



## INTRODUCTION

# Finding the “Latin American” in Latin American Environmental History

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“Sometimes you can’t be outside, the odor stinks, your throat stings. It smells of gas. Even if we close our doors, it smells.”<sup>1</sup>

This is how residents of Villa Inflamable, a shantytown in Greater Buenos Aires, described their neighborhood in 2004. Villa Inflamable is surrounded by one of Argentina’s largest petrochemical complexes, in addition to a hazardous waste incinerator and an unmonitored landfill. The land, air, and water are contaminated with heavy metals; children suffer health problems linked to elevated levels of lead in their blood. Situated on the bank of the highly polluted Matanza-Riachuelo River, the inhabitants of Villa Inflamable also endure frequent flooding. In 2004, a group of residents filed a lawsuit against both the Argentine government and private companies seeking compensation for harm suffered from pollution. The case reached Argentina’s Supreme Court, which ruled in 2008 that decisive action needed to be taken by government authorities including a plan to relocate the petrochemical complex. More than a decade later, the people of Villa Inflamable continue to wait.<sup>2</sup>

The story of Villa Inflamable highlights the environmental dimensions of social problems associated with neoliberal policies: since the 1980s, both urban poverty and economic inequalities have skyrocketed in Argentina, compelling poor people to live in undesirable places. But the causes of environmental degradation and pollution have deeper roots: Shell Oil opened its first refinery in 1931 with the blessings of Argentine military ruler General Uriburu, who, like his civilian predecessors, was eager to harness petroleum resources first discovered in Patagonia in 1907.<sup>3</sup> The name of the sixty-four-kilometer waterway—“Matanza-Riachuelo”—alludes to a still older history: in the early nineteenth century, the banks of the “little stream” (*riachuelo*) became the site of slaughterhouses (*matanza*), leather tanneries, and other factories that needed water in order to transform animals raised on the fertile grasslands of the Pampas into commercial goods.<sup>4</sup> The lead and cadmium that course through the blood of residents in Villa Inflamable then, are part of Argentina’s national

heritage—an entangled web of historical relationships that extend far beyond neoliberal Buenos Aires.

Environmental history seeks to describe and analyze the dynamic relationships between human societies and nonhuman nature that can help us to explain not only industrial places like Villa Inflammable but also seemingly pristine areas like Amazonian rainforests, Caribbean beaches and Andean glaciers. Environmental historians strive not only to introduce new questions, actors, and explanatory frameworks, but also to shed fresh light on familiar topics such as the rise of nation-states, social inequalities, and technological change.<sup>5</sup> This volume, comprised of original contributions researched and written by fifteen scholars coming from diverse academic and geographical backgrounds, is both synthetic and topical. Some of its chapters are organized around nations or regions such as Brazil, Mexico, the Greater Caribbean, and the tropical Andes. Others focus on broader themes not limited to a specific location or region: environments such as urban areas and jungles, or transformative processes like agriculture, conservation, mining, ranching, and scientific research.

Well-established in the United States and parts of Europe, environmental history is still taking shape in Latin America. By no later than the 1930s, notable scholars demonstrated that the region’s human history is best understood when not viewed in isolation from the material environments in which it is entangled.<sup>6</sup> In the 1980s and 1990s, a handful of researchers from Latin America and the United States planted the proverbial seeds for the field by publishing interpretive essays and narrative histories about human-driven environmental changes in countries including Argentina, Brazil, and Mexico.<sup>7</sup> Latin American environmental history began to blossom at the outset of the twenty-first century in the forms of scholarly publications, conferences, and graduate programs. Communication and networking among a growing group of scholars studying Latin American and world environmental history greatly increased as reflected and fostered by the Latin American and Caribbean Society for Environmental History (SOLCHA), formally established in 2006.<sup>8</sup>

Nevertheless, the circulation of research findings across this vast, diverse region continues to face barriers posed by geography, academic cultures, language, and technological divides; as a result, the historiography remains fragmented and uneven. Furthermore, the vast majority of published works, with a few notable exceptions, study specific regions or nation-states, so that a general picture is still emerging.<sup>9</sup> In this introductory chapter, we identify some of the central themes that characterize recent scholarship in the field, before exploring four features—colonial legacies, nation-states, transoceanic connections, and tropicality—which, taken together, are crucial for identifying the “Latin American” in the environmental histories that follow.

The theme that most strongly marks the first wave of Latin American environmental history is a preoccupation with the fate of forests. Warren Dean’s

sweeping history of Brazil's Atlantic Forest (1994) and Reinaldo Funes's study of the Cuban sugarcane industry (2004) both reinterpret the histories of those countries by documenting the centrality of long-term processes of forest removal.<sup>10</sup> The centrality of deforestation is further revealed by studies focused on agriculture, human diseases, mining, and politics, in which the felling of forests serves as a key trigger for other kinds of socioecological change.<sup>11</sup> Other researchers working on case studies of Brazil, Chile, Colombia, Costa Rica, and Mexico have sharpened their focus to explain the logic of logging industries and the policies that regulated them.<sup>12</sup>

This emphasis on forests is understandable in light of the diversity and geographical expanse of forested ecosystems in Latin America. In some instances, the motivation to write forest histories results from an undeniable reality that many forests have disappeared or become highly fragmented over the past two hundred years. In contrast to the environmental historiography on Europe, South Asia, and the United States, state forestry institutions have not figured prominently in Latin American histories with the exception of Chile and Mexico, whose governments enlisted French or German-trained foresters to oversee the management of temperate forests in the early twentieth century.<sup>13</sup> That said, recent scholarship on the contested politics of forest management resonates with studies of regions outside of Latin America that examine the viewpoints of the communities who inhabited forests and their efforts to defend their territories and sylvan resources from states and other actors.<sup>14</sup>

Environmental historians of Latin America have also devoted considerable energy to studying rural landscapes and livelihoods, an outgrowth of the longstanding scholarly interest in the region's export economies. They have privileged analysis of the agroecological dynamics of plantation production of tropical commodities, highlighting widespread deforestation, the exploitation of local people, and the role of plant pathogens.<sup>15</sup> Mining and petroleum have received less attention to date, a curious imbalance given the importance of past and present mineral extraction to the political economies of most Latin American countries. The same slow start holds true for environmental histories of food, energy, and goods produced primarily for internal consumption.<sup>16</sup> Domestic use of natural resources looms large for environmental histories of the late twentieth century, when import substitution industrialization (ISI), large dam construction, and transportation infrastructure expanded, along with public investments in education, health, and housing for a burgeoning population.<sup>17</sup>

Conservation history is another popular topic among environmental historians of Latin America. The findings of this scholarship demonstrates that the establishment of protected areas in the region cannot be understood as the mere importation of "America's best idea," but rather as a result of multiple and sometimes contradictory dynamics that need to be explained. These include a

desire to control frontier areas in Brazil, Argentina, and Chile; the building of rural justice in revolutionary Mexico; and the promotion of international tourism in Costa Rica.<sup>18</sup> Historians of science have shown that scientists and naturalists have played critical roles in “nationalizing” nature via natural resource inventories and taxonomies, and advocating for government-led conservation projects.<sup>19</sup> The contributions from this related field also include works on the development of the environmental sciences.<sup>20</sup>

Latin America is widely regarded as the most urbanized region in the contemporary world. Although “megacities” only emerged in the past few decades, urban centers are hardly new phenomena in Latin America, as visitors to Mexico City are able to appreciate when encountering the jumbled architecture of Aztec, Spanish, and Mexican societies. Fortunately, environmental historians are increasingly studying urban water and waterworks, among other topics related to the spaces that determine the experiences of most of the region’s inhabitants.<sup>21</sup> In addition, because cities rely on connections to other places for food, energy, water, and building materials, environmental histories of cities promise to reveal the historical importance of regional, rural-urban connections that often lie in the shadows of international ties in Latin American historiography.

There are many forms of socioecological relationships and systems in Latin America whose histories have yet to be fully examined. Histories of watery environments, including rivers, estuaries, reefs, ocean littorals, and even glaciers, are few and far between.<sup>22</sup> Grasslands have not received attention commensurate with their historical importance for the production of grains and livestock.<sup>23</sup> Deserts and semiarid regions, with a few notable exceptions, have yet to be embraced by environmental historians with the same degree of enthusiasm as forests.<sup>24</sup>

Latin American environmental histories are heavily concentrated on the nineteenth and twentieth centuries. This “recentism”—not without its critics—is partly attributable to mounting evidence showing that planetary environmental transformations accelerated dramatically since 1945.<sup>25</sup> The fact that many of us understand environmental history as a form of knowledge production that can generate “tools” for shaping contemporary policy and politics also helps to explain the bias for the recent past. However, as we acknowledge below, the legacies of the precolonial and colonial eras are crucial for explaining both the changes and continuities of the nineteenth and twentieth centuries. Moreover, recent works on sixteenth-century New Spain (Mexico) demonstrate the vitality of early modern environmental histories.<sup>26</sup> Perhaps what is most worthy of critical reflection is that few environmental histories cut across the colonial/republican divide or advance new periodizations.

In sum, Latin American environmental history has taken great strides in recent years as measured by the growing number of practitioners in the field and the expanding geographical, temporal, and thematic scope of research.

That said, there is no shortage of tasks at hand requiring additional empirical and conceptual work. However, instead of providing a “to do” list, we devote the rest of this chapter to exploring four interrelated features that are crucial for understanding the “Latin American” in Latin American environmental history: the enduring legacies of Iberian colonialism, the nineteenth-century formation and persistence of nation-states, transoceanic exchanges, and tropicality.

## **Enduring Colonial Legacies**

A human presence in what is today Latin America began no later than fourteen thousand years ago; since that time, people have modified a wide range of environments via foraging, hunting, fishing, fire setting, farming, water management, mining, and building settlements. The domestication of plants began at least ten thousand years ago in southern Mexico, the tropical Andes, and Amazonia, giving rise to crops such as maize, potatoes, cocoa, and manioc. In some parts of Latin America, indigenous societies’ agricultural prowess supported the formation of populous, urbanized societies. However, indigenous cultures left imprints nearly everywhere, including ecosystems still perceived to be wildernesses such as the Amazon River basin and the wind-swept Patagonia steppe lands. By the time Europeans arrived in the late fifteenth and early sixteenth centuries, tens of millions of people lived in Latin America and the Caribbean, with particularly dense populations in Mesoamerica and the Andes. Far from pristine, the Americas circa 1492 consisted of humanized land and waterscapes.<sup>27</sup>

The arrival of Iberian colonizers had uneven effects on Latin American cultures and environments. In the century following initial contacts with people from Europe and Africa, indigenous populations succumbed to introduced pathogens whose devastating effects helped to ensure that short-term military victories, achieved via political alliances, warfare, and enslavement, would become enduring colonies. In contrast to later European imperial ventures in Africa and Asia, the main consequence of colonial rule in the Americas—a demographic collapse—was not the result of explicit state policies aimed at controlling resources (such as forestry in India or game conservation in Africa) but rather an unintended, contingent outcome.<sup>28</sup> Exposure to introduced pathogens would continue to affect indigenous groups in Latin America in the twentieth century, when relatively isolated groups in Amazonia and Tierra del Fuego confronted new diseases and violence in processes that paralleled those in North America, Australia, and New Zealand.<sup>29</sup>

The demographic collapse and ensuing three centuries of Iberian colonialism transformed Latin America and the Caribbean but did not homogenize

it. In mining regions (including Central Mexico, highland Peru, and Minas Gerais), human migration and the relentless extraction of silver and gold, but also to a lesser extent of mercury, diamonds, and other minerals, resulted in significant levels of deforestation, pollution, and human health risks. One of the first documented instances of large-scale toxic contamination took place in the famed silver-mining center of Potosí when in 1626 a reservoir burst, creating a surge of water that destroyed many mills and released an estimated nineteen tons of mercury (used for amalgamation) into the Pilcomayo river system, a toxic legacy that remains in the soils of the area.<sup>30</sup> In New Spain, centuries of charcoal production for silver smelting consumed vast quantities of forests.<sup>31</sup> In lowland tropical regions of northeast Brazil and the Caribbean, the introduction of sugarcane and millions of African slaves resulted in regional deforestation and, particularly on Caribbean sugar islands, the extirpation of fauna.<sup>32</sup>

Iberian imperialism also bequeathed to modern Latin America a number of urban centers, many of which would become national capitals (e.g., Mexico City, Lima, Havana, Bogotá, Caracas, Guatemala, Buenos Aires, Santiago de Chile, and Rio de Janeiro). In Mexico City, the center of Spain’s American empire, colonial officials initiated a long-term process of environmental change in the form of the *Desagüe*, a massive infrastructure project that eventually drained most of the lakes that surrounded the city in the early sixteenth century.<sup>33</sup> Along with libraries, cathedrals, and convents, Spaniards in Mexico City established Chapultepec, a public park that remains one of the largest urban green spaces on the planet. In their contribution to this volume, Lise Sedrez and Regina Horta Duarte explain how many contemporary urban environmental issues are rooted in decisions made during the colonial period, including fundamental ones such as location.

Perhaps the most taken-for-granted colonial legacy are the countless cattle, horses, pigs, goats, sheep, oxen, and hens that roamed from California to Tierra del Fuego. European colonialism in Africa and Asia did not have nearly as large of an impact in altering the species composition of domesticated animals as it had on the Americas, where large animal domesticates were few in number and there was much room for the newcomers.<sup>34</sup> Only Australia experienced a comparable degree and scale of transformation.<sup>35</sup> As Shawn Van Ausdal and Robert Wilcox demonstrate in this volume, cattle ranching and horsemanship outlived Iberian rule and continue to be a major influence on Latin American ecologies and cultures.

But, there was another, less obvious legacy of Iberian colonialism: an expansion of forests and other native ecosystems due to the abandonment of indigenous agricultural fields, a reduction in intentional burnings, and the decline in human population that would not begin to recover until the late eighteenth century. Determining the extent and composition of forest cover is fraught with uncertainty due to major gaps in evidence and challenges associated with

interpreting the data that do exist.<sup>36</sup> Nevertheless, evidence suggests that forests covered as much as 68 percent of Latin America and the Caribbean in the early nineteenth century.<sup>37</sup> Republican discourses and metaphors of an abundant nature, such as the Brazilian republic's birth in a "splendid cradle" (see chapter 4, by José Augusto Pádua), were as much a product of colonialism as they were of any intrinsic prodigality of tropical nature. Nationalist writers sometimes viewed these postcolonial environments as hostile, at other times beautiful, but they nearly always described them as vast and empty, an understanding that drove—and justified—wasteful production processes, a problem that persists to this day.

Finally, Iberian colonialism brought new languages, ontologies, and epistemologies to the Americas.<sup>38</sup> These included not only Christian doctrines and rituals but also Enlightenment ideas and practices about how to order and represent nature, as well as legal codes that redefined property, sovereignty, and social relations. The incorporation—albeit partial—of new ways of knowing and valuing life-forms, time, and human labor is vitally important for thinking about the forces driving ecological change, including the conservation of biocultural resources. Current political debates, including those that have invoked the indigenous Andean notion of *Sumak Kawsay* (good living) for rethinking development, demonstrate the high stakes involved in the ways we interpret the complicated and connected histories of indigenous, African, and European ideas and practices toward nonhuman natures, a topic that Nicolás Cuví addresses in this volume.<sup>39</sup>

## States from Nature

As political revolutions spread across the Atlantic world, the Spanish Empire crumbled in the Americas and gave way in the early nineteenth century to sovereign nation-states in all but a few places. Between the 1830s and the 1950s, when many Africans and Asians fought against European colonial bureaucracies and armies to maintain control over land and resources, Latin Americans participated in novel and fractious experiments in state-making and nation-building in which they enlisted nature.<sup>40</sup> The environment became national patrimony, not imperial plunder as was the case throughout most of Africa and Asia.

Ruling elites—who often violently disagreed about forms of governance—struggled to define state territories by drawing borders that nationalized natures. As Pádua and Claudia Leal argue in their contributions to this volume, states claimed sovereignty over vast, uncontrolled areas—the deserts of northern Mexico, the forests and steppes of Patagonia, the jungles of the Amazon and Orinoco basins—via maps that invariably overlapped, creating disputed

territories on paper. In many cases, it took decades for states to reach agreement on the exact boundaries that defined their respective dominions. As Stuart McCook explains, inventories of plants and animals were a fundamental tool in this process of nationalizing nature, effectively extending passports to birds, trees, and other organisms. Governments enlisted scientists who traveled widely, identifying and counting species, illustrating specimens, and compiling long lists of plants and animals that claimed nature as a means to proclaim national grandeur.<sup>41</sup> This incipient form of nationalism did not need effective occupation, and thus came in handy for fledgling states that had trouble imposing their rule over diverse and extensive geographies.

The republican imperative to transform “wastelands” (in Spanish often expressed as *desiertos*) coincided with the expansion of industrializing economies in the North Atlantic. Paradoxically, cash-strapped governments turned increasingly to international investors and markets in order to assert their territorial sovereignty and further nationalize nature by turning “natural resources” into export products. Nineteenth-century Latin American states were quite literally hewn *from* nature—republics built on bird shit and bananas, cattle hides and sheep fleece, coffee and copper. The wealth acquired by extracting minerals and nutrients from the lithosphere, or making commodities from the biosphere, allowed states to increase their tax revenue and enlarge meager bureaucracies. This wealth did not flow spontaneously; metaphors of “open veins” or “commodity lotteries” fail to convey the sustained labor of millions of people and the state policies that directly and indirectly enabled the harvest of rents from the forests, grasslands, mountains, and waterways that comprised the “splendid cradle” in which Latin American nation-states were born.

As Chris Boyer and Micheline Cariño demonstrate for the case of Mexico, revenue-poor states took advantage of the existence of ample “public” lands to grant concessions in exchange for state-building projects, including the measurement of lands and the construction of roads. The prospects of turning forests into wealth via commodification or simply speculation motivated concessionaires. But once states grew stronger, especially after the economic turmoil of the 1930s, they moved in the opposite direction, returning some natural resources to the public domain, a process that arguably had its most forceful expression in post-revolution Mexico. As Myrna Santiago documents in this volume, organized labor often supported states’ efforts to claim strategic resources for the nation. Militant miners and oil workers pressured governments to nationalize industries in hope of securing greater control over labor processes and the subsoil resources that they viewed as national patrimony. For example, Mexican oil workers influenced the government of Lázaro Cárdenas to nationalize Mexico’s oil industry.<sup>42</sup> Many Latin American states subsequently nationalized key mining and energy sectors, setting examples that would be emulated elsewhere in the world.

The nationalization of key industries was part of a more active state role in environmental management, which after the mid-twentieth century strongly contributed to significant landscape transformations. The rise of populism in the 1930s, along with the geopolitics of World War II and the Cold War, accelerated the creation of government-sponsored, technoscientific “development” programs whose broad outlines would be pursued in similar fashion in many parts of Europe, Asia, and Africa: land reform and agricultural “modernization” via the Green Revolution, dams for irrigation and electricity, highways and mass transit systems, mass education, and public health measures changed the lives of people and altered ecosystems throughout the world. If true that state-led development frequently failed to reduce social inequalities or to promote democracy in Latin America, it almost always resulted in accelerating rates of resource use, linked in part to an enormous increase in human population that often overwhelmed the capacities of government programs.

But not all twentieth-century state policies and projects promoted resource consumption; as Emily Wakild’s chapter reveals, Latin American governments also created national parks, established forestry departments, and passed laws protecting fauna. In contrast to colonial Africa or South Asia, elites viewed protected areas as forms of national patrimony rather than foreign impositions. These measures contributed, as early as the 1930s in Argentina, but more commonly in the 1960s, to the building of “nature states”—distinctive spheres of government activity devoted to caring for nature—a phenomenon observable in other parts of the world.<sup>43</sup>

## **Transoceanic Trade and Ecological Exchanges**

Many scholars have documented the movements of people, plants, animals, and pathogens across oceans and their effects on Latin America’s biocultural diversity. Although transoceanic movements have connected and transformed other large regions, such as the Indian Ocean, the magnitude and significance of exchanges between the Americas and Africa, Eurasia, and the Pacific are unique. The Columbian Exchange marked only the beginning of a process of biological exchange that has yet to cease; in fact, the potential for more frequent and multidirectional exchanges increased dramatically in the nineteenth century, a period when African slaves, indentured labor from China, India, and the Pacific Islands, along with immigrants from Europe, all converged on the region. These massive flows of people brought with them a menagerie of domesticated animals and crop plants, along with a slew of “hitchhiking” biota, including rats and weeds that have fared all too well in their new homes.<sup>44</sup> More importantly, the flows from Latin America to the rest of the world multiplied and diversified with far-reaching environmental consequences.

The rise of agroexport industries characterized by international investors and markets linked by telegraphs, railroads, and steamships, strengthened and expanded the networks by which people and nonhumans moved across oceans and continents. The production of bananas, cattle, coffee, sugarcane, sheep, wheat, and, more recently, palm oil, grapes, salmon, and soybeans, has led to an influx of organisms from across oceans. Fodder grasses, crop plants, and trees remade terrestrial landscapes, while the introduction of northern hemisphere fish, including trout, salmon and bass, remade freshwater ecologies. The introduction and propagation of African grasses and South Asian cattle breeds transformed tropical cattle ranching, an economic sector often perceived as static if not backward. In Argentina, the displacement of sheep from the fertile Pampas to the steppe lands of Patagonia compelled ranchers to import sheep breeds from Australia and New Zealand that would subsequently spread from Patagonia to the Andes.

The export economies created new agroecological dynamics marked increasingly by “commodity diseases”—outbreaks of plant and animal diseases whose intensity, spread, and meanings were tightly linked to processes of commodification.<sup>45</sup> Agribusiness and governments took initiatives to eradicate or at least limit the spread of organisms that damaged crops and animals. These initiatives included an ever-widening search for varieties and breeds that possessed both disease tolerance and marketability. Plant diseases, herbivores, and nutrient loss also contributed to a rise in the use of agrochemicals and synthetic fertilizers. Commodity diseases in key export crops, including bananas, cacao, coffee, and sugar, prompted planter associations, agribusinesses, and governments to enlist the support of university-trained scientists, and to establish research centers dedicated to plant pathology and breeding.<sup>46</sup>

Export economies were by no means limited to products from farms and ranches. People extracted wealth from forests, including timber but also products such as rubber, *chicle*, quinine, tagua seeds, coconuts, and Brazil nuts that generated wealth from *living* forest species. The strategic importance of tree and palm products such as natural rubber and quinine would compel powerful states, including the British Empire and the United States, to seek to control their production. Forests, along with other kinds of ecosystems, also served as an important source of feathers, skins, and furs from wild fauna. Jaguars, whales, chinchillas, turtles, fur seals, foxes, and rheas were just a few of dozens of animal species hunted extensively for commercial purposes. However, commerce in wildlife also compelled some Latin American governments to regulate hunting as early as the late nineteenth century, in the name of preserving national patrimony, not global biodiversity.

Modern Latin America’s involvement with interoceanic trade and exchanges was not limited to biological commodities. Some of the first export markets to emerge in the nineteenth century included mined fertilizers (guano

and nitrates). As Santiago explains in her chapter, mining activities increased during the twentieth century: the extraction of bauxite, copper, gold, iron, and tin, along with petroleum and gas drilling, created new kinds of environmental hazards. The transnational character of Latin America's twentieth- and twenty-first-century mining and petroleum industries raises new questions for environmental historians that have less to do with biological exchanges than with energy exchanges: Mexico and Venezuela, along with Brazil, Colombia, and Ecuador, have transferred massive amounts of stored energy (and heat-trapping carbon) to the United States and elsewhere. The extraction and export of copper, principally from Peru and Chile, has helped to enable the large-scale transmission of electricity, transforming many aspects of daily life for billions of people and contributing to localized and planetary ecological changes.<sup>47</sup>

Transoceanic movements continue to be an important source of environmental change in much of Latin America even as new markets (e.g., China) and new products (e.g., soy and lithium) emerge. As Reinaldo Funes observes, the movement of international tourists on cruise ships and airplanes has largely replaced that of agroexports in much of the Greater Caribbean. Illegal drug trades also fuel border-crossing activities with ecological consequences that have yet to be fully assessed. Of course, intercontinental exchanges are by no means the only ones with lasting ecological consequences; indeed, the rights and restrictions associated with citizenship in sovereign nation-states make regional movements far more common than international ones. Nevertheless, centuries of intercontinental exchanges of biophysical matter and energy are—somewhat paradoxically—central to the “Latin America” in Latin American environmental history.

## **Tropicality: Confronting Diversity**

Nearly three quarters of the South American landmass lies within the tropics, in addition to the entire Central American isthmus, the insular Caribbean, and central and southern Mexico.<sup>48</sup> Contemporary estimates indicate that rainforests occupy an astounding 44 percent of Latin America's landmass. Other extensive tropical ecosystems include grasslands and savannas (16.4 percent) and dry tropical forests (8.8 percent). Nature in these tropical ecosystems is extremely diverse: Latin America and the Caribbean, which occupy less than 10 percent of the earth's land mass, possess nearly one-third of the world's documented species of vascular plants (far more than found in Africa or Asia), half of all species of amphibians, and forty percent of Earth's reptiles and birds.<sup>49</sup>

However, even naturalists such as Alexander von Humboldt, who marveled at the American tropics' biological diversity, considered that its heat and fe-

cundity sapped the energy and motivation from human societies. European and U.S.-based writers, artists, and scientists believed that the abundance of nature anywhere in the tropics “overwhelmed the human endeavor” and reduced place to nature itself.<sup>50</sup> This ahistorical thinking about the tropics served to depict the Caribbean region as an area fit only for “inferior races,” deemed closer to nature, thus justifying the continued enslavement of Africans and the post-emancipation use of indentured workers from Asia. In fact, the sugar, rum, and slave trades radically altered Caribbean environments while introducing yellow fever and its mosquito vector to the region, a historical contingency that many medical doctors and others would interpret as evidence of the inherent dangers of the tropics for “whites” (see Reinaldo Funes’s chapter).<sup>51</sup> This thinking persisted into the early twentieth century and served as a justification for importing black workers from the Caribbean to labor on the Panama Canal and also banana plantations.<sup>52</sup> The “civilizing mission” espoused by both early twentieth-century U.S. government officials in Cuba and Panama and corporate businesses resonated forcefully with the discourses of European colonial officers in tropical Asia and Africa.

The history of labor subjugation in many parts of tropical Latin America reminds us that political elites and investors considered the tropics to be not only unruly and dangerous but also a source of riches. The rainfall and heat that came to embody the notion of tropicality (there are also dry and cold areas in the tropics) served to produce sugar and bananas for export. Tropical plantations efficiently transformed solar energy—along with forests and soils—into caloric energy, while extractive economies, as in the case of rubber, commodified useful elements found in the diversity of life-forms. The tropics, then, were not just imagined spaces, but also very physical places that got transformed as they joined networks of global exchange.

Latin American elites viewed the tropics with deep ambivalence. In the early twentieth century, writers such as Horacio Quiroga, Rómulo Gallegos, José Eustacio Rivera, and Alejo Carpentier presented tropical forests in a vein similar to that of Joseph Conrad’s portrayal of the Congo River basin in *Heart of Darkness*. As Rivera’s novel *The Vortex* (1925) poignantly showed, the jungle disoriented and ultimately defeated those who sought to subdue or domesticate it. The notion that untamed tropical forests posed a threat to civilization informed Latin American governments’ efforts to colonize tropical lowlands through the 1970s.<sup>53</sup> However, elites in early twentieth-century Brazil and postrevolutionary Mexico increasingly rejected theories of racial “degeneracy” and embraced visions of *mestizaje* (racial mixing)—and whitening—that tried to reimagine the tropics as a place of great vitality and potential.

As Leal and Funes argue in their chapters, both elite ideas about tropical nature and economic activities underwent a dramatic shift in the second half of the twentieth century. The development of public health measures to control

yellow fever in late nineteenth-century Cuba, along with a decline in demand for sugarcane and the formation of close ties with the United States, created conditions that gave rise to a robust tourist trade beginning in the 1930s when droves of (mostly U.S.) tourists came, lured by desires for Cuban sun, rum, and son. By the end of the twentieth century, the islands of the Caribbean—including Fidel Castro's Cuba—were better known for their sandy beaches than for tropical agriculture. European and North American tourists viewed Caribbean islands as places of rejuvenation, not illness. In a rather bitter irony, many residents of the Caribbean left their "island paradise" to seek jobs in the United States and elsewhere as local agricultural economies collapsed.

Perceptions of tropical forests in continental Latin America also transformed. In the 1980s, formerly menacing jungles became "hot spots" of biological diversity that drew the attention of international conservation movements, political leaders, and pop stars. No longer threatening, jungles discursively transformed into "rainforests" that were now threatened with extinction due to human action. The United Nations recognized Brazil, Colombia, Ecuador, Mexico, Peru, and Venezuela as "megadiverse" nations possessing high rates of endemic species. International conservation networks formed alliances with local organized people to pressure national governments to protect rain forests and their human inhabitants. These movements resulted in the creation of novel forms of conservation, such as extractive reserves, that protected forests without displacing forest residents. In the early twenty-first century, deforestation rates in Amazonia started to decline.

But, rainforests and sandy beaches constitute only a small part of most Latin Americans' lived experiences, even if the vast majority of them live in the tropics, a remarkable continuity that stretches across the pre-Columbian, colonial, and modern eras. Most of these tropical people have lived in agrarian settlements or urban areas. As the chapters by John Soluri and Cuvi demonstrate, highland tropical regions have been centers of agricultural diversity that sustain indigenous communities and supply urban markets. The highland tropics are also places where alternative cosmologies and visions of human-nature relationships continue to germinate. Finally, the Andes are home to nearly all of the world's tropical glaciers, which represent, among other things, important sources of water for rural and urban populations. Many glaciers are likely to disappear long before tropical rainforests do.

There is a diversity within the diversity of Latin America's tropical regions that scholars and others have to confront in order to move beyond stereotypes or deterministic understandings of tropicity. In ecological terms, the productivity and biotic diversity of tropical ecosystems distinguish them from temperate latitudes. However, the productivity of a sugarcane plantation in Brazil, the diversity of potatoes in highland Ecuador, or the variety of bats found in a Central American coffee farm are largely outcomes of historical processes.

Tropicality—the cultural meanings of tropical places and the living things that inhabit them—is also deeply historical, contested, and consequential.

## **Convergences: Latin America and a Global Environment**

There is no single factor that distinguishes Latin American environmental history from other world regions, but rather a conjuncture of multiple socioenvironmental processes that include: Iberian imperialism, early but rather weak state formation, sustained intercontinental material exchanges, and tropicality. Of course, these are broad generalizations that run the risk of blocking from view the rich diversity that lends the geohistorical idea of “Latin America” its material beauty and complexity—its enormous palette of colors, tastes, textures, sounds, smells, and “structures of feeling,” that condition and give meaning to everyday life. The chapters that follow collectively reveal some of the seams, tensions, diversity, and silences that characterize environmental histories of the region.

At the same time, the volume also points toward a convergence of Latin American environmental history with that of several other world regions characterized by: population growth, particularly in urban areas, increasing commodification of life-forms and processes, governments that rely on resource rents to maintain political legitimacy, the rise of consumer-driven (and meat-eating) middle classes, and energy-intensive technological systems. One outcome of this convergence has been a tremendous increase or “Great Acceleration” in energy and resource use since ca. 1940 that has created an unprecedented era of human-induced environmental change that some observers have labeled the “Anthropocene.”<sup>54</sup>

“Latin American” environmental histories, therefore, should continue to be written as connected histories whose specificity is not derived exclusively or even primarily by the boundaries of its constituent nation-states. Moreover, as many parts of Latin America become linked in new ways to Africa and Asia, environmental historians should be looking in new directions when drawing connections and comparisons. At the same time, our narrative and analytical lenses have to be constantly zooming in and out so as not to lose the ability to focus on the localities where most of life, human and otherwise, plays out.

We end with a small caveat: this volume does not pretend to provide answers for contemporary environmental problems: reading this book will do little to lower the lead levels of children in Villa Inflammable, conserve the Andean flamingo, or reduce atmospheric levels of carbon dioxide. However, by calling attention to the more-than-human processes that have constituted Latin America, we hope to spark conversations about the region’s present and possible futures that are informed by notions of sustainability, diversity, and

resiliency, rather than growth, purity, and stability. Ultimately, the only sustainable past is one that remains open to interpretation.

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## Notes

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8. See the webpage of the Latin American and Caribbean Society for Environmental History (SOLCHA) for an overview of such developments: <http://solcha.org/>. Examples of publications that helped shape this community include a few edited volumes: *Estudios sobre historia y ambiente en América*, vol. 1, *Argentina, Bolivia, México, Paraguay*, ed. Bernardo García Martínez and Alba González Jácome (Mexico City: Instituto Panamericano de Geografía e Historia, El Colegio de México, 1999); *Estudios sobre historia y ambiente en América*, vol. 2, *Norteamérica, Sudamérica y el Pacífico*, ed. Bernardo García Martínez and María del Rosario Prieto (Mexico City: El Colegio de México, 2002); *Naturaleza en declive: Miradas a la historia ambiental de América Latina y el Caribe*, ed. Reinaldo Funes Monzote (Valencia: Centro Francisco Tomás y Valiente

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  54. Literature on the “Anthropocene” is growing swiftly. Among the most widely cited works in English is Dipesh Chakrabarty, “The Climate of History: Four Theses,” *Critical Inquiry* 35 (Winter 2009), 197. For Latin American perspectives, see Astrid Ulloa, “Dinámicas ambientales y extractivas en el siglo XXI: ¿es la época del antropoceno o capitaloceno en Latinoamérica?” *Desacatos* 54 (May–Aug. 2017): 58–73 and José Augusto Pádua, “Brazil in the History of the Anthropocene” in *Brazil in the Anthropocene: Conflicts between Predatory Development and Environmental Policies* (London: Routledge, 2017).