

SETH GARFIELD

IN SEARCH OF THE AMAZON

AMERICAN ENCOUNTERS/GLOBAL INTERACTIONS

A series edited by Gilbert M. Joseph and Emily S. Rosenberg

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AMAZON

BRAZIL, THE UNITED STATES, AND THE NATURE OF A REGION

SETH GARFIELD

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ACRONYMS

ACA	Associação Comercial do Amazonas (Trade Association of Amazonas)
BASA	Banco da Amazônia (Bank of Amazonia)
ВСВ	Banco de Crédito da Borracha (Rubber Credit Bank)
BEW	Board of Economic Warfare
CAETA	Comissão Administrativa do Encaminhamento de Trabalhadores para a Amazônia (Administrative Commission for the Forwarding of Workers to Amazonia)
CNG	Conselho Nacional de Geografia (National Geography Council)
CNS	Conselho Nacional de Seringueiros (National Council of Rubber Tappers)
DIP	Departamento de Imprensa e Propaganda (Department of Press and Propaganda)
DNI	Departamento Nacional de Imigração (National Department of Immigration)
FBC	Fundação Brasil Central (Central Brazil Foundation)
IAN	Instituto Agronômico do Norte (Northern Agronomic Institute)
IBGE	Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics)
IFOCS	Inspetoria Federal de Obras Contra as Secas (Federal Inspectorate of Works to Combat Drought)
IPEN	Instituto de Patologia Experimental do Norte (Northern Institute of Experimental Pathology)

IRRC International Rubber Regulation Committee Office of Inter-American Affairs OIAA Rubber Development Corporation RDC Reconstruction Finance Corporation RFC Rubber Reserve Company RRC Superintendência de Abastecimento do Vale Amazônico SAVA (Superintendency of Supplies for the Amazon) Serviço Especial de Mobilização de Trabalhadores para a Amazônia SEMTA (Special Service for the Mobilization of Workers for the Amazon) SESP Serviço Especial de Saúde Pública (Special Public Health Service) Serviço de Navegação na Amazônia e Administração do Porto do SNAPP Pará (Amazon Navigation and Port Authority Service)

Superintendência do Plano de Valorização Econômica da Amazônia

(Superintendency for the Amazon Economic Valorization Plan) Superintendência do Desenvolvimento da Amazônia SUDAM (Superintendency for the Development of Amazonia)

SPVEA

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INTRODUCTION

THE REAPPEARING AMAZON

uxuriant, sublime, forbidding, denuded: images of the Amazon arrest the beholder. Yet the Amazon enthralls us through more than its physical wonders. Its power is a social product, forged by people and institutions that have made material and symbolic investments in the region.¹ This book examines an array of mediators in Brazil and the United States that delineated the nature of the Amazon during the twentieth century. Focused on the era of the Second World War, this study explores how conflicts raging within and over the Brazilian Amazon came to shape landscapes and lifeways in the region. It offers an analysis of the political and environmental history of the Brazilian Amazon as much as a reflection on shifting cultural representations of its nature.

The Brazilian Amazon, which comprises between 70 and 80 percent of the total area of the Basin, has long been knotted in disputes over labor, resources, and meaning. As forester Roy Nash aptly stated in *The Conquest of Brazil* (1926): "Many things the tropical forest has meant to as many men. To the Indian, abundant home. To the convict turned adrift by the early Portuguese, abominable hell." More broadly, we might argue, for peasant-extractivists and traders, the forest has presented the battleground or backdrop for struggles over sustenance and power. For outside promoters, proper use of the tropical forest promises to rescue societies from doom or disenchantment. For skeptics, the jungle defies remediation. Mirroring the broader Western oscillation between triumph and despair in imagining human capacity to trans-

form nature, such visions in the tropics invariably enlist hierarchies of race and nation.³ The Amazon's vast geographic expanse, dense forests, and fitful integration into global markets have triggered and prolonged such conflicts and controversies.

During the twentieth century, the Amazon came to be summoned by a large number and range of contestants in the Northern and Southern Hemispheres. The expansion of state power, population growth, and rising demand for raw materials redefined notions of economic need and national security. Industrialization fueled the expansion of cities and mass markets, while new technologies fired urban elites' faith in the capacity to vanquish space, distance, and time. Agricultural mechanization and land commodification displaced millions of rural smallholders. Policymakers and professional sectors identified or recast socioenvironmental problems in national or global terms, pitching solutions in the language of science and public planning. Mass media beamed news and images to far-flung consumers, and broader swaths of the population demanded the rights of citizenship. Amidst wrenching societal transformations, competing human designs on the Amazon proliferated.

As a hinterland, the Amazon challenged the competence of the Brazilian state to achieve governability and national integration. As a borderland, it crystallized geopolitical concerns with territorial defense. As a resource-rich land, the Amazon became increasingly entwined with patterns of capital investment in Brazil and trends in global consumption. As a promised land, it beckoned economic migrants, drought refugees, and adventurers. As a homeland, Amazonian landscapes comprised sites of concerted human intervention, founts of historical reference and environmental knowledge, and loci of conflicts over resources and power.⁵ As a tropical lowland, the Amazon was marked as much by distinct ecosystems as invidious canards about race, place, and national character.

Indeed, the varied delimitations of the Brazilian Amazon, reflective of disparate biogeographic and political-administrative criteria, illustrate the multiple perspectives of institutional and disciplinary fields.⁶ The hydrographic basin of the Brazilian Amazon encompasses the geographic region drained by the Amazon River and its tributaries. The Amazonian biome comprises a set of terrestrial and aquatic ecosystems that include tropical forests, floodplain forests, grasslands, savannas, mangroves, and palm forests. The "classic" Amazon is a geographic and political division comprising the six states of the northern region—Pará, Amazonas, Roraima, Rondônia, Acre, and Amapá—where tropical rain forest predomi-



Map Intro.1 Legal Amazon

nates. The "Legal Amazon," a federally created administrative unit dating to 1953, has extended the geographic boundaries of "classic" Amazonia by more than one-third through the incorporation of western Maranhão and the northern portions of Mato Grosso and Goiás (today the state of Tocantins)⁷ (see map Intro.1).

This book approaches the field of political ecology in the Amazon as a study in conflicts over the use, rights, and definition of territory and resources among distinct social groups.8 While recognizing the fundamental material basis to such struggles, the book also explores the symbolic and affective relationships that groups maintain with the biophysical environment.9 Building on the concept of a "commodity ecumene," which anthropologist Arjun Appadurai defines as the "transcultural network of relationships linking producers, distributors, and consumers of a particular commodity or set of commodities," this study highlights how landscapes, politics, and things are constituted through such flows, processes, and interconnections. 10 Midway between the turn-of-the-century rubber boom and the contemporary environmental fracas, the wartime history of the Brazilian Amazon reveals the multiple mediations and networks that served to constitute the diverse region.

Of Jungle Explorers and Historians: Stories and Methods

Jungle explorers revel in recounting their arduous journeys, so I follow in their footsteps in enumerating the difficulties of writing a history of the Amazon. My tale is devoid of hair-raising brushes with piranhas, anacondas, stingrays, malarial mosquitoes, and treacherous rapids that comprise the standard fare of such accounts. Rather, as a historian, the greatest challenges that I encountered stemmed from social conditions in the Amazon, which pose particular problems for historical record-keeping and research, and consolidation of a historiographical canon. In places where state power and capital falter, impunity flourishes, and humidity rules, archival material often ends up being poorly preserved and spotty (in both senses of the word).

Yet the Amazon has always fit uncomfortably into Brazilian historiography for epistemological reasons as well. Peripheral to the eastern slaveplantations that propelled colonial integration into Atlantic markets and to the import-substitution industrialization that fuelled economic growth in twentieth-century Brazil, the Amazon seemingly confounds the grand narratives of empire and the nation-state—the muses of History. Nor has the study of frontiers and borders coalesced as a specialized field in Brazilian historiography to situate the history of the Amazon in the process of nation-state formation.¹² In any event, the Amazon's longstanding integration into the global economy, the spatial fragmentation of its populations due to territorial size and dispersal of resources, and the variegated patchwork that characterize its social history complicate its conceptualization as "a frontier," if the latter is perceived as modernity erupting uniformly onto an uncharted hinterland.¹³ In addition, the decades-long concentration of Brazil's doctoral programs in the nation's southern industrial core consolidated a formidable historiography covering the São Paulo-Rio de Janeiro axis, and drained academic talent from the north as well; and the prohibitive airfares from southern Brazil to the Amazon further dissuaded those unblessed with research grants from foreign universities, foundations, and governments.

Amid the so-called nature-culture divide grounding Western ontologies, the Amazon's academic banishment to the former realm has further deterred, or detoured, historiographical exploration.¹⁴ It is not for nothing that the natural sciences and the social sciences—particularly geography and anthropology, with their disciplinary origins in the colonialist study of the "organic" rootedness and "primitive" mores of rural popula-

tions—have long claimed, and given rise to, the study of the Amazon.¹⁵ Geographically distant from the centers of political power, economically "underdeveloped," and environmentally challenging to outsiders, the nature of the Amazon was declaimed a problem by scientific experts, policymakers, and international advocates, rather than a matter for historical inquiry.

Since historians, like jungle explorers, tend to overstate the originality of their discoveries, a number of qualifications are in order for the wary reader. Native sons of the Brazilian Amazon, notably Arthur Cezar Ferreira Reis, Leandro Tocantins, and Samuel Benchimol, were pioneering and prolific chroniclers of the region's rich history.¹⁶ Moreover, Brazilian historiography's early emphasis on boom and bust cycles in national economic development spurred robust scholarship on the Amazon's legendary turn-of-the-century bonanza.¹⁷ In a similar fashion, research on the region's boomlet during the Second World War has flourished over the last decade.¹⁸ And our understanding of recent Amazonian history has been immeasurably enhanced by the groundbreaking work of geographers Bertha Becker and Susanna Hecht and sociologists Marianne Schmink and Charles Wood focusing on government policies, investment from the nation's core economic regions, and highway construction in the processes of regional formation and integration into the nation-state.19

Rather than an integrated analysis of the multiple networks and processes that mutually construct natures and societies, however, much of the existing scholarship on the Amazon has tended to depart from and isolate such poles. Environmental histories of Amazonian biota can obscure the role of labor, social conflict, and representation in the making of nature; or that nature is knowable through the mediation of the sciences, networks of instruments, and the intervention of professions and disciplines.²⁰ Social science texts examining the impact of public policies in the Amazon can conceal how the realms of discourse and the content of objects also serve to construct societies. And discourse-centered analyses can overlook that although rhetoric, representation, and semiotics impact things and social contexts, they are not worlds unto themselves.²¹ Thus, whereas scholarship on the Amazon has tended to focus on modes of production and systems of land use, (geo)politics and public policies, or cultural representations, I intertwine these analytical strands to explore the multilevel processes of region making. My conceptualization of the Brazilian Amazon is informed by geographer David Harvey's insight that places are constructed and experienced as material, ecological artifacts and intricate networks of social relations; are the focus of discursive activity, filled with symbolic and representational meanings; and are the distinctive product of institutionalized social and politicaleconomic power.²² I employ intersecting local, regional, national, and global scales to assess the multiple processes involved in the social production of space.23

Practitioners of environmental history, a field traditionally situated at the intersection of natural history and intellectual and cultural history, have examined the role of the environment in shaping human behavior, in shifting human relations with the nonhuman natural world, and in questions of sustainability. Others have explored the material and discursive production of nature, and the political processes that have shaped environmentalism.24 My analysis of the Amazon's history heeds sociologist of science Bruno Latour's directive that nature and society should not serve as explanatory terms but rather as something that requires a conjoined explanation. Since "nature" cannot be separated from its social representations, and "society" itself has to be made out of nonhuman, nonsocial resources, Latour urges a historical-minded focus on the mediators and networks, composed of associations of humans and nonhumans, that create natures and societies.²⁵ In tracking the Amazon's intermediaries, I examine the region's laboring classes both as key instruments in the production of nature, through modification of its material base, and as shapers and subjects of public policies and debate.26 But I also analyze other collectivities in Brazil and the United States - sanitarians and mosquitoes, doctors and pathogens, engineers and automobiles, journalists and newspapers, filmmakers and movies, botanists and rubber trees, chemists and synthetics, migrants and drought profiteers, ecologists and deforestation—that forged the Amazon during World War II and its aftermath. Thus, my lens shifts from the political and professional strongholds and media outlets in Washington and Rio de Janeiro to the boardrooms and laboratories of the large rubber goods manufacturers; from the highways of the United States to the parched backlands and war-wrecked economies of the Brazilian northeast; from the hardscrabble rubber properties, boom towns, and frontier health posts in the Amazon to the contemporary struggles of tappers and environmental organizations. The making of nature, as much as politics, emerges as a contested process that must be understood outside of conventional geographic and historiographical boundaries.

In exploring the "productive friction of global connections" that have framed the history of the Brazilian Amazon, this study ambles across continents rather than within them.²⁷ Although transnational analysis along a north-south axis may seem untoward given the physical dimensions of the Amazon Basin, which spills into eight different South American countries and one overseas territory, the decision stems from the particular story that I wish to tell: one that interlinks the histories of the United States—the place where I live, teach, and much of my readership resides — and Brazil, my country of study. Some may feel that my transnational take on the Amazon is redolent of colonialist literary production, marketed as it was for domestic consumption.²⁸ Or perhaps others will see a response to Eric Wolf's salutary injunction to uncover "the conjoint participation of Western and non-Western people in this worldwide process" of history—although I prefer less ideologically loaded, and inaccurate, labels to conceptualize the respective histories of the United States and Brazil.²⁹ My focus also reflects the challenge of conducting multiarchival, binational research in collections teeming with the documentation characteristic of twentieth-century bureaucracies. Ultimately, if all regions are made up of networks of social linkages and understandings that transcend bounded notions of place, any transnational method can only go so far or deep in narrating the historical past. Of greater importance is that a transnational optic need not jettison region- and nation-based analyses of the historical formations of race, space, class, culture, politics, or nature; nor need specialization in any historical subfield restrict practitioners to a singular methodology or research agenda.

Through a composite of synchronic snapshots, multisited in nature and often thick in descriptive content, this book focuses on an array of war-era mediators involved in the making of the Amazon, bearing in mind that "what are called environments, that is relations between people and nature, get made and remade not so much in the plans but in the process."30 Chapter 1 examines the coterie of white-collar professionals, military officials, intellectuals, and traditional oligarchs in Brazil who endeavored to remake populations and landscapes in the Amazon during the first Vargas regime (1930–45). Chapter 2 traces the origins and objectives of U.S. government investment in the wartime Amazon, precipitated by the nation's loss of 92 percent of its rubber supply following the Japanese invasion of the Malayan peninsula in early 1942. Chapter 3 explores how Brazilian and U.S. policymakers sought to transform the local terms and meanings of forest labor, recasting the Amazon as an arsenal for hemispheric defense and a laboratory for social uplift. Chapter 4 analyzes the socioenvironmental factors that led tens of thousands to migrate from northeastern Brazil to the Amazon during the war. Chapter 5 assesses the varied wartime outcomes and historical legacies in and for the Amazon region. The epilogue, tacking from the 1970s through the United Nations Conference on Environment and Development of 1992, charts the Amazon's political reappearance as global ecological sanctuary, highlighting both historical links and counterpoints to the war era.

While introductions to contemporary accounts of the Amazon often begin by rattling off a list of superlatives that seemingly provide readers with definitive answers, this one closes with them to pose fundamental questions. At 2,700,000 square miles, the Amazon Basin is threequarters the size of the continental United States, and a million square miles larger than all of Europe exclusive of Russia. Covering two-fifths of South America and three-fifths of Brazil, the Amazon Basin contains one-fifth of the planet's available fresh water, one-third of its evergreen broad-leaved forest resources, and one-tenth of its living species. The Amazon River, the longest in the world (at 4,255 miles) and the most voluminous, has some 1,100 tributaries, seven of which are over 1,000 miles long. And the Amazon's forests, with rainfall averages of 2,300 millimeters (7.5 feet) per year, represent, along with the adjacent Orinoco and Guyanas, over half the world's surviving tropical rain forests.31 Shall we now ask: Who has brought such inventories to light? Why have the realities that they represent carried diverse social meanings? How has their significance evolved over time?

CHAPTER 1

BORDER AND PROGRESS

The Amazon and the Estado Novo

n 1941, U.S. historian Hubert Herring noted the Amazon's capacity to stir nationalist sentiment in Brazil. While residents of the more industrial states of São Paulo, Minas Gerais, and Rio Grande do Sul looked upon the rest of Brazil with condescension, he affirmed, they exhibited "indulgent imperial pride in the uncharted Amazon empire." Three years later, geographer Earl Parker Hanson made a similar observation. Whereas elites once shunned discussion of the Amazon because it conjured images of a nation consisting largely of "vast jungled wildernesses, filled with poisonous insects and unpleasantly savage Indians," many had since decided that "there is the future South America."

Such "pride" in the Amazon's "future" had been nurtured. Indeed, the nationalization of the Amazon "question" represents one of the dramatic transformations in twentieth-century Brazilian politics. Its origins can be traced to the first government of Getúlio Vargas (1930–45), and particularly to the authoritarian period of the Estado Novo (1937–45), when the rehabilitation of Amazonia morphed from a localized oligarchic longing into a state-backed crusade. While the economic nationalism of the Vargas regime has been extensively explored, this chapter examines the efforts of state officials and elites to promote the regional development of the Amazon.³

As economists have noted, in a country with one area that is rich and prosperous and another poor and stagnant, the periph-

eral region is only likely to attract public investment during periods of extraordinary prosperity, inflationary excess, or when the promotion of such growth assumes paramount national importance.⁴ In 1937, the southern states of Rio de Janeiro, São Paulo, and Rio Grande do Sul accounted for more than half of Brazilian agricultural and industrial production; coffee comprised 70 percent of Brazil's exports, two-thirds of which came from São Paulo.5 Moreover, residents of southern Brazil tended to view the Amazon as a Green Hell, or merely harbored general indifference to extraregional concerns in a continental nation. This chapter analyzes the confluence of factors that redirected public policies and state investment toward the Amazon during the Estado Novo. Rising national and global demand for rubber offered new bidders for Amazonian latex. Geopolitical doctrines legitimized the military's quest to colonize the Amazon and tap its natural resources. And the Vargas dictatorship, disbanding the legislature, banning political opposition, and blaring official propaganda, upheld the development of the Amazon as a nationalist imperative. (Perhaps it is no coincidence that another full-blown, state-driven program to develop the Amazon would recur decades later in Brazil under military rule.)

Yet if nature, regions, and nations are produced from the power-laden struggles involving discrete human and nonhuman mediators, the task here too is to examine their protagonists during the Vargas era. The Amazon's social meanings were delineated by forest biota, whose distribution, extraction, and circulation are discussed more fully in subsequent chapters. Among human mediators, the Amazon's new-found resonance during the Estado Novo reflected its embodiment of multiple aspirations in a society undergoing tumultuous change. Industrialists in southern Brazil favored access to cheap raw materials, tariffs, and subsidies, while Amazonian producers and traders clamored for higher prices for forest commodities.8 Military officials strove to secure national borders and patriotic loyalties, while oligarchs defended local fiefdoms and prerogatives. Sanitarians groomed robust workers to sustain national development, while forest peasants resolved to use their bodies as they saw fit. Intellectuals searched for Brazil's organic roots, while technocrats heralded its future.9 And poor forest dwellers repudiated the lifestyle overhauls and social stigmatization intrinsic to developmentalist projects. 10 Amidst such cacophony, however, standard refrains sounded. Policymakers and professionals trumpeted the potential of science, technology, and state planning to remake nature and society in the Amazon. And elite pronouncements compartmentalized the Amazonian region and the purported cultural lag of its populations, even as the centralization of state power and the expansion of industrial capitalism deepened national integration.¹¹

"Taking a Chance" on the Amazon

"Amazonia will be quite a game, but it will be worth it," Vargas's Foreign Minister Oswaldo Aranha reportedly stated. "What is needed is the audacity and imagination of new people accustomed to taking a chance, that is, to win and lose."12 Indeed, the region's prospective developers confronted numerous challenges. Socioeconomic, environmental, demographic, and epidemiological factors in the Amazon hindered the flow of capital, the rule of law, the control of labor, the extension of social services, and popular identification with the nation-state. An area of roughly 1,845,500 square miles, the Brazilian Amazon comprised 54 percent of national territory in 1942. Yet its population of between one and a half and two million, an average density of one inhabitant per square kilometer, represented less than 5 percent of the national total.¹³ Geopolitical thinkers admonished that the Amazon's sparse and dispersed population imperiled national security when colonial powers ogled tropical lands for raw materials and population resettlement, and neighboring countries schemed.14 With scattered rural dwellers combing forests and rivers for tradable commodities and means of subsistence, Amazonian employers howled of a labor "shortage" that crimped exports and agricultural surpluses, stalled transport and public works, and inflated urban salaries.¹⁵ And Brazilian statesmen bemoaned their inability to harness the Amazon's vast natural resources.

The Amazon's economic stability and long-term growth, moreover, seemed forever hostage to cycles of commodity booms and busts, seasonal harvesting of forest products, mobility of labor, and dependency on imports of food and consumer goods. As Agnello Bittencourt noted in his survey of the state of Amazonas (1925):

The economic life of Amazonas is based on the extraction of forest products, chiefly rubber and Brazil nuts. The commercial and financial activity of the State is always dependent on the prices of these commodities, which are, for their part, at the mercy of speculative schemes and other unforeseeable circumstances.

When rubber prices dropped, workers abandoned the properties, commercial firms collapsed, and public finances contracted. But when they rebounded, "everything comes to life again: ships that had been docked load up with merchandise and passengers; businesses hire new employees; imports increase as do customs receipts; and new buildings and other urban improvements crop up in Manaus, where life pulsates in the streets, the theaters, the schools, and the business firms."16

The region's stark socioeconomic and racial stratification further clouded the Vargas regime's vision of development with social justice. Observers spoke of two classes in the Amazon. An urban elite of largely Portuguese, Middle Eastern, and Sephardic Jewish descent possessed trade goods, ships, docks, warehouses, and processing mills; in the countryside, (absentee) landlords claimed the most accessible territories along the rivers in vast, uncultivated holdings that extended far beyond legal property lines.¹⁷ The other class consisted of peasants, whose fight with the forest environment was "very direct and very severe." Tied by debt to landlords and merchants, they relied on subsistence and the extraction of scattered natural resources to acquire commercial goods under highly unfavorable terms of exchange. This class also included small farmers relegated to far-off, meandering channels (igarapés) and burdened by usurious terms of credit, punitive taxes, and lack of formal land title.18 In the Amazon's urban centers, the underclass aggregated throngs of domestic servants, stevedores, washerwomen, prostitutes, vendors, beggars, and jacks-of-all-trades.¹⁹ The poor were largely nonwhite, made up of caboclos of indigenous and mestizo origin, and northeastern migrants and their descendants; the 1940 census classified more than 50 percent of the Amazon's population as pardo, or "brown." 20

Insalubrious conditions, deriving principally from poverty and lack of infrastructure, perpetuated a vicious cycle in the region.²¹ Malaria, dysentery, typhoid, tuberculosis, yaws, leprosy, leishmaniasis, filariasis, venereal disease, and nutritional deficiencies afflicted residents, felled migrants, and repelled investors. Western medical care, best in Belém and Manaus—the capitals of Pará and Amazonas with respective populations of 250,000 and 90,000—eluded most locales; populations scattered over vast territories with slow forms of transportation relied on botanical medicines and an irregular supply of overpriced, and often adulterated, drugs.²² In Amazon towns, the common practice of drinking from polluted rivers, due to the lack of running water and the challenge of building wells where the water table was too high, served to transmit intestinal parasites; shallow wells often became contaminated by latrines or provided breeding grounds for mosquitoes.²³

While rivers served as the conduits for trade, settlement, and com-



Figure 1.1 Aerial view of Amazon region, c. 1943. Source: National Archives.

munication in the Amazon (see figure 1.1), seasonal variations in water levels and the presence of rapids on numerous waterways increased the hardships of transport and the cost of production and consumer goods.²⁴ On the main artery of the Amazon, ocean-going ships drawing twenty feet can reach the city of Manaus. But tributaries east of the Madeira river are interrupted by rapids within 200 miles of the main trunk; those to its west, such as the rubber-rich Purus and Juruá rivers, accommodate larger boats in upriver regions only during the rainy season from November-December to April-May.²⁵ Thus, a 2,395-mile trip from Manaus to Cruzeiro do Sul, near the Peruvian border, of thirty days in high river might take up to three months in the dry season, as upriver captains, consigned to flat-bottom boats, motor launches, and canoes, dodged sandbars.²⁶ Moreover, lack of scheduled transport, overcrowded vessels, fuel shortages, and frequent stops for firewood chronically delayed travel, while commercial shipping monopolies inflated costs and offered spotty provisions.²⁷ For the third-class passengers crammed in hammocks on the bottom decks of the larger steamboats, transport entailed sharing space with livestock, which in the absence of ice were carried alive and killed on board as needed, producing a "choice collection of smells." ²⁸

For nationalists, the "conquest" of the Amazon stood yet as a taunt to Brazilian character. In the Northern Hemisphere, environmental determinist theories condemned hot climates for ingraining indolence and inflaming passion over reason. Alternatively, detractors who attributed tropical "backwardness" to race, religion, or culture insisted that only "men from the Mississippi would make things hum along the Amazon and the Paraná"; or yearned that "when the great valleys of the Amazon and Congo are occupied by a white population more food will be produced than in all the rest of the inhabited world."29 Small wonder, with national character on trial, that anthropologist Gilberto Freyre extolled the Brazilian military's initiatives to promote colonization of the hinterland as confirmation of "the capacity of mestiço populations (as is ours, in its majority) to accomplish in tropical lands superior achievements."30

The Vargas government's project for the Amazon entailed the rationalization of the rubber trade and the expansion of commercial agriculture, subsidized migration, improvements in sanitation, public health, and transportation, and militarization of the hinterland. ³¹ Upholding Enlightenment beliefs in the perfectibility of peoples and places through science, Brazil's expanding professional sectors and bureaucratic apparatus vowed that out of vast jungle would emerge orderly landscapes, marketoriented producers, and hearty patriots.³² Through public discourse and political spectacle the regime stoked popular interest and national pride in the Amazon's potential.

Remaking Amazonia: A Centuries-Long State Ambition

Four centuries after Europeans first descended the Amazon river, Brazilian state officials still struggled to exert control over the basin's human and natural resources. In 1542, Francisco de Orellana, a conquistador of Peru searching for the fabled lands of El Dorado, had led the first band of Europeans down the great river, which they named "Amazonas" following a purported attack by indigenous female warriors reminiscent of classical legend.³³ Although Spain claimed the Amazon under the Treaty of Tordesillas of 1494, which divided New World dominions between the Iberian monarchies, over the next centuries the Portuguese moved to control the estuary of the river and to extend their dominion over the basin. Lisbon's success was facilitated by geographic advantage: the Portuguese gained access to the region through the Amazon River's mouth and Atlantic seaborne trade, whereas Spaniards had to confront the rugged Andean mountains and dense jungle before reaching navigable rivers. Based on claims of prior occupation, achieved principally through the establishment of forts and missions, the Portuguese acquired formal rights to Amazonian territory from Spain under the Treaty of Madrid of 1750. The new colonial boundaries of the Iberian kingdoms in the Amazon-delineated according to patterns of European occupation, geographic features, and waterways - were established by the Treaty of San Ildefonso of 1777.34

During the colonial period, Amazonian populations and resources were linked to global trade through the export of drogas do sertão, an assortment of botanicals collected in the wild by indigenous peoples and prized by Europeans as condiments and curatives.³⁵ The most lucrative New World plantation crops, however, such as sugar, cotton, tobacco, cacao, and coffee, grew better in drier and more temperate climates, while Amazonia's poor soils, seasonal flooding, lush vegetation, and aggressive pathogens generally confounded Europeans. Chronic shortage of capital precluded large-scale importation of African slaves, leaving settlers overwhelmingly reliant on indigenous labor.³⁶

John Hemming has estimated the population of lowland Amazonia at between four and five million in 1500—of whom three million were in present-day Brazil. Comprising over four hundred different peoples, aboriginal societies in the Amazon were marked by extensive settlements and fairly sedentary lifestyles. They cultivated manioc, a tuber high in carbohydrates, on the terra firme, where most of the land is of low fertility and deficient in animal life. They also relied on animal capture, fishing, and agriculture on the várzea, the alluvial forest that is annually renewed by rich silt from the Andes (and which comprises only roughly 2 percent of the entire Amazon basin). Cultivation on the várzea—although tricky due to the unpredictable flooding of crops, and compromised by the reduction in protein supplies during the high-water season when fish swim inland, birds fly north, and egg-laying turtles disappear—was practicable with large labor reserves.³⁷ But in 1743, when French scientist Charles-Marie de La Condamine sailed (unauthorized) down the Amazon, he found hundreds of miles of uninhabited stretches along its banks. Epidemics, warfare, and enslavement had decimated the indigenous populations during the intervening years.³⁸ Moreover, the introduction of European goods and the extraction of forest products for export upended traditional native subsistence patterns. Reorienting the Amazonian economy toward systematic commercialization of natural resources, European colonialism and Atlantic trade engendered new harvesting strategies, residential patterns, and forms of spatial distribution for native populations.39

Portuguese officials, like countless subsequent outsiders, dreamed of making better use of people and places in the Amazon. 40 The "Law of Liberties" of 1755, issued by Portuguese Secretary of State Sebastião José de Carvalho e Mello (better known as the Marquis of Pombal), abolished indigenous slavery and stripped missionaries of temporal power over native communities, which were placed under the tutelage of a (white) director. Seeking to forge a racially integrated and European-style peasantry in the Amazon, Pombal's reforms barred legal discrimination against Indians and peoples of mixed race and rewarded marital unions between Luso-Brazilian men and indigenous women in an attempt to promote longterm settlement.41 Yet Pombal's efforts to overhaul the Amazon foundered. Under the Directorate (1758-98), indigenous peoples continued to be mobilized to collect drogas do sertão; to paddle canoes and transport cargoes; to work on the construction of forts, public works, and in shipyards; and to perform labor for settlers for derisory compensation or under outright duress.⁴² Whereas an estimated thirty thousand Indians lived under direct colonial control in the Amazon at the start of the Directorate, forty years later the population had plummeted to nineteen thousand because of disease, overwork, and flight.43

Following Independence, economic and racial tensions in the Amazon Valley exploded in the Cabanagem revolt of 1835. Originating in Belém as an intra-elite dispute, the rebellion soon turned into a mass rural uprising marked by guerrilla warfare and horrific violence. A half decade of fighting claimed the lives of some thirty thousand people—one-fifth of the Brazilian Amazon's population at the time. And the ensuing geographic dispersal of populations dedicated to mixed subsistence and extractive activities further exacerbated the labor shortage in the province of Pará. 44 Official efforts to colonize the Amazon during the Brazilian Empire (1822-89) including the creation of military colonies at São João do Araguaia (1850) and Óbidos (1854), as well as state-sponsored and privately administered settlements for northeastern migrants—largely failed. 45

Between 1850 and 1910, the Amazon's domination of raw rubber production deepened regional integration into the global economy. Crude rubber is obtained from latex, a milky emulsion that occurs in the roots, stems, branches, and fruit of a wide variety of trees, vines, and plants; when treated properly, the tiny globules of the rubber hydrocarbon that float in the viscous liquid can be coagulated and solidified into crude natural rubber. 46 The premiere source of crude rubber is *Hevea brasilien*sis, a tree native to the Amazon, particularly its southwestern zones, where millions dot vast expanses of the forest, although typically no more than three or four Hevea grow per acre. 47 Subsequent to Charles Goodyear's discovery of vulcanization in 1839, which mixed in sulfur and applied heat to ensure rubber's resistance to fluctuations in temperature, the material came to be widely used in manufacturing and construction.48 Consumer demand skyrocketed with the introduction of the lowwheeled Rover safety cycle in England in 1885; John Dunlop's patenting of the pneumatic bicycle tire in 1888; and the proliferation of tens of thousands of bicycles worldwide over the ensuing decade. 49 In 1890, the Amazon commanded 90 percent of global production of rubber and remained the single largest producer over the next two decades, reaching a historic annual peak of 42,000 tons in 1912.50 Indeed, during the first decade of the twentieth century, rubber climbed to second place in Brazil's overseas commodity trade, comprising 40 percent of the total value of national exports by 1910 (only 1 percent lower than coffee), and greatly increasing the influx of foreign exchange throughout the country.⁵¹ Moreover, unlike the plantation economies of the circum-Caribbean, Brazilian nationals (or recent immigrants) controlled the means of production in the Amazon, although European and U.S. import-export houses dominated the international trade in raw rubber during the boom.⁵²

Between 1870 and 1910, the population of the Brazilian Amazon quadrupled from 323,000 to 1,217,000. Rapid growth resulted primarily from the mass influx of migrants from northeastern Brazil seeking economic opportunity and refuge from catastrophic drought.53 Manaus, whose population rose from 3,000 in 1867 to 50,000 in 1900, became one of the first cities in Brazil to have electric lighting and telephone service.⁵⁴ And Belém, founded in 1616 near the mouth of the Amazon, thrived as a commercial and administrative center: the capital of Pará had a population of over ninety thousand in 1900 (one of Brazil's largest cities at the time) and boasted electric lighting, trolleys, public works, and small-scale industry.55

The Amazon rubber boom was all the more remarkable given its primitive mode of production. Bosses advanced merchandise and credit to workers who tapped latex from scattered wild trees, and who exchanged cured rubber for goods, and less often for cash, under highly unfavorable terms. Moreover, most Hevea grew upriver some 2,000 to 2,500 miles from the Atlantic Ocean, far from commercial centers in Brazil and overseas consumption sites, and with trade hobbled by slow and irregular river transport.⁵⁶ Investors eschewed the creation of rubber plantations due to heavy capital outlay, the absence of properly surveyed or registered land, the challenge of regimenting labor, and the five-year lag between planting and production. Subsequent discovery of the South American leaf blight (*Dothidella ulei*), a fungus that ravaged rubber trees planted in close proximity in the Western Hemisphere, only gave additional pause.

The reign of Amazonian rubber proved fleeting. Commissioned by the Royal Botanic Gardens, Englishman Henry Wickham smuggled 70,000 seeds of *Hevea brasiliensis* from the lower Tapajós River to London in 1876.⁵⁷ Upon germination, the British transplanted the seedlings to Ceylon, Malaya, and other regions of Southeast Asia, where they were cultivated on plantations.⁵⁸ In 1910, wild rubber from the Americas and Africa collectively accounted for 90 percent of global production, and Asian plantations for 10 percent, but the proportion was thoroughly inverted over the next decade. Indeed, from a mere 65,000 acres in 1905, Asian rubber cultivation expanded to nearly eight million acres by 1930, and cost one-quarter the price of wild rubber. By 1932, Amazonia produced less than 1 percent of global rubber.⁵⁹

Although Asian rubber production was spared the South American leaf blight fungus, its success owed also to heavy capital investment and state subsidies; extensive scientific research; accessibility of rubber trees on plantations and family farms with facility of transport; and cheap, regimented labor. (The Amazonian tapper's average yearly production of 1200 to 1500 kilograms of rubber represented slightly less than one quarter of the Asian worker's annual yield.) Plantation rubber also contained less than 2 percent of impurities and was exported in sheets, whereas Brazil's finest grade of rubber had 16 to 20 percent of impurities and arrived in the form of 30–40 kilogram balls, which required additional time and expenses for cutting, washing, and purging.⁶⁰

As the price of wild rubber plummeted, boom towns in the Amazon became ghost towns. In Óbidos, Pará, for example, the population fell from thirty thousand inhabitants in 1907 to about three thousand in 1920.⁶¹ And in 1929, a visitor to Lábrea, Amazonas, which had once prospered from the rubber trade on the Acre and upper Purus rivers, described a hamlet "in complete ruin, desolate, forlorn, and abandoned." With the Amazon's economic decline, outsiders also came to depict the region as more formidable, or forgettable.⁶³ If in *The Land of To-morrow* (1906), J. Orton Kerbey, a former U.S. consul in Belém, hailed the Ama-

zon region as "the California of South America," twenty years later forester Roy Nash declaimed, "most of the Amazon forest enters no more into the life of our globe than would forests on the silvery satellite."64

Yet what appeared to most interwar observers as the Amazon's coda would prove mere interlude amidst the convulsive rhythms of the twentieth century. Between 1880 and 1914, sweeping technological innovations such as the radio, telephone, cinema, automobile, and assembly line created new ways to think about and experience time and space.⁶⁵ Neo-Malthusian theories warned that urban overcrowding and depletion of raw materials would trigger ecoscarcity and public calamity. 66 The United States and European powers staked out colonial possessions to secure access to natural resources and waterways, while the trauma of global trade disruptions during World War I haunted the postwar governments and militaries of the Great Powers.⁶⁷ In Brazil, political leaders, army officials, and industrialists contemplated the challenges of modernizing production, mining natural resources, and reaching far-flung populations, while the quest for sustenance or social mobility kept poor populations on the move.

The March to the West and the Presidential Visit to Manaus

On October 10, 1940, thousands lined the main thoroughfare of Manaus to welcome Getúlio Vargas, "the savior of Amazonia." 68 At the junction of the Amazon and Negro rivers, some one thousand miles from the Atlantic coast, Manaus served as the political and financial capital of the state of Amazonas (see figure 1.2). The city long bedazzled weary visitors with its electric-lit domiciles, tramcars and automobiles, public buildings and squares, and its Belle-Époque opera house adorned with Venetian glass chandeliers, marble pillars, and fine paintings. 69 "It seems almost incredible that after so many miles of water," wrote a traveler in 1928, "that the gallant and captivating sight of Manaus appears to us smiling and cheerful, as if a mysterious miracle, greeting us with kindness and hospitality."⁷⁰ But the city had suffered hard times for decades, while its poor population had swelled during the interwar years from 75,000 to 96,400, mainly due to emigration from the stricken seringais (rubber properties).71 Many of the downtrodden undoubtedly waited on the boulevard that day to catch a glimpse of the president.

Manaus contained a number of small industrial establishments dedicated to food and beverages, manufacture of rubber goods, and processing of leather and animal skins. But the city remained in 1940 princi-



Figure 1.2 Image of Manaus, capital of the state of Amazonas, early 1940s. The Teatro Amazonas, the famed opera house inaugurated in 1896, is the domed building on the left. Source: National Archives.

pally a commercial entrepot for trade with the vast interior. Oceangoing vessels brought in manufactured goods and foodstuffs for Manaus and the hinterland, such as sugar, wheat flour, coffee, potatoes, beans, jerked beef, lard, and dairy products. On their return trips, the steamships sailed with forest products assembled in town from the launches, rafts, and small steamboats that collected the commodities on the upper tributaries of the Amazon River (see figure 1.3). In October 1940, rubber led the state of Amazonas's exports, dwarfing Brazil nuts, pirarucu fish, and lumber (see table 1.1). Tappers extracted the finest latex (borracha fina) along four principal rivers.

With Europe convulsed by war in September 1939, a global scramble for rubber seemed poised to swing the pendulum in favor of the Amazonian trade. Rumors buzzed at the headquarters of the Associação Comercial do Amazonas (Trade Association of Amazonas-ACA), which congregated representatives from the state's tight-knit mercantile class involved in the marketing of forest products and the forwarding of credit and merchandise to producers.72 "Heretofore, when rubber arrived in Manaus, the buyers deliberated for some time before attempting to buy it," Ameri-

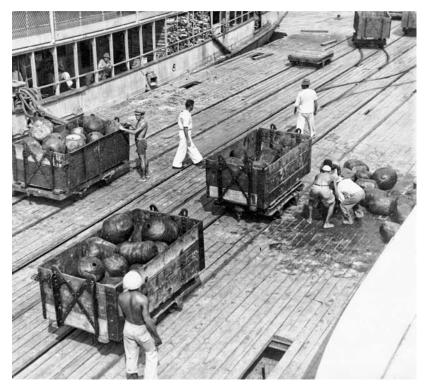


Figure 1.3 Rubber being loaded for export from Manaus. Source: National Archives.

can vice consul Hubert Maness would note. "Today this situation is quite different. Rubber is immediately sold upon arrival from the interior. The rise in price has given the buyers more confidence and enthusiasm."⁷³ Indeed, the visit of the president to Manaus in October 1940 hinted that perhaps this latest boom in the Amazon might be different after all.

In his oration in Manaus on October 10, 1940, officially dubbed the Speech of the Amazon River, Vargas outlined his government's intent to remake nature and society in the Amazon. "Conquering the land, dominating the water, and subjugating the forest have been our tasks" for centuries, Vargas noted. "What Nature offers is a magnificent gift that demands care and cultivation by the hand of man." Deeming vast, unpopulated space the greatest enemy to progress in the Amazon, he pledged state support for colonization, "rationalization" of production, and improved transport. "Nothing will deter us from this undertaking which is, in the twentieth century, the greatest task for civilized man: to conquer and dominate the valleys of the great equatorial torrents,