



Curing the Colonizers

HYDROTHERAPY, CLIMATOLOGY,
AND FRENCH COLONIAL SPAS

Eric T. Jennings

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A black and white photograph of a tropical landscape. In the foreground, there are two small, simple buildings with gabled roofs. Behind them, a dense forest of tall palm trees rises. The scene is captured from a slightly elevated perspective, looking down at the buildings and up at the trees.

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For Tina, who knows why

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Preface and Acknowledgments

The importance and pervasiveness of colonial hydrotherapy dawned on me while I was researching my previous book on the colonial politics of the Vichy regime. The town of Vichy's longstanding colonial function, its countless imperial connections, including its missionary house, its colonial associations, and its hospital that had catered to colonial troops since the invasion of Algeria all begged for explanation. Similarly, in Madagascar under Pétainist rule, I observed how colonials stranded in the colony and denied their regular furloughs back to France—a minor inconvenience of global war—thronged to the highland spa of Antsirabe, which they took for an ersatz home. At this “Vichy of Madagascar” they sought not merely leisure, but also cures for malaria and colonial “anemia,” reinvigoration, reimmersion in clement climes, and revitalization through a potent mineral water cure. How did Vichy itself and Antsirabe in Madagascar emerge as sites of colonial *villégiature*? What was their role in the French colonial matrix? How did hydrotherapy come to be seen as the method of choice for treating or even avoiding colonial ills? These questions drove me to undertake this book, whose ramifications soon extended beyond Vichy and Antsirabe to encompass spas in Réunion Island, Guadeloupe, and Tunisia.

Spa research and fieldwork, pleasant though it may sound, requires funding. I could not have immersed myself in colonial hydrotherapy without the support of the Social Science and Humanities Research Council of Canada, which funded major research trips to Aix-en-Provence, Madagascar, and Guadeloupe. Subsequent research at Vichy and in Norway's missionary archives was

made possible thanks to grants from the Associated Medical Services/Hannah Institute for the History of Medicine. A Victoria College Senate Research Grant enabled me to undertake the research for chapter 3 on Réunion Island. The University of Toronto's Joint Initiative in German and European Studies funded Paris- and London-based research on acclimatization. The Department of History and the Faculty of Arts and Science at the University of Toronto generously provided me with a term off to focus on writing. Victoria College covered map-making and indexing costs.

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exiles seeking to take French waters between 1830 and 1840. I am deeply thankful to Tina Freris for offering to help me research in Antananarivo, Stavanger, and Fort-de-France.

Skilled and dedicated research assistants at the University of Toronto provided valuable contributions to this book. Rosita Marcel and Rikke Andreassen translated documents relating to the first part of chapter 5, from Malagasy and old Norwegian, respectively. Deborah Neill, a fellow traveler in the history of French colonial medicine, patiently scoured numerous newspapers and journals searching for spa references. Nick Bentley researched spa legislation in the *Journal officiel de l'Indochine française* at Cornell University's Kroch Library.

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Introduction

THROUGHOUT THE FRENCH COLONIAL EMPIRE, SPAS thrived in the nineteenth and twentieth centuries. *Villes d'eaux* (literally, “water towns”) and *villes d'altitude* (“high-altitude resorts”) were widely believed to serve vital therapeutic, curative, even prophylactic functions against tropical disease and the tropics themselves. They were seen as critical to the well-being of the colonizers. Hydrotherapy (*thermalisme* or *crénothérapie*), the branch of medicine dealing with mineral water cures, and climatology (*climatologie*, *climatisme*), the branch concerned with altitude therapy, constituted two interconnected centerpieces of French colonial and tropical medicine between 1830 and 1962.

Water cures, often combined with altitude cures, became, like the ubiquitous cork helmet, mainstays of the colonial regimen. The Ministry of the Colonies published bulletins accrediting a host of spas thought to treat tropical ailments, ranging from malaria to yellow fever and amoebic dysentery. Specialized guidebooks dispensed advice on the best spas for *colonialites* (literally, “colonial ills”). Administrators were granted regular furloughs to take the waters back home. In the colonies themselves, highland hydromineral resorts became so vital that they

often emerged as seats of colonial power, as in Guadeloupe, Réunion, and Madagascar.

In the colonies, spas served as potent reminders of home for the colonizers. Teams of scientists compared the chemical composition of overseas and metropolitan spas, seeking clones of Vichy, Vittel, or Plombières. Spa towns themselves became evocative symbols of colonial power. Their modernist architecture, quaint “metropolitan” villas, and segregated bathhouses were intended as much to remind settlers of home as to impress and distance the colonized. Most important, spas re-created oases of France, where settlers could overcome homesickness through *ressourcement* (literally, “reimmersion”). This empire rested at least partly on baths—even claiming to emulate ancient Rome in this regard.

How did this pervasive reliance on water cures come about? Hydrotherapy and climatology answered profound, long-standing anxieties over colonial settlement. In his memoirs, written in 1927, Serge Abbatucci reflected widespread beliefs when he wrote, “European generations can only survive in the tropical zone in . . . artificial conditions.”¹ This book is largely concerned with the justification, elaboration, and production of such an artifice. In the French case, colonial hydrotherapy and climatology represented prominent parts of this construction—as Abbatucci knew well, given his position as a leading French colonial hydrotherapist. Sometimes the artifice involved exploiting microclimates reminding colonials of home, sometimes it related to tapping spring waters akin to French ones, and at other times it simply featured the creation of an oasis of cultural Frenchness in the tropics. All three phenomena were usually interconnected in French colonial spas.

Colonial spas therefore illuminate some of the foundations of empire. They found their *raison d’être* in eighteenth- and nineteenth-century fears over the tropics. These fears were constantly recast and reformulated—around notions of climatic determinism and around the impact of milieu, heredity, racial purity, degeneration, and creolization. The link between these haunting fears on the one hand and colonial practices and policies on the other constitutes the focus of my opening chapter. Colonizers would not have resorted to hydrotherapy and a host of other preventative and curative agents had they not been struggling to understand European fragility and mortality in the tropics.² This is partly, therefore, a history of colonial anxieties and countermeasures.

My decision to examine spas in Guadeloupe, Réunion Island, Madagascar, and Tunisia warrants explanation. Simply put, these colonies boasted the most important *stations thermales* and *climatiques* (“hydrotherapeutic” and “climatic resorts”) of the French empire. Sub-Saharan French continental Africa, the French South Pacific islands, and French colonial Indochina counted very few sites where previous or ongoing volcanic activity permitted the construction of a highland hydromineral spa. Settlers and administrators in these colonies instead thronged to metropolitan spas catering to colonial ills. Admittedly, Algeria and Martinique also possessed noteworthy colonial spas that were deemed both *stations climatiques* and *thermales*. Unfortunately, however, very few materials on Algeria’s and Martinique’s spas are present in colonial-era archives. As for Vichy, my choice of spas in metropolitan France, it was widely recognized to be the “port of call of colonials everywhere” — the top spa to treat colonial ills.³ Its role as a de facto imperial hydrotherapeutic hub made it an obvious case study (see chapter 7). Finally, the geographical diversity of my five case studies, situated in the Indian Ocean, the Caribbean, Africa, and France, makes for broad and rich comparisons. Indeed, these colonies reflect different waves of French imperialism — Guadeloupe and Réunion having been claimed by France in the seventeenth century, while Tunisia and Madagascar entered the French imperial orbit in the late nineteenth century (1881 and 1896, respectively). And yet, one discerns remarkable continuities and parallels between these case studies, a fact that underscores the endurance of climatic and thermal logics and their remarkable capacity for reinvention.

Based upon extensive, original primary research on three continents, this book contributes to the studies of empire, tourism, leisure, and medicine. If colonialism was essentially a struggle over geography, as Edward Said asserts, then these purportedly healthful sites of leisure and power were certainly at the very heart of the French empire.⁴ While historians have begun to explore some of the networks of imperial power (ranging from freemasonry to imperial clubs and colonial schools)⁵ and geographers and historians have analyzed the function and workings of British colonial hill stations,⁶ the case of French colonial hydrotherapy has until now garnered no historical attention whatsoever.

To be sure, historians of medicine have shown how hydrotherapy and related sciences were utilized in a host of other medical sectors, from dermatology to gynecology. The business aspect of French hydrotherapy, its emer-

gence as a bona fide science, its position as a state-sponsored sector, and its status as a bourgeois activity have likewise elicited historiographical interest.⁷ And again, there is no shortage of studies of British colonial hill stations, sites where the British practiced climatic, rather than hydrotherapeutic or mixed cures. To date, however, the powerful connection between French spas and empire has been utterly ignored.⁸ And yet French colonial spas were more than mere imperial curiosities. The connection between hydrotherapy and empire has profound repercussions that extend well beyond the history of medicine. Indeed, this book stands at the crossroads of the histories of empire, leisure, tourism, power, culture, and medicine.

I propose six interventions straddling these fields. First of all, recent scholarship has demonstrated how European medicine used the colonies as testing grounds, how doctors controlled indigenous bodies, and how indigenous populations reacted to Western medicine.⁹ Megan Vaughan's impressive book *Curing Their Ills: Colonial Power and African Illness* is emblematic of the second of these approaches. She demonstrates how "in British colonial Africa, medicine and its associated disciplines played an important part in constructing 'the African' as an object of knowledge, and elaborated classification systems and practices which have to be seen as intrinsic to the operation of colonial power."¹⁰ My book, while equally centered on questions of colonial power, suggests that we cannot lose sight of the centrality of European health to colonial medicine. Colonial hydrotherapy and climatology evolved out of a nebula of racial theories, climatic and environmental determinism, and degeneration paradigms, concentrated as much, if not more, on the colonizers as on the colonized, as we shall see in chapters 1 and 2. In this same vein, colonial medicine's mix of control and regulation over indigenous peoples is often couched in the understanding that European scientists established their medicine as normative and African medicine, for instance, as either backward or superstitious. While I would not for an instant call into question this bias in European medical thinking, the prevalence in a purportedly Cartesian culture of hydrotherapy and climatology for curing colonial ills certainly underscores its intrinsic contradiction.

Second, the temptation when thinking of colonial tourism is to conjure up film-induced clichés of mythical treks to Angkor Wat, of big game hunts, or of daring automobile rallies across the Sahara. And yet, far from seeking the

exotic, the French colonial tourists I study (considerably more numerous than the big game hunters, Angkor visitors, or Sahara rally enthusiasts) actually craved the familiar at sites of leisure and medicine created in the image of the metropole. Students of colonialism persuaded of exoticism's hegemonic sway have too often overlooked this evocative lateral or internal tourism.

Third, the elaboration of what Dane Kennedy has called "islands of white," "pinnacles of power," and "magic mountains"—and their configuration in this instance around high-altitude mineral springs—reveals the inherent dystopianism of this French colonial project.¹¹ French colonial spas were not only conceived as an artifice; they constituted an attempt at achieving a colonial *tabula rasa*, involving the strategic cloning of a slice of France in the tropics. Here colonialism is laid bare: gone is the pretense of altruistic colonization—of colonizing to build bridges, aid, to elevate and improve colonized populations. Around these spas, the colonizers hoped to achieve regeneration, maintain strength, and cultivate difference.

Fourth, colonial spas shed light on everyday colonial practices and colonial sensibilities. While the intimate, the sartorial, and the experimental, to give only three examples, have all recently come into sharper focus in colonial settings, much work remains to be done on the relationship between colonial epistemologies, sensibilities, medicine, and practices.¹² Whereas Michel Foucault's writings on power and governmentality have been repeatedly projected onto the colonial sphere, fewer attempts have been made to apply either his studies on medicine, or for that matter the methodologies of Alain Corbin, Georges Vigarello, or Michel de Certeau, to colonial practices.¹³ Yet both everyday medical practices and colonial sensibilities open windows onto the mechanisms, foundations, and functioning of empire. Here I invert or, rather, historicize Kristin Ross's contention that in the 1950s and 1960s the colonial situation was suddenly infused into the "everyday life" of the "metropolitan existence."¹⁴ French colonial spas, then, offer many glimpses into the workings of empire: they served as military bases, rest stations, seats of colonial power, replicas of home, way stations for preseasoned arrivals, antechambers of the tropics, and detoxification centers. They not only acted as the interface between metropole and colony, but were also believed to make empire possible.

Fifth, colonial spas constituted sites where colonial margins and identities themselves were negotiated around multiple and complex power relations.

These included the kind of internal fractures identified by Ann Stoler in other contexts.¹⁵ Quarrels between settlers and administrators, rival spa promoters and clients, and recent settlers and Creole populations as well as tensions over the status and role of missionaries all spring out from an analysis of colonial spas. Vaster imperial fault lines are also revealed. Metropolitan and colonial spas soon entered into competition. But at the same time, spas like Vichy also permitted vastly different colonial constituencies to meet and mingle. Vichy, and to a lesser extent spas in the colonies, enabled lateral contact among administrators and other colonial agents from every corner of the French empire. Spas therefore reveal some of the complex traffic patterns of French colonialism.

On a related identity matter, colonial doctors systematically elided precolonial uses of hydromineral springs by indigenous peoples, so as to postulate their Frenchness. By labeling Antsirabe a piece of France in Madagascar, by virtue of its supposed chemical affinity to the spring at Vichy, French colonial medicine was able to lay a symbolic claim over the site. Paradoxically, in the end, the line between colony and metropole, between Réunionais, Guadeloupean, and French spas, became both culturally and even chemically blurred. The very project intended to carve out a piece of France in the colonies arguably ended up hazing the lines of home. “Are we really in the colonies?”¹⁶ asked a journalist about Madagascar’s spa, Antsirabe. And, at a metropolitan French spa like Vichy, the unexpected blurring would take on a different form, when colonized elites began frequenting the resort, bringing the empire home to the French provinces.

Sixth, such considerations lead one to ponder the encounters and more generally the relations between the French medical establishment, *baigneurs*, and *curistes* (spa practitioners) on the one hand and indigenous or colonized peoples on the other. How, if at all, did precolonial Arawak or Carib practices in Guadeloupe, maroon practices in Réunion, Betsileo and Merina practices in Madagascar, and Ottoman and Maghreb practices in Tunisia spill over onto French perceptions and uses of mineral springs? Medical literature systematically denied any influence of the Tunisian *hammam* or of Malagasy religious and cultural meanings on “proper” French scientific uses of mineral waters. Such denials were far from uniquely French: Michael Fisher has shown how nineteenth-century British doctors appropriated the Turkish Bath, claiming it “as an aboriginal British tradition.”¹⁷ But in this case, as in the British one,

the reality was manifestly more complex, as indigenous elites, Creoles, and colonials all jockeyed for influence at the very sites which settler society was actively seeking to define as inherently French.

Colonial spas sprang out of a complex firmament. At these spas, concepts of human bioengineering and of racial and moral regeneration stood cheek by jowl with the notion of human rootedness, with the idea of tropical toxicity, and with the growing ritualization of colonial conduct. Before turning to how colonial hydrotherapy and climatology were practiced—first in the colonies themselves, then back home at Vichy—I will therefore begin by tracing the genesis and rationalization of French colonial hydrotherapy itself. The certainty that water and altitude cures could stave off or even cure the nefarious impact of the tropics is sufficiently foreign to us today to warrant thorough explanation.

CHAPTER I

Acclimatization, Climatology, and the Possibility of Empire

HOW DID FRENCH SCIENCE COME TO PRESCRIBE water and altitude cures to combat the influence of the tropics? The answer lies in some of the epistemological foundations of French overseas hygiene and medicine. Geographers, historians of science, and others have traced the emergence of moral climatology, tropical geography, and taxonomies of climes over the course of the eighteenth and nineteenth centuries. Similarly, a number of studies have examined how the tropics were constructed as a “putrid” and “unhealthy” space, or more generally how European science understood disease as climatically determined.¹ The connection between these “sciences” and the sensibilities and practices of the colonizers, however, has yet to be thoroughly investigated. By focusing on debates over human acclimatization, this chapter traces the link between the production and practice of colonial knowledge in the field of tropical hygiene.

If altitude and water cures came to be seen as essential to detoxify, recalibrate, or otherwise heal the constitutions, organs, even the blood composition of French people who had spent time in “hot climes,” then the said climes must indeed have been considered highly noxious. Nowhere is the anxiety over colonial settlement and over the inherent

toxicity of the tropics more apparent than in the interminable debates over human acclimatization, which weighed considerably on modes of European behavior in the colonies.

To Acclimatize or Not to Acclimatize?

It is difficult to reconstruct the importance of climate in eighteenth- and nineteenth-century scientific discourse. Many Enlightenment philosophes operated within a framework of climatic determinism, descended from Hippocrates. Indeed, the Hippocratic legacy, centered as it was on “Airs, Waters and Places,” lies at the root of three sciences treated in this book: climatology, hydrotherapy, and *mésologie*.² In his monumental study of the idea of nature in eighteenth-century France, Jean Ehrard notes the philosophical complicity between geographical and climatic determinism and the Enlightenment: each married the sensual with the material while providing an experimental confirmation of Spinozism.³ Admittedly, climate occupied a more central place for some philosophes than for others: it appears virtually insignificant to David Hume, for example, while being paramount to J. G. Herder.⁴

Denis Diderot’s and Jean le Rond d’Alembert’s *Encyclopédie* (1777) reveals that tropical weather was believed to render indigenous women oversexed, to the point that men traveling to these climes were advised to wear chastity belts.⁵ Similarly, Baron de Montesquieu asserted, the only reason European women need not have been “locked up” was because northern climes guaranteed “good mores.”⁶ These widely held ideas were reiterated by Count Georges Louis Leclerc Buffon in his famous eighteenth-century *Histoire naturelle*. In a stereotype descended from antiquity, nymphomania was time and again associated with the tropics.⁷

Climate did more than affect the humors and sexuality. It was thought to lie at the very origin of behavioral and cultural differences—themselves grossly distorted to legitimize European dominance. Montesquieu, in particular, expounded upon the tyranny of climate. His *De l’Esprit des Lois* (1748) imputed sati in India, daughter selling in China, and even the decline of ancient Rome to differences of temperature.⁸ In fact, to Montesquieu the main difference between Europeans and “savages” resided in the fact that the latter “were almost entirely dominated by climate and nature.”⁹ The degree and novelty of

Montesquieu's climatic determinism have been called into question, however. Some deem it perhaps the least original aspect of his oeuvre.¹⁰ While conceding that climatic determinism was so widespread at the time as to be unavoidable, others view Montesquieu as breaking from the more cautious appraisal Abbé François-Ignace d'Espiard articulated in his *Essais sur le génie et le caractère des nations* (1743), which treated climate as one variable among countless others.¹¹ The harshest interpretation holds that for Montesquieu "climate explains vice and virtue, industry and indolence, sobriety and drunkenness, 'monachism' and [even] the British constitution."¹²

Still, none of the philosophes questioned the possibility or the desirability of Europeans traveling to the tropics or settling there. If anything, the eighteenth-century settlement objective involved achieving a state of acclimatization — seasoning Europeans, so that they might best withstand the local environment and hence disease. It follows, therefore, that many a prescriptive guide written in the late eighteenth century and the early nineteenth dispensed advice on how to win the battle against climate. Some suggested sexual abstinence, others recommended frequent baths. Some counseled the consumption of wine, others warned against the dangers of alcohol.¹³ There was no shortage of advice on how to soften the transition to living in the colonies.

Montesquieu concluded that Europeans were intensely vulnerable in far-away lands: "Those who wish to settle [in tropical colonies] cannot take on the local lifestyle under such different climes; they are forced to bring all the commodities of everyday life from the country whence they came."¹⁴ Here, medicine and commodity culture met the practice of everyday colonial life. Colonizers, Montesquieu argued, would have to re-create Europe in the tropics in order to prosper. This was considered one front in a titanic war against the over-riding impact of climate. In the words of the historian Anthony Pagden, "Try as they might to remain Frenchmen or English or Spaniards in the tropics, sooner or later the environment would reclaim its empire, and re-establish things in their proper order."¹⁵ The emergence of a Creole identity, however, ultimately belied this belief. For French scientists, the process of becoming Creole seemed double-edged: it signaled a gradual loss of Europeaness but might hold the promise of acclimatization. Acclimatization, in turn, might prove medically invaluable for those contemplating long stays or even permanent moves to the tropics.

In the nineteenth century, acclimatization and creolity underwent profound reassessments in France. A century prior, the philosophes had certainly stressed the dominance of climate over constitutions. But most also recognized that acclimatizing and becoming Creole were necessary steps toward living elsewhere. In the nineteenth century this cosmopolitan view was first called into question and then utterly rejected by a growing number of scientists, who would reinvent creolity and acclimatization into pathologies. The trajectory to making acclimatization deviant was by no means straightforward. A host of early influences shaped the process. The physician Pierre-Jean-Georges Cabanis's *Rapports du physique et du moral de l'homme* (1802) established the connection between climate—defined as the “totality of physical circumstances attached to each locality”—and morality and mental capacities.¹⁶ Cabanis's school, known as the Ideologues for their science of ideas, was not alone in auguring an initial shift circa 1800. Around the same time, the famous naturalist Georges Cuvier was likewise charting a course toward a “deterministic, physicalist interpretation of the capacities and potentials of the diverse races.”¹⁷ Although they anticipated the later nineteenth-century hardening of determinisms, these sources displayed nowhere near the same rigidity.

Martin Staum has shown how races were not yet considered fixed in the second half of the eighteenth century: the Dutch anatomist Petrus Camper even speculated that after a thousand years, whites in the tropics could turn black—precisely the opposite of what the German anthropologist Rudolf Virchow would assert a century later, namely that whites could not even survive in the tropics, let alone morphologically adapt to them.¹⁸ And William Cohen has observed how an avowed racist like the medical doctor Julien Joseph Virey, writing in 1801, still allowed for the possibility that environment could trump race. Race, in other words, was not yet immutable, the way it would soon become for hard-line “scientific racists” later in the nineteenth century.¹⁹ Most important, pathologies were not heavily racialized, as they would so markedly become in the second half of the nineteenth century.²⁰ By 1888, Joseph Onésime Orgeas, who had served at a colonial hospital in Cayenne (Guyana), concluded from clinical evidence that “human races differ no less in their pathological characteristics than in their physical ones . . . Pathological differences, themselves derived from physical variations, have vast and profound consequences: a race lives and prospers where another dwindles and goes extinct.”²¹

I would argue that such determinism itself, be it climatic, environmental, hereditarian, or racial, would reach its zenith in the second half of the nineteenth century, when strands of European science would posit, without regard for paradox, the fixity of race, the immutability of national cultures, and the impossibility of migration. Indeed, each of these threads soon became intertwined with the theories of so-called scientific racists, which asserted that climate conditioned racial degeneration, fragility, or supremacy. Interestingly, fragility and supremacy frequently ended up inscribed in the same equation — even within the same variable of a given equation. One contradiction in particular lay at the heart of the anti-acclimatization position. Humankind and other organisms were believed to rapidly transform — or degenerate — in the tropics. But this transformation could only work in one direction and resulted in a fixed, immutable outcome.

According to Mark Harrison, the second half of the nineteenth century marked the rejection of the very possibility of European acclimatization and settlement in the so-called torrid zones — an obvious irony if one thinks of this era as the zenith of European overseas expansion. Whereas it had been held in the eighteenth century that Europeans “could adapt physiologically to their new environments,” the very idea of acclimatization was now called into question by some racial doctrines: “This new [nineteenth-century] conception of difference stressed heredity and the innate, unalterable characteristics of the ‘races’ of Mankind.”²² Anne-Marie Moulin has been even more chronologically specific, situating the shift in the 1860s. She writes,

All the naturalists raised the crucial question of the survival of French people in the tropics. Transformative logic provided the theoretical axis for a very pragmatic line of questioning. Schematically speaking, until the 1860s, doctors were optimistic, guided by theories of acclimatization. Different races or variants of a single species (monogenism) could easily adapt to new climes. This optimism was maintained in spite of the terrifying morbidity of the French in Algeria [after 1830] . . . But, in a second phase, pessimism emerged vis-à-vis the colonization of Africa and Asia. Doctors, more than naturalists, henceforth weighed in with considerations of “race.” [In this view] natives had a natural advantage, being hereditarily adapted to their milieu.²³

Although the precise timing of the shift can be debated — I would suggest that pessimism toward acclimatization was already on the rise in the 1830s, and that

in any event the battles over acclimatization played themselves out over several decades²⁴ — Moulin's model provides an extremely helpful map of changing French views of "warm climes" in the nineteenth century.

There can be no doubt that the growing rigidity of racial models over the course of the nineteenth century both enabled and sharpened beliefs in immutable essences, whether racial, regional, or climatic. Karl Linnaeus or the Enlightenment more generally should not be saddled with the transformations popularized later by the likes of Arthur de Gobineau and Hippolyte Taine. Neither can they be held accountable for the increasing rejection of the very possibility of productive hybridity and mixity. As Moulin suggests, this trend accompanied the intensification of the debate over the unity of humankind: monogenists, like promoters of acclimatization, found themselves very much on the defensive by the mid-nineteenth century (American polygenist ethnographers like Samuel George Morton weighed in heavily on this conflict).²⁵ The polygenism versus monogenism debate was inextricably connected to that over acclimatization. In 1861, the French anthropologist Eugène Dally drew a direct line between the two: "It seems to me that if it were demonstrated that mankind is not cosmopolitan, that our European races, for example, cannot acclimate to other lands where other races thrive, that would provide strong proof in favor of the multiplicity of human species."²⁶

In this sense, although climate had admittedly played an important role in framing and delineating the non-European "other" since ancient times, it was in the nineteenth century that battle lines were drawn over climate's teleological impact on race.²⁷ In the nineteenth century, French scientists thus recast the primacy of climate in a crucial question: should Europeans even attempt to acclimate to the tropics? In other words, should the uphill struggle against climate even be waged? Such anxieties were widely shared. The same internal debate was occurring simultaneously at the heart of the world's other colonial superpower. Alan Bewell has remarked, "[The nineteenth-century British] medical literature on tropical invalidism was intrinsically a reflection on the feasibility of empire."²⁸ In France, two schools of thought battled over the viability of migration and empire over the course of the nineteenth century: one was increasingly racially and climatically deterministic, while the other found itself defending the very possibility of acclimatization, even over the long term. At stake were quite simply the cosmopolitanism and oneness of humankind and the feasibility of empire.

Which Tropics?

The notion of the tropics itself came under intense scrutiny in the nineteenth century. The tropics, to borrow the geographer David Livingstone's expression, fell victim to "negative environmental stereotyping" on a pan-European scale.²⁹ This had not always been the case, and some significant exceptions remained. These included paradisaical islands, in the Pacific and Indian oceans most notably, where tropical influences were said to be attenuated by breezes or other factors. The image of tropical Edens, emblemized in its romantic version by Bernardin de Saint-Pierre's *Paul et Virginie*, proved resilient even as the tropics were being pathologized.³⁰ In Derek Gregory's analysis, the tropical nature of excrement coexisted — and actually became entangled with — that of tropical nature as abundance.³¹ This helps in part to explain the stubborn quest for a salubrious tropical microclimate within the increasingly demonized tropical zone. It also accounts for the generally positive outlook cast on the isle of Réunion, which I will come to in chapter 4.

Still, as environmental determinists coded the tropics as increasingly dangerous sites, tropical Edens were gradually confined to the realm of the exceptional. Indeed, the stain associated with the tropics spread to warm, nontropical climes. Algeria and Tunisia illustrate this point. The heavy losses incurred during and after the French conquest of Algeria in 1830 cast serious doubts on the region's healthfulness to Europeans, doubts that endured for the remainder of the century. In 1841, a French general, Franciades-Fleurus Duvivier, famously pronounced, "Cemeteries . . . are the only flourishing colonies in Algeria."³² Two decades later, one Dr. Vital, a physician posted in the Constantinois region of Algeria reported, "European children are mercilessly leveled [by the local climate]." In 1863, the anthropologist Jean Boudin related the story of some twelve northern French peasants who had emigrated to a purportedly healthful part of Algeria: even there, only one survived his new climes.³³ During the conquest of Tunisia in 1881, a quarter of the French expeditionary force was felled by disease (typhoid fever in this case).³⁴ I will return shortly to the conviction that climate, rather than disease, killed. Here I wish to stress that Algeria and Tunisia, like sub-Saharan Africa, South Asia, and Southeast Asia, had established murderous reputations in nineteenth-century France. If anything, far from being circumscribed as the nineteenth century progressed, the "tropical menace" was seen as spreading over onto liminal climates. In-

deed, French scientists most often referred to a generalized peril of *pays chauds* (“warm climes”), lumping together all French colonies save Saint-Pierre and Miquelon.

The Acclimatization Camp and the Feasibility of Empire

The historian Michael Osborne has described *acclimatization* as “the essential science of [French] colonization.”³⁵ Certainly the popularity of French acclimatization societies, zoos, and gardens tends to confirm this view (though these institutions were largely concerned with animal and botanic rather than human acclimatization). *Acclimatization*, the amorphous concept popularized by the naturalist Isidore Geoffroy Saint-Hilaire (1772–1844) and influenced by Jean-Baptiste de Monnet Chevalier de Lamarck’s (1744–1829) theories of physiological adaptability, transformation, and subsequent transmission, was gaining broad currency in the early nineteenth century.³⁶ Its gist has been broadly defined as “a rationally forced adaptation to new environments.”³⁷ While certainly ascribing a dominant role to environment, at its very core acclimatization involved *facilitating*, rather than hindering, the settlement of people or indeed species from one climate to another. Beneath its naturalistic surface lay some deep universalistic and cosmopolitan currents. Warwick Anderson has observed that acclimatization theories seem to have gained greater favor in France than elsewhere, Britain particularly.³⁸ Even though they drew considerable criticism from some quarters after 1830, “human acclimatization” theories would continue to shape French colonial policy and practices long after. As for the anti-acclimatization turn launched in earnest in France in the 1830s, it would arguably prove all the more virulent in France than elsewhere, precisely because it first needed to loosen acclimatization’s grip.

Antoine Joseph Dariste’s guide for Europeans traveling to the colonies, written in 1824, belongs to the first wave of enthusiasm for the potential of human acclimatization. It demonstrates how powerful an ideal acclimatization had become in French colonial medicine and practice. Focusing on the case of yellow fever, he wrote,

Acclimatization is achieved by habit, which offsets the actions that the agents of yellow fever have on our organs. I base this theory on: 1) The fact that natives of the Caribbean, as well as Europeans acclimated there, lose the privilege of accli-

matization when they have lived for some time in cold climes. 2) That among the small number of Creoles who have fallen ill with yellow fever without having left the colony, one finds only inhabitants who live in higher elevations where the temperatures are cooler. They then came to areas where yellow fever was rampant, and fell victim to the disease. 3) That among those who, previously acclimated, left the colony for cooler climes, it was the young who lost the privilege of acclimatization the fastest.³⁹

Dariste, who had served as a doctor in Martinique in 1794, clearly strove to “creolize” Europeans in the colonies.⁴⁰ The role of French medicine, he argued, was to accelerate and smoothen the process of adaptation by any way possible, through bleedings or the consumption of potions, for example.⁴¹ Here, resolutely premodern medical practices were pressed into service to achieve the ideal of acclimatization.

Dariste’s views were echoed by many French doctors familiar with the colonies. N. Huillet’s *Hygiène des blancs, des mixtes et des Indiens à Pondichéry* (1867) reached the same conclusion concerning the desirability of creolization: “The body’s economy undergoes, gradually, an organic transformation which allows it to indigenize itself, to borrow the wonderful phrase of Dr. Celle’s *Hygiène pratique des pays chauds*, or if one prefers, to creolize itself. In other words, the body achieves a mixed temperament, halfway between that of the European and the native. That is the Creole temperament, the only one compatible with tropical regions . . . [As for] escaping diseases brought on by tropical climes . . . that is the domain of practical hygiene.”⁴² Here, Huillet grafted the emerging discipline of tropical hygiene studies upon Dariste’s earlier goal of achieving a measure of indigenization within a humor- or temper-based paradigm. In Huillet’s view, creolization, combined with the proper hygienic practices, could help stave off disease.

Although under sustained attack by the end of the nineteenth century, the acclimatization ideal had not vanished altogether; instead, tropical hygienists had absorbed and appropriated its residual elements. In fact, the growing field of French tropical hygiene defined its very existence as tributary to the aims of acclimatization. A commission formed in 1893 to popularize hygienic principles, concluded as much: “If we were to define the ‘colonial settler’ as one who settles definitively or spends very long periods of time in foreign lands, even tropical ones, then we would eliminate the need for the present study