato Grosso* (São Paulo: Editora Resenha Tributaria Ltda., 1981), 15.

<sup>83</sup> Cabral, *Histórias de uma região*, 368.

<sup>84</sup> Ulrich, *Nos sertões do rio Paraguai*, 97-98.

flood stage, living out of a canoe and stringing up hammocks and mosquito nets from tree branches at a new spot each night.

The actual labor of capybara hunting required a thorough knowledge of the behaviors and ecology of the capybara, elements that varied between the flood stage and dry season. Due to the ample supply of water, grass, and other forage, capybaras are ubiquitous in the Pantanal. Because of their amphibious nature, they spend a considerable amount of time near one of the many water sources in the Pantanal, whether a river, a lake, or a lagoon.<sup>85</sup> Multiple contemporary observers commented on the seasonal nature of capybara hunting in the Pantanal. During the dry season, when pools in the flooded countryside dried up, hunters focused on main rivers and tributaries where capybaras congregated in search of a reliable water source. During the rainy season when rising flood waters inundated the countryside, capybaras sought shelter in areas of high ground called *capões* – forest-covered hills – that created temporary islands of refuge for wildlife in the Pantanal. Hunters were then forced to track their prey in canoes into the isolated, watery expanses that stretched for kilometers on either side of a given watercourse.<sup>86</sup>

*Capivareiros* worked almost exclusively at night, when their prey could be found resting near water. Although they hunted nightly for weeks on end, the easiest time to work was under a new moon, when improved visibility aided hunters in locating groups of capybaras. The two most important tools of the trade were a .22 rifle with ammunition and an electric lantern. In a method akin to “spotlighting” (*lanternar*), hunters glided quietly in

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<sup>85</sup> For scientific publications on capybara ecology in the Pantanal, see George B. Schaller and J.M.C. Vasconcelos, “Jaguar Predation on Capybara,” *Z. Säugetierk* 43 (1978): 296-301 and George B. Schaller and Peter G. Crawshaw, “Social Organization in a Capybara Population,” *Säugetierkundliche Mitteilungen* 29 (1981): 3-16.

<sup>86</sup> For descriptions of the seasonal nature of capybara hunting, see Pinto de Arruda, *Um trecho do Oeste*, 113; and Aguirre, *A caça e a pesca no Pantanal* (1958), 15.

canoes to the water's edge where capybaras rested. Each canoe usually carried three men, one with the lantern, one with gun ready, and one pilot to navigate and steer. Once the hunters located a group of capybaras and steered as closely as possible, one man shone the lantern in the direction of the animals, where they usually stood in place, stunned by the bright light. All that was left, according to Proença, was to "pull the trigger and collect another" animal.<sup>87</sup>

While Proença downplayed the skill necessary to track and hunt capybaras, other observers such as Francisco de Barros recognized the critical role that local knowledge played in the success of a capybara hunt. During a hunting trip through the Pantanal, Barros accompanied a local guide on a hunt and described the process in detail. According to Barros, hunting capybaras was not simply a matter of shining a lantern and pulling the trigger. Instead, hunters needed to be "knowledgeable of the local topography," familiar with the intricacies of a landscape in motion and able to locate the beaches (*bahias*) and stream (*corixos*) entrances where capybaras congregated without scaring them away.<sup>88</sup> The hunters he accompanied "whistled," or called, to the capybaras and waited for a response as they slowly made their way up or down the streams. After shining the lantern and firing the first shot, most capybaras fled into the water. Hunters never fired upon capybaras in the water because they risked losing the wounded animal and its valuable skin to the river current or to piranhas attracted to the blood. Because of this, hunters were forced to wait in silence until the capybaras felt safe enough to return to solid ground. Then the calling and spotlighting

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<sup>87</sup> "É só apertar o dedo e colher mais uma." Cavalcanti Proença, *No têrmo de Cuiabá*, 53. For a similar description of this method, see *Ernesto Vinhaes, Féras do pantanal: aventuras de um reporter em Matto Grosso* (Rio de Janeiro: A Noite S/A Editora, 1936), 137.

<sup>88</sup> "Conhecedores da topografia local"

process began anew.<sup>89</sup> Thus, hunters spent entire nights rowing, calling, spotlighting, firing, collecting, and waiting.

Barros and his group of hunters shot eight animals that night and he watched in awe as the hunters skinned and prepared them with “marvelous dexterity,” taking less than four minutes with each. After skinning, the hides were hung up from tree branches to dry.<sup>90</sup> The sources do not provide conclusive evidence for what hunters did with the carcass after skinning. Some observers, such as Ernani Silva Bruno, Gabriel Pinto de Arruda, and Antonio Carlos Simoens da Silva noted the importance of capybaras as an important source of bush meat and oil (rendered from fat).<sup>91</sup> Many others claimed that the majority of the carcasses were wasted, discarded into the river as a mere byproduct to be eaten by piranhas and vultures.<sup>92</sup> Barros Junior and Aguirre, who provide the most detailed accounts of capybara hunting, are conspicuously silent on the issue. Did most hunters throw out the carcass or did they use the meat and oil for food and cooking purposes? Although it is not possible to know with certainty, the answer likely depended upon who was doing the hunting. Since multiple sources document capybara meat and oil as a food source for local populations, many hunters probably took at least some of the meat and fat back to their families. However, given the massive scale of hunting (as many as 100,000 animals killed per year), the sparse population of the Pantanal, and the involvement of commercial hunters from outside the region, we can

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<sup>89</sup> Barros Junior, *Caçando e pescando*, 102. For details on why hunters never fired on capybaras in the water, see Proença, *No termo de Cuiabá*, 54 and Simoens da Silva, *Cartas matogrossenses*, 63.

<sup>90</sup> “Maravilhosa destreza.” Ibid., 104.

<sup>91</sup> Bruno, *As selvas e o pantanal*, 23; Pinto de Arruda, *Um trecho do Oeste*, 112-13; and Simoens da Silva, *Cartas matogrossenses*, 63. There are also occasional references in export ledgers to shipments of capybara oil but it was never exported in similar quantities to those of wild animal skins.

<sup>92</sup> Ulrich, *Nos sertões do rio Paraguay*, 100; Adolpho Jorge da Cunha, *As peripécias de um ex-poaieiro mato-grossense* (São Paulo: Editora Resenha Tributaria, 1982), 53-64.

safely assume that most of the carcasses produced as a result of the capybara skin trade were wasted.

Hunters, however, were not the group who stood to gain the most from the mid-century skin trade. While the entire trade depended upon the hunting expertise and ecological knowledge of the Pantanal's rural inhabitants, most of the money to be made in the wild animal fur trade went to well-connected merchants who bought skins from the Pantanal's network of hunters and then resold them in bulk to buyers on European and North American markets. Although some rural inhabitants of the Pantanal – especially ranch hands and cowboys – sold their skins to ranch owners, the main intermediary between hunters and merchants was the *mascate*.<sup>93</sup> A *mascate* was a small-scale, ambulatory vendor ubiquitous on Brazil's interior river networks, such as the Rio São Francisco in Bahia, the Amazon River system, and the Paraná and Paraguay River systems of central and western Brazil.<sup>94</sup> In the Pantanal, they peddled staple goods and supplies from small boats to isolated rural families and settlements that lined the Paraguay River's many tributaries. In exchange, they bought up whatever skins the locals could offer as well as surplus produce. The *mascate* often functioned as the sole source of contact between rural dwellers and the region's modest commercial centers and, thus, enjoyed a measure of power and control in dictating the terms of trade.

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<sup>93</sup> For an example of ranch hands selling animal skins to ranch owners, see Benevides and Leonzo, *Miranda Estância*, 82-83. Sources also suggest that this may have been the case at the Fazenda Descalvados in the northern Pantanal.

<sup>94</sup> For more on the role of the *mascate* in Brazilian society see Tanus Jorge Bastani, *Memórias de um mascate: o soldado errante da civilização* (Rio de Janeiro: F. Brigueit, 1949) and José Alipio Goulart, *O mascate no Brasil* (Rio de Janeiro: Conquista, 1967). The local term for the *mascate* in the Amazon River system was the *regatão*. See Goulart, *O regatão, mascate fluvial da Amazônia* (Rio de Janeiro: Conquista, 1968).

When Álvaro Coutinho Aguirre traveled through the Pantanal for a second time in the 1950s, he estimated that up to 90% of hunters in the Pantanal dealt directly with a mascate. Many of them received advances of supplies based upon the promise of later delivering a specified number of animal skins. Whenever a mascate arrived at a trading post, all of the “*caboclos*” in the surrounding vicinity gathered to buy the items they needed most. According to Aguirre, the items in the most demand, at least for those in the hunting profession, were *cachaça*, cigarettes, and bullets for their rifles and revolvers. In exchange, the mascate received animal skins, timber, fruit, and even live animals.<sup>95</sup> In these exchanges, currency rarely changed hands. Instead, the mascate and the *ribeirinhos* negotiated and agreed upon the value of each item traded.

Although Aguirre does not offer more detail about the negotiations that took place between mascates and the rural population of the Pantanal, given their relative isolation and lack of alternatives rural hunters often fell victim to exploitation. In his narrative of hunting in the Pantanal, Francisco de Barros Junior sheds more light on these trade relationships, describing the mascate as both a blessing and a curse for the *ribeirinhos*. Although merchants provided much needed supplies, they often charged between ten and twenty times the actual value of their items. This allowed merchants to acquire large numbers of animal skins at extremely low prices. Barros estimated that a typical mascate could buy a single capybara skin from a hunter for three or four mil réis and sell it to a merchant in Corumbá for 35.<sup>96</sup>

A closer look at the activities of a known mascate helps to shed light on the volume of trade that these ambulatory merchants conducted on their trips up and down the Pantanal’s

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<sup>95</sup> Aguirre, *A caça e a pesca no pantanal*, 15.

<sup>96</sup> Barros Junior, *Caçando e pescando*, 104-05.

rivers. José Gattass was a prominent merchant in the Pantanal during the 1930s on the Paraguay River between Corumbá and Cáceres. His company, *Gattass e Companhia Limitada* exported cattle hides, ipecac, and wild animal skins acquired from *fazendeiros* and commercial associates in the northern Pantanal. Although his operation was much more comprehensive than that of a mascate, Gattass made regular stops along the Paraguay River south of Cáceres to buy up animal skins from the rural population, prompting one journalist in Cáceres to dub him the “King of Skins.”<sup>97</sup>

But the Gattass Company did not limit its sphere of influence to the Paraguay River south of Cáceres. Shipping manifests from the municipal port of Cáceres show that Gattass made frequent trips on Paraguay River tributaries north of the town, including the Jauru, Sepotuba, and Cabaçal, to buy up skins from ribeirinhos. Although the manifests do not list the specific locations where Gattass stopped along the way, they do give a good idea of the quantity and types of skins a single mascate could acquire on a single trip. For example, on July 21, 1937, Gattass declared a shipment of animal skins “acquired in the riverine zone upstream” composed of 434 capybara skins, 125 collared peccary skins, 36 white-lipped peccary skins, and 30 deerskins.<sup>98</sup> If Barros’s estimate of the value of a single capybara skin was accurate, then Gattass likely paid between 1302 and 1736 mil réis in one journey *mascateando* and sold them for 15,190, a profit of more than 10,000 mil réis. Although other local firms such as *Castrillon & Irmãos* were also in the skin business, Gattass is the only merchant who declared skins acquired during trips north of Cáceres. By assuming the role of

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<sup>97</sup> Carlos de Araújo, “Na frota mercante Gattass, no curso do Paraguai,” *Fronteira*, Ano 1, n. 8, March 31, 1935, 2.

<sup>98</sup> “Adquiridas na zona ribeirinha de aguas acima.” Manifesto de embarcação, 21 julho 1937, Gattass e Cia. Ltda. Folder labeled “Documentos referentes a navegação, embarcações, 1937-1939. Box is unlabeled. APM-Ca, Cáceres, Brazil.

*mascate*, his company earned a competitive advantage over other merchants who relied on these middlemen to deliver skins to them.

### ***The Nature of Hunting***

We know that hundreds and perhaps thousands of individuals were employed as *capivareiros* or hunters of other animals during the height of the skin trade. What impact, if any, did their activities have within the society of the broader Pantanal? Did any conflicts develop between different stakeholders in the Pantanal as a result of the surging trade in capybara and other wild animal skins? What impact did the slaughter of tens of thousands of wild animals have on the ecology of the Pantanal? The sources are surprisingly silent on this front. As mentioned above, the peripheral and cash-strapped state of Mato Grosso had a vested interest in the success and expansion of the skin trade. Thus, the widespread slaughter of thousands of wild animals sparked no official debate in government circles, no public outcry in regional newspapers, and no efforts to control hunting through legislation at the state level, other than through export taxes. From the point of view of the state government, it was business as usual.

Instead, conflicts over the expansion of the hunting economy played out at the local level on the sprawling ranches of the Pantanal, where ranch-owners, cowboys, hunters, domestic animals, and wild animals coexisted on a daily basis. Although the evidence is scattered and anecdotal, the historical record suggests that many ranch owners initially welcomed the increased pace of hunting in the Pantanal, especially of capybaras. Capybaras were widely recognized as carriers of *mal das cadeiras* and hoof-and-mouth disease (*febre aftosa*), lethal diseases that affected livestock in the Pantanal. Horses were especially susceptible and in years when large numbers of them died from the disease, ranchers often



noticed the same phenomenon among capybaras.<sup>99</sup> When Francisco de Barros Junior traveled through the Pantanal in the 1940s, he talked with ranch owners who affirmed that incidences of cattle disease were decreasing in response to increased hunting and falling populations of capybaras.<sup>100</sup>

In response to this perceived benefit of hunting, at least some regional ranchers entered into agreements or contracts with hunters to rid them of capybaras on their property. Álvaro Coutinho Aguirre noted this practice when he traveled through the Pantanal in the 1950s. According to Aguirre, however, because of the large size of the typical ranch in the Pantanal, most ranch owners could do little to control the activities of hunters on their property and many complained that they were killing cattle for food.<sup>101</sup> Although their efforts were probably futile, as early as the 1930s at least some ranchers posted notices in local newspapers forbidding hunters from trespassing on their land.<sup>102</sup> Almost thirty years later, in 1963, Luiz Estevão Pinheiro de Lacerda, the owner of the vast Descalvados ranch in the northern Pantanal, still entered into occasional contracts with individuals, granting them permission to hunt capybaras and other animals on his property. Lacerda placed time limits

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<sup>99</sup> Wilcox, "Cattle Ranching," 526-27. For scientific studies of capybaras as carriers for livestock diseases, see José Francisco Arias, et. al., "Trypanosoma evansi in capybara from Venezuela," *Journal of Wildlife Diseases* 33:2 (1997): 359-61; Andrew Seidl, et. al., "A financial analysis of treatment strategies for *Trypanosoma evansi* in the Brazilian Pantanal," *Preventative Veterinary Medicine* 33 (1998): 219-34; and V.L.B. Nunes, et. al., "Investigação epidemiológica sobre *Trypanosoma evansi* no Pantanal sul-mato-grossense," *Revista Brasileira de Parasitologia Veterinária* 2:1 (1993): 41-44.

<sup>100</sup> Barros Junior, *Caçando e pescando*, 266.

<sup>101</sup> Aguirre, *A caça e a pesca no pantanal* (1958), 15.

<sup>102</sup> See, for example, the following notices: "Aviso aos caçadores," *A Razão*, 11 February 1933, 4 and "Aos caçadores," *Fronteira*, 14 April 1935, 3.

on hunting activities and forbade hunters from setting up camp on areas of high ground where cattle congregated.<sup>103</sup>

Things must not have gone well because, in 1970, Lacerda wrote a letter to an associate describing the uncontrolled activities of hunters on his and other rural properties as “the drama of the Pantanal.”<sup>104</sup> According to Lacerda, as many as 60 hunters invaded his property during the flood season, a time of year when only a limited number of hills provided dry ground for both humans and animals. Lacerda claimed that hunters disrupted the grazing patterns of his cattle and competed with them for resources. During the wet season, hunters tracked capybaras and set up camp on the hills that dotted the flooded landscape, monopolizing critical spaces of refuge for livestock to the point that many cattle became malnourished and some even died. During the dry season, hunters scared cattle away from lagoons, ponds, and other watering holes that they depended upon for water. When confronted, the well-armed hunters threatened violence.<sup>105</sup> In the clash between cattle ranching, the established economic mainstay of the Pantanal, and the new wave of hunters, many ranchers were struggling to adapt.

Although we do not know the outcome of Lacerda’s conflict or those of other ranchers who bemoaned the invasion of hunters and their lack of regulation in the Pantanal, the evidence makes it clear that capybara hunters were active and extremely productive

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<sup>103</sup> Luiz Estevão Pinheiro de Lacerda to Olímpio Rosa, 3 February 1963, “Correspondências,” Caixa 125, Acervo Descalvados, Núcleo de Documentação de História Escrita e Oral (hereafter NUDHEO), Universidade do Estado de Mato Grosso (hereafter UNEMAT), Cáceres, Brazil. This collection is only in the beginning stages of cataloging. Most of the documents were placed in boxes in the same state in which they were found, roughly chronological but lacking any sort of filing system, categorization, or organization. It is likely that the owners of the Descalvados ranch granted hunting permissions earlier than 1963, but this is the earliest reference I could locate.

<sup>104</sup> “O drama do nosso Pantanal.”

<sup>105</sup> Lacerda to Cel. Jesse, 29 July 1970, “Correspondências,” Caixa 125, Acervo Descalvados, NUDHEO, UNEMAT, Cáceres, Brazil.

during at least a thirty-year period, from the 1930s to the 1960s. As early as the 1936, observers such as Otto Willi Ulrich commented with alarm on the drop in capybara populations in the Pantanal. When Ulrich first traveled through the Pantanal in 1926, he witnessed capybaras in abundance on the margins of the Paraguay. According to Ulrich, the animals did not flee upon sight of humans but, instead, looked on with “that curiosity characteristic of an edenic life.”<sup>106</sup> By the 1930s, however, hunters had persecuted capybaras in the Pantanal so relentlessly that it was becoming rare to see them along the major rivers and tributaries. Consistent with contemporary export statistics, Ulrich estimated that “hundreds of thousands” of animals were being killed every year by hunters.<sup>107</sup>

In an interesting commentary on the changing ecology of the capybara in response to hunting pressures, Ulrich noted that capybaras were beginning to desert the margins of the Paraguay River, forcing hunters to track them into increasingly isolated locales. Writing in the 1950s, Manoel Cavalcanti Proença noted the same phenomenon along the Cuiabá River, a tributary of the Paraguay River to the east. There capybara populations were also disappearing and Proença hypothesized that the animals were responding to hunting pressure by moving further into the interior and settling near “less-populated” pools and smaller tributaries.<sup>108</sup> Both predicted that, if the current pace of hunting continued, capybaras would

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<sup>106</sup> “Com aquela curiosidade característica da vida paradisíaca.” Ulrich, *Nos sertões do Rio Paraguay*, 99-100. Writing in 1941, Alexander Daveron also noted the drastic drop in capybara populations in the Pantanal. See Alexander Daveron, “Resumé of a Report by Mr. Alexander Daveron,” 5 August 1941, CFE.T.2.085, Acervo do Conselho de Fiscalização das Expedições Artísticas e Científicas no Brasil (hereafter CFE), Arquivo de História da Ciência, Museu de Astronomia e Ciências Afins (hereafter MAST), Rio de Janeiro, Brazil.

<sup>107</sup> Ulrich, *Nos sertões do Rio Paraguay*, 99.

<sup>108</sup> Proença, *No têrmo de Cuiabá*, 53. Historian John Soluri notes a similar phenomenon among fur seals in reaction to intense hunting pressure on the Patagonian littoral and suggests that these relocations reflect “a certain agency” on the part of animals, making it more difficult for hunters to track and kill them. See John Soluri, “On Edge,” 254-55.

become extinct in the Pantanal. Proença believed that the solution lay in prohibiting commerce (buying, selling, and export) in wild animal skins during the off-season. Eliminate the market and there would be no economic incentive for hunters to continue the slaughter.<sup>109</sup> This would provide the necessary time for capybara populations to recover. These descriptions make it clear that, by the 1960s, sustained hunting pressure was beginning to deplete the non-human population of the Pantanal and change the ecology of wild animals and, thus, the hunting landscape.<sup>110</sup>

## Conclusion

This chapter demonstrates that the integration of the Pantanal into the world economy after 1870 facilitated the commercialization of hunting, leading to the commodification of wild animal products and an export boom that reached levels unparalleled in the rest of Brazil and rivaled only by the Amazon.<sup>111</sup> Judging from the sheer number of wild animal products exported from the region from the 1930s to the 1960s, it is likely that the broader Pantanal was one of the most important (if not the most important) South American suppliers by volume for the global skin and fur trade in the twentieth century.<sup>112</sup> At the local level, the

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<sup>109</sup> Proença, *No têrmo de Cuiabá*, 60. In the 1950s when Proença wrote, federal hunting regulations were in place that restricted hunting to certain periods of the year. However, contemporary sources make it clear that most hunters either disregarded or were unaware of federal hunting regulations. At around the same time, Walter Buttel, President of the Club dos Caçadores do Estado de Guanabara, advocated for a blanket federal ban on capybara hunting in Brazil. See Walter Buttel, “Capivara,” in *Caça e Pesca* 21:249 (February 1962), 16-18, 24.

<sup>110</sup> In the 1970s and 1980s, the wild animal skin trade took on new dimensions, as new global markets and consumer demand increasingly placed caimans within the crosshairs. This phase of economic and environmental history in the Pantanal will be the subject of future research.

<sup>111</sup> For a recent publication on the Amazonian fur trade during the twentieth century, see André Pinassi Antunes, Glen Harvey Shepard Junior, and Eduardo Martins Venticinque, “O comércio internacional de peles silvestres na Amazônia brasileira no século XX,” *Boletim do Museu Paraense Emílio Goeldi* (Belém) 9:2 (Maio-Aug. 2014), 487-518.

<sup>112</sup> The history of the skin and fur trade in the twentieth century is still in its infancy and little understood outside of the traditional centers of Canada and Russia. By the twentieth century, the industry in these places

commercialization and commodification of wild animals had a definite impact on the landscape of the Pantanal, transforming labor patterns, altering trade relationships, and giving rise to social and ecological conflicts that would come to define the region in the second half of the twentieth century.

This chapter also leaves many questions unanswered. For example, while export statistics document the rapid commercialization of hunting between 1930 and 1969, other sources tell us much less about the social, political, and ecological consequences that the commodification of animals had in the Pantanal. How, for example, did local populations (both hunters and merchants) receive and respond to the efforts of the national government to regulate hunting and the commerce in wild animal skins? What was at stake for the various groups of people involved in commercial hunting in the Pantanal? What role did ranchers – the regional powerbrokers and landholders – play in this process? Clearly much work remains to be done to understand not only the significance of commercialized hunting to the history of the Pantanal, but also the broader picture of a poorly understood period in the history of central South America.

At the very least, however, the story of hunting and its commercialization during the twentieth century forces us to rethink some commonly held assumptions about the history of the Pantanal. First, the plume boom of the early twentieth century was not an aberration but the first of multiple export booms and busts centering on wild animals that have punctuated the history of the Pantanal throughout the twentieth century. While the slaughter of caimans in the 1970s was unprecedented in intensity and scale, this chapter demonstrates that commercial hunting was not foreign to the Pantanal before the activities of poachers began to

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had moved away from furs acquired from hunted wild animals and towards “farms” which relied upon animals raised in captivity.

attract the attention of national governments and the international environmental movement. In a second and related way, this chapter demonstrates the centrality of hunting to the socioeconomic fabric of the Pantanal. Commercial hunting fit well within a regional labor regime defined by seasonal work and mobility. For most of the twentieth century, commercial hunting was legal and local society regarded it as an acceptable occupation. In turn, it forces those with power – regional and national governments, the scientific community, and nongovernmental organizations – to take seriously the claims that the rural population has made and continues to make on the wildlife and resources of the Pantanal. Rather than simply labeling these activities as “poaching,” any conservation efforts must account for the overlapping and historically entrenched meanings that hunting has carried for local societies for over a century. Documenting the period from 1930 to 1967 brings into relief the longer history of hunting in the Pantanal and the cyclical nature of its commercialization during the twentieth century.

It was during this same period when scientists, sport hunters, international travelers, bureaucrats, and regulating agencies first began to transform the image of the Pantanal as an isolated, non-productive backwater from a weakness to a strength. Their roles in circulating knowledge about the region were instrumental in changing attitudes about hunting and wild animals, both in the Pantanal and in other rural regions of Brazil and South America. In the next chapter I will examine the experiences of sport hunters in more depth in an effort to uncover the origins of conservation and ecotourism in the Pantanal during the twentieth century. I will argue that a focus on changing relationships between humans and animals and the conflicting meanings of hunting is the key to understanding the gradual development of a conservation ethic in the Pantanal by the 1970s and 1980s.

## CHAPTER 6

### Consuming the Pantanal: Sport Hunting and the Origins of Conservation in the Pantanal

In 1929, Alexander “Sasha” Siemel guided his first expedition through the Pantanal and across eastern Bolivia. The publication of *Green Hell* in 1931 by Julian Duguid, the leader of the expedition, propelled Siemel into the international spotlight as the first “white man” ever to hunt and kill a jaguar armed only with a spear. One year later, Duguid published *Tiger-Man*, a biography of Siemel and his eventful life in the wild spaces of South America, which further cemented his fame.<sup>1</sup> Over the next four decades, until his death in 1970, Siemel made a living as a professional hunter and guide, leading sport hunters from around the world in pursuit of South America’s prize trophy: the jaguar (*Panthera onca*). During the offseason, he underwent extensive lecture tours across the United States, Great Britain, and Brazil, authored a book, penned dozens of newspaper and magazine articles about his exploits, and even acted in a television mini-series with the legendary Frank Buck. Siemel undertook all of these activities with the goal of publicizing Brazil – specifically the Pantanal – to international audiences, but also to cultivate his own persona, and, above all, to attract hunting clients. His efforts paid off. During his career, Siemel established himself as an expert on the Pantanal and boasted an illustrious clientele, which included members of the Roosevelt family.

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<sup>1</sup> Julian Duguid, *Green Hell: Adventures in the Mysterious Jungles of Eastern Bolivia* (New York: Century Co., 1931) and Julian Duguid, *Tiger-Man: An Odyssey of Freedom* (New York: Century Co., 1932). Both were published in multiple languages and, thus, reached a broad audience.

Despite his high visibility in the media and the sensational nature of his fame, Siemel's efforts to promote sport hunting in the Pantanal represent only the most prominent example of a broader trend that was already taking place in Brazilian society. In the midst of rapid industrialization and urbanization in southeast Brazil, by the 1940s many urban Brazilians sought new ways to reconnect with nature. Increasing numbers of people began to meet this need by going on hunting, fishing, and camping expeditions throughout rural Brazil. Although hunters' motivations for undertaking these expeditions were by no means uniform, it is clear that accounts of their experiences – in the form of hunting and fishing magazines, newspaper articles, and books – reached a broad audience in almost every Brazilian state. This growing interest in sport hunting coincided with a series of federal laws, enacted under the regime of Getúlio Vargas, which were designed to redefine the relationship between Brazilian citizens and the natural environment, a relationship in which humans cared for and protected the plants and animals that made up the “national patrimony.”<sup>2</sup>

Most, if not all, sport hunters supported Brazil's National Hunting Code – first enacted in 1939 and amended in 1943 – and thus became key interlocutors between the Brazilian state and the rest of Brazilian society. While many sport hunters sought to educate the Brazilian public about the flora, fauna, and people of places like the Pantanal, many others sought to profit from their knowledge of a region that quickly gained an international reputation as the best place to hunt in Brazil. Although Siemel was the most well-known and successful hunting guide, by the 1960s at least five different individuals or companies offered

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<sup>2</sup> For a cogent synthesis and analysis of the history of Brazilian environmental legislation, see José Drummond and Ana Flávia Barros-Platau, “Brazilian Environmental Laws and Policies, 1934-2002: A Critical Overview,” *Law & Policy* 28:1 (January 2006): 83-108.



guided hunting tours – or “safaris” – that catered to wealthy hunting enthusiasts from urban Brazil and South America, the United States, and beyond.<sup>3</sup>

This chapter examines the cases of Siemel and other sportsmen in the Pantanal in order to provide a new interpretation of the origins of conservation in Brazil. While most historical scholarship links the birth of the conservation movement in Brazil to a cohort of high-profile scientists and the nationalist agenda of Getúlio Vargas and the Estado Novo, it is not clear how and why (and even if) such movements gained popular support. Shifting the focus from scientists to sportsmen helps to illuminate how one highly-visible sector of Brazilian society understood and acted upon the efforts of the Brazilian state to reform its citizens’ relationship with wildlife.

The case of sport hunting in the Pantanal reveals a persistent tension between the logic of economic development and the logic of nature protection and conservation. During the early years, sport hunters acted squarely within the first logic. At the same time that they bemoaned the alienation from nature that characterized life in the city, their escape from the urban jungle depended upon their connections with wealthy *fazendeiros* (ranchers) in the Pantanal, who supplied them with lodging, supplies, hunting guides, and dogs. In their writings, they inserted themselves into the familiar Brazilian narrative of frontier exploration and conquest typified by the *bandeirante*. They imagined themselves as explorers of unknown lands who, by hunting and killing wild animals, were able to subdue and tame the Brazilian wilderness.<sup>4</sup>

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<sup>3</sup> One of Siemel’s potential clients was Abdul Reza Pahlavi, member of the royal family of Iran. See letter from Elgin Gates to Sasha Siemel, June 15, 1961, Box 3, Untitled Folder, Sasha Siemel Collection, M111, Special Collections Department of Canada Library, Bryn Mawr College.

<sup>4</sup> *Bandeirantes* were Portuguese and Brazilian-born colonists – most often associated with the present-day state of São Paulo – who, beginning in the eighteenth century, undertook expeditions into central Brazil and the Amazon in search of valuable minerals and indigenous slave labor. For more background, see Sérgio Buarque

Over time, however, their writings began to reflect a growing belief in the need to protect and regulate the wild spaces of Brazil against the vagaries of capitalist development. In the eyes of many sportsmen, this included the seemingly wanton and indiscriminate slaughter that commercial hunters and even sportsmen continued to carry out against wildlife in the Pantanal. By the 1950s and 1960s, many sport hunters began to focus less on entertaining readers with tales of adventure and more on educating them about the proper relationships between humans, plants, and animals. These popular naturalists wrote for a broad audience, many of whom would never set foot in the Amazon or the Pantanal.<sup>5</sup> Siemel extended these efforts beyond the borders of Brazil and into the lecture halls of American scientific institutions, high schools, fraternal organizations, and community centers. While many writers argued that the Pantanal was a place to be respected and appreciated for its own intrinsic value, these publications and the growth of the sport hunting tourist industry established new ways for Brazilians (and others) to consume both wild animals and wild places. More than ever, the Pantanal became a locus of consumption, not just for its animals, land, or resources, but for the place itself – the experience of the Pantanal as a symbol of wild Brazil.<sup>6</sup>

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de Holanda, *Caminhos e fronteiras* (São Paulo: Companhia das Letras, 1944). For recent historiographical debates on the role of *bandeirantes* in the history of Brazilian frontier expansion, see the following special edition: “Rethinking Bandeirismo Studies in Colonial Brazil,” ed. John Russell-Wood, *The Americas* 61, no. 3 (2005).

<sup>5</sup> This group includes (most prominently) Francisco de Barros Junior, Eurico Santos, and Irineu Fabichak.

<sup>6</sup> Neil Whitehead makes a similar observation in a recent synthetic essay included in Martha Few and Zeb Tortorici, eds., *Centering Animals in Latin American History* (Durham: Duke University Press, 2013), 330-31. On the interrelationship between eco-tourism and capitalism, see Martha Honey, *Ecotourism and Sustainable Development: Who Owns Paradise?*, 2<sup>nd</sup> edition (Washington, D.C.: Island Press, 2008).

## Forging a New Relationship with Animals: The Brazilian National Hunting Code

On July 10, 1934, the Brazilian revolutionary government under President Getúlio Vargas declared all animals “wards of the state.” The decree defined animals as “any irrational being, quadruped or biped, domestic or wild, except pests” and was the first in Brazilian history to delineate the rights and proper treatment of animals in society.<sup>7</sup> Overall, the decree sought to define which practices constituted abuse or mistreatment of domestic animals and only briefly mentioned wild animals. However, the decree marked a turning point in the history of human-animal relations in Brazil. In the next few decades, the Brazilian government enacted multiple pieces of legislation designed to protect and regulate Brazil’s national patrimony, including national hunting and fishing codes, a forest code, and protocols designed to monitor and regulate collecting expeditions underwritten by scientific institutions from Europe and the United States. Taken as a whole, this new body of legislation reflected the nationalist agenda of the Vargas regime and a wider concern about the need to conserve and protect the vast resources of Brazil.<sup>8</sup>

Where did the impetus for this conservation-minded legislation come from? In two landmark essays on the history of conservation in Brazil, José Luiz de Andrade Franco and José Augusto Drummond argue convincingly that scientists played a decisive role in the early conservation movement in Brazil. This group of scientists – including Alberto José

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<sup>7</sup> “Todo ser irracional, quadrúpede ou bípede, doméstico ou selvagem, exceto os daninhos.” For the full text of the decree, see Decreto No. 24.645, de 10 de Julho de 1934, [http://www.planalto.gov.br/ccivil\\_03/decreto/1930-1949/D24645impressao.htm](http://www.planalto.gov.br/ccivil_03/decreto/1930-1949/D24645impressao.htm), accessed 10-30-2013.

<sup>8</sup> On the expansion of the Brazilian state into rural Brazil during the Vargas era (especially the Amazon), see Seth Garfield, *In Search of the Amazon: Brazil, the United States, and the Nature of a Region* (Durham: Duke University Press, 2013). On the importance of scientists in the history of Brazilian conservation and environmental legislation as part of a nationalist agenda, see José Luis de Andrade Franco and José Augusto Drummond, “Wilderness and the Brazilian Mind (I): Nation and Nature in Brazil from the 1920s to the 1940s” *Environmental History* 13:4 (Oct. 2008): 724-50 and José Luis de Andrade Franco and José Augusto Drummond, “Wilderness and the Brazilian Mind (II): The First Brazilian Conference on Nature Protection (Rio de Janeiro, 1934)” *Environmental History* 14:1 (Jan. 2009): 82-102.

Sampaio, Armando Magalhães Corrêa, Cândido de Mello Leitão, and Frederico Carlos Hoehne – were highly-educated, well-read, and well-connected and held posts in Brazil’s major scientific institutions, such as the Museu Nacional in Rio de Janeiro and the Instituto de Botânica do Estado de São Paulo. Many had studied abroad or maintained regular correspondence with members of the international scientific community and, thus, were well-versed in the intellectual currents of the day, including conservation movements in Africa and the United States. Most of them were closely aligned with the Estado Novo and a few even served on boards and councils created by the Vargas regime to implement his new environmental policy initiatives.<sup>9</sup>

It is not clear, however, what lasting impact these early conservation efforts had in broader Brazilian society. Franco and Drummond admit that the writings of prominent, conservation-minded scientists likely only reached a small group of peers and educated, concerned citizens.<sup>10</sup> Moreover, the authors argue that the ideas these visionaries proposed were out of step with a Brazilian economic and political consensus bent on development at all costs.<sup>11</sup> Because of this, many of the laws, including the Hunting and Fishing Code, lacked staying power and were only nominally enforced. It was not until the 1970s and 1980s, in the wake of the Brazilian dictatorship and a new project of “re-democratization” that environmental protection initiatives began to gain both institutional and popular support.

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<sup>9</sup> Franco and Drummond, “Wilderness and the Brazilian Mind (I),” 727, 731, 737, 740 and Franco and Drummond, “Wilderness and the Brazilian Mind (II),” 90-91.

<sup>10</sup> This is true, they note, with the possible exception of Cândido de Mello Leitão, who published didactic materials on Brazilian flora and fauna intended for a broad readership and even hosted his own radio program. See Franco and Drummond, “Wilderness and the Brazilian Mind (I),” 745-46.

<sup>11</sup> Ibid., 745 and Franco and Drummond, “Wilderness and the Brazilian Mind (II),” 98-99.

In contrast to prominent scientists, by the 1930s, sport hunters in Brazil were publishing widely about the flora, fauna, and little-known regions of Brazil and their writings reached a broad readership in almost every Brazilian state. Most of them supported the National Hunting Code, one of the landmark pieces of environmental legislation enacted by the Vargas regime. Shifting the focus from scientists to hunters thus provides an opportunity to gauge how the general public reacted to the attempts of the Brazilian state to forge a new relationship between its citizens and the natural environment. While the state relied upon the efforts of public servants and other bureaucrats who collected taxes, issued hunting licenses, and registered firearms, it also depended upon a large group of allies who publicized its vision of proper hunting in newspapers and magazines, extending the reach of the federal government to readers across Brazil.<sup>12</sup>

The National Hunting Code of 1939 defined hunting as “the act of pursuing, surprising, or attracting wild animals in order to capture them alive or dead.”<sup>13</sup> Significantly, it did not distinguish between commercial and sport hunters. Instead, anyone who carried out the act of hunting was required to pay for and obtain two licenses: one to register the firearm and the other to authorize hunting activities. The code was also intended to regulate the rapidly expanding business and trade in wild animal products. It required all individuals and businesses to apply for a license and imposed a federal export tax on all wild animal products in transit to destinations outside of Brazil. In turn, it established a series of penalties and fines

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<sup>12</sup> It must be noted, however, that sport hunters made up a specific sector of Brazilian society. In contrast to the majority of Brazilian citizens at the time, most of them were urban, well-educated, and affluent.

<sup>13</sup> The code was amended and expanded in 1943, as noted above. “...o ato de perseguir, surpreender ou atrair os animais silvestres, afim de apanhá-los vivos ou mortos.” For the full text of the decree, see Decreto-Lei No. 5.894, de 20 de Outubro de 1943, <http://www2.camara.gov.br/legin/fed/declei/1940-1949/decreto-lei-5894-20-outubro-1943-415862-publicacaooriginal-1-pe.html>, accessed 11-4-13.

for individuals and firms who failed to comply with the provisions of the new code. Most importantly, the new code created the National Hunting Council (NHC), composed of representatives from various branches of the Ministry of Agriculture and its Department of Animal Production.<sup>14</sup> The purpose of the council was to implement the hunting code and to issue yearly decrees announcing the dates for hunting seasons and lists of endangered species that hunters were prohibited from targeting.

The text of this legislation makes it clear that the intent was not simply to tap into an increasingly lucrative business centered on the trade in wild animal skins. Instead, legislators envisioned a new relationship between people and animals in Brazil, one in which society recognized and appreciated the intrinsic value and unique characteristics of its non-human population. Over the course of the next several decades – from 1940 to 1967 – one of the key functions of the NHC was to disseminate knowledge to the broader public about the diverse wildlife in Brazil and the need to protect it. To that end, the hunting code charged the NHC with planning and organizing an annual “Festa da Ave,” to celebrate Brazil’s rich bird population and to educate the public about them.<sup>15</sup> The NHC also created and funded a “Museum of Hunting and Fishing” in Rio de Janeiro. Between 1939 and 1958, the Department of Hunting and Fishing (DCP) sent 27 different expeditions to almost every state in Brazil to collect zoological specimens for the museum.<sup>16</sup> Carefully preserved by

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<sup>14</sup> Not coincidentally, Cândido de Mello Leitão, Brazil’s leading zoologist, served as the council’s first president. José Luiz de Andrade Franco and José Augusto Drummond, “Cândido de Mello Leitão: as ciências biológicas e a valorização da natureza e da diversidade da vida,” *História, Ciência, Saúde – Manguinhos* 14:4 (Out.-Dez. 2007): 1268.

<sup>15</sup> See Article 31 in Decreto-Lei No. 5.894, cited in footnote six.

<sup>16</sup> Among these were two separate trips to the Pantanal. Álvaro Coutinho Aguirre and Antônio Domingos Aldrighi, *Catálogo das aves do Museu da Fauna, primeira parte* (Rio de Janeiro: Instituto Brasileiro de Desenvolvimento Florestal, 1983), 9.

taxidermists and displayed in life-like dioramas, the specimens at the Museum of Hunting and Fishing gave visitors the “perfect idea of how [these] animals live in their own habitat.”<sup>17</sup> Instead of traveling thousands of kilometers to Mato Grosso, urban Brazilians could simply head to the Praça 15 de Novembro in Rio de Janeiro to see and learn about wild animals, “as if [they] were in the actual Pantanal.”<sup>18</sup> The legislation also reflected the growing popularity of sport hunting in Brazil. Along with educating the broader public about animals in Brazil, the new code also tasked the NHC and the DCP with sponsoring hunting and shooting competitions. The DCP also organized conferences and exhibitions devoted to hunting dogs, firearms, supplies, and hunting trophies.<sup>19</sup>

One of the most important legacies of the DCP was the sponsorship and publication of a monthly journal entirely devoted to sport hunting and related issues. Published for more than 25 years, from 1941 to 1966, the magazine *Caça e Pesca* served as the main conduit for disseminating the agenda of the Department of Hunting and Fishing. The magazine’s first director was Adelino Brandão Junior, who headed a staff and board of consultants numbering 16 people that was based in São Paulo. *Caça e Pesca* joined another long-running magazine, *Fauna*, which also circulated for 25 years, between 1943 and 1968.<sup>20</sup> Although independently operated, *Fauna* had a similar mission and format and it, too, supported the efforts of the DCP, printing its yearly decrees and publicizing its many initiatives. Both

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<sup>17</sup> Coronel Arlindo Vianna, “Museu de Caça e Pesca,” *Fauna* 13:10 (Outubro 1954): 7-9.

<sup>18</sup> Vianna, “Museu de Caça e Pesca,” 7-9.

<sup>19</sup> See Article 31 in Decreto-Lei No. 5.894, cited in footnote six.

<sup>20</sup> Both of these publications ceased operation around the same time as the 1967 decree which declared all wild animals property of the state and outlawed commercial hunting. Another long-running hunting and fishing publication, *Trofeu*, published its first issue in 1971. For the text of the 1967 decree see Lei No. 5.197, de 3 de Janeiro de 1967, [http://www.planalto.gov.br/ccivil\\_03/leis/15197.htm](http://www.planalto.gov.br/ccivil_03/leis/15197.htm), accessed 5-8-14.

magazines had wide readerships and regularly published articles by regional correspondents throughout Brazil.

The content of the magazines was diverse and included hunting and fishing stories, advertisements, anecdotes about animals in popular culture, editorials, and, increasingly, scientific pieces geared for a popular audience about natural history, animal ecology, and conservation. Advertisements reflected the growing popularity of sport hunting as well as the continued importance of commercial hunting and the trade in wild animal skins. For example, both magazines featured regular advertisements from sporting goods and ammunition companies in São Paulo and commercial firms such as *Berkhout y Companhia, Limitada*, which informed readers of the competitive prices they could offer for wild animal skins.<sup>21</sup> Finally, both magazines published periodic reports from hunting, fishing, and target-shooting clubs throughout Brazil, ranging from the urban southeast to the backwaters of Campo Grande and Corumbá, Mato Grosso. All of these clubs were registered with the DCP, providing further evidence for the broad reach of the National Hunting Code and the proliferation of its ideals beyond the halls of scientific institutions and government offices.<sup>22</sup>

The magazines reflect the voices of a growing sector of society that discovered sport hunting as a way to reconnect with “nature” in the context of Brazil’s rapid urbanization. Their accounts document the gradual growth – in at least one sector of the broader Brazilian public – of concern with the way in which the majority of Brazilians interacted with Brazil’s natural resources. For these people – in parallel to the growing body of environmental

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<sup>21</sup> See, for example, advertisements in *Caça e Pesca*, 4:44 (Jan. 1945), 2-6 and 21. At least one sporting goods company, *Ao grande Amazonas*, had been operating as early as 1906. See *Caça e Pesca*, 5:50 (Julho 1945), 62.

<sup>22</sup> Major clubs in São Paulo and Rio submitted regular reports. For reports and references to smaller clubs in Campo Grande and Corumbá, see Frank J.S., “Clube de Caça e Pesca de Mato Grosso,” *Caça e Pesca* 11:127 (Dez. 1951), 6 and n.a., “Clube Esportivo Matogrossense de Caça e Pesca,” *O Estado de Mato Grosso* 3:588 (3 Out. 1941).



legislation after 1930 – hunting became a way to exercise responsible Brazilian citizenship. Moreover, through their hunting and fishing trips, these intrepid sportsmen carried the new Vargas-era gospel of wildlife conservation into the far corners of Brazil’s vast national territory.

### ***Bandeirantes of the Industrial Age: Urban Brazil Rediscovered the Pantanal***

By 1930, Brazil was in the midst of an economic transformation that would shape the rest of its twentieth century history. As the nation transitioned from an economy based on export agriculture to one largely powered by industrial production, domestic migrants and European immigrants flocked to the booming urban centers of the Brazilian southeast, including Rio de Janeiro, Porto Alegre, and, especially, São Paulo. There they labored in factories and learned the trades and services that were central to life in an urbanizing environment. Along with urbanization and industrialization came social stratification and a growing middle class that aspired to maintain the standard of living expected in a modern, industrial society.<sup>23</sup> While most embraced the new ideals of modernity and progress, many also expressed ambivalence with the hectic pace and growing complexity of life in the city. For many middle and upper class Brazilians, hunting became a way to escape the hustle and bustle of the city and to experience a simpler way of life in the *sertão*. At the same time, their exodus from urban life was integrally linked to and dependent upon the networks and flows of capital, a reality they could not escape, even in the wilds of Mato Grosso.

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<sup>23</sup> For a concise overview of Brazilian economic history during the twentieth century, see Werner Baer, *The Brazilian Economy: Growth and Development*, 6<sup>th</sup> ed. (Boulder: Lynne Rienner Publishers, 2008) and Marcelo de Paiva Abreu, “The Brazilian Economy, 1930-1980” in Leslie Bethell, ed., *The Cambridge History of Latin America*, Vol. 9, Brazil since 1930 (Cambridge: Cambridge University Press, 2008), 283-394. On the emergence of a Brazilian middle class see Brian Owensby, *Intimate Ironies: Modernity and the Making of Middle-Class Lives in Brazil* (Stanford: Stanford University Press, 1999).

## *Escaping the City*

Hunting narratives provide a unique window into the mindset of urban sportsmen as they attempted to reconcile Brazil's rapid urbanization with its rural and agricultural heritage. Many sportsmen drew a stark contrast between what they perceived as the filth and depravity of the city and the purity and virtue of the countryside. For example, Paulo Japyassu, writing in 1951 about an excursion into the Brazilian "hinterland," described the rural Brazilian countryside as the antidote, or remedy, to life in the noisy city "where everything [was] artificial and exhausting."<sup>24</sup> Another author, César Torraca, portrayed the *sertão* as a place "stripped of the arrogant preconceptions, envy, and other vices" common in the city. To him, rural Brazil represented the anti-city, a place where "the sky is bluer, the air is purer, nature is more expressive, and life is fuller."<sup>25</sup> Leaving the city for the *sertão* allowed urbanites to forget their troubles for a while. Francisco de Barros Junior, one of the most prolific hunting and fishing authors, compared hunting expeditions to the carefree days of youth: "We are children... We have no problems to solve. All of that stayed in the city. All that we feel is the joy of living, the joy of youth."<sup>26</sup> Another hunter likened his anticipation of the first day of hunting season to that of a child eagerly awaiting the arrival of Christmas day.<sup>27</sup> All longed for wide open spaces and what they regarded as the untrammelled nature of the Brazilian interior.

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<sup>24</sup> "...longe do borborinho [sic] das cidades onde tudo é artificial e exaustivo, procurando na Natureza o paregórico da ergastania." Paulo Japyassu, "Pela interlândia brasileira" *Caça e Pesca* 11:125-126 (Out.-Nov. 1951), 2.

<sup>25</sup> "...o ceu do sertão é mais azul: o ar é puro; a natureza é mais expressiva e a vida é mais vida." César Torraca, "Um macuco perigoso," *Caça e Pesca* 4:45 (Fev. 1945), 25-27.

<sup>26</sup> "Somos crianças... Não temos problemas a resolver. Tudo ficou na cidade. Só sentimos a alegria de viver, de viver na mocidade. Francisco de Barros Junior, "O rio Miranda," *Caça e Pesca* 22:261 (Fev. 1963), 6.

<sup>27</sup> José Aguiar, "Uma semana nas cabeceiras do Rio Taquari," *Caça e Pesca* 11:122 (Julho 1951), 31.

But first, they had to get there. Before the advent of regular air and automobile travel between urban and western Brazil, most sportsmen arrived in the Pantanal by train. The route was operated by the *Estrada de Ferro Noroeste do Brasil* (EFNB) and extended from Bauru (in the state of São Paulo) to Porto Esperança along the Paraguay River in the southern Pantanal, a distance of over 1,000 kilometers. Passengers undertook a three-day journey through the dense and cultivated coffee estates of rural São Paulo and across the sparsely-populated *cerrado* of central Brazil before arriving in Aquidauana, a small town at the eastern edge of the Pantanal.<sup>28</sup> Many travelers were struck by the sharp change in vegetation and landscape as they crossed from São Paulo into Mato Grosso. Gone were the “endless coffee estates,” replaced by a vast and uncultivated expanse where “everything was completely flat, as far as the eye could see.” Travelers now encountered the *cerrado*, a dry, monochromatic landscape punctuated by low-lying scrub vegetation and various species of palm trees.<sup>29</sup> By the time they reached the Pantanal, dust and dirt had invaded every inch of the passenger car, leaving a tangible reminder to travelers of their passage from civilized life on the coast and into the earthy, wild spaces of the Brazilian interior. Once travelers reached Porto Esperança, a tiny river port in the heart of the Pantanal and the terminus of the EFNB, they had reached the “true Mato Grosso.”<sup>30</sup>

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<sup>28</sup> On the length of time to travel between Bauru and Porto Esperança, see Ernesto Vinhaes, *Feras do pantanal: aventuras de um reporter em Matto Grosso* (Rio de Janeiro: A Noite S/A Editora, 1936), 30.

<sup>29</sup> Grace Thompson Seton, *Magic Waters: Through the Wilds of Matto Grosso and Beyond* (New York: E.P. Dutton & Co., Inc., 1933), 47 and Ernesto Vinhaes, *Feras do pantanal*, 30-31.

<sup>30</sup> Vinhaes, *Feras do pantanal*, 38. During his train trip to the Pantanal, Claude Lévi-Strauss described the “fine red dust of the sertão which...settled in every fold of flesh and every pore.” Claude Lévi-Strauss, *Tristes Tropiques*, translated by John Weightman and Doreen Weightman (New York: Penguin, 2012), 161.

## *A Hunter's Paradise*

By the mid-twentieth century there was a general consensus among the Brazilian sport hunting community that the Pantanal was the best place in Brazil to hunt and fish.<sup>31</sup> For one, hunters were awed by the natural beauty of the Pantanal, “for its immensity, its flatness, for its fertility, and for its extraordinary agricultural potential.” Many struggled to comprehend how and why the Pantanal remained so sparsely-populated and underdeveloped. One writer, after visiting the Pantanal for the first time, hailed it as “the most abundant land in Brazil,” a place of “practically unlimited possibility.”<sup>32</sup> Secondly, and not surprisingly, sport hunters were amazed and delighted by the diversity and density of wildlife in the Pantanal. One writer was unimpressed with the “monotonous” landscape of the Pantanal but spoke in superlatives about the profusion of animals in the region, describing it as a highlight reel of Brazilian fauna.<sup>33</sup> The sheer abundance of caimans, capybaras, peccaries, and wild geese, among other game, made many wonder if they had entered a zoo.<sup>34</sup>

Francisco de Barros Junior, who was perhaps the most well-traveled and famous sport hunter in Brazil, knew from experience what made the Pantanal a “hunter’s paradise.” To be sure, most people when asked would have placed the Amazon at the top of that list. According to Barros, however, the Amazon was “so vast, its forests so dense and

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<sup>31</sup> For more expressions of this sentiment, see, for example, C.M. Siqueira, “Um sonho de caçador,” *Caça e Pesca* 12:135 (Ago. 1952), 10; Francisco de Barros Junior, “Uma excursão ao Pantanal Matogrossense,” *Caça e Pesca* 12:138 (Nov. 1952), 23; N.A., “Entrevista com um ‘Sportsman,’” *Caça e Pesca* 22:258 (Nov. 1962), 15; Ten. Cel. Frederico Josetti, “Férias em Mato Grosso: Pescarias,” *Fauna* 10:3 (Mar. 1951), 35; Abelardo Goulart Braga, “Pantanal de Mato Grosso,” *Fauna* 17:11 (Nov. 1958), 15; and Otto Willi Ulrich, *Nos sertões do rio Paraguay* (São Paulo: Empresa Editora J. Fagundes, 1936), 37.

<sup>32</sup> Such descriptions, of course, reinforced historically entrenched portrayals of the Pantanal as an isolated and under-utilized landscape. “Pimentel Gomes,” *O Pantanal Mato-Grossense*, *Fauna* 24:5-6 (Maio-Jun. 1965), 4.

<sup>33</sup> Nilson Vidal, “Memórias de duas viagens aos pantanais matogrossenses,” *Fauna* 19:7 (Jul. 1960), 9-10.

<sup>34</sup> Josetti, “Férias em Mato Grosso,” 38.

immeasurable, its rivers like true Mediterranean seas, that a hunter navigating them can see neither winged or terrestrial fauna, for he figures in the scene as a mere grain of sand on the ocean shore.”<sup>35</sup> Wildlife was just as plentiful in the Amazon, but, for the purposes of a sport hunter, its thick tropical vegetation made game much more difficult to track and kill. In contrast, the landscape of the Pantanal was much more open, with gallery or riparian forests lining the Paraguay River and its tributaries that were not “continuous and impenetrable like the Amazon.”<sup>36</sup> This increased visibility coupled with the extreme flatness of the Pantanal afforded hunters an unobstructed view of the landscape. The seasonal flood regime of the Pantanal also worked in the favor of hunters:

During flood stage, right from the break of day the navigator has within view an enchanting kaleidoscope of birds, populating an expansive and marvelous scene. During the dry season, mammals draw near to the current as do aquatic birds, in search of their natural element. During the flood season, it is in this flat plane, covered with underbrush, where game birds teem, where pampas deer roam in bands, where on isolated island hills live large groups of collared and white-lipped peccaries, and where jaguars prowl their well-stocked pantry.<sup>37</sup>

The cyclical and extreme patterns of flood and drought forced animals to adapt, creating perfect (or at least favorable) conditions for hunting. The dry season attracted animals to the rivers, the only viable sources of fresh water in many years, while the flood season forced them onto *capões* – forest-covered hills – and other areas of high ground where they congregated, easy prey for jaguars and humans alike.

Sheer distance and an established infrastructure also led many hunters to favor the Pantanal over the Amazon. Instead of traveling thousands of kilometers – by land, air, river, and sea – to a region still marginally incorporated into state institutions of power, affluent

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<sup>35</sup> Francisco de Barros Junior, *Caçando e pescando por todo o Brasil*, 2ª série, *Mato Grosso e Goiás* (São Paulo: Cia. Melhoramentos, 1947), 223.

<sup>36</sup> Barros Junior, *Caçando e pescando*, 224.

<sup>37</sup> *Ibid.*, 225-26.

sport hunters from São Paulo or Rio de Janeiro needed only to book a train ticket from Bauru to Porto Esperança in Mato Grosso. While a trip to the Amazon was likely a month-long proposition, sport hunters could undertake a hunting trip to the Pantanal in a few weeks.

Moreover, most, if not all, sport hunters benefited from connections to property-holding *fazendeiros* in the Pantanal, as a group the most economically and politically influential people in the state of Mato Grosso. For example, when Anésio Amaral Filho – a widely-traveled sport hunter from São Paulo – journeyed to the Pantanal to hunt in 1951 he relied on the hospitality of Fernando Corrêa da Costa, owner of the Fazenda São Pedro and then president of the state of Mato Grosso.<sup>38</sup> While most sport hunters could not boast friendships with such high-ranking politicians, few of them arrived in the Pantanal without an introduction or an invitation from a landowner. Some ranch owners even arranged to have boats waiting in Corumbá to meet hunters when they arrived and to transport the party and their supplies to the *fazenda*. Such was the case for one group from São Paulo that traveled by train to the Pantanal for a hunt in the mid-1950s. After stocking up on supplies in Corumbá, the boat carried them on a two-day journey to the Fazenda Bananal – near the confluence of the Paraguay and São Lourenço Rivers – where they were greeted with a place to sleep and shared a meal with João Pires de Oliveira, the owner of the property.<sup>39</sup> The hospitality of *fazendeiros* in the Pantanal was so well-known that even those arriving without an invitation could count on a place to set up camp, at least for a few nights.<sup>40</sup>

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<sup>38</sup> Anésio Amaral Filho, “No pantanal de Mato Grosso,” *Caça e Pesca* 11:125-126 (Out.-Nov. 1951), p. 12. Filho’s hunting exploits included safaris in Africa and he was a regular contributor to both *Caça e Pesca* and *Fauna*.

<sup>39</sup> No author, “Uma rodada pelos rios Paraguai e São Lourenço,” *Caça e Pesca* 17:203 (Abril 1958), p. 8-10.

<sup>40</sup> See, for example, the account of Joviniano A.D. Alvim, who undertook a 20-day hunt in the Pantanal in 1947. Joviniano A.D. Alvim, “Conhecendo o Pantanal Matogrossense,” *Fauna* 6:7 (Julho 1947), 22.

While *fazendas* most often served as staging grounds for sportsmen, the actual hunting expeditions usually took place in isolated spots, one or more day's journey from the ranch. Sportsmen carried with them all that they would need during the hunt, including food, medicine, anti-venom, firearms, ammunition, and a whole array of supplies necessary for pitching camp, including clothes, cooking supplies, canvas tents, and mosquito nets. The typical diet was simple and consisted of non-perishable items such as jerked beef (*charque*), manioc, rice, beans, salt, sugar, coffee, *guarana*, and *mate* as well as wild game and fish caught from the river.<sup>41</sup>

Given such substantial transportation needs, two other considerations were critical to the success of a hunting expedition: draft animals and laborers. Hunters needed horses to traverse the vast expanses of the Pantanal, oxen and oxcarts to transport supplies, and a variety of laborers to guide and assist them during prolonged periods away from the ranch. For these things, hunters almost always relied upon the generosity of their hosts. The terms of agreement between hunting parties and *fazendeiros* are not entirely clear. Given the high value of livestock in a historically cash-poor region of South America, it is likely that most hunters paid fair prices for the animals they acquired. For example, when Ernesto Vinhaes accompanied Sasha Siemel on a hunt in the 1930s, the hunting party purchased all of the supplies for the expedition, including horses and oxen.<sup>42</sup>

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<sup>41</sup> On supplies for hunting expeditions, see J. Nunes Ferreira, "Um sonho que se tornou realidade," *Fauna* 8:3 (Mar. 1949), 15; H. da Silva Portugal, "A maior organização de caça e pesca da América do Sul," *Fauna* 22:11-12 (Nov.-Dez. 1963), 46-47; and Ernesto Vinhaes, *Feras do pantanal*, 17. On diets, see No author, "Uma rodada pelos rios Paraguai e São Lourenço," 9; Francisco de Barros Junior, "Caçadas e pescarias em Mato Grosso," *Fauna* 19:4 (Abril 1960), 68; and Ernesto Vinhaes, *Feras do pantanal*, 153.

<sup>42</sup> Ernesto Vinhaes, *Feras do pantanal*, 117.

Hunting parties also relied upon the labor and local knowledge of rural ranch workers in the Pantanal. Few, if any, hunting parties undertook an expedition without enlisting the services of cooks, camp hands, porters, taxidermists, and hunting guides. The size of their parties and their unfamiliarity with the local landscape made this necessary. As with the case of draft animals, the terms under which ranch owners rented out their employees is not clear. As discussed in chapter two, ranch labor in the Pantanal was a highly seasonal profession marked by varying degrees of dependence between laborers and property-owners. While ranch tasks were intensive and continuous during most of the wet season, during the dry season ranch labor dropped off and ranch hands and other rural laborers occupied themselves with other tasks, including small-scale agricultural production, hunting, and migratory labor outside of the Pantanal. The dry season also happened to be the best time of the year to hunt in the Pantanal.<sup>43</sup> As a result, ranchers were more likely to loan out their workers to assist the occasional hunting expedition. In this way, sport hunters benefited from and inserted themselves into pre-established rhythms of labor and productivity in the Pantanal.

The Pantanal thus combined qualities that no other place in Brazil could boast. Not only was it rich in wildlife, but its flat relief, its visibility, and the navigability of its rivers set it apart from places like the Amazon where denser vegetation, hills, river rapids, and poor visibility made sport hunting difficult. It was also much closer to urban Brazil and better connected than the Amazon due to the railroad that linked São Paulo with Mato Grosso. Moreover, the Pantanal had an established infrastructure of expansive ranch properties that provided ideal base camps for extended hunting trips into regions that, as a rule, lacked roads

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<sup>43</sup> On labor relationships in the Pantanal and Mato Grosso, see chapter seven in Robert Wilcox, "Cattle Ranching on the Brazilian Frontier: Tradition and Innovation in Mato Grosso, 1870-1940," PhD Diss. New York University, 1993, 417-504. On the seasonal rhythms of hunting, see Francisco de Barros Junior, "O rio Miranda," *Caça e Pesca*, 22, n. 256 (Set. 1962), 5-6.



and electricity. An established ranching economy gave hunters access to the draft animals, camp laborers, and guides they needed to transport and escort them to the best spots for hunting and to sustain their activities once they arrived. In these ways, the ecology of the Pantanal combined with its social and economic geography to make it a “paradise” for sport hunters in Brazil.

### **Shifting Mentalities: From Destruction to Protection**

While it is clear that sport hunters operated within and depended upon the flows of capital, the ways in which they narrated their experiences reflected a deep ambivalence about the role of hunting, wildlife, frontier development, and conservation in Brazilian society. On the one hand, hunters often inserted themselves and their expeditions into time-honored narratives of Brazilian frontier exploration and conquest, symbolized by the *bandeirante*. They imagined themselves as intrepid frontiersmen who left the littoral to explore the vast, wild expanses of the Brazilian interior. The underlying themes of conquest and the extraction of resources – through the hunting and killing of animals – established striking continuities between Brazil’s colonial past and the developmentalist ethos of Getúlio Vargas and the Estado Novo. At the same time, however, many hunters envisioned their expeditions as an escape from the relentless urban growth and industrial expansion that was engulfing the Brazilian southeast. By the 1950s and 60s, many writers began to portray their experiences less as titillating tales of adventure and conquest. Instead, they began to use their writing – in hunting and fishing magazines, but also natural history books and juvenile literature – to educate readers about the flora and fauna of the Pantanal and the responsibility of citizens to care for, protect, and conserve the national patrimony of Brazil.

### ***Sportsmen and the Reconquest of the Brazilian Interior***

In the early stages of growth of sport hunting in Brazilian society, writers sought to place themselves within time-honored narratives of frontier adventure and exploration. Typical of this trend is Francisco de Barros Junior whose mastery of Brazilian history enabled him to link Brazil's legacy of frontier expansion to his own efforts to bring unknown Brazil into the homes of urban readers. In his volume describing his hunting exploits in Mato Grosso and Goiás, Barros imagined that he was "following in the footsteps" of the *bandeirantes*, who had pushed west from São Paulo in the eighteenth century to explore and populate the interior. After narrating a history lesson on *bandeirantes* and the foundation of Cuiabá, the capital of Mato Grosso, he wondered what it must have been like for the earliest explorers who encountered the richness of the Pantanal fauna for the first time.<sup>44</sup> These descriptions reinforced his dual goals of entertaining readers with tales of adventure and educating them about Brazilian history.

Apart from their informational and didactic purposes, such descriptions spoke to a particular mentality of destruction and conquest that continued to motivate many sportsmen who undertook hunting expeditions beginning in the 1930s. At a basic level, colonial-era *bandeirantes* sought to conquer and settle new spaces of interior South America, to subjugate indigenous populations, and to extract resources that they could transform into profit. Twentieth century sportsmen operated under this same logic. The physical acts of traveling to the Pantanal, of camping in its wild spaces, and of tracking, killing, skinning, eating, and preserving wild animals provided a symbolic way for sportsmen to replicate the

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<sup>44</sup> Barros Junior, *Caçando e pescando*, 80, 159-68. Reading up on the history of Mato Grosso seems to have been a common practice for educated sportsmen and travelers who undertook expeditions to the Pantanal in the twentieth century. For another example, see Ernesto Vinhaes, *Feras do pantanal*, 26.

achievements of the storied bandeirantes. Through these acts of conquest, sportsmen reasserted control over nature at a moment in Brazilian history when many urban dwellers felt that they were subject to changes – urbanization and industrialization – that were beyond their control. Hunting expeditions allowed sportsmen not only to rediscover the Pantanal, but also to reconquer it. In this way, urban sportsmen simultaneously challenged and upheld the wide consensus in Brazil during and after the Estado Novo, one which favored development and economic growth at all costs.

Examples of this mentality of destruction and conquest at work in the Pantanal are ubiquitous in the accounts that sportsmen left behind in books, newspaper articles, and magazines. Francisco de Barros Junior provides a prime illustration. When Barros first traveled through the Pantanal in the mid-1940s, he did so under the sponsorship of the Remington Arms Company, which had commissioned him to promote its arms and ammunition throughout Brazil. He demonstrated the utility of his wares to local populations so frequently – through Remington-sponsored hunting expeditions, events, and demonstrations – that he nearly exhausted his ammunition and supplies before reaching Cuiabá, the last stop on his journey.<sup>45</sup>

Although Barros hunted and killed all types of wild animals – from peccaries and game birds to lizards – he focused special attention on caimans (*Caiman yacare*), which he regarded as “repugnant,” and which were one of the most abundant animal species in the Pantanal. During his time there, Barros shot and killed caimans whenever the opportunity presented itself which, given their population density in the Pantanal, was frequent. Significantly, he recognized that some of his readers – “non-hunters” – might consider it

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<sup>45</sup> Barros, *Caçando e pescando*, 151.

cruel to indiscriminately target caimans solely “for the pleasure of killing.” Thus, he took great pains to rationalize his actions, asserting that caimans were economic liabilities and dangerous pests in the Pantanal because they targeted and killed livestock, including “pigs, goats, sheep, calves, foals, dogs, and poultry.” They had even been known to snatch the occasional unwary child who ventured too close to the edge of the river.<sup>46</sup> Apart from the prejudices they caused to local ranchers, Barros was also repulsed by their uncanny ability to evade death, which he attributed to the toughness of their hides. Only an accurate shot within the orbit of the eye could kill them and even then they seemed to Barros “insensitive to pain.” For both of these reasons, Barros did not “feel sorry for the thousands [he had] already destroyed.”<sup>47</sup>

Other sport hunters shared Barros’s enthusiasm for slaughtering caimans in the Pantanal. As mentioned in previous chapters, target practice on caimans was a common leisure activity for passengers on boats that plied the waters between Corumbá, Cuiabá, and Cáceres, a practice that began in the nineteenth century. According to Waclaw Korabiewicz – a Polish war refugee and writer who traveled through the Pantanal in 1942 – the practice was still common at mid-century. On a boat between Porto Esperança and Corumbá, the captain of his ship passed the time by taking aim at caimans.<sup>48</sup> One author estimated that he and his hunting companions shot and killed seventy caimans in a single day. Before they moved on to the next hunting ground, the group made sure to pursue and kill the “treacherous suarians”

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<sup>46</sup> Ibid., 36. For another discussion of caimans as dangerous pests, see Álvaro Coutinho Aguirre, *A caça e a pesca no pantanal de Mato Grosso* (Rio de Janeiro: Ministério da Agricultura, 1945), 29.

<sup>47</sup> Ibid., 33-34, 158.

<sup>48</sup> Waclaw Korabiewicz, *Matto Grosso*, translated by M.A. Michael (New York: Roy Publishers, 1954), 41.

until none remained in that stretch of the river.<sup>49</sup> Korabiewicz claimed that his hunting companion, a Brazilian by the name of “Tadeusz” was a judicious sportsman, except when it came to caimans, “which he hated whole-heartedly”: “If he had had enough ammunition I believe that he would have cleared the Pantanal of its caimans in a comparatively short time.”<sup>50</sup>



**Figure 4** – David Newell and Guide with Slaughtered Caimans, 1931. ANSP Archive Collection 2010-049

Caimans also interfered with the activities of fishermen in the Pantanal. In a 1952 article published in *Caça e Pesca*, Francisco de Barros Junior claimed that caimans were disappearing on certain stretches of the Miranda River – a tributary of the Paraguay River in

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<sup>49</sup> Ten. Cel. Frederico Josetti, “Férias em Mato Grosso: Pescarias,” *Fauna* 10: 3 (Marzo 1951), 38.

<sup>50</sup> Korabiewicz, *Matto Grosso*, 124.

the southern Pantanal – because sportsmen, mostly fishermen, were slaughtering them wholesale. According to Barros, fishermen targeted caimans because they were notorious for stealing bait and fish from their hooks.<sup>51</sup> Korabiewicz and his Brazilian hunting companion encountered the same phenomenon while fishing in the northern Pantanal. One caiman was so persistent, gliding behind their boat to steal each fish they caught, that they eventually called a truce and offered it a portion of the catch.<sup>52</sup>

What happened to the thousands of caimans that sport hunters and fishermen slaughtered in the Pantanal between 1930 and 1964?<sup>53</sup> Barros Junior and others make it clear that caimans were not commercially valuable in the Pantanal during this period.<sup>54</sup> Apparently, the species of caiman abundant in the Pantanal (*Caiman yacare*) had hard, ossified “adhesions” in the tail and their hides lacked the flexibility necessary to produce shoes and bags that consumers demanded.<sup>55</sup> A few enterprising individuals attempted to profit from the prodigious quantities of caimans in the Pantanal but each venture ended in failure. One firm from São Paulo built a processing plant in Corumbá to produce caiman and fish oil but only managed to make a single shipment – representing almost 5,000 dead

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<sup>51</sup> Francisco de Barros Junior, “Uma excursão ao pantanal matogrossense,” *Caça e Pesca* 12:138 (Nov. 1952), 24.

<sup>52</sup> For a colorful and lengthier description of the episode, see Korabiewicz, *Matto Grosso*, 106-08.

<sup>53</sup> As mentioned elsewhere, the scale and intensity of caiman hunting increased significantly after 1964, when new technologies, increased demand, and declining populations of leather-producing crocodiles and alligators elsewhere transformed caimans in the Pantanal from pests into valuable commodities. This shift is evident in export statistics, which document a dramatic increase in exports of caiman leather between 1963 and 1964. See Appendix 8.

<sup>54</sup> Local populations, however, considered caiman tail a delicacy. See, for example, Vinhaes, *Feras do pantanal*, 165 and Barros Junior, *Caçando e pescando*, 37.

<sup>55</sup> *Ibid.*, 37 and Aguirre, *A caça e a pesca no pantanal*, 23, 39.

caimans – in January 1926 before closing shop.<sup>56</sup> According to Barros, the firm failed because it took an overly “technical” approach, failing to consult someone knowledgeable about the region who could explain to them local hunting practices, labor patterns, and networks of transportation. By the time hunters recovered the bodies of caimans and shipped them to Corumbá, most were already decomposing and unusable.<sup>57</sup>

Due to their negligible commercial value at the time, most hunters made little effort to retrieve their bodies. Korabiewicz witnessed dead and bloated crocodiles floating in the river current, carrying vultures that were feeding on the entrails.<sup>58</sup> Later during the same trip, he and his hunting companions were forced to change campsites because “there were at least twenty crocodiles we had shot lying with swollen bellies gleaming in the shallows and stinking abominably.” Their decomposing bodies had begun to contaminate their drinking water, forcing them to relocate upstream. Korabiewicz was assisting a collecting expedition for a museum focused on birds, so the *bahia* near their campsite also served as the dumping ground for the remains of birds and whatever other animals they had killed and discarded, including “one stag – two hundred pounds; two *mutums* – twenty-five pounds; one musk duck – five pounds; one otter – seventy-five pounds; [and] two herons – seven pounds.”<sup>59</sup>

None of the individuals discussed above questioned the practice of killing caimans – and many other species of animals – for the simple sake of killing. If they questioned it at all,

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<sup>56</sup> Registro de Exportação do Estado, 1926, Livro 8, p. 13-22, Mesa de Rendas de Corumbá, 1926, Caixa 27, Arquivo Publico de Mato Grosso, Cuiabá, Brazil.

<sup>57</sup> Barros Junior, *Caçando e pescando*, 58-59, 69-69.

<sup>58</sup> Korabiewicz, *Matto Grosso*, 124.

<sup>59</sup> *Mutum* is the local name for the bare-faced curassow (*Crax fasciolata*), which is common in the Pantanal. Ibid., 108-09.

they rationalized their actions by claiming that animals such as caimans were prejudicial to their interests or the interests of others in the region, whether economic or recreational.<sup>60</sup> Few sportsmen seemed bothered by the fact that a particular representative of Brazil's national fauna was dying in such great numbers. What they did regret was their inability to profit from these deaths. Álvaro Coutinho Aguirre – who traveled through the Pantanal twice between 1945 and 1957 and who represented the federal Ministry of Agriculture and its Division of Hunting and Fishing – captured the sentiment of most sport hunters who visited the Pantanal at midcentury. He lamented that the physical characteristics of the Pantanal caiman made their commercialization unprofitable and recommended that the Brazilian government establish an award for the first person to develop a processing or tanning technology that would overcome these obstacles and make hunting and shipping their hides worth the efforts of merchants in the region. Prophetically, Aguirre predicted that “the day [would] come” when the Pantanal would be transformed into a “grand emporium” for the global trade in reptile leather.<sup>61</sup>

The case of sportsmen and caimans in the Pantanal highlights the multiple and overlapping meanings of hunting in the region at mid-century and the enduring mentality of destruction and conquest that many hunters continued to carry with them on their trips to Mato Grosso. Unlike the case of capybaras during the same period (discussed in chapter five), caimans were not targeted primarily for their commercial value. Instead, they became victims of an established ranching economy and an emerging tourist industry, both of which

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<sup>60</sup> It is worth noting that the national hunting code defined caimans as pests that could be hunted and killed legally and without restriction. See, for example, “Portaria N. 123, de 26 de Marco de 1945,” in *Caça e Pesca* 4:47 (Abril 1945), 61-66.

<sup>61</sup> “Um grande empório.” Aguirre, *A caça e a pesca no pantanal*, 39-40.



labeled them as repulsive pests. At the same time, their slaughter reflected the destructive mentality of sport hunters and their unquestioning allegiance to frontier expansion and economic development. Although they were quick to denounce the activities of commercial hunters, sport hunters merely consumed the Pantanal in a different way, one in which they could enjoy the beauty of the region and move within a landscape free from the nuisance of caimans that stole their fish, kept them from bathing, or generally offended their sensibilities. It is within this hybrid hunting landscape – one where sport hunters coexisted and interacted with subsistence and commercial hunters – where sportsmen both rediscovered and reconquered the Pantanal between the 1930s and 1967.

### ***Emerging Environmentalisms***

Like their contemporaries who held influential positions in prominent scientific institutions, sportsmen and lay naturalists embraced the new, Vargas-era vision of natural resource conservation, one defined by the valorization of Brazil's flora and fauna as unique representatives of a "national patrimony" in need of regulation and protection. Both groups recognized the gulf between this ideal and the mentalities of most Brazilian citizens, who continued to regard the natural environment as a repository of resources to be transformed into personal profit. In contrast to individuals in the scientific community, sportsmen and popular naturalists targeted Brazil's broad and rapidly expanding middle class. Their ability to reach and educate Brazilians about the natural environment and their civic responsibility to respect and care for it made them key messengers for the Vargas government in its effort to institutionalize a conservation ethic in Brazilian society. Popular writers expanded the influence of conservation beyond law and policy and into the minds of Brazilian citizens in ways that scientists could not achieve. Their writings are a valuable source for understanding

the gradual shift in mentalities that occurred between 1940 and the 1960s as new environmentalisms began to emerge among a growing sector of the Brazilian middle and upper class.<sup>62</sup>

The writings of Francisco de Barros Junior are an ideal source through which to track and analyze this changing mentality about the Pantanal and its wildlife. First, the height of Barros's career fell exactly between the 1940s and the 1960s during which time he authored two popular book series (referenced above) and published in a variety of prominent newspapers and magazines, establishing a broad reputation as the leading authority on the various landscapes, flora, and fauna of Brazil. Second, the Pantanal was one of his favorite places to visit and write about. Of the four volumes that make up his *Três Escoteiros* series two of them are set on the rivers, tributaries, and floodplains of the Pantanal. Many of his pieces in Brazil's two leading hunting and fishing magazines also featured the Pantanal. While his early writings portrayed the Pantanal as a wild and uncharted "paradise" for hunters, his later works in juvenile fiction served a self-consciously didactic purpose. While they still fit firmly within the adventure genre, the explicit goal of the *Três Escoteiros* series was to educate young readers, not only about a little known part of Brazil, but also about the responsibility of young citizens to care for and respect the natural environment. By the end of his career, Barros fully embraced the gospel of conservation and used his influential voice to share his message with readers across Brazil.

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<sup>62</sup> In the writings of Brazilian sport hunters the distinction between conservationism and environmentalism was not clearly defined. While most hunters condemned overhunting, few objected to what they regarded as the "responsible" hunting of wild animals for profit. At the same time, some in the hunting community began to vocalize an awareness of the connectedness and interdependency of humans with non-human elements of the environment. Overall, however, such voices were isolated and non-uniform. I have adopted the term "environmentalisms" to characterize the incipient and contingent nature of such sentiments.

*Três escoteiros em férias no rio Paraguai* was first published in 1963, the third installment of the four-volume adventure series.<sup>63</sup> In it the protagonists, three young boy scouts from São Paulo, embark on a three-week expedition on the Paraguay River from Cáceres to Corumbá through the heart of the Pantanal. The ensuing narrative describes their daily efforts to navigate the landscape, putting into practice their survival skills and overcoming a series of surprises and challenges until their safe arrival in Corumbá. Although the plot does not reach higher levels of complexity, *Três Escoteiros* provides ample evidence of the enduring debate between development and conservation that Barros and others continued to grapple with at midcentury. For example, Barros uses his three main characters, José Alberto, Vadinho, and Luis Otávio, as archetypes of prevailing attitudes toward conservation and wildlife in Brazil. While Vadinho would “gun down any game within shooting range” without a second thought, the “thoughtful and methodical” José Alberto prefers to collect and study butterflies and insects and is an *aficionado* of Brazilian natural history. Luis Otávio, the youngest of the three, enjoys fishing but abhors Vadinho’s penchant for indiscriminately killing wild animals.<sup>64</sup>

These character profiles set the stage for the main conflict of the story: the protagonists and their differing opinions about the responsibilities of humans to animals in nature. In what becomes a highly repetitive theme of the book, the trio encounters various animal species and is faced with the decision of whether or not to kill them.<sup>65</sup> Vadinho is always the first to reach for his firearm, but José Alberto usually intercedes, offering various

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<sup>63</sup> Francisco de Barros Junior, *Três escoteiros em férias no rio Paraguai*, 2ª edição (São Paulo: Edições Melhoramentos, 1963).

<sup>64</sup> Francisco de Barros Junior, *Três escoteiros em férias no rio Paraguai*, 6.

<sup>65</sup> This scenario occurs in at least ten separate places in the book. See, for example, pages 21, 45, 47, 56, 64, 83, 87, 94, 145, and 186.

explanations for why they should let the animal go (protected by law, already have enough food, mother with young, too close to the city, etc...). Their dialogue captures the two competing approaches to wildlife that hunters faced in Brazil during the early conservation movement as well as the blurred lines between hunting for sport and hunting for science. While Vadinho represented the mentality of many urban Brazilians who saw hunting expeditions as a way to subdue nature, José Alberto represented the scientific community which advocated respect for Brazil's fledgling hunting code. Indeed, the book is full of direct and indirect references to the hunting code, a strategy Barros used to educate young Brazilians about the laws governing hunting. For example, on two different occasions Vadinho's companions explain why he must not shoot and kill tapirs and marsh deer, both of which were protected by law under the Brazilian Hunting Code.<sup>66</sup> On another occasion, José Alberto prevents Vadinho from opening fire on caimans until they are outside of the Cáceres city limits, another stipulation of the hunting code.<sup>67</sup> These examples leave no doubt that Barros was a firm supporter of Vargas-era environmental legislation, particularly government efforts to regulate and control the hunting activities of its citizens.

Apart from teaching young Brazilians about their responsibilities as hunters, Barros also used *Três Escoteiros* as a vehicle to educate urban Brazil about the Pantanal itself – its unique ecology, animal behavior, its local populations, its history, and its socioeconomic geography. The book is punctuated by long digressions, for example, recounting the history of Cuiabá and its foundation by the *bandeirantes* in the 18<sup>th</sup> century or, in another example,

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<sup>66</sup> Ibid., 37 and 87.

<sup>67</sup> Ibid., 62.

explaining how and why a jabiru stork can swallow a large fish without choking.<sup>68</sup> In one scene, as the boys are sitting around a campfire in the evening, Tio Chico launches into a monologue about the hydrology of the Pantanal and its flood regime that covers almost two entire pages.<sup>69</sup> While these frequent tangents make for rather unconvincing dialogue, they reflect both Barros's intimate knowledge of the Pantanal and his desire to share it with young readers, not only to enlighten them but also to instruct them about the need to conserve and protect the national patrimony of Brazil. In doing so, Barros articulated and popularized a new vision for the relationship between humans and wildlife, one that questioned indiscriminate killing and hunting for profit and advocated responsible sport hunting that adhered to the guidelines set forth in the National Hunting Code.

Francisco de Barros Junior was not the only one to take up the cause.<sup>70</sup> While he was arguably the most widely-published and influential, many of his contemporaries voiced similar sentiments in the pages of Brazil's hunting and fishing magazines. One example that reflects this change is the notable shift in content of both *Caça e Pesca* and *Fauna* that took place over two decades of publication. While articles recounting tales of adventure from sport hunting expeditions featured prominently in the early years, by the mid-1950s and 1960s, these pieces were much less frequent, replaced instead by articles reporting on conservation efforts and pressing issues such as deforestation and species extinction in Brazil and around the world.

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<sup>68</sup> Ibid., 67 and 176.

<sup>69</sup> Ibid., 32-33.

<sup>70</sup> Other prominent and widely-published authors include Eurico Santos and Irineu Fabichak. Both were regular contributors to the major hunting and fishing magazines and both authored books on the natural history of Brazil geared for popular audiences.

Most contributors decried indiscriminate hunting of any kind and drew a sharp distinction between commercial and sport hunters in the Pantanal and elsewhere. They agreed that the National Hunting Code was not being respected by the majority of Brazilians and used the pages of these magazines to raise the alarm about the impending extinction of various animal species that were being overhunted. Predictably, they tended to demonize commercial hunters, depicting them as ignorant rural dwellers motivated only by a selfish desire for profit.<sup>71</sup> In an interview for *Caça e Pesca*, Alberto Whately denounced commercial hunters who “invaded” the countryside to “transform the defenseless animals of the Brazilian forests” into profit. According to Whately, commercial hunters were, “both by nature and by habit,” “relentless destroyers” of Brazilian wildlife who regarded hunting laws as “obstacles” and for whom “quantity always trumped quality.”<sup>72</sup> Authors were quick to point out that land owners in the Pantanal, in contrast to commercial hunters, “respected” the federal hunting laws and made sure to avoid species that were protected by law. One correspondent took special care not to divulge the location of their Pantanal excursion to “prevent the invasion of hunters.” Although the purpose of their trip was for sport hunting, when confronted with such a “gorgeous” spectacle of wildlife, they laid down their guns and took in the scene, lingering for “hours and hours” and feeling as if they themselves had become part of a work of art.<sup>73</sup>

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<sup>71</sup> See, for example, João do Brejo, “O caçador profissional,” *Fauna* 18:6 (Junho 1959), 9.

<sup>72</sup> No author, “Editorial: a destruição da nossa fauna,” *Caça e Pesca* 6: 64 (Set. 1946), 7. It is not clear from the article whether this is the same Alberto Whately who served as the Brazilian chief engineer for the construction of the railroad between Corumbá and Santa Cruz de la Sierra, Bolivia, discussed in chapter three. However, since Whately spent the majority of his time in Corumbá it seems highly plausible that he observed or took part in the sport hunting scene.

<sup>73</sup> Mario Moreira Rebecchi, “Exterminio, não!,” *Caça e Pesca* 24: 283 (Dez. 1964), 28, 30; Lilly Rondon, “O paraíso das ariranhas,” *Caça e Pesca* 24:282 (Nov. 1964), 33-34.

Such descriptions mirror the asymmetries of power and class that defined relationships between various groups of hunters in the Pantanal. Since sportsmen and ranchers did not rely upon hunting for their livelihood, it was much easier for them to denounce hunting for profit and what they regarded as the crass materialism of commercial hunters. Although some recognized that the problem of over-hunting was “complex and difficult,” they rarely discussed the broader conditions – heavy domestic and international demand for wild animal products and the inability (or unwillingness) of the Brazilian state to outlaw the trade – that made the commercialization of hunting in the Pantanal possible in the first place. Instead, most sport hunters claimed that a lack of education was responsible for such widespread and indiscriminate hunting. Brazil’s rural populations simply had not learned to appreciate the intrinsic value of the country’s unique wildlife.<sup>74</sup>

By this logic, sport hunters had already achieved a more advanced understanding of the proper role of hunting in Brazilian society. “True hunters” respected the hunting code, took careful measures not to waste any animal killed, and recognized the potential “utility” of all animals within the environments they inhabited.<sup>75</sup> J. Nunes Ferreira, who hunted in the Pantanal in 1949, articulated the difference between commercial and sport hunters as follows: “The true hunter is also a naturalist. He hunts, not with an instinct to kill – as many people think – but to be in contact with Nature...not only to appreciate its wonders, but to make use of the benefits it provides in support of health.” For Ferreira, a true hunter only targeted pests and other animals that were harmful to agriculture or livestock. Ferreira

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<sup>74</sup> See, for example, no author, “Fauna fluvial e terrestre,” *Caça e Pesca* 8:118-119 (Mar.-Abril 1951), 29; César Torraca, “A serviço da Pátria: quando a nação precisa do caçador,” *Fauna* 5:12 (Dez. 1946), 17-18; W. Duarte de Barros, “A caça de animais selvagens no Brasil,” *Fauna* 6:12 (Dez. 1947), 20.

<sup>75</sup> Mario Moreira Rebecchi, “Exterminio, não!,” 30.

dubbed himself a “nature hunter” and spent most of his time on the excursion photographing and filming the landscapes and animals he encountered.<sup>76</sup>

Although a focus on the distinction between sport and commercial hunters figured prominently in their writings, by midcentury many individuals also expressed a broader concern that overhunting was disrupting the “biological equilibrium” in the Pantanal and elsewhere. For example, while Barros Junior wrote unsentimentally about slaughtering caimans during trips to the Pantanal in the 1940s, by the 1960s he had changed his tune. Instead of pests, Barros now recognized the important role they played within the Pantanal ecosystem as predators that regulated fish and bird populations. Without them, he reasoned, bird populations would skyrocket and they would destroy agricultural plots.<sup>77</sup> Another hunter noted that stretches of the Paraguay River and its tributaries were being overrun by piranhas because sportsmen were overhunting caimans, their main predators.<sup>78</sup> Others, such as Alberto Whately, echoed such sentiments and claimed that the disappearance of wild animals was “transforming” agricultural landscapes and allowing populations of crop pests to grow out of control.<sup>79</sup> Although not directly concerned with wild animals and overhunting, J. Barisson Vilares, an agronomist from the Universidade de São Paulo, claimed that overgrazing and the burning of pasture was contributing to the gradual “desiccation” of the Pantanal.<sup>80</sup>

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<sup>76</sup> J. Nunes Ferreira, “Um sonho que se tornou realidade,” *Fauna* 8:3 (Mar. 1949), 14-15. Ferreira served as the film director on an expedition to the Pantanal guided by Sasha Siemel. See photograph and caption in *Fauna* 8:4 (Abril 1949), 23.

<sup>77</sup> Barros Junior, *Três escoteiros no rio Paraguai*, 128. For another articulation of Barros’ concern over overhunting and its disruption of biological equilibrium, see Francisco de Barros Junior, “Zoofilia,” *Caça e Pesca* 16:188 (Jan. 1957), 21.

<sup>78</sup> Renato Castelo Branco, “Safari no pantanal,” *Caça e Pesca* 25:293 (Out. 1965), 12-13.

<sup>79</sup> No author, “Editorial: a destruição da nossa fauna,” *Caça e Pesca* 6: 64 (Set. 1946), 7.

<sup>80</sup> No author, “O Dr. J. Barisson Vilares e o pantanal matogrossense,” *Fauna* 19:12 (Dez. 1960), 26-28.



These emerging environmentalisms reflected a growing awareness on the part of many Brazilian hunters of the interdependency between humans, animals, and the natural environment. Yet, while sportsmen were increasingly aware of the impact that hunting had on environmental relationships between people and animals, they often failed to realize that their budding environmentalism was directly related to the ever-increasing expansion of commercial networks into the Pantanal. Thus, while their discourse was beginning to shift, sportsmen were critical in introducing new ways for the outside world to “consume” the Pantanal.

### **Consuming the Pantanal**

When Sasha Siemel arrived in the Pantanal for the first time in the late 1910s, he entered a region on the verge of transformation. As we have seen, from the 1920s onward, scientific expeditions from Brazil and around the world came, one after the other, to study and collect specimens from the region’s flora and fauna, commercial hunters capitalized on growing international demand for wild animal skins, and sport hunters traveled from across the country to reconnect with nature and to hunt the elusive jaguar. It was into this changing landscape that Siemel entered and it was these same activities – hunting and guiding – that enabled him to make a living for the rest of his life. As the conservation movement took hold in Brazil (and around the world) the mentalities of hunters shifted and they began to see their expeditions less as acts of conquest and more as civic educational experiences, carried out with respect for wildlife and the natural environment. But the imperative of economic development and profit did not disappear. It merely took on a different form. From the 1930s onward, Siemel and others capitalized on this shift, packaging the Pantanal as a place to experience the exuberant nature of wild Brazil. These efforts represented the

commodification of the Pantanal as an experience, a set of practices which blended the pursuit of profit with the logic of conservation in ways that would echo strongly in the rise of ecotourism decades later.

### ***Alexander “Sasha” Siemel and the Pantanal***

Alexander “Sasha” Siemel was an international sensation in the decades between 1930 and 1960. Although he started out as a peripatetic tradesman and explorer, he managed to transform himself into one of the world’s most storied big game hunters and professional guides, as well as an actor, writer, lecturer, and unabashed booster for the Pantanal. While it is likely that Siemel sought only to make a name for himself and a living in the process, the broad publicity given to his activities and his efforts to attract wealthy sport hunting clients were critical to transformation of the Pantanal into a region to be consumed as a place of singular natural beauty.

Born in Riga, Latvia, in 1890, Siemel left home at the age of 17 and wandered around the United States, Argentina, and southern Brazil before arriving in Mato Grosso in the late 1910s, where he integrated himself into the social and economic geography of the region.<sup>81</sup> During most of the 1920s, Siemel occupied himself with a variety of economic pursuits that carried him from Cuiabá to Corumbá and all points in between, practicing a diversity of trades, including mechanic, pharmacist, and employee of the commercial firm, *Companhia Sul-Americana Belga*.<sup>82</sup> Siemel also fostered relationships with ranch owners and other members of the regional political and economic elite which, not coincidentally, included

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<sup>81</sup> Siemel narrated his life story often and through multiple media. See, for example, Sasha Siemel, *Tigrero!* (New York: Prentice-Hall, 1953).

<sup>82</sup> See correspondence contained within Folder 9, Correspondence, 1920s and Folder 20, Business Correspondence, Box 1, Sasha Siemel Collection, M111, Special Collections Department of Canaday Library, Bryn Mawr College.

landowners from both the Brazilian and Bolivian Pantanal.<sup>83</sup> Siemel also took advantage of the growing economic importance of commercial hunting in the region. As early as 1917, Siemel struck business deals to supply live animals and zoological specimens and, in 1927, he won a contract to capture and ship jaguars for two zoological parks in Córdoba and Buenos Aires, Argentina.<sup>84</sup> Local ranchers also began to contract Siemel to eliminate cattle-killing jaguars that were a constant threat to their hard-won profits. At some point during this period, Siemel learned the art of spear-hunting from a local ranch hand, a man of Guató descent named Joaquim who was a local legend in the Pantanal.

Siemel was busy establishing himself as a professional hunter in the Pantanal when a chance encounter with Julian Duguid and his band of travelers in 1929 changed the trajectory of his life and propelled him into the international spotlight. His reputation and his connections with Duguid enabled him play a central role in the 1931 Mato Grosso Expedition.<sup>85</sup> Afterward, Siemel spent most of 1932 in England while Duguid penned his biography, *Tiger-Man*. The combination of Duguid's books and Siemel's highly-publicized involvement with the Mato Grosso Expedition gave him the exposure he needed to launch his career as a hunting guide for an international sport hunting clientele in the Pantanal.

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<sup>83</sup> See, for example, letter from José Rapp, San Matías, Bolivia, to Siemel, 24 Junho 1928, Folder 26, Box 1, Sasha Siemel Collection, Bryn Mawr College. José Rapp was also an acquaintance of Alexander Davenport. For a brief period, Siemel was even engaged to be married to Bertha Magalhães, daughter of José Antonio de Magalhães, who owned and operated the Fazenda Amolar in the Brazilian Pantanal. See Letter from Siemel to Bertha Magalhães, 24 Oct. 1924 and letter from José Antonio de Magalhães to Siemel, 9 Nov. 1924, Folder 13, Box 1, Sasha Siemel Collection, Bryn Mawr College.

<sup>84</sup> See, for example, Letter from O. de Rochefort-Lucay to Siemel, Patiño, Paraguay, 16 Jan. 1917, Folder 9, Box 1, Sasha Siemel Collection, Bryn Mawr College. Siemel even appears to have supplied specimens to Carl Hagenbeck Junior of Hamburg, Germany, whose father achieved international fame as the creator of the modern zoo. See letter from Carl Hagenbeck to Siemel, Hamburg, Germany, 22 Jan. 1926, Folder 29, Box 1, Sasha Siemel Collection, Bryn Mawr College.

<sup>85</sup> This expedition (discussed in chapter four) was sponsored, in part, by the Academy of Natural Sciences and the Penn Museum of Archaeology and Anthropology in Philadelphia.

1933 saw Siemel in the United States promoting his first guided hunting tour of the Pantanal. Siemel's "South American Hunt" offered six clients a six-month, guided expedition "into the jungles of Brazil, Paraguay, and Bolivia." \$5,000 per person covered all necessary expenses, including round-trip transportation (by steamship and railroad), food, and supplies. In turn, Siemel guaranteed "at least one *tigre* and one cougar within a single month to each member of the party." Expedition members would also have the opportunity to hunt other representatives of the Pantanal's prolific fauna, including "cougar, tapir, deer, wild hogs, foxes, red wolves, alligators, monkeys, snakes and birds." Clients could rest assured that they were in good hands since, through twenty years of experience, Siemel "command[ed] a thorough knowledge of the country and its inhabitants." Aside from hunting, expedition members would enjoy fishing and photographing the "magnificent scenery" of the Pantanal and could observe "primitive Indians and their customs."<sup>86</sup> In one package deal, Siemel provided a unique opportunity for North Americans to experience wild Brazil and consume the Pantanal.

Siemel attracted a wealthy clientele for his hunting trips. After all, it was not anybody who could afford to invest \$5,000 and six months of their life to an adventure hunt in South America. Siemel's early clients included members of high society from New York, Philadelphia, and Chicago, including Stella Reeves, Col. John K. Howard, Mrs. John Jennings, Helen Post, Kermit Roosevelt, Arnold Scheuron, Ann Susen, and Jens Touborg.<sup>87</sup> Siemel actively cultivated these relationships and expanded his social networks. For example, he joined New York City's Explorers Club in 1933, shortly after he arrived to the

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<sup>86</sup> "Siemel South American Hunt," brochure, Folder 1, Box 1, Sasha Siemel Collection, Bryn Mawr College.

<sup>87</sup> Ibid.

United States from England.<sup>88</sup> The Mato Grosso Expedition of 1931 had traveled under the flag and emblem of the Explorers Club and Siemel knew that potential clients abounded within the ranks of this exclusive and well-heeled organization. He also maintained connections with other high-profile institutions and clubs such as the Field Museum in Chicago; the Authors Club, Adventurers' Club, and Hollywood Athletic Club of Los Angeles; the Boone and Crocket Club; and zoological societies across the United States.<sup>89</sup>

However, Siemel's reach and influence was not limited to his wealthy hunting clients. Siemel was an ardent self-promoter and established an active presence in the press and other media outlets. Between 1930 and 1960, Siemel made headlines in *National Geographic*, *Time*, *Sports Illustrated*, *Reader's Digest*, *Colliers*, *Field and Stream*, *Outdoor Life*, the *New York Times*, and a host of other regional and national newspapers.<sup>90</sup> He and his wife, Edith Bray Siemel – a Philadelphia socialite he met on one of his hunting trips and married in 1940 – both published autobiographies in collaboration with journalist and author Gordon Schendel that were geared for popular audiences.<sup>91</sup> In 1937, Siemel even took his show to Hollywood to act in a television adventure mini-series entitled *Jungle Menace*, starring the legendary sport hunter Frank Buck. He was cast as “Tiger Van Dorn,” a character loosely

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<sup>88</sup> See the Explorers Club newsletter, *The Adventurer* 33:4 (Dec. 1958).

<sup>89</sup> Letter from Colin Sanborn, Chicago, to Siemel, 5 Apr. 1935, Box 1, Folder 35; Letter from Gene Lockhart, Hollywood, CA, to Siemel, 3 Apr. 1937, Folder 33, Box 1; Letter from H.L. Tanner, Los Angeles, to Siemel, 13 Apr. 1937, Folder 33, Box 1; Letter from Mao Norton, Hollywood, to Siemel, 24 Apr. 1937, Folder 39, Box 1; Letter from Archibald B. Roosevelt, New York, to Siemel, 30 May 1966. For connections with zoological societies, see the series of letters received in 1960 and 1961 contained within Folder 25, Box 2.

<sup>90</sup> For a comprehensive list of publications featuring Siemel, see Box 4, Sasha Siemel Collection, Bryn Mawr College.

<sup>91</sup> Edith Siemel and Gordon Schendel, *Jungle Wife* (Garden City, NY: Doubleday, 1949) and Sasha Siemel, *Tigrero!* (New York: Prentice Hall, 1953). Both of these books are based on their experiences in Mato Grosso and the Pantanal but cannot be considered true autobiographies due to their popularized nature (with recreated dialogue, etc.). The intent of both publications was to captivate readers with tales of adventure in wild Brazil.

modeled after his experiences in the Pantanal. To manage his increasingly complex affairs, from the late 1930s onward, Siemel enlisted the services of a series of publicists and agents who crafted and managed his image, coordinated his legal affairs (contracts and other agreements), advertised his hunting expeditions, and booked a growing number of speaking engagements.<sup>92</sup> Corporations even capitalized on Siemel's growing fame and sought endorsement deals with him. For example, a 1937 Kodak advertisement featured Siemel pictured with a jaguar and holding a Kodak camera. The text of the ad read, "I hunt tigers with a Kodak."<sup>93</sup> In all of these ways, Siemel crafted a brand, one that capitalized on the exotic and untamed image that the Pantanal held in the collective mind of the North American public.

Yet Siemel did not gain popularity simply by virtue of his stories of adventure about an unfamiliar part of the world. What made him particularly appealing was his ability to serve as a bridge *between* the unknown (and, by extension, dangerous) spaces of Brazil and the "civilized" world. His twenty years of experience living, hunting, and establishing relationships with the local populations and power brokers endowed him with an air of authenticity that most contemporary adventure personalities could not replicate. His wide appeal also extended beyond the American public, captivating the Brazilian reading public at a time when sport hunting was growing in popularity among the urban middle and upper class. For example, Siemel appeared regularly in feature articles published in both of Brazil's major hunting and fishing magazines between the 1930s and the 1950s. Articles in these

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<sup>92</sup> Siemel seems to have hired his first publicist, Grace Aird, in 1937. See correspondence contained within Folder 33, "Correspondence, 1937, A," Box 1, Sasha Siemel Collection, Bryn Mawr College.

<sup>93</sup> Letter from Jane White to Siemel, 12 Apr. 1937, Folder 40, "Correspondence, 1937, R-Z," Box 1, Sasha Siemel Collection, Bryn Mawr College.

magazines generally applauded Siemel for his efforts to rid the Pantanal of cattle-killing jaguars and, in the same way as the North American media, heralded him as the first “white man” to hunt and kill a jaguar with a spear. Their descriptions of Siemel “courageously penetrating the backlands” fit within the narrative trope created by Brazilian sport hunters who envisioned themselves as modern-day *bandeirantes* exploring the vast interior.<sup>94</sup>

Because of his notoriety, Siemel played a critical role in disseminating a particular image of the Pantanal to people outside of Mato Grosso. In his efforts to publicize his sport hunting business, support his lifestyle, and to cultivate his image, Siemel made a conscious effort to portray the Pantanal not only as exotic and wild, but also as a singular wetland landscape, one unique to Mato Grosso. Siemel was thus instrumental in perpetuating the image of the Pantanal as isolated and pristine but also in shifting the discourse surrounding the Pantanal toward recognition of its importance as an ecological region.

One of the key ways in which Siemel disseminated his vision of the Pantanal was through extensive lecture tours that brought him into contact with audiences across the United States and in Brazil. Between 1940 and 1946, Siemel and his wife, Edith, lived in the Pantanal with their first two children (both of whom were born in Corumbá). During this time, Siemel continued to hunt jaguars on contract for *fazendeiros* and guided occasional hunting expeditions. He also collected a wealth of motion pictures and photographs that served key roles in his publicity efforts. After he returned to the United States, Siemel settled

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<sup>94</sup> In 1936, journalist Ernesto Vinhaes published his account of a 1935 hunting expedition that he accompanied with Siemel and Theodore Roosevelt, Jr, entitled *Feras do Pantanal*, and cited above. For articles on Siemel in Brazilian hunting and fishing magazines, see Manfredo Carlos, “Sacha Siemel: grande caçador de onças do Brasil,” *Fauna* 6, n. 6 (Junho 1947), 35; Thomaz d’Amato, “Sasha Siemel, O Tigreiro,” *Fauna* 8, n. 3 (Mar. 1949), 7-15; Thomaz d’Amato, “Sasha Siemel: vida de aventuras nos sertões de Mato Grosso,” *Fauna* 9, n. 11 (Nov. 1950), 8-20; Luis Prudente Corrêa, “Sasha Siemel, o homem-onça,” *Caça e Pesca* 6, n. 83-84 (Abr.-Maio 1948), 19-20.

into a pattern that continued off-and-on until his death in 1970.<sup>95</sup> During the dry season (from roughly April to October), Siemel organized and guided hunting expeditions with clients from the United States. During the wet season, when hunting conditions were poor, Siemel returned to the United States to undergo lecture tours designed to educate North American audiences about Brazil and the Pantanal, but also to publicize his business and generate revenue.

In the early years, Siemel spoke to large audiences at prominent institutions, including Carnegie Hall, Brown University, and the University Club in Rio de Janeiro.<sup>96</sup> Over time, Siemel's audiences grew much more diverse and included fraternal and community organizations, high schools, and elementary schools across the east coast, the mid-Atlantic, and the Midwest. Although this likely reflected the declining popularity of the adventure genre in North American popular culture after World War II, Siemel's broad lecture itinerary also expanded his reach, enabling him to share his vision of Brazil and the Pantanal with middle class America. For example, after giving a lecture at Maryland Avenue Elementary School in 1965 in Columbus, Ohio, Siemel received a series of letters – complete with crayon drawings of Siemel hunting a jaguar with a spear – from Helen Harwood, a third grade teacher, and her students. Harwood thanked Siemel for his presentation and shared that the students “were delighted to know that the age of Adventure is still with us.”<sup>97</sup> During

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<sup>95</sup> Siemel also lectured broadly in the 1930s before his marriage to Edith Bray in 1940, but his yearly schedule of expeditions and speaking tours was less predictable.

<sup>96</sup> He also lectured in California while filming *Jungle Menace* in Hollywood in 1937 (see footnote 82). Grace Aird, New York, to Siemel, 8 Feb. 1937, Folder 33, “Correspondence, 1937, A,” Box 1; and Jerry Dills to Siemel, Rio de Janeiro, 28 April 1937, Folder 35, “Correspondence, 1937, C-E,” Box 1, Sasha Siemel Collection, Bryn Mawr College.

<sup>97</sup> Letters from Lucy Long, Jennifer Schring, and Barbara Campbell, Bexley, OH, to Siemel, 28 May 1965, Folder 11, “Miscellaneous Business Papers,” Box 2 and letter from Helen Harwood to Siemel, 31 May 1965, Folder 12, “Business Correspondence, 1965,” Box 2, Sasha Siemel Collection, Bryn Mawr College.



the same year, Siemel underwent a whirlwind, cross-country tour as part of the Kiwanis Club Travel and Adventure Series.

Siemel's lectures integrated the spoken word with moving pictures and photograph slides that depicted his hunting exploits as well as the flora, fauna, landscapes, and people of rural Brazil and the Pantanal. He also thrilled audiences with demonstrations, using his spear to reenact dramatic encounters with charging jaguars. Predictably, lectures and their contents functioned as a showcase for Siemel and his life of adventure in the wilds of South America, recycling the same images that made him famous in the 1930s. Titles such as "White Hunter of Brazil," "Man-Eater," and "Adventures with Camera and Spear" portrayed Siemel as an intrepid and noble figure who had learned the ways of the "jungle" in order to provide a service to local ranchers who were helpless to defend against cattle-killing jaguars. For example, the heading for a promotional brochure for his lecture series read as follows: "To the civilized world he is Sasha Siemel but to the natives of Matto Grosso he is – Tiger Man." According to the brochure, Siemel had earned this moniker "as a title of honor," given "in respect for his courage and daring."<sup>98</sup> Such descriptions lent Siemel an air of authority and authenticity while simultaneously portraying the Pantanal as isolated and wild.

Despite their sensationalized nature, the content of Siemel's lectures reflect a deep knowledge of the Pantanal and a desire to educate his audience about a part of Brazil that had become central to his identity. In a lecture he gave in Rio de Janeiro, Siemel began by reflecting on his eventful life that carried him across the Western Hemisphere and Europe. Despite his birth in Latvia and his travels to urban centers such as Rio de Janeiro, Buenos

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<sup>98</sup> See promotional brochures and materials contained within Folder 2, "Bio Notes, Clippings, Etc.," Box 1, Sasha Siemel Collection, Bryn Mawr College.

Aires, London, and New York, Siemel considered Mato Grosso and the Pantanal his home.<sup>99</sup> The lecture contained over 180 photograph slides depicting scenes from hunting expeditions but also examples of the regional flora and fauna, local populations, and the landscape. Siemel's lecture notes demonstrate a comprehensive knowledge of the ecology of the Pantanal and the ways in which its cyclical rhythms of rain, flood, and drought influenced the actions of both humans and animals. He related these details to urban audiences – in this case, Rio de Janeiro – largely unfamiliar with the Pantanal landscape and the diversity of people who created it. With enthusiasm and aplomb, he educated his audiences, bringing to life a region that most urban Brazilians would never witness personally. More than this, however, he presented the Pantanal as one of Brazil's natural wonders, a place with “the most marvelous sunrise[s]” he had ever seen, hard-working and hospitable local populations, and a diversity of plant and animal life that few other places could match.<sup>100</sup>

Despite his efforts to promote the natural beauty of the Pantanal, Siemel was no conservationist. The same lecture referenced above was filled with slides depicting not only sportsmen and hunting scenes, but also captured animals awaiting shipment to zoological societies in the United States.<sup>101</sup> For six months, between August 1960 and February 1961, Siemel shopped around a jaguar cub he had captured in the Pantanal, contacting at least thirteen different institutions (mostly zoos and exotic animal dealers) across the United States, before finally selling it at the reduced price of \$375 to the Oklahoma City Zoo.<sup>102</sup>

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<sup>99</sup> “Seleção das fotografias em preto e branco e colorido do Mr. Sacha Siemel,” undated, Folder 31, “Slide Lists,” Box 2, Sasha Siemel Collection, Bryn Mawr College.

<sup>100</sup> *Ibid.*, p. 3, slide 5.

<sup>101</sup> *Ibid.*, p. 18, slide 178.

<sup>102</sup> See correspondence contained within Folder 25, “Business Venture (Cleopatra and Sale of Jaguar), 1964,” Box 2, Sasha Siemel Collection, Bryn Mawr College.

Like Barros Junior and a host of others, Siemel lamented the unsuitability of Pantanal caiman leather for commercial purposes.<sup>103</sup> In lecture tours throughout the country, he boasted without reservation of the 270 jaguars he killed during his career as a professional hunter. Clearly, Siemel regarded the Pantanal as an exceptional place but more than thirty years there also taught him that the wetland was also a particularly good place to make a living.

### ***Profiting from the Pantanal***

While Siemel was a pioneer in the business, others quickly recognized the potential of the Pantanal to feed the international sporting community's growing appetite for outdoor adventure. Alexander Daveron, another member of the infamous 1931 Mato Grosso Expedition, also foresaw the opportunity to profit from the growing reputation of the Pantanal as a sportsman's paradise. After the expedition, Daveron split time between the United States and Brazil. Like Siemel, he secured contracts with scientific institutions and zoological societies to hunt, capture, collect, and ship specimens from Brazil to the United States. During World War II, he worked for the United States government and the Rubber Development Corporation to compile a survey and report on the feasibility of establishing communication between the Paraguay and Amazon watersheds.<sup>104</sup> After the war, Daveron purchased land on the outskirts of Cáceres at the northern edge of the Pantanal, a spot he called home for the rest of his life.<sup>105</sup> While most of his friends in the United States thought

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<sup>103</sup> "Seleção das fotografias em preto e branco e colorido do Mr. Sacha Siemel," p. 7, slide 67, undated, Folder 31, "Slide Lists," Box 2, Sasha Siemel Collection, Bryn Mawr College.

<sup>104</sup> See report from Daveron to James A. Russell, Rubber Development Corporation, Rio de Janeiro, 11 May 1943, Doc. 4, Caixa 1, Acervo Alexander Daveron, Núcleo de Documentação de História Escrita e Oral (NUDHEO) Universidade do Estado de Mato Grosso (UNEMAT), Cáceres, Brazil.

<sup>105</sup> For the contracts and titles documenting the purchase, see Doc. 3, Pasta 3, Caixa 1, Acervo Alexander Daveron, NUDHEO, UNEMAT, Cáceres, Brazil.

that his stay in Brazil was just temporary, Daveron purchased land in 1953 and constructed a large building on the property that combined his living quarters, rooms for guests, a laboratory, and a work shop. In the following years, Daveron imported all the necessary supplies to outfit a hunting and fishing lodge, including boats, fishing supplies, and outboard motors manufactured in the United States.

Like Siemel, Daveron was convinced that the Pantanal was a region that hunters from across the western hemisphere would enjoy. In a letter to a friend, he claimed that the Pantanal offered “the best hunting and fishing on this continent.”<sup>106</sup> While Daveron enjoyed a similarly broad and influential social network composed of businessmen, government bureaucrats, and other members of high society, his plans to promote sport hunting and tourism in the Pantanal never came to fruition.<sup>107</sup> For one, Daveron lacked the charisma and wide publicity that Siemel so skillfully used to his advantage. While Siemel was able to promote his business in multiple media outlets, Daveron authored stories of adventure in the Pantanal that received a steady stream of rejection from North American publishers, including the *Saturday Evening Post* and *Harper’s Magazine*.<sup>108</sup> Daveron also experienced

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<sup>106</sup> Letter from Daveron to Gerald R. Hough, 2 July 1954, Pasta 3, Caixa 6, Acervo Alexander Daveron, NUDHEO, UNEMAT, Cáceres, Brazil.

<sup>107</sup> At one point before the war, he seems to have been involved in a business scheme designed to attract wealthy investors to an exclusive hunting and fishing club, dubbed “Texas Ranch Inc. do Brasil,” based in Mato Grosso. A promotional publication that Daveron saved reads “over 200 Americans have already bought shares in the ranch’s deluxe club to provide the \$2 million necessary to turn the 120,000 acre property into a luxurious hideaway where members and their guests may even go on ‘safaris’ to hunt and fish.” See pasta 04, “Documents related to Xingu Expedition of 1941,” Caixa 01, Acervo Alexander Daveron, NUDHEO, UNEMAT, Cáceres, Brazil.

<sup>108</sup> For correspondence with publishers, see Doc. 1, Pasta 2, Caixa 1, Acervo Alexander Daveron, NUDHEO, UNEMAT, Cáceres, Brazil.

financial troubles related to properties and investments in California that preoccupied him and drew his attention away from his efforts to promote his sport hunting business.<sup>109</sup>

Nevertheless, Daveron hosted several sport hunting expeditions in the 1950s and 60s. In 1955, he guided a fishing and hunting expedition with California acquaintances William Anderson and Henry Aube, an account of which was published in the *Oakland Tribune*.<sup>110</sup> He also planned a hunt with James Marshall, co-founder of the Brazilian department store chain, *Lojas Americanas*, in 1956, and corresponded about potential hunting expeditions with other American nationals in Brazil such as Arthur Glowka and Eugene Payne.<sup>111</sup> Whether or not any of these other expeditions actually occurred is unclear. What is clear, however, is that Daveron was widely recognized as a hunter and guide in the Pantanal. During his time there, he received letters, not only from potential sport hunting clients, but also wild animal dealers and local ranchers who sought his services.<sup>112</sup>

While Daveron struggled to establish his business, other enterprising companies, including *Brazil Safaris Limitada*, incorporated during the 1950s and 60s to meet the growing demand for guided, all expenses included, hunting “safaris” in the Pantanal and throughout Brazil. They publicized their businesses in Brazil’s two leading hunting and

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<sup>109</sup> The majority of Daveron’s surviving collection is composed of correspondence between Daveron, business contacts, and friends in California.

<sup>110</sup> Bill Strobel, “Jungle Proves Hunter’s Dream,” *Oakland Tribune*, 4 January 1956, 1.

<sup>111</sup> Letters from Daveron to James Marshall, 17 and 18 March 1956, Pasta 11, Caixa 1, Acervo Alexander Daveron, NUDHEO, UNEMAT, Cáceres, Brazil. Correspondence with Glowka and Payne contained within the same folder. Glowka was a naval aviator stationed in Brazil and Payne was a doctor and pharmaceutical researcher who also worked in Brazil.

<sup>112</sup> For correspondence with wild animal dealers, see letter from Benson Wild Animal Farm, Nashua, NH, to Daveron, 1945, Doc. 5, Pasta 7, Caixa 1. For correspondence with local ranchers, see letter from Luiz Lacerda, Fazenda Descalvados, to Daveron, 18 Mar. 1956, Pasta 10, Caixa 1, Acervo Alexander Daveron, NUDHEO, UNEMAT, Cáceres, Brazil.

fishing magazines, *Caça e Pesca* and *Fauna*. *Brazil Safaris Limitada* was founded in 1961 in Rio de Janeiro by the American Charles A. Cabell, whose father was well-known for similar business ventures in Africa. In an interview with *Caça e Pesca*, Cabell claimed that hunting jaguars in the Pantanal offered a more authentic experience to sport hunters and required much more skill than “pre-fabricated” safaris in Africa, where wealthy pseudo-hunters targeted big game from the safety of a vehicle.<sup>113</sup> Another business owner, Paulo Lima of *Safari-Sertões Limitada* of São Paulo, outfitted hunts – for both science and sport – all over Brazil but claimed that the Pantanal was the “most appropriate” for safaris.<sup>114</sup>

Safari companies sought to capitalize on the image of the Pantanal as isolated and wild, but also on its growing reputation as a paradise for sportsmen, a place to be experienced for its natural beauty and its dense wildlife population. In a promotional piece published in *Fauna*, the author described how one company, Safari Sertões, made it possible for hunters to “securely penetrate the fascinating and mysterious backlands of Mato Grosso,” a region “rich in hunting and fishing.” Unlike in earlier years when sport hunting in the Pantanal was improvised on the fly, clients could rest assured that the company’s “years of study and analysis” of the region would guarantee successful results. Each expedition lasted fifteen days and included all necessary transportation, food, and supplies. Once in camp, clients slept on “deluxe beds” in “special tents” sealed from the elements to prevent the entrance of mosquitos and other pests. A team of cooks, camp hands, boat pilots, local guides, a doctor, and even a taxidermist attended them day and night to prepare food, transport supplies, set up

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<sup>113</sup> For the date of incorporation and the interview with Cabell, see no author, “Grupo de Norte-Americanos organizou uma companhia para “Safaris” no Brasil,” *Caça e Pesca* 21, n. 241 (Junho 1961), 31 and no author, “Entrevista com um “Sportsman,”” *Caça e Pesca* 22, n. 262 (Março 1963), 26, 28.

<sup>114</sup> No author, “Empresa de Safaris,” *Caça e Pesca* 22, n. 263 (Abril 1963), 31-32.

camp, guide hunts, prepare fish caught, and skin, stuff, and mount wild animals hunted and killed.<sup>115</sup>

While these safari companies capitalized on the Pantanal's reputation as a hunting destination, other business ventures sought to attract a different subset of sportsmen. For example, in April 1966, the Coxim Fishing Club, backed by the hotel and tourism group *Matogrossense Turismo* (Matotur, S/A), made headlines in *Fauna*.<sup>116</sup> The group planned to construct the club in Coxim, on the banks of the Taquari River at the eastern edge of the Pantanal floodplain. The location fronted a "beautiful island," where members and guests could "enjoy the most admirable landscape." Developers hoped to pitch the club as an international attraction, an exclusive club that combined luxury accommodations with breathtaking scenery and some of the best fishing in Brazil. Members would benefit from the knowledge of local guides who would guide them in modern motor boats to the best spots for fishing, according to the species. The president of Matotur, Aridio Orestes Marinho, was finalizing plans and hoped to launch the project in May 1966.<sup>117</sup>

The proliferation of businesses catering to sportsmen in the Pantanal in the 1950s and 60s, likely parallels a more widespread pattern of growth in the Brazilian tourism industry by midcentury. Yet the style of tourism that developed in the Pantanal was of a particular type, one that depended upon and appealed to the natural beauty of the region and the richness of

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<sup>115</sup> H. da Silva Portugal, "A maior organização de caça e pesca da América do Sul – Safari-Sertões organização promotora de caça e pesca," *Fauna* 22, n. 11-12 (Nov.-Dez. 1963), 46-47.

<sup>116</sup> It is not clear whether plans for this business venture were actually carried out. For more on the sport fishing industry in the Pantanal, see Irineu Fabichak, *A pesca no pantanal de Mato Grosso* (São Paulo: Livraria Nobel, 1978).

<sup>117</sup> No author, "Coxim: será atração internacional com construção de Clube de Pesca," *Caça e Pesca* 25, n. 299 (Abril 1966), 17. See also, no author, "Mato Grosso já tem escritório de turismo em SP," *Correio da Manhã*, 30 Abril 1967, 4.

its flora and fauna. As we have seen, Sasha Siemel, Alexander Daveron, and many other entrepreneurs all drew upon this imagery to promote their businesses. Their efforts and the writings of many sport hunters are indicative of shifting attitudes about the Pantanal. Hunters in the 1930s envisioned their expeditions to the Pantanal as an escape from civilization and a means through which to reassert their control over the natural environment in the midst of the alienation of rapid industrialization and urbanization. These same motivations and sentiments persisted over the following decades, but by the 1950s, many more hunters began to view hunting expeditions as a way to experience and learn about an unknown part of Brazil that was quickly gaining a reputation as a wildlife hotspot. While the myths of isolation surrounding the Pantanal remained, Siemel and others capitalized on the shifting meanings of hunting and adventure by midcentury. Blending the logic of conservation with the logic of capitalism, they packaged the Pantanal as an experience, a place where sportsmen could encounter wild Brazil.

## **Conclusion**

This chapter examined the role of sport hunters in the growth of the tourism industry in the Pantanal and the early stages of the conservation movement in Brazil. Their writings reveal multiple and conflicted images of the Pantanal that reflect broader historical processes and debates in Brazil during the Vargas era. At the same time that they rejected the alienation of city life and urbanization, hunters acted within established networks of trade and commerce that linked Mato Grosso with the littoral. While many hunters lamented how rural populations disregarded the hunting code, few objected to the idea of hunting for profit in principle and many others actively sought to profit from the Pantanal's growing reputation as a paradise for hunters. Although it is clear that the expansion of hunting in the Pantanal



produced a growing concern for the environmental health of the region and its wildlife, the steady stream of hunting clients and the advent of “safari” companies both point to the continued appeal of sport hunting by the 1960s.

The expansion of hunting economies in the Pantanal from 1910 to the 1960s also introduced new and redefined old social and economic relationships between ranchers, rural laborers, riverine merchants, and a broad and diverse group of hunters (scientific, commercial, sport). As cattle ranching faded in importance in the Pantanal after World War II, hunters stimulated the region economically and provided additional employment for rural laborers who continued to scratch out livelihoods from a variety of economic pursuits. At the same time, commercial hunting and the trade in wild animal products created a valuable source of revenue for the state government of Mato Grosso during a time of relative economic crisis. In the years and decades after 1967 (when commercial hunting was outlawed), hunting gained new meanings yet again as landowners and governments struggled to control the activities of poachers in the Pantanal and environmentalists began to label animal species as “endangered” and “threatened.” Yet, as we have seen, consuming the Pantanal and profiting from its resources has taken many forms over time. Ultimately, the rise of environmentalism and ecotourism after 1970 represented not a turning point for the Pantanal but a new chapter in a longer history of conflict between development and conservation in the world’s largest wetland.

## CONCLUSION

### Where is the Green Hell?

No Pantanal ninguém pode passar régua. Sobremuito quando chove. A régua é existidura de limite. E o Pantanal não tem limites.

– Manoel de Barros, *Livro de pré-coisas*, 1985.<sup>1</sup>

In 1908, the Brazilian Alberto Rangel published *Inferno Verde*, an account inspired by his brief stint as a public official in the Amazon. Like many aspiring men of letters of the day, born and raised on the Brazilian littoral, Rangel described the Amazon as an ominous place where the natural environment forced scattered and destitute human populations to adapt.<sup>2</sup> His work reignited an old debate among lettered elites in Brazil and abroad about the Amazon. Was it really a dangerous and foreboding place or a space of vast opportunity for those with the courage to subdue it?<sup>3</sup> It is likely that these debates influenced (at least indirectly) Jacomo Vicenzi who penned *Paraíso Verde* in 1918 about his travels through the state of Mato Grosso, describing it as a fertile promised land ripe for colonization and development.<sup>4</sup> In 1931, Julian Duguid introduced the English-speaking world to the term when he published *Green Hell*, an account of his overland expedition through the Pantanal

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<sup>1</sup> Manoel de Barros, *Livro de pré-coisas: roteiro para uma excursão poética no Pantanal* (Rio de Janeiro: Philobiblion, 1985), 29.

<sup>2</sup> The famous Euclides da Cunha wrote the preface for the first edition of *Inferno Verde*. Alberto Rangel, *Inferno Verde*, (Tours: Typograhia Arrault, 1927). For a recent analysis of Rangel and his portrayal of the Amazon, see Marco Aurélio Coelho de Paiva, “O sertão amazônico: o inferno de Alberto Rangel,” *Sociologias* 13:26 (Jan.-Abr. 2011), 332-62.

<sup>3</sup> For background on early twentieth century debates about the Amazon, see Candace Slater, *Entangled Edens: Visions of the Amazon* (Berkeley: University of California Press, 2003), 95-99.

<sup>4</sup> Jacomo Vicenzi, *Paraíso verde: impressões de uma viagem a Matto Grosso em 1918* (Cuiabá: n.p., 1919).

and across the *Chiquitania* of eastern Bolivia. Duguid emphasized the stark isolation of the regions he traversed and, of course, the ever-present threat of hostile Indians. The book received wide publicity and was translated into multiple languages.<sup>5</sup>

Sometime thereafter, the term “Green Hell” took on a life of its own. Over a century after Rangel first coined the term, the Green Hell has proven a remarkably versatile and portable metaphor for describing tropical and subtropical South America. Over the last several decades it has been appropriated by environmentalists, anti-environmentalists, missionaries, historians, journalists, novelists, and many others to describe anything from indigenous exploitation in the Amazon to the violent and costly Chaco War of the 1930s between Paraguay and Bolivia.<sup>6</sup> The most common scholarly usage of the term has been to describe a space or territory at the margins of state power. For example, Bridget Chesterton and Anatoly Isaenko’s recently published article employs Green Hell as a term to describe the nation-building efforts of military officials and scientists in the Paraguayan Chaco.<sup>7</sup> What began as a term coined by an obscure public servant to describe a particular time and place now travels freely, a floating geographical container that transcends ecological, geopolitical, and temporal boundaries, from the Amazon to the Paraguayan Chaco.

Indeed, part of the reason for the popularity of the term is its capacity to carry so much descriptive weight, encapsulating a large continental expanse largely unknown to

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<sup>5</sup> Julian Duguid, *Green Hell: Adventures in the Mysterious Jungles of Eastern Bolivia* (New York: Century Company, 1931).

<sup>6</sup> See, for example, Steve Milloy, *Green Hell: How Environmentalists Plan to Control Your Life and What You Can Do to Stop Them* (Washington, D.C.: Regnery Publishing, 2009); Lucien Bodard, *Green Hell: Massacre of the Brazilian Indians* (New York: E.P Dutton, 1971); Adrian English, *The Green Hell: A Concise History of the Chaco War between Bolivia and Paraguay, 1932-1935* (Stroud, Gloucestershire: Spellmount, 2007); Homer Myers, *Grace in a Green Hell* (Bloomington, IN: CrossBooks, 2014).

<sup>7</sup> Bridget María Chesterton and Anatoly V. Isaenko, “A White Russian in the Green Hell: Military Science, Ethnography, and Nation Building,” *Hispanic American Historical Review* 94:4 (2014): 615-48.

cultivated elites and educated publics in the urban centers of the Americas and Europe. To educated readers (then and now) the Green Hell was a term with no need for definition, analysis, or explanation. Its meaning was readily apparent and simply understood. The Green Hell was any place where the progress and development of civilization had not fully taken hold and, in South America, those places were located at the heart of the continent. While we know that he spent a considerable amount of time in the Pantanal wetlands, for Duguid geographical or ecological specificity was beside the point. Duguid himself adopted a similarly broad and flexible definition, describing the Green Hell as a “truly colossal block of forest, so vast that the mind refuses to grasp the full immensity of its range.” He likened the Green Hell to the human body: “Its trunk is Brazil and Paraguay and eastern Bolivia, its far-flung shoulders dip into two oceans at Ecuador and Pernambuco, and its scraggy neck twists at Panama into the republics of Central America.”<sup>8</sup> Although Duguid recognized variations in geography, ecology, and human populations, his unifying and anthropomorphizing description of the interior of South America struck a chord with a civilized world anxious to subdue and profit from the region and its untapped resources.<sup>9</sup> Through their writings, authors such as Rangel and Duguid drew upon and perpetuated old myths of isolation that had circulated about central South America – and, specifically, the Pantanal – since the first European explorers arrived there in the sixteenth century.<sup>10</sup>

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<sup>8</sup> Duguid, *Green Hell*, 23.

<sup>9</sup> Candice Slater comments on the anthropomorphization and feminization of nature in *Entangled Edens*, 95-101.

<sup>10</sup> As we’ve seen, the Pantanal wetlands figured prominently in these first chronicles of exploration because the navigability of the Rio de la Plata and the Paraguay River made it the path of least resistance for expeditions into the interior of South America. Maria de Fátima Costa, *História de um país inexistente: O Pantanal entre os séculos XVI e XVIII* (São Paulo: Estação Liberdade, 1999).

The case of the Green Hell illustrates the power of the written word to bring regions into being, producing spaces that help us to orient ourselves within the world we inhabit. The production of space depends upon the creation of knowledge and the capacity to create knowledge, in turn, is mediated by disparities in power. As a result, not all social actors play equal roles in the historical creation of regions. The post-independence history of the Pantanal confirms this reality. For the better part of two centuries following independence, powerful stakeholders exercised the most authority to create knowledge about the Pantanal. Such actors included naturalists who benefitted from the political support of central governments and undertook expeditions to explore the Pantanal and classify its flora, fauna, human populations, and mineral resources; boundary officials, empowered by national governments in Brazil and Bolivia to survey and map the border region and to place boundary markers to fix the region in geographical space; civil engineers, who promoted the linked interests of governments and investors to create infrastructure such as telegraphs, railroads, and roads; field scientists and others armed with a formal education and the tools of science, who identified the Pantanal as a repository of zoological specimens; and sport hunters and other travelers with disposable income, who rediscovered the Pantanal as a paradise for hunters and articulated some of the first calls for conservation in the region. The Pantanal came into being largely through the writings and reports – and knowledge – that these groups produced.

Yet, according to social theorist Henri Lefebvre, the production of a regional space is a multi-layered, historical, and *social* process. Lefebvre develops the three-part concepts of the production of space, “representations of space,” and “representational space” to analyze the processes by which societies produce historical spaces over time. The social and

historical production of a region operates not only in the realm of descriptive texts and symbols imposed by those in power but also through the “lived” experiences of people through their labor and their interactions with the environment.<sup>11</sup> In the Pantanal, these specific practices and acts included the creation of river and overland trade networks, cutting gallery forests for fuel, the extraction of commodified natural resources for export, patterns of land tenure, cattle grazing, migratory labor, small-scale agriculture, hunting and fishing, and the seasonal movement of humans and animals (*transhumance*), both domestic and wild, in response to the flood regime. Unlike their more powerful counterparts, however, rural workers – such as Bolivian migrants, commercial hunters, *poaieiros*, or quebracho workers – did not have the luxury of devising “rational” ways to exploit the natural resources of the Pantanal. Consequently, the knowledge they produced about the region was borne out of their routine interactions with the environment and applied to their daily subsistence needs.<sup>12</sup>

A focus on the multiplicity of social actors who made discursive and material claims on the Pantanal and its resources also reveals that the production of space is not a linear process with an end result. Indeed, as this dissertation demonstrates, a large gap separated representations of the Pantanal from the reality on the ground throughout the period of study. While powerful stakeholders described it as a strategic and isolated region in order to justify their efforts to control it, the Pantanal underwent many of the same changes that characterized the rest of the continent in the decades and centuries after independence. After

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<sup>11</sup> Henri Lefebvre, *The Production of Space*, translated by Donald Nicholson-Smith (Oxford: Blackwell Publishers, 1991), 38-40.

<sup>12</sup> On the role of human activity in the creation of regions, see Hugh Raffles, *In Amazonia: A Natural History* (Princeton: Princeton University Press, 2002). On the disconnect between the ecological knowledge produced by those in power versus rural populations, see Joan Martinez-Alier, *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation* (Cheltenham, UK; Northampton, MA: Edward Elgar Publishing, 2002). On the relationship between nature and the historical creation of places, see Hugh Raffles, “‘Local Theory’: Nature and the Making of an Amazonian Place,” *Cultural Anthropology* 14:3 (1999): 323-60.

1870, the Paraguay River and its tributaries provided a reliable route for commercial expansion and, as a result, the Pantanal formed the center of a regional economy focused on cattle ranching and the extraction of natural resources for export. Commercial opportunities and a demand for labor drew increasing numbers of people through the region, representing a variety of ethnic backgrounds and nationalities.

This dissertation's focus on the socioeconomic contours of the Pantanal reveals two interrelated realities: both ecology and borders mattered in the post-independence history of the region. For example, in the late nineteenth century, Brazilian boundary officials benefited from a longer history of occupation in the region that dated to the colonial period. Drawing upon their understanding of the Pantanal and its cycles of flood and drought, they used this knowledge to their advantage to establish boundary demarcations that were favorable to Brazil. In the twentieth century, the Pantanal's flood regime and its distance from political and economic centers in Brazil and Bolivia frustrated the efforts of both governments to string telegraph lines and build railroads designed to bring the region into the fold of their respective nations. The ecological characteristics of the region also made it difficult for officials to control the movement of goods and people across international borders. A focus on Bolivian sources and archives helps to bring this reality into sharper relief.

While those in power viewed flood and drought in the Pantanal as problems to be overcome, local populations used these same things to their advantage, synchronizing their lives with the seasonal rhythms of the wetland. Drawing upon the resources of the Pantanal and adjacent ecological regions, rural populations adopted strategies of subsistence – including extractive labor, ranch labor, subsistence agriculture, hunting, and fishing – that carried them across international borders to ensure their livelihoods. The rural working class

was thus composed of people from diverse ethnic and national backgrounds, including people of mixed indigenous, African, and European descent from Paraguay, Argentina, Bolivia, and Brazil. As demand for some regional products decreased by the 1930s (*ipecacuanha*, cattle products, etc.) demand for others, such as wild animal products, grew significantly and many rural workers turned to commercial hunting to supplement their incomes. Despite federal legislation designed to control and profit from the industry, government officials found it difficult to regulate the activities of hunters in such a sparsely populated rural environment. Indeed, the local geographies that rural populations established and maintained have always been out of step with the centralizing and developmentalist agenda of post-independence governments and their adherents.

This disjuncture between representations of the Pantanal and the reality on the ground formed a central tension of this dissertation and it is one that continues to shape the region. In fact, the myth of isolation is alive and well in the Pantanal today. For example, it echoes strongly in the discourse of scientists and environmentalists and in debates that continue to swirl about economic development in the broader region. The scientific community continues to identify the Pantanal as one of the last “pristine” wetlands, preserved in a “nearly natural state” and “modified only slightly by man.”<sup>13</sup> They marshal scientific data and draw comparisons with other global wetlands to argue for the protection of an ecologically diverse and isolated region, only recently threatened by environmental degradation as a result of uncontrolled agro-industrial development in the broader region. On the other side of the

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<sup>13</sup> Frederick A. Swarts, “The Pantanal in the 21<sup>st</sup> Century: For the Planet’s Largest Wetland, an Uncertain Future,” in Frederick A. Swarts, ed., *The Pantanal: Understanding and Preserving the World’s Largest Wetland*, Selected Papers and Addresses from the World Conference on Preservation and Sustainable Development in the Pantanal (St. Paul, Minn.: Paragon House, 2000), 1; Charles W. Heckman, *The Pantanal of Poconé: Biota and Ecology in the Northern Section of the World’s Largest Pristine Wetland* (Dordrecht: Kluwer Academic Publishers, 1998), 1.



equation, a multi-national consortium of developers continues to seek solutions to the problem of the Pantanal and its isolation. The most well-known example is the *Hidrovia Waterway Project*, which proposes the construction of a fluvial highway linking the interior of Brazil, Bolivia, and Paraguay with Argentina and the Atlantic Ocean and is designed to improve commercial infrastructure and to open the region to increased international trade. The project would require substantial capital outlays and dredging, drainage, and dam projects in the Pantanal that scientists argue would permanently alter the ecosystem.<sup>14</sup>

Both of these narratives – of development and protection – silence the voices of local populations, the very people who stand to gain or lose the most from current efforts to conserve the Pantanal and its natural resources. They are tools that powerful stakeholders employ to advance their own agendas. The writer Abílio Leite de Barros recognized this fact when he criticized media outlets and environmentalists who claimed to have “discovered” the Pantanal for the rest of the world in the 1970s. According to Barros, many offered “fanciful and irresponsible interpretations” of the region without ever setting foot there. For Barros, born and raised in the Pantanal, such misrepresentations were the “price of its ecological importance.”<sup>15</sup> His writings echoed those of the anthropologist Vincenzo Petrucco who criticized his companions on the Mato Grosso Expedition (1931) and their “exaggerated” depictions of the Pantanal and its people.<sup>16</sup> Indeed, throughout its history outsiders held much

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<sup>14</sup> For background on the debate surrounding the Hidrovia Waterway Project, see Daniela M. Figueiredo, Eliana F.G.C. Dore, Adriano R. Paz, and Christopher F. Souza, “Availability, Uses and Management of Water in the Brazilian Pantanal,” 66-67, in Antonio Augusto Rossotto Ioris, ed., *Tropical Wetland Management: The South-American Pantanal and the International Experience* (Farnham, England: Ashgate Publishing, 2012).

<sup>15</sup> Barros offered these observations in the preface to a published collection of sources documenting the history of the British-owned Miranda Estância in the southern Pantanal. Abílio Leite de Barros, “By way of preface,” in Cezar Benevides and Nanci Leonzo, *The English and the peões in the Miranda Estância* (Campo Grande: Estúdio Texto, 2011), 9.

<sup>16</sup> Petrucco complained constantly about the amateurish activities of the members of his expedition. His review of Duguid’s *Green Hell* was as follows: “Much ado about nothing... The book ought to sell. Many

power to influence wider perceptions of the region and many continued to describe it as an unknown land, existing in a space outside of history. These dynamics led to the discursive erasure of the rural populations who lived there and contributed to its designation as an “unknown land.”

One of the consequences of this dynamic has been that we still have only a dim picture of the histories of those who continue to inhabit and make a living in the Pantanal. Instead of a dynamic rural population who actively inhabit the world and make claims upon its resources, media outlets and nongovernmental organizations (NGOs) often portray *pantaneiros* in oversimplified terms. For example, while they act out of a genuine desire to preserve and educate the general public about their cultural heritage, many NGOs present *pantaneiros* as living symbols of a bygone era, existing in harmony with their environment.<sup>17</sup> At the other end of the spectrum, many conservation-oriented NGOs approach rural populations as stakeholders who threaten the Pantanal through irresponsible use of its natural resources.<sup>18</sup> Hence, multiple NGOs have worked to implement “environmental education” programs designed to raise local awareness about the ecological importance of the Pantanal.<sup>19</sup> While many members of the local population already possess a wealth of

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exaggerations, many errors, poor comprehension in parts, and at times very poor observation.” Vincenzo Petrullo, Matto Grosso Expedition, Diary Book 1, IV, V, 1931, p. 117, Box 3, Folder 2, Vincenzo Petrullo Expedition Records, Penn Museum, Philadelphia.

<sup>17</sup> The most prominent NGO devoted to preserving the cultural heritage of rural populations in the Pantanal is the *Instituto Homem Pantaneiro* in Corumbá: <http://www.institutohomempantaneiro.org.br/>

<sup>18</sup> These concerns, of course, are not unfounded. Multiple scientific studies have documented how the activities of humans – through ranching, agriculture, pollution, water control, and deforestation – are altering the Pantanal ecosystem.

<sup>19</sup> A variety of major international conservation organizations currently operate programs in the Pantanal, including the World Wildlife Fund, Panthera, and Conservation International. Major Brazilian conservation organizations also have an active presence in the Pantanal, including *Rios Vivos* and *Pró-Carnívoros*. One of the most recent and high-profile efforts is *Bichos do Pantanal*: <http://www.bichosdopantanal.org/en/>. With funding and support from the Brazilian government and *Petrobras* – Brazil’s semi-public oil company – the project

knowledge about the region and its natural resources – achieved through lived experience – the environmental education activities of conservation organizations demonstrate that the production of knowledge in the Pantanal is an ongoing and power-laden process.

For those interested in social and environmental history, the Pantanal remains a fertile field of inquiry. While this dissertation uncovered some of the ways that local populations used the ecology of the region and its borderland location to their advantage, future research will work to illuminate the social histories of – and interrelations between – specific communities in the Pantanal region. For example, judicial records and notarial records in Cáceres, Cuiabá, and Corumbá will enable historians to determine with much more clarity the relationships between rural workers and their employers, from the *mata da poaia* in the north to the *quebracho* reserves in the south and the cattle ranches in between.

Correspondence and reports generated by Bolivian officials from the Delegado Nacional en el Oriente (Puerto Suárez) will also shed more light on patterns of seasonal and permanent migration between eastern Bolivia and the broader Pantanal and how such patterns changed in response to broader geopolitical events, such as the Chaco War and the Bolivian Revolution of 1952. Analysis of municipal and regional records will also allow for a fuller examination of the relationship between migratory labor and the ecology of the region. This dissertation also raises important questions about the social and ecological conflicts that developed around hunting in the Pantanal, especially after the 1930s when the Vargas regime introduced laws to regulate the activity. Future research will use new sources to explore interactions between commercial hunters, sporthunters, field scientists, and government

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unites a transnational network of conservation organizations and academic institutions devoted to creating an inventory of fauna in the Pantanal and educating local populations about the importance of wildlife. One of the main goals of the project is to use conservation and environmental education as vehicles to promote sustainable tourism in the northern Pantanal.

officials in the Pantanal and how these relationships changed after 1967 when the Brazilian government outlawed commercial hunting and the trade in wild animal products.<sup>20</sup>

Writing the social and environmental history of a region as vast as the Pantanal is no simple task. Although the sources exist to document the twentieth century history of the region, most of them are located in unorganized municipal archives. Moreover, its borderland location poses multiple logistical hurdles for research. For example, municipal-level sources for the Bolivian Pantanal are scarce, if they exist at all.<sup>21</sup> Instead, national-level institutions with headquarters in La Paz preserve the largest volume of sources to document the history of the border region.<sup>22</sup> Due to its emerging importance as a workshop for international conservation, it is likely that the Pantanal will attract more interest from historians and social scientists in the coming years. It remains to be seen, however, what shape the region will take as a result of this latest phase of discovery.

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<sup>20</sup> I tried without luck to locate archival sources for the federal Division of Hunting and Fishing (DCP) in Brazil. In the future, I plan to seek them out in the Ministry of Agriculture (of which the DCP was a part) and Treasury Department collections at the National Archive branch in Brasília. Municipal records in Corumbá will also help to clarify the importance of commercial hunting to the local economy during the period of study. I also hope to conduct oral histories with rural populations to further contextualize their lives in relation to social, economic, political changes that shaped the region during the second half of the twentieth century.

<sup>21</sup> I traveled twice to Puerto Suárez in search of municipal archival sources – town council and judicial records – but officials insist that they do not exist.

<sup>22</sup> After the dissertation, I plan to locate records produced by the Delegado Nacional en el Oriente (Puerto Suárez), which was established in the 1910s and had administrative jurisdiction over the border region between the Bahía Negra and San Matías.

## APPENDICES

### APPENDIX 1: Ledger of Bolivian Citizens Registered in Vice-Consulate of Bolivia in Cáceres, Mato Grosso, Brazil, 1944-1977

**Source:** Reyes Maldonado, Libro de matrículas, 1944-1973, Caixa 3, Acervo Reyes Maldonado, Núcleo de Documentação de História Escrita e Oral (NUDHEO), Universidade do Estado de Mato Grosso (UNEMAT), Cáceres, Brasil.

Date	Name	Age	Literacy	Birthplace	Marital Status	Profession	Color	Last Residence
17/9/1944	Antonio Suárez	25	No	Beni	Single	Labrador	Moreno	San Ignacio
19/9/1944	Dionisio García	20	No	San Matías	Single	Labrador	Moreno	San Matías
19/9/1944	Carlos Mariano Suárez	17	No	San Miguel	Single	Labrador	Moreno	San Miguel
28/9/1944	Toribio Zabalo	30	No	Santa Anita	Married	Labrador	Moreno	Santa Anita
29/9/1944	José Domingo Suárez Torres	28	Yes	Concepción	Married	Labrador	Moreno	Concepción
30/9/1944	Luis Vargas Rodriguez	16	Yes	San Ignacio	Single	Labrador	Moreno	Santa Clara
30/9/1944	Melquíades Ricardo Garcia	27	Yes	San Matías	Single	Labrador	Moreno	San Matías
30/9/1944	Manuel Puchui	42	No	Las Petas	Married	Labrador	Moreno	San Matías
2/10/1944	Leonardo Antelo	34	Yes	San Ignacio	Single	Labrador	Moreno	San Juan
2/10/1944	Alejandro Saravia	44	Yes	San Ignacio del Sara	Married	Labrador	Moreno	
3/10/1944	Manuel Román		Yes	Concepción	Married	Labrador	Moreno	Puerto Suárez, S. Matías
3/10/1944	Gil Velarde	34	Yes	Santa Rosa de la Roca	Single	Labrador	Moreno	
3/10/1944	Nelson Toledo		Yes	Santa Cruz	Married	Joyero	Blanco	San Matías

4/10/1944	Guillermo Justiniano Pedroza	27		San Ignacio	Married	Sapatero	Blanco	Puerto Suárez
4/10/1944	José Marcos Arteaga		No	Limón (Chiquitos)	Married	Labrador	Moreno	San Matías
n.d.	Bernabé Nunes	27	No	San Miguel	Married	Labrador	Moreno	San Miguel
5/10/1944	Casimiro Gil	29	No	Tuna (Chiquitos)	Married	Labrador	Moreno	San Fabián
5/10/1944	Alejo Hurtado		No	Limón	Married	Labrador	Moreno	Limón
5/10/1944	Anselmo Hurtado		No	Portachuelo	Married	Labrador	Moreno	Puerto Suárez
5/10/1944	Luis Alvarez Ramos	48	Yes	Concepción	Married	Labrador	Moreno	Concepción
n.d.	Ervin Ribero	19	Yes	San Ignacio	Single	Comerciante	Moreno	Puerto Suárez
n.d.	Juan de Dios Ribero	17	Yes	San Ignacio	Single	Joyero	Moreno	Puerto Suárez
n.d.	José Jacinto Samaricha		No	San Matías	Married	Labrador	Moreno	San Matías
n.d.	Isaias Ribero Fria	66	Yes	San Ignacio	Married	Joyero	Moreno	San Ignacio
n.d.	Virginia Zabala		No	Limones	Widow	Usos domésticos	Morena	
n.d.	Luis Mercado (Gabriel)	12	No	San Matías			Moreno	
n.d.	Alejandro García	7	No	La Gaiba			Moreno	
6/10/1944	Bartolo García	26	Yes	Los Palmares		Labrador	Moreno	
6/10/1944	Juan de la Cruz Peña	28	No	San Ignacio		Labrador	Moreno	
n.d.	Miguel Bernabé Ribero	23	No	Las Petas		Labrador	Moreno	
9/10/1944	Amadeo Pechaza	60	No	San Ignacio		Labrador	Blanco	

9/10/1944	Eulelia Pereira	44	No	Curicha		Usos domésticos	Morena	
9/10/1944	Lorenzo Pechaza	25	No	Las Petas		Labrador	Moreno	Las Petas
10/10/1944	Bartolo Morales	25		San Ignacio		Labrador	Moreno	
11/10/1944	Agustín Velasco	20	No	San Rafael		Labrador	Moreno	
12/10/1944	Carlos José Melgar	44	No	San Matías		Labrador	Moreno	
n.d.	Carmen Vega							
13/10/1944	Pablo Espinoza	56	Yes	Santa Ana		Labrador	Moreno	San Matías
13/10/1944	Rufina Suruby	52		San Matías				San Matías
13/10/1944	Juan Espinoza	23	Yes	San Matías		Labrador	Moreno	San Matías
13/10/1944	Pascuala Espinoza	21		San Matías				San Matías
13/10/1944	Bernabé Espinoza	17	Yes	San Matías			Moreno	San Matías
13/10/1944	Francisca Espinoza	15						San Matías
13/10/1944	Praxedes Espinoza	12						San Matías
13/10/1944	Jacintha Espinoza	10						San Matías
13/10/1944	Tomás Espinoza	6						San Matías
14/10/1944	Victorio García	28	No	San Matías			Moreno	
19/10/1944	José Marcelino		No	San Rafael			Moreno	San Matías
n.d.	Hermenegilda Poquiviqui	32		Santa Ana				
21/10/1944	Juan Ramón		No	Las Petas			Moreno	San Matías
24/10/1944	Liberato Heredia	33	Yes	San José			Moreno	Rio Esperanza, Rio Iténez
3/11/1944	Adolfo Poñez Zeballos	21	Yes	San Matías	Single	Labrador	Moreno	
4/11/1944	José María Rocha	35	No	Santa María	Married	Labrador	Moreno	San Pedro
13/11/1944	Manuel Zabala	34		Santa Ana	Married	Labrador	Moreno	

18/11/1944	José Jovio			San Matías	Single	Labrador	Moreno	
21/11/1944	Miguel Hernando Chávez	34	Yes	San Rafael	Single	Mecánico	Moreno	San Ignacio
21/11/1944	Juan de Dios Durán	30	No	San Ignacio	Single	Labrador	Moreno	Espinal
21/11/1944	Anastasio Aguilar	18	Yes	San Matías	Single	Ayudante de escritorio	Moreno	San Matías
24/11/1944	Luis Manuel Rodriguez	25	No	Santa Fe (Chiquitos)	Single	Labrador	Moreno	San Matías
25/11/1944	Antonio Taborga	30	No	Ascensión	Married	Labrador	Moreno	Campo Caiçara
27/11/1944	Juan Hurtado	21	Yes	San Ignacio	Married	Labrador	Moreno	Limón
28/11/1944	Francisco Tosube	22	Yes	Curichino	Married	Labrador	Moreno	San Matías
28/11/1944	Francisco Tomichá	17	Yes	Ascensión	Single	Labrador	Moreno	San Matías
30/11/1944	Gerónimo Paisano	44	Yes	San Ignacio	Married	Herrero	Blanco	San Josefina (Brasil)
30/11/1944	Concepción Guardia Paisano	41	Yes	Santa Ana	Married	Usos domésticos		San Josefina
30/11/1944	Fidela Paisano	18	Yes	Ascensión		Usos domésticos		San Josefina
30/11/1944	Luisa Paisano de Sá	16	Yes	Ascensión	Married	Usos domésticos		
30/11/1944	Nora Paisano	14	Yes	Ascensión				
30/11/1944	Eudosia Paisano	12	Yes	Ascensión				
2/12/1944	Manuel Jesús	25	No	Santa Ana	Married	Labrador	Moreno	El Carbón
4/12/1944	José Pinto	23	Yes	San Matías	Single	Labrador	Moreno	Las Garzas
n.d.	José Esteban Pereira							
7/12/1944	Francisco Justiniano		No	San José	Single	Labrador	Moreno	San Matías



9/12/1944	Antonio Castedo	41	Yes	Santa Cruz	Viudo	Siringuero	Blanco	San Antonio, Rio Sepotuba
18/12/1944	Jesús Toledo	20		San Ignacio	Single	Labrador	Moreno	Cáceres
22/12/1944	Hercilia Poquiviqui	28		Puerto Sucre (Beni)	Single	Usos domésticos	Morena	San Matías
27/12/1944	Francisco Pedro Cesario	19		Ascensión	Single	Labrador	Moreno	
27/12/1944	Rafael Paraba	33		Santa Ana	Married	Labrador	Moreno	Las Piedritas
31/12/1944	Pedro Ynacio Ortíz	20		San Ignacio	Single	Labrador	Moreno	San Matías
31/12/1944	Mariano Alvarez	20	Yes	San Matías	Single	Labrador	Moreno	San Matías
n.d.	Manuel Espinoza	34	Yes	Bahia Palmares	Single		Moreno	San Matías
31/12/1944	Carlos Tomichá	21	No	La Curicha (Bolivia)	Single		Moreno	San Matías
8/1/1945	Juan Dorado	25	Yes	San Miguel	Single	Labrador	Moreno	Porto Esperidião
10/1/1945	Manuel Galindo	40	Yes	San Rafael	Married	Labrador	Moreno	Pedreiras
20/1/1945	Abel García	16	No	Las Petas	Single	Labrador	Moreno	Las Conchas
6/3/1945	Miguel Salvatierra Ramos	18		Candelaria (Palmares)	Single	Labrador	Moreno	“Carne Seca” (Brasil)
24/3/1945	Pedro Tacoó	24		San Matías	Married	Labrador	Moreno	Usina de la Ressaca (Brasil)
24/3/1945	Julio Alves	20		Candelaria (Palmares)	Single	Labrador	Moreno	Usina Ressaca
27/3/1945	Diego Ramos	27		Monte Cristo	Married	Labrador	Moreno	“Moura”
27/3/1945	Felipe Silva	21		Ascensión	Single	Vaquero	Moreno	Cáceres

24/4/1945	Juan Bautista Putari	28	Yes	San Bartolo	Married	Labrador	Moreno	Cáceres
21/5/1945	José Nazario Santo	15		Corralito (Chiquitos)	Single	Labrador	Moreno	Barra do Jauru
28/5/1945	Manuel Espiritu Paraba Rubí	22		San Matías	Single	Carpintero	Moreno	Estación Parecis
2/6/1945	Walter Limpías Roca	31	Yes	Santa Cruz	Single	Exfuncionario de la policía	Blanco	San José, Rio Sepotuba
4/6/1945	Antonio Dorado	38	Yes	San Miguel	Single	Labrador	Moreno	San José, Rio Sepotuba
6/6/1945	Telésforo Ardaya		No	San Ignacio	Married	Labrador	Moreno	“Guardador” – Rio Jauru
8/6/1945	Joaquín Rodríguez	36		Puerto Suárez	Single	Labrador	Moreno	Cáceres
2/7/1945	José Redes	42	Yes	San Ignacio	Single	Carpintero	Moreno	Caiçara
n.d.	Atanasio Tomichá	25		Santa Ana	Married	Labrador	Moreno	
12/11/1945	Feliciano Ribero	20	Yes	Las Petas	Single	Labrador	Moreno	Rio Sepotuba
12/11/1945	Bartolo García	28	Yes	Palmares (Chiquitos)	Married	Labrador	Moreno	Cáceres
3/1/1946	Mariano Alvarez Palacio	21	Yes	San Matías	Single	Labrador	Moreno	San Matías
5/1/1946	Juan Sinforiano Ferreira	30	Yes	“Bahia” (Chiquitos)	Single	Labrador	Moreno	
2/2/1946	Alejo Ribero	36	No	San Ignacio	Married	Labrador	Moreno	Flexero (“Macaco”), Rio Sepotuba
4/2/1946	Joaquín Rodríguez		No	Puerto Suárez	Single	Labrador	Moreno	
4/2/1946	Jaime Paraba	22	No	San Matías	Single	Labrador	Moreno	

12/2/1946	Florencio Mejía	20	No	“En la frontera”	Single	Labrador	Moreno	
23/2/1946	Rafael Lora Espinoza			San Rafael	Single	Labrador	Moreno	
23/2/1946	Julio Vaca			Concepción	Single	Labrador	Moreno	San Matías
23/2/1946	Francisco Moroá			San Matías	Single		Moreno	San Matías
28/2/1946	Emiliano Hurtado	35	Yes	Limonos (Chiquitos)	Married	Labrador	Moreno	Rio Vermelho
16/4/1946	Egidio Oliveira	21	Yes	Santo Corazón	Married	Labrador	Moreno	
28/5/1946	Juan Ramón Bartolo		No	Las Petas	Married	Labrador	Moreno	
5/6/1946	Florencio Dorado	45	No	San Miguel	Single	Labrador	Moreno claro	Flexeiro, Rio Sepotuba
5/6/1946	Julio Fernandez	27	Yes	San Matías	Single	Labrador	Blanco	Flexeiro, Rio Sepotuba
1/7/1946	Miguel Morales	25	No	San Ignacio	Single	Labrador	Moreno	Pantanal, Rio Jauru
1/7/1946	Ignacio Rojas	46	No	Santa Ana	Married	Labrador		Pantanal
1/7/1946	Cornelio Charupá		No	Ascensión		Labrador	Moreno	
n.d.	Nazario Chamo		No	Concepción	Married	Labrador	Moreno	Tempestad
9/8/1946	Jacinto Belzu	20	Yes	San Matías	Single	Labrador	Moreno	Tapirapuã
10/8/1946	Julián Pesoa	26	No	Santo Corazón	Single	Labrador	Moreno	Rio Vermelho
12/8/1946	Pascual Poñez	24	No	Concepción	Single	Labrador	Moreno	Retiro Rio Cabaçal
9/9/1946	Tomás Gonzalo	30		San Matías	Single	Labrador		
9/9/1946	Dionisio Peña	21		Zumá	Single	Labrador	Blanco	
10/9/1946	Jesús Peña	26		Santa Ana	Viudo		Moreno	Barranco Vermelho

10/9/1946	Javier Para	20		Ascensión	Single	Labrador	Moreno	Barranco Vermelho
5/10/1946	Miguel Rosales	22		San Miguel	Single	Labrador	Moreno	Flexeiro, Rio Sepotuba
8/10/1946	Ascencio Yupique	26		Las Petas	Single	Labrador	Moreno	
31/10/1946	María Alves Ribero			San Matías	Single	Usos domésticos		
13/6/1947	Geraldo Charupá	24		San Matías	Single	Labrador	Moreno	
20/11/1947	Samuel López Jantsch	30	Yes	Santa Cruz	Single	Educacionista	Blanco	
3/8/1947	Alice Vargas Rodriguez	24	Yes	San Ignacio	Single	Servicios domésticos	Morena	
30/9/1947	Alfredo Ortíz R.	14	Yes	Concepción	Single	Agremiador	Blanco	
3/10/1949	Darío Velarde Salvatierra	34		San Rafael	Single	Labrador	Blanco	Flexeiro, Rio Sepotuba
19/10/1949	Hernán Román	18		Rio Paraguá	Single	Labrador	Moreno	
22/1/1950	Manuel Castedo	18		Concepción		Labrador	Moreno	
19/7/1950	Carmen Redes Widow de Ortíz	49		San Ignacio				
19/7/1950	Deyse Ortíz Redes	15		San Ignacio				
5/8/1950	Samuel Redes Ortíz	11	Yes	San Javier	Single	Estudiante	Moreno	
3/7/1951	José Yaybone	16		San Matías				Puerto Esperidião
3/7/1951	Juan Anastacio Peña			San Vicente				Jacotinga
13/7/1951	Juan Hurtado Mejía	30	Yes	San Ignacio	Married	Labrador	Moreno	

13/7/1951	Juan Francisco Mendes	21	No	Santa Fe	Single	Labrador	Moreno	
13/7/1951	Rufino Piris	18		La Trinchera	Single		Moreno	San Matías
17/7/1951	Lino Zeballos	18		San Matías	Single		Moreno	San Matías
17/7/1951	Fernando Maquisai	20		Curicha	Single		Moreno	San Matías
17/7/1951	Esteban Charupá	19		San Matías	Single		Moreno	San Matías
17/7/1951	Lorenzo Vargas	18		San Matías	Single		Moreno	San Matías
17/7/1951	Marcos Salvatierras	19		San Ignacio	Single		Moreno	Cáceres
17/7/1951	Manuel Rueda	19		Puerto Suárez	Single		Blanco	San Matías
25/7/1951	Ramón Rojas	24	Yes	El Forno (or Torno?)	Married			San Matías
25/7/1951	Pedro Charupá	26	Yes	Santa Ana	Single			Las Petas
25/7/1951	Hernán Herrera Dorado	32	Yes	Cafetal (Beni)	Single	Industrial	Blanco	Foz del Rio Cabixi (Brasil)
25/7/1951	Vera Ribera	16		San Ignacio	Single			Cafetal
25/7/1951	Laida Ribera	12		San Ignacio	Single		Morena	Cafetal
31/7/1951	José Chávez Yurupí	43	No	Concepción	Married		Trigueño	Corzo de Pedra
31/7/1951	Nicolás Yurupí	22	Yes	Concepción	Single	Labrador		Corzo de Pedra
14/8/1951	Leonardo Antelo	31	Yes	San Ignacio	Single	Labrador		Caiçara
27/8/1951	Luciano Rojas	25	No	San Matías	Married	Labrador		San Matías
n.d.	Andrés Méndez							
27/8/1951	Elias Méndez	19	No	San Matías	Single	Labrador		“Cuatao”
3/9/1951	Bernabé Nuñez	36	No	San Miguel	Married	Labrador		Cáceres
8/9/1951	Saúl Gutiérrez Céspedes	27	Yes	San Javier	Single	Herrero	Blanco	Ascensión de Guarayos

8/9/1951	Antonio Ares	20	No	Las Petas	Single	Labrador	Moreno	San Matías
9/9/1951	Cayetano Ares	25		Las Petas	Single	Labrador	Moreno	Las Petas
9/9/1951	Victoriano Dorado	34	Yes	San Miguel	Married	Labrador	Moreno	Flexeiro, Rio Sepotuba
15/9/1951	Ascencio Sabore	18	Yes	Ascensión	Single	Labrador	Moreno	Burity (frontera)
22/9/1951	Eduardo Pesoa	19	No	Las Petas	Single	Labrador	Moreno	Burity
6/10/1951	Sebastián Siye Masai	24		San Matías	Single	Agricultor	Moreno	Porto Esperidião
1/12/1951	Antonio Sorioco	29	No	Santa Ana	Single		Moreno	Pantanal (Rio Jauru)
9/12/1951	Lorenzo Algarañoz	29	Yes	Roboré			Moreno	Cáceres
15/12/1951	Casimiro Mejía	30	Yes	San Ignacio			Moreno	Barranco Vermelho
1/3/1952	Gonzalo Cuéllar	19	Yes	Santa Cruz			Blanco	Concepción
10/3/1952	Ernesto Bazán	19	Yes	San Miguel	Single		Moreno	
15/3/1952	Pedro Zeballos	30	No	San Matías	Married		Moreno	
16/3/1952	Walter Lutz Peinado	20	Yes	San Matías			Blanco	San Matías
17/3/1952	Lorgio Escalante Arauz	26	Yes	San José	Single	Motorista	Blanco	Cáceres
26/5/1955	Isidoro Rojas Tosube	25	Yes	San Matías	Single	Labrador	Moreno	Cáceres
26/5/1955	Mariano Ardaya Sabore	25	Yes	San Matías	Single	Labrador	Moreno	Cáceres
20/8/1955	Juan Charupá		No	San José	Viudo	Labrador	Moreno	Cáceres
9/5/1957	Armando Laras Yturricha	27	Yes	La Paz	Single	Dactilógrafo	Morena blanca	Cuiabá and Rio Taquari
9/7/1958	Maximiano Sánchez Alvarez	39	Yes	Charagua	Single	Comerciante	Moreno	Alto Paraguai,

								lives in Cuiaba
12/7/1958	Peregrina Alvarez Palacio	35		San Matías	Married	Servicios domésticos		Cáceres
12/7/1958	Fidela Antelo Durán	36		San Ignacio	Widow	Servicios domésticos		Cáceres
15/7/1958	D. Isolina Velarde de Atala	37		“Las Magueres”	Married	Costurera		Cáceres
20/11/1959	Víctor Molina da Silva	32	Yes	Santa Cruz	Single	Labrador	Moreno	
20/11/1959	Rogeria Ardaya	35	No	Santa Ana	Single	Quehaceres domésticos	Mestiza	
20/11/1959	Mercedes Paraba	35	No	San Rafael	Single	Quehaceres domésticos	Negruza (?)	
20/11/1959	Guillermina Ardaya	13	No	Libertad (Velasco)	Single	Quehaceres domésticos	Morena	
20/11/1959	Pabla Quinquivi	44	No	Santa Rosa	Single	Quehaceres domésticos	Morena	
20/11/1959	Carlos Poiqui	46	No	San Miguel	Single	Labrador	Moreno	
20/11/1959	Pedro Ramos	60	No	San Ignacio	Single		Moreno	
20/11/1959	Juana Paraba	18	No	Retiro (Velasco)	Single	Quehaceres domésticos	Negruza (?)	
20/11/1959	Fernando Pone Poquiviqui	21	Yes	Mira Flores (Velasco)	Single	Labrador	Negruza (?)	
11/2/1960	Genaro Tosube Surubi	41	Yes	San Matías	Single	Ganadero	Trigueña	
28/5/1960	Roberto Leños	17	Yes	Trinidad (Beni)	Single	Dibujante	Blanco	Cáceres
10/1/1961	Onofre Picolomini	25	Yes	Concepción	Married	Carpintero	Moreno	Corumbá
15/2/1961	Rogelia Méndes	25	Yes	Santa Cruz	Single	Usos domésticos	Blanca	Cáceres

28/2/1961	Luis Alberto Dominguez Ardaya	21	Yes	Santa Cruz	Single	Estudiante	Blanco	Santa Cruz
28/2/1961	Marco Salvatierra	9	Yes	San Ignacio	Single	Labrador	Pardo	Cáceres
n.d.	Remberto Paesano	58	Yes	Santa Ana	Single	Talabartero	Blanco	Cáceres
28/11/1961	Carmelo Landívar	48	Yes	Santa Cruz	Single	Labrador	Moreno	Cáceres
n.d.	Carmelo Justiniano Colodro	33	No	Portachuelo	Single	Labrador	Moreno	Cáceres
n.d.	Petronila Flores Lopes	24	No	Santa Rosa		Labores domesticas	Morena	Cáceres
28/11/1961	Teodoro Lorent Moreno	20	Yes	Santa Cruz	Single	Mecánico amador	Blanco	
29/1/1962	Andrés Méndes Belzu	32	No	Santa Anita	Married	Labrador	Moreno	San Matías
n.d.	Luciano Rojas	34	No	San Matías	Married	Labrador	Moreno	Matão, Brasil
29/1/1962	Juan Anastacio Peña Solíz	32	Yes	San Vicente	Married	Labrador	Moreno	San Matías
29/1/1962	Ceferino Méndez Surubi	25	No	Santa Fe	Married	Labrador	Moreno	“Pantanal”
29/1/1962	Juan Francisco Méndez Surubi	31	No	Santa Fe	Married	Labrador	Moreno	“Pantanal”
29/1/1962	Elías Méndez	26	No	San Matías	Married	Labrador	Moreno	“Pantanal”
29/1/1962	Miguel Morales	41	No	San Ignacio	Married	Labrador	Moreno	“Pantanal”
29/1/1962	Mariano Montero	56	No	Concepción	Married	Labrador	Moreno	“Acury”
30/1/1962	Jesús Ares	23	No	Tuna	Married	Labrador	Moreno	"Maton"
13/2/1962	Miguel Putari	30	Yes	San Matías	Married	Labrador	Moreno	“Maton”
23/5/1962	Pedro Poquiviqui	21	Yes	Mira Flores	Single	Carpintero	Moreno	Mato Grosso
30/5/1962	Adolfo Cuéllar Montero	29	Yes	San Joaquin (Beni)	Single	Ganadero	Moreno	San Joaquín



8/6/1962	Arnoldo Rapp Rojas	24	Yes	San Matías	Single	Ganadero	Moreno	San Matías
14/7/1962	Carmelo Putare Poñez	43	No	San Matías	Married	Labrador	Moreno	Limones (Brasil)
10/12/1962	Roberto Añez	36	Yes	Roboré	Single	Agricultor	Moreno	Montero (Santa Cruz)
12/2/1963	José Flores Espinoza	30	Yes	San Matías	Single	Carpintero	Moreno	
17/7/1963	Ranulfo Pereira Ribeiro	37	No	San Javier	Single	Agricultor	Moreno	Pontes e Lacerda
17/7/1963	Luisa Matú	46	No	Concepción	Single	Usos domésticos	Morena	Pontes e Lacerda
n.d.	Mauricio Ramos	22	Yes	Motacu	Single	Ganadero	Blanco	San Matías
9/9/1963	Ricardo Rapp Martínez	39	Yes	San Matías	Married	Ganadero	Blanco	San Matías
12/9/1963	Juan García Casupa	23	Yes	San Matías	Single	Motorista	Moreno	San Matías
26/12/1963	Juan de Dios Justiniano	46	Yes	San Ignacio	Single	Comerciante	Blanco	San Ignacio
11/12/1964	Pablo Arcaba Manaca	35	Yes	San Miguel	Married	Agricultor	Moreno	San Matías
18/3/1965	Eloy Escobar Herbas	32	Yes	Cochabamba	Single	Mecanico electricista	Blanco	
9/4/1965	Guillermo Ribero Vaca	44	Yes	Santa Cruz	Married	Ganadero	Moreno	San Matías
29/4/1965	Alejandro Vaca	23	Yes	Candelaria	Single	Agricultor	Moreno	San Matías
30/4/1965	Laida Maldonado Céspedes	20	Yes	San Ignacio	Single	Estudiante	Blanca	Cáceres
7/6/1965	Francisco Renner Aguilera	26	Yes	Trinidad (Beni)	Single	Mecánico	Moreno	Mato Grosso
22/1/1966	Olga Lola Méndez Suárez	24	No	Santa Cruz	Single	Usos domésticos	Morena	Cáceres

5/4/1966	Juan Milton Jiménez	25	Yes	Cochabamba	Single	Labrador	Moreno	Santa Cruz
16/5/1966	Catalina Eguez Bazán de Flores	28	Yes	Potrero (near San Matías)	Married	Hilanderá	Morena clara	
16/5/1966	Gregorio Samaricha	24	Yes	San Matías		Albañil	Moreno	Cáceres
20/5/1966	Alfredo Cisneros Ortíz	26	Yes	Santa Cruz		Comerciante	Blanco	San Ignacio
30/6/1966	Germán Llado Bastos	34	Yes	Constancia	Married	Auxiliar de escritorio	Blanco	Cáceres
7/10/1966	Dromiro Silva Cuellar	32	Yes	Ascensión	Single	Labrador	Moreno	Cáceres
7/10/1966	William Figueroa Frey	18	Yes	San José de Chiquitos	Single	Ganadero	Moreno	Fazenda Viga
26/10/1966	Gilberto Limpías	50	Yes	Santa Cruz	Single	Agricultor	Blanco	San José, Río Sepotuba
27/11/1966	José Charupá Para	18	Yes	Las Petas	Single	Labrador	Moreno	Fazenda Toriba
27/11/1966	Arcino Aguilera García	20	No	San Matías	Single	Labrador	Moreno	Pontes e Lacerda
4/2/1967	Juan Sinforiano Ferreira	51	Yes	"Bahia"	Married	Vaquero	Oscuro	Cáceres
2/7/1968	Julio Tomichá Vaca	36	Yes	Concepción	Married	Agricultor	Moreno	Cáceres
2/7/1968	Nicolás Moreno	52	Yes	Santiago de Chiquitos	Married	Agricultor	Moreno oscuro	Rio Cabaçal
23/8/1968	Rudecindo Prado Aguilera	23	Yes	Cruz Chica	Single	Agricultor	Blanco	Cáceres
n.d.	Lucio Dormini Silva	30		San Matías	Married	Agricultor	Moreno	Fazenda Figueira

15/6/1969	Elizabeth Bertachini Jiménez	16		Santa Cruz	Single			
16/10/1969	Damian Méndez Montero	29	Yes	Cidral (Santa Cruz)	Single	Agricultor	Moreno	Gleba de Mirassol (Brasil)
23/10/1970	René Mercado Durán	28	Yes	Santa Cruz	Single	Electricista	Blanco	Cuiabá
14/1/1970	Ernestina Peña Tomichá	22	Yes	San Matías	Single	Usos domésticos	Morena	San Matías
14/11/1970	Manuel Ramos Manacá	22	Yes	San Juan de la Cruz	Single	Agricultor	Moreno	San Matías
7/7/1971	Rosa Nuñez	52	No	San Miguel		Usos domésticos	Morena	Porto Esperidião
25/7/1971	Rafaela Luiza Alpires Agreda	77	No	Santa Rosa	Widow	Usos domésticos	Morena	Cáceres
9/8/1971	Casimiro Mejías	49	Yes	San Ignacio	Married	Labrador	Moreno	Cáceres
2/9/1971	Eduardo Aguilera Vargas	23	Yes	San Rafael	Single	Albañil, pedrero	Moreno	Fazenda Cerro Azul
4/11/1971	Elena Netz Kühn	21	Yes	Candelaria	Single	Usos domésticos	Morena	Cáceres
15/12/1971	Carmelo Landívar	58	Yes	Santa Cruz	Married	Guarda nocturno	Moreno	Cáceres
24/1/1972	Casiano Hurtado Nuñez	53	Yes	San Miguel	Married	Labrador	Blanco	Cáceres
28/1/1972	Ascencio Massavi	57	No	San Rafael	Married	Labrador	Moreno	"Junco"
1/2/1972	Vitalina Paesano de Salvatierra	35	Yes	Santa Ana	Married	Usos domésticos	Morena	San Ignacio (Bolivia)
4/2/1972	Fidel Ortíz Gutiérrez	22	Yes	Santa Cruz	Single	Pedrero	Moreno	Corumbá y Cáceres
9/6/1972	Micaela Landívar Atala		Yes	Santa Cruz	Widow	Usos domésticos	Blanca	Cáceres

10/7/1972	Guillermo Ortíz Redes	53	Yes	San Ignacio	Single	Comerciante, enfermero	Blanco	Cuiabá
12/7/1972	Deisy Ortíz Kury	37	Yes		Married	Usos domésticos	Morena	Cáceres
27/10/1972	Eusebio García Vargas	59	Yes	Buena Vista	Married	Labrador	Blanco	Fortaleza (frontera Brasil- Bolivia)
9/11/1972	Ernesto Abastoflor Campazano	23	Yes	Incalacaya (La Paz)	Single	Mecánico	Moreno	Corumbá
14/2/1973	Maria Isabel Amaral Sevilla	18	Yes	San Matías	Single	Balconista	Morena clara	Cáceres
26/2/1973	Lourdes Mendoza	52	Yes	Santa Cruz	Married	Usos domésticos	Blanca	Cáceres
27/3/1973	Miguel Salvatierra	61	No	Ascensión	Married	Labrador	Blanco	
13/4/1973	Rudecinda Egues	54	No	San Rafael	Widow		Morena	
12/5/1973	Feliberto Pérez Romero	45	Yes	Cochabamba	Married	Mecánico, carpintero, pedrero	Blanco	San Matías
29/5/1973	Alejandro Barba Salvatierra		Yes	Paraizo (zona litigiosa)	Married	Labrador	Blanco	
29/5/1973	Jorge Rojas		Yes	San Matías	Single	Estudiante	Moreno	

## APPENDIX 2: Annual Exports of Wild Animal Products, 1890-1899\*

Species	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
Anteater (Tamanduá)									3	2
Bird Feathers (unspecified, in grams)								15,000		
Caiman (Jacaré) (kg)									31	
Capybara			20						1	
Deer (Cervo)	45		50		485	80		21	125	47
Deer (Veado)	20	54	80					200		35
Heron Feathers (grams)										5,000
Heron Wings (kg)										155
Jaguar	107	9	70	74	85	70	79	49	191	130
Maned Wolf	2									
Sloth	14									
River Otter	1									
Snakes (unspecified)									10	
Tapir (Anta)								1		2
Unspecified	6		50	201	102	786	276	349	343	82
Unspecified (kg)			1,090	20	70	260	325	441	126	116

\*Unless otherwise noted, statistics for Appendices 2-6 were compiled from the following sources: Arquivo da Delegacia do Ministerio da Fazenda em Mato Grosso, Tesouraria da Fazenda Nacional em Mato Grosso, Alfândega de Corumbá, Guias de Exportação, 1877-1916, Microfilm Rolls 1-3 and 21-24, Núcleo de Documentação e Informação Histórica Regional, Universidade Federal de Mato Grosso; Coletoria de Corumbá, Livros de Estatísticas de Exportação, Caixas 2-16, 1878-1903, Arquivo Público de Mato Grosso; Mesa de Rendas de Corumbá, Livros de Estatísticas de Exportação, Caixas 2-56 1904-1942, Arquivo Publico de Mato Grosso; and S. Cardoso Ayala, Feliciano Simon, and Joaquim Augusto da Costa Marques. *Album graphico do Estado de Matto-Grosso (E.E.U.U. do Brazil)*. (Corumbá, Brazil: s.n, 1914), 120-123.

**APPENDIX 3: Annual Exports of Wild Animal Products, 1900-1909**

<b>Species</b>	<b>1900</b>	<b>1901</b>	<b>1902</b>	<b>1903</b>	<b>1904</b>	<b>1905</b>	<b>1906</b>	<b>1907</b>	<b>1908</b>	<b>1909</b>
Anaconda (Sucuri)			1			1				
Anteater (Tamanduá)								1		
Bird Wings (unspecified) (kg)								111	35	45
Caiman (Jacaré)			1			2				
Deer (Cervo)	6	10	11			274		144		3
Deer (Veado)		1	25					77		
Deer Antlers (Chifres de Cervo)						2				20
Heron Feathers (grams)									7,000	121,115
Ocelot (Jaguaririca)			2							
Oncilla (Gato do Mato)			1							
Jaguar	136	95	131	73	64	157	129	258	211	201
River Otter (Lontra)			2							
Snake (unspecified)			2							
Unspecified	128	57	72	68	8	560	368	100	189	787
Unspecified (kg)								100		

#### APPENDIX 4: Annual Exports of Wild Animal Products, 1910-1919

Species	1910	1911	1912	1913	1914*	1915	1916	1917	1918	1919
Anaconda (Sucuri)										3
Anteater (Tamanduá)										1
Baguary Feathers (grams)			11,440	1,700						
Bird feathers (unspecified) (grams)			5,400							
Bird skins (unspecified)				8						
Deer (Cervo)	12	241		248		130	7	151		
Deer (Veado)	25									
Deer Antlers (Chifres de Cervo, Veado)		42	50	67			25			
Heron Feathers (grams)	54,004	128,415	127,288	114,503		38,380	26,898	18,197	19,540	109,043
Heron Skins										56
Jabiru Stork Feathers (grams)			2,580							
Jabiru Stork Wings (pairs)			67							
Jabiru Stork Skins			7							
Jaguar	197	177	196	142		166	136	94	273	150
Monkey (Macaco)		5								
River Otter (Lontra)						1				
Tapir (Anta)			21				13			4
Unspecified	919	1,575	1,482	2,065		1,284	1,617	1,602	1,227	101

# **APPENDIX 5: Annual Exports of Wild Animal Products, 1920-1929**

<b>Species</b>	<b>1920</b>	<b>1921</b>	<b>1922</b>	<b>1923</b>	<b>1924</b>	<b>1925</b>	<b>1926</b>	<b>1927</b>	<b>1928</b>	<b>1929</b>
Anaconda (Sucuri)										26
Bird Feathers (unspecified)										10,000
Caiman (Jacaré)		12			3	107	4,949			
Caiman Oil (kg)							5,000			
Capybara										
Capybara oil (kg)							2,538			
Deer (Cervo)			151							
Deer (Veado)	503									
Heron Feathers (grams)	31,020	37,112	22,804	63,727	211,775	250,952	8,801	20,446		480
Heron Skins	116									
Jaguar	112	101	141	180	256	7,650	413	391	259	132
Live Animals (unspecified)										15
Ocelot (Jaguaririca)					2					
Puma (Onça Parda)						77	10		27	9
Rhea Feathers (grams)									26,000	53,000
Tapir (Anta)					10					
Unspecified	34	156								
Unspecified (kg)			547	3,384.50	1,580	11,452	3,500 (?)	13,874	62,089	80,086



# **APPENDIX 6: Annual Exports of Wild Animal Products, 1930-1939**

<b>Species</b>	<b>1930</b>	<b>1931</b>	<b>1932</b>	<b>1933</b>	<b>1934</b>	<b>1935</b>	<b>1936*</b>	<b>1937**</b>	<b>1938</b>	<b>1939</b>
Anaconda							13			
Bird Feathers (unspecified) (g)	10,000									
Black Jaguar (onça preta)	31	105	50				77			
Capybara			42,279	93,027	83,316	99,596	73,303	88,259	53,259	35,945
Capybara Oil (kg)			1,500	3,101						
Deer (cervo)					4,139		11,855	10,105	5,082	3,900
Deer (veado)							1,478	5,318	3,625	2,136
Heron Feathers (grams)			202,000		58,000		28,000			
Jaguar	1,167	358	229	1,988		691.5	186	176	74	76
Ocelot							722	2,804	1,687	1,581
Peccary (caititu)					32,633	31,757	15,327	36,228	24,614	19,714
Peccary (queixada)							8,828	10,194	6,402	4,412
Puma (onça parda)	49	21					26			
River Otter (lontra)					184	59	1,335	7,908	2,094	1,711
River Otter (ariranha)					271		656	1,042	301	203
Tapir (anta)							664	125	24	
Unspecified	69,153	84,611	23,474	30,851	8,874	21,816	3,706			

\*1936 data for Estrada de Ferro Noroeste do Brasil (EFNB) only. Does not Corumbá.

\*\*1937-1939 data for Corumbá only. Does not include EFNB. Data for 1937-1939 is compiled from the following source: Álvaro Coutinho Aguirre, *A caça e a pesca no pantanal de Mato Grosso* (Rio de Janeiro: Ministério da Agricultura, 1945), 40-44.

## APPENDIX 7: Annual Exports of Wild Animal Products, 1940-1942 and 1954-1957

**Sources:** Álvaro Coutinho Aguirre, A caça e a pesca no pantanal de Mato Grosso (Rio de Janeiro: Ministério da Agricultura, 1945), 40-44 and Aguirre, A caça e a pesca no pantanal de Mato Grosso (Rio de Janeiro: Ministério da Agricultura, 1958), 56-58.

Species	1940	1941	1942
Capybara	22,558	34,466	26,803
Peccary (caititu)	13,293	17,060	12,246
Peccary (queixada)	3,101	4,428	5,175
River Otter (lontra)	366	52	
River Otter (ariranha)	219	64	
<b>Total</b>	39,537	56,070	44,224

Species	1954	1955	1956	1957
Capybara (Capivara)	88,887	94,495	86,373	83,442
Peccary (Caetetus)	21,353	14,042	12,788	19,561
Peccary (Queixadas)	6,198	4,416	5,473	7,637
Ocelot (Jaguariricas)	2,244	3,020	1,773	3,288
Jaguar (Onça-pintada)	63	77	86	70
River Otter (Lontras)	662	354	628	458
River Otter (Ariranhas)	74		11	2
Brocket Deer (Veado Mateiro)	216	167		357
Puma (Onça Parda)	38	1		
Oncilla (Gato do Mato)	347	11	104	319
Iguana (Sinimbu)			760	100
Caiman (Jacaré)				6
<b>Total</b>	120,082	116,582	107,996	115,068

## APPENDIX 8: Annual Exports of Wild Animal Products, 1960-1969

**Sources:** Conselho Nacional de Estatística (IBGE), *Anuário Estatístico do Brasil, 1964* XXV (Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1964): 59-60; IBGE, *Anuário Estatístico do Brasil, 1967* XXVIII (Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1967): 76-78; and IBGE, *Anuário Estatístico do Brasil, 1970* XXXI (Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística, 1970), 102-104.

Species	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
River Otter (Ariranha)	1,514	1,008	1,764	1,431	1,207	1,651	1,428	930	740	717
Capybara (Capivara)	92,336	126,669	132,899	122,777	114,891	122,920	81,861	61,701	53,115	21,992
Gato do Mato*	4,996	5,087	4,365	4,793	3,542	3,360	4,208	2,987	2,364	1,996
Peccary (Porco do Mato)	29,261	38,972	48,621	52,514	58,895	64,925	61,915	46,074	40,712	44,970
Deer (Veado)	4,991	5,211	6,245	6,447	8,848	12,185	7,225	7,020	4,838	4,879
Caiman (Jacaré)	5,300	17,928	29,276	20,071	370,375	428,998	240,317	154,732	211,150	128,219

\*Gato do mato refers to any number of smaller wildcats in the genus *Leopardus*, including the margay (*Leopardus wiedii*) and the oncilla (*Leopardus tigrinus*)

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