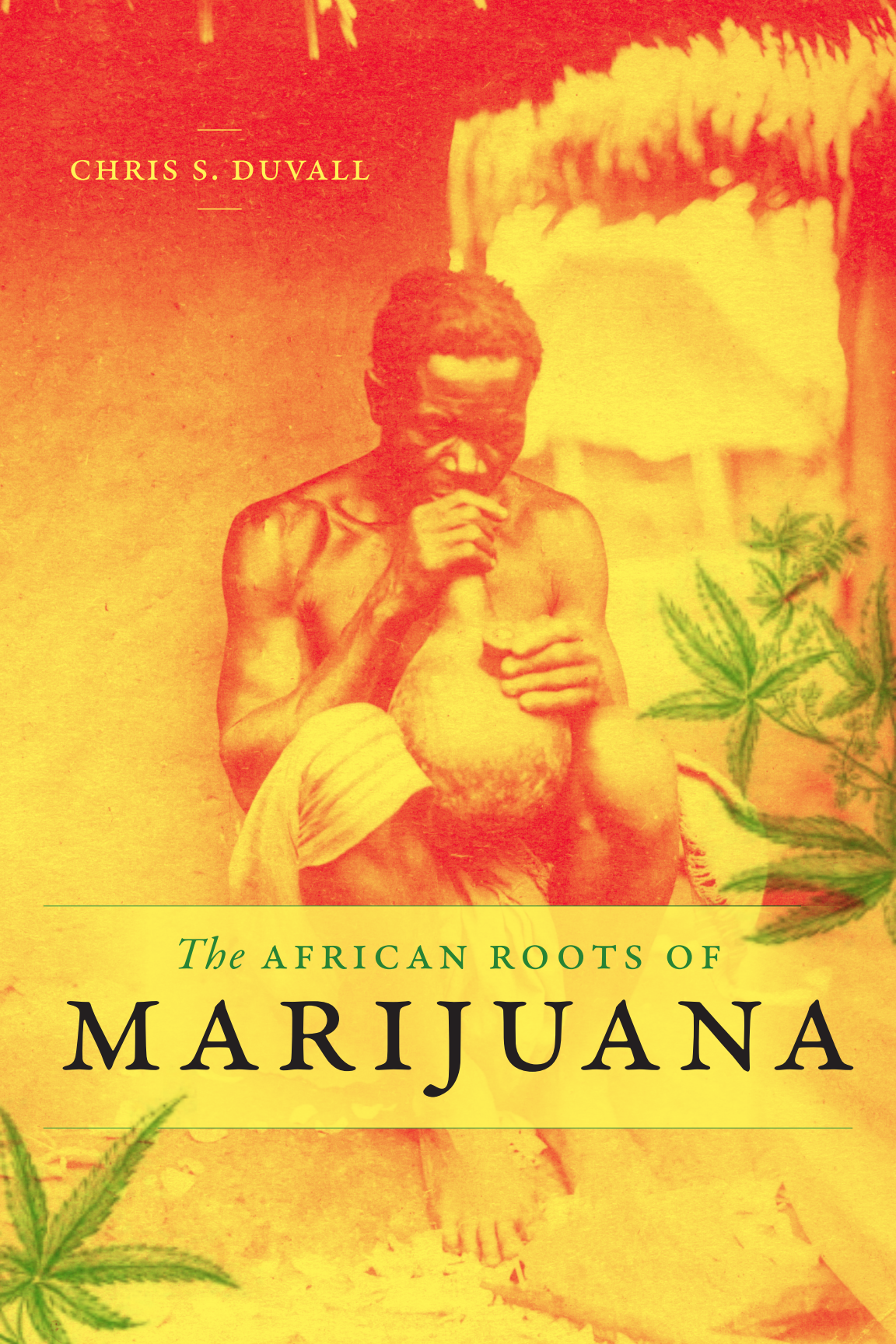
CHRIS S. DUVALL



The AFRICAN ROOTS OF MARIJUANA

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To JHR

Contents

PART I. INTRODUCTION

Pay Attention to African Cannabis

ONE

Cannabis and Africa

Marijuana does not cause trypanosomiasis. This is one fact I will offer.

I will not offer much information on other topics some readers might expect in a book about marijuana and Africa. I offer very little about Rastafarianism, for instance, and mention Bob Marley just once more. These examples are crucial in a history of cannabis broader than this one. My research period ends in approximately 1925, a few years before Rastafarianism arose in Jamaica. I have chosen 1925 because this was when cannabis was first listed in an international drug-control agreement, which initiated the now familiar condition of global cannabis prohibition. This book is about what preceded the familiar.

For the period before 1925, I touch on some characters that frequently appear in cannabis histories, including Scythians, Queen Victoria, and the Bena Riamba. Perhaps these characters are unfamiliar to you; their parts will unfold. Whatever your awareness of cannabis in the global past, I will touch on the unfamiliar, because I focus on Africa.

I make a simple argument: Africa has been neglected in popular and scholarly histories of cannabis, and this neglect undermines the capacity of global societies to manage the plant drug. There are no histories of psychoactive cannabis in any continental region, not just Africa. However, Africa is especially important. African knowledge is foundational to the now dominant global use of cannabis as a smoked drug. If you know *nothing* about cannabis except that it can be a smoked drug, your knowledge traces to Africa.

FIGURE 1.1. The imagery and content of Jamaican reggae music has shaped popular understanding of cannabis in Africa. Reggae lyrics that celebrate *ganja* and African heritage reflect views within Rastafarianism and Jamaican society, not an awareness of the plant's actual African past. Photograph by Sheila G. Duvall.

There is an enormous literature on cannabis. I do not cover it all. At points, I am quite critical of recent portrayals of the plant's history. I mention publications ranging in substance from *The Lancet* to *Playboy* magazine. My view is that histories of cannabis—whether book-length scholarly studies, vignettes in medical literature, or tidbits in popular media—are poorly researched and unjustifiably neglect Africa. My critiques may seem frivolous—it should be obvious that ads in *Playboy* may be misleading—only if you overlook the closeness of pop culture and academic discourse about cannabis. The same factual errors appear in high and low places, because the same conceptual errors are shared across society. The conditions of cannabis prohibition have warped ideas about the plant. The collective historical narrative about cannabis is built predominantly from pretentious, politically motivated factoids rather than documented evidence about the plant's past.

Africa is ignored in the collective historical narrative. The widely shared nonportrayal overlooks the fundamental importance of African knowledge to the global practice of cannabis smoking. More important, the nonportrayal of Africa intellectually justifies notions that drug use is a racially determined

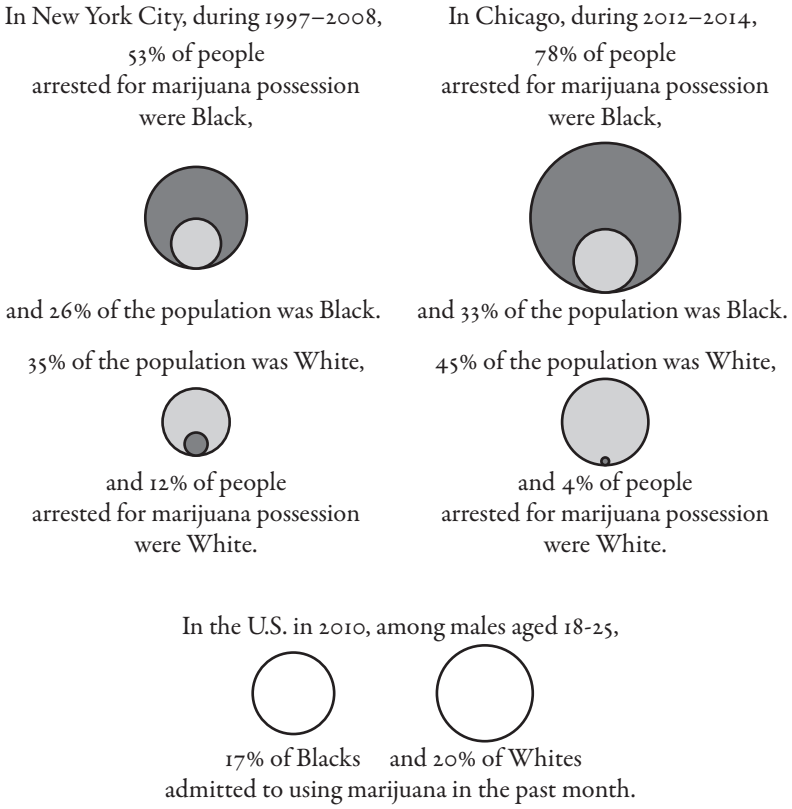


FIGURE 1.2. Marijuana arrests and population by race in New York City and Chicago, 1997–2014. New York City decriminalized possession of small amounts of marijuana in 1977, as did Chicago in 2012. Sources for these data are given in n. 1. Graphic by Chris S. Duvall.

behavior. The collective narrative, being unconstrained by evidence of the plant's African past, enables anti-Black, racial stereotypes about cannabis drug use. In the United States, one outcome of these stereotypes is biased drug-law enforcement.[1]

Again, however, my focus is on Africa and the period before 1925. I do not offer much on current drug-law enforcement, primarily comments about its intellectual basis. My focus is on what preceded the familiar. To understand why cannabis appears in international drug laws at all, for instance, the intellectual pathway leads to colonial Africa.

Neglect of Africa in cannabis history has real-world consequences in and beyond the continent. African knowledge lies at the foundation of the dominant

global culture of psychoactive cannabis use, even as Pan-African experiences are ignored in developing approaches to managing the plant as an economic, pharmacological, ecological, and political resource.[2] To understand cannabis in the modern world, the pathway leads to Africa.

CANNABIS IS AMONG the most widely recognized plants. Its leaf 🍁 is globally iconic. This book is written for people who know that cannabis can supply psychoactive drugs, as well as industrial products such as fiber for rope or cloth. Many people know little else about the plant. Some people know brief anecdotes about its history; George Washington and Queen Victoria are sometimes mentioned. A few people with especial interests in the plant have published world histories of it.

World histories of cannabis comprise a distinct literary genre. Among the canon, *Cannabis: Evolution and Ethnobotany* (2013) is a new classic; *Smoke Signals: A Social History of Marijuana* (2012) and *Cannabis: A History* (2005) have both sold many copies for mass-market publishers; *Marihuana: The First Twelve Thousand Years* (1980) is foundational to many newer works.[3] The most influential of all is *The Emperor Wears No Clothes*, an anti-prohibition tale first published 1985 and now in its twelfth American English edition, with editions in other languages and countries.[4] *The Emperor* is as poorly researched as widely read. Many works offer shorter histories, ranging from the obscure to the current mainstream (such as in 2014's authoritative *Handbook of Cannabis*).[5] Many physicians have offered historical vignettes about cannabis to justify their scientific interest in medical marijuana (see chapter 10). George Washington somehow used cannabis, so why shouldn't we?[6] The vignettes of scholars blend with the sound bites of popular media to become common knowledge about the plant's history, a knowledge poorly rooted in facts.[7] It is not true, for instance, that "Cannabis has been used throughout the world for thousands of years and by all types of social classes, including Queen Victoria in the 1800s."[8]

Cannabis histories reflect the political-economic conditions of their authorship. Most have been written by authors interested in advancing political arguments for or against the drug plant's prohibition. Cannabis histories display political advocacy more than desire to build knowledge and test assumptions about the past.[9] The first serious history of *marihuana* in Mexico, of all places, was published in 2012, Isaac Campos's *Home Grown: Marijuana and the Origins of Mexico's War on Drugs*.[10] Other serious historians have investigated cannabis elsewhere. Some who have looked at the plant drug in African societies include Emmanuel Akyeampong, Johannes Fabian, Gernot Klantschnig, Liat Kozma,

James Mills, David Gordon, and Wolfgang Cremer. Academic histories are much less well circulated, though, than popular books like *The Emperor*.

Political debates about cannabis in current societies have shaped knowledge about the plant in past societies. Real historical events have been overlooked, or, if noticed, spun beyond recognition and never studied for insight on the people-plant relationship. An important example is the origins of global cannabis prohibition. Campos shows that a War-on-Drugs mentality originated within Mexico, well before the rise of harsh anti-marijuana rhetoric in the twentieth-century United States. Political-advocate histories have ignored the plant drug's past outside the United States, simplistically portraying global prohibition as a blight spread by U.S. political-economic dominance and tinged by racist attitudes within the United States.[11] Cannabis histories often target Harry Anslinger as the driving force behind global prohibition. Anslinger was the first commissioner of the Federal Bureau of Narcotics, a precursor to the Drug Enforcement Administration (DEA). He strictly enforced drug laws through his thirty-two-year commissionership (1930–62). His influential public discourse vilified marijuana and its growers, peddlers, and users.[12] Anslinger's classic paper, "Marijuana, Assassin of Youth" (1937), adapted a centuries-old Orientalist stereotype about drug-fueled violence to serve his purposes in twentieth-century America.[13]

Despite his real role in cannabis history, Anslinger has been made into a semifictional straw man, easy to topple as a stand-in for the idea of prohibition. *The Emperor Wears No Clothes* ostensibly paraphrased U.S. prohibitionists in Louisiana in the 1910s as saying marijuana "mak[es] the 'darkies' think they [are] as good as 'white men.'"[14] These unsavory words were written in 1985 by a pro-marijuana activist but now circulate without restraint as a direct quote from Anslinger in outlets that include *Rolling Stone* magazine (2016), the scholarly book *Race and the Black Male Subculture* (2016), and the academic periodical *Kansas Journal of Law and Public Policy* (2017).[15]

These false attributions serve to make cannabis control an outcome of "abhorrent hatred toward immigrants and racial minorities" in the United States.[16] This is not an accurate portrayal of prohibition. Initial U.S. cannabis-control laws were about controlling pharmacy practice and preventing use of a drug thought to produce individual and public-health problems.[17] Local anti-cannabis laws preceded federal prohibition, but these were widely preemptive bureaucratic initiatives passed before psychoactive cannabis gained any other local attention.[18] Anslinger was initially hesitant to bring marijuana under federal control but did so to favor domestic politicians; he always remained more concerned about morphine and heroin. Racial bias in all aspects of U.S. law

enforcement was entrenched long before Anslinger, whose ideas about human difference surely reflected his time. However, none of his published writings display the racial virulence that pro-marijuana activists have placed in his mouth.

Legal controls on cannabis did not originate in the United States. Controls were in place globally before the U.S. federal government began worrying about marijuana in the 1930s.[19] The roots of global prohibition lay in early twentieth-century Africa, not in American bureaucrats. Cannabis first appeared in an international drug-control agreement, the International Opium Convention signed in Geneva in 1925, because South Africa and Egypt asked for it to be included, and the world went along. Both countries had had cannabis controls in place since 1870. Decades before Anslinger, most African colonies had banned cannabis, often in explicitly racist terms and principally to control the hard laborers who were the plant drug's principal users (see chapters 8 and 9). The world came into compliance with colonial African ideas about cannabis.[20]

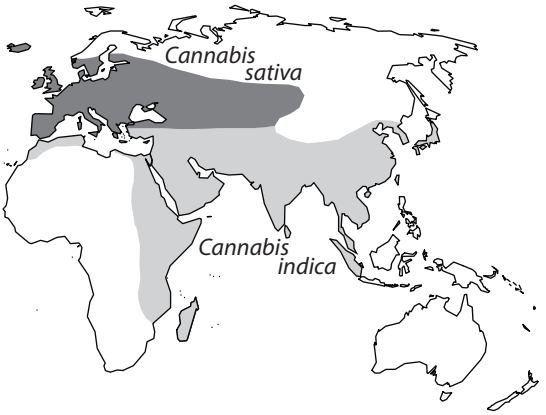
Cannabis is a global crop. Over the past five centuries, the plant genus has colonized the world, expanding its outdoor range to encompass effectively all ecologically suitable territory between about 60 degrees north and south latitudes. Humans have been the primary dispersal vector for the plant. People have carried cannabis seeds into many landscapes, including colonists hoping to make rope in new lands, slaves saving seeds to plant somewhere someday, and marijuana growers trying to breed new varieties. The plant's biological dispersal was inevitably a political-economic process, because it was a human endeavor.

It's challenging to understand the plant's history because of its challenging nomenclature and its dichotomous material values. I discuss cannabis taxonomy in chapter 2. At this point I will simply adopt the view that there are two major genetic groups within the *Cannabis* genus: *indica*, which exhibits psychoactive chemistry, and *sativa*, which does not.[21] When italicized, *indica* and *sativa* refer to these groups, which are not the same as the groups of plants that marijuana aficionados call indica and sativa. Nonitalicized indica and sativa designate folk species—plant types that are recognized informally within a social group—and are unreliable indicators of genetic relationships between plants.[22]

The genetic lineages have their own histories of biological dispersal. The center of evolutionary origin for *Cannabis indica* was around the Hindu Kush mountains in highland South Asia, while *Cannabis sativa* originated in temperate Central Asia. The midlatitude population traveled westward to colonize Europe, where people valued it for fiber and hempseed. The psychoactive population colonized southern and eastern Asia and about a third of Africa, the

TABLE 1.1. Key Components of a Cannabis Vocabulary

Term	*Definition as used in this book*
Cannabis	The formal, scientific name of the botanical genus.
cannabis	An informal name for the botanical genus.
Cannabis indica	The genetic group of plants that displays psychoactive chemistry. This group originated in the southwestern Himalayas and has been grown globally up to about 35 degrees latitude (see chapter 2).
Cannabis sativa	The genetic group of plants that does not display psychoactive chemistry. This group originated in temperate Central Asia and has been grown globally between about 35 degrees and 60 degrees latitude (see chapter 2).
drug	A substance that is consumed or applied externally that alters bodily function through biochemical pathways beyond the digestion of calories or nutrients.
hemp	A use of *Cannabis* plants that generally entails fiber production (as for textiles and cordage) or hempseed production (as for food or oil).
indica	A psychoactive folk species recognized by marijuana aficionados. Although idealized as a short plant with wide leaflets, it is recognized by its pseudosedative effects, not its physical form (see chapter 3).
marijuana	A set of practices and knowledge that is associated with *Cannabis indica*, as developed in the United States since circa 1900. This is not a general term but has specific geographic, historical, and cultural relevance.
pharmaceutical cannabis indica	*Cannabis* herbal material that is used in Western pharmacy and some preparations made from this herbal material (see chapter 9).
sativa	A psychoactive folk species that is recognized by marijuana aficionados. Although idealized as a tall plant with narrow leaflets, it is recognized by its pseudostimulant effects, not its physical form (see chapter 3).



MAP 1.1. Global distribution of cannabis, circa 1500. Map by Chris S. Duvall.

northeastern portion, by 1500. Three major subgroups exist within the psychoactive population. In eastern Asia, these plants were bred for fiber and hempseed production, not psychoactive products, although they retained psychoactive chemistry. In South Asia, people developed two major subgroups, one associated with the production of *charas* (cannabis resin), and one associated with *ganja* (female flowers or, more precisely, pistillate inflorescences).

Historical accounts of cannabis come principally from European observers, many of whom had strong opinions about how others interacted with the plant. During the Age of Sail, hemp fiber was crucial to European political-economic power. Each large ship required dozens of tons of maritime-quality rope and canvas that needed to be regularly replaced. Political-economic authorities sought continually to increase plant-fiber production, but farmers often did not want to grow the crop because of its heavy labor demands. An early impetus for economic botanical exploration of the world was to find fiber plants that were easier to process into high-quality rope and cloth.[23] Yet despite the problems of producing cannabis fiber, throughout the period before 1925, hemp represented agricultural bounty, industrial success, and maritime strength in European media. Psychoactive cannabis drug use was contrarily framed as a waste of a plant resource presumed to be more valuable if made into rope.

For European documentarians in colonial Africa, perceptions of cannabis drug use were entangled in ideas about class and race. Racial ideas coevolved with the historical epidemiology of drug use. The drug-use practices of people in social underclasses were stereotyped as deleterious to individual and public health. The social-ecological processes that produced marginality elevated the

importance of subsistence therapeutic resources to these people, including cannabis. Racial categories commonly served to mark class differences so that the social-ecological conditions of wealth and poverty were considered the natural states of different racial groups. Notably, the racial category "Black" (and historical synonyms) arose as an intellectual justification for chattel slavery.[24] In colonial societies around the Atlantic, the conditions of Blackness, marginality, and psychoactive cannabis drug use became associated and were assigned negative meanings in European thought.

Drug use by White, social-ecological elites, by contrast, was sanctified as open-minded experimentation, free-thinking expression, or intrepid worldliness. The documents of cannabis history come almost entirely from Western travelers, few of whom claimed direct experience with the plant drug. Those who did could boast of cannabis consumption even while condemning it among others, because their status allowed them to dabble with low-class drugs without fear of social repercussions. Elite privilege has shaped the telling of cannabis history, too. Consider the twentieth-century American writer Paul Bowles, whose writings helped form current popular understanding of cannabis in Morocco. Public representations of Bowles's drug knowledge exuded worldly coolness, as when he told eager but naive *Rolling Stone* readers in 1974, "There's no good Moroccan hashish. It's not a product [Moroccans] ever used. The first ones who made it were mostly American blacks who brought presses and showed the Moroccans how to do it."[25] His worldliness alone backed up his anecdote: trust the expert, the bad drugs trace to Blacks. Yet Bowles's knowledge of Moroccan language and culture was superficial, despite his long residence in the country.[26] Narratives of cannabis history reflect the partial perspectives of privileged observers; race and class shaped both patterns and portrayals of drug use in past societies.

It's crucial to think about race and class in understanding cannabis history. For the world population of *Cannabis indica*, the main pathway to global dispersal passed from southern Asia across the Indian Ocean to sub-Saharan Africa and from there across the Atlantic. The political economy of its trans-African and transatlantic dispersal was the global expansion of capitalism after 1500. Cannabis was integral to exploitative labor relationships upon which capitalist endeavors and colonial expansion depended, including plantation economies in the New World connected to slave economies in the Old World. The psychoactive cannabis seeds that crossed the Atlantic accompanied disease, trauma, violence, and poverty. Cannabis histories have overlooked this people-plant relationship, mostly because Pan-African experiences have been ignored.

Common-knowledge history provides intellectual bases for decisions made about managing the drug plant in current societies. My pre-1925 focus limits my engagement with current debates. Cannabis decriminalization is a prominent issue in many countries and jurisdictions[27]—notably, in the United States, where I reside. Not until chapter 10, the last chapter, do I discuss current debates, and even there I consider only three topics: how global society manages cannabis as an agricultural resource, as a medicinal resource, and as an object of legal control. I conclude that wider understanding of cannabis history would improve how societies manage it today.

To start toward these conclusions, I begin by reviewing portrayals of Africa in cannabis histories. The documentary record for cannabis in Africa is rich but has been almost completely ignored by historians. This book summarizes what has been overlooked, and with what consequences.

MY BACKGROUND IS in the field of African studies. I am interested in historical geographies of Africans in the Atlantic World, by which I mean the many and varied connections that exist across and around the ocean basin.[28] I am trained as a geographer, focused on people-plant interactions. My thinking about Africans and plant geography has been shaped by Judith Carney, Andrew Sluyter, Robert Voeks, Londa Schiebinger, and others who have shown that Africans were fundamentally important in the transformation of landscapes around the Atlantic after 1492 and that long-standing biases have led scholars to overlook the creative contributions of Africans in historical societies.[29] Africans were not merely labor in Atlantic history, even if slavery sharply constrained how people could alter the conditions they experienced. Obviously, Africans were not alone. People from Europe, Asia, and the Americas shaped post-Columbian landscapes, too.

Biological and cultural diffusions of cannabis are historically and geographically traceable.[30] The minimal facts in cannabis histories show that Africa and Africans should not be overlooked. Here are the minimal facts: human-cannabis interactions originated in Central Asia more than twelve thousand years ago. The plant and knowledge of its uses diffused globally along several pathways. Perhaps one thousand years ago, cannabis arrived in East Africa from South Asia and in North Africa through connections around the Mediterranean Sea. The plant dispersed widely throughout the sub-Saharan region.

Within Africa, three cultural features are widely agreed on. First, many works have suggested that *dagga* is *the* African word for cannabis. This is the principal term for the plant drug in South Africa, ultimately from an unknown

Khoisan language. Many publications have applied the term widely, including a book that states *dagga* is "spoken widely across the continent, and sometimes applied to any psycho-active plant material."[31] Other cannabis histories use *dagga* in situations as diverse as historical South Sudan; among slaves in the southeastern United States; in reference to both Louis Armstrong and "Black Africans"; and as an "Arabic or Khoikhoi" term in Southern Africa.[32]

Second, all works emphasize "the most interesting anecdote concerning cannabis in Africa[,] . . . in which the drug transformed . . . a tribe of feuding miscreants to one dedicated to peace and goodwill."[33] This interesting anecdote refers to the Bena Riamba political-religious movement, which persisted around 1870–90 in what is now the southern Democratic Republic of the Congo (see chapter 6). In its normal telling, marijuana inspired tranquility and goodness in a group of people who previously had been prone to warmongering and cannibalism.

The third commonly (but quietly) repeated mention of Africa in cannabis histories is that slaves perhaps carried knowledge of the plant drug across the Atlantic to Brazil.

Only one work ostensibly covers *Cannabis in Africa*, the title of a 1980 book by the sociologist Brian du Toit.[34] This remains the state-of-the-art historical geography of the plant on the continent, although its geographic aspect was identified explicitly as a survey in the book's subtitle. The book instead was a sociological study of drug use in 1970s South Africa. It is valuable in both regards, even though its historical-geographic limitations are clear. For example, it reports "no evidence of cannabis in West Africa before the Second World War."[35] This statement has been widely repeated. Nonetheless, primary sources show that psychoactive cannabis was present in nineteenth-century Gambia, Liberia, Niger, Nigeria, Sierra Leone, Senegal, and, possibly, Guinea and Togo.[36] Du Toit did his research before the internet. I have benefited from digital repositories made available in the past decade, which allow unprecedented access to an enormous number of searchable historical documents.[37] This book is an outcome of investments global society has made that make printed knowledge widely available via the internet.

All histories agree that the drug plant's African dispersal pathway essentially ended at the continent's shores and had little consequence for world culture. All that departs Africa on global dispersal maps is a single, thin line vaguely toward Brazil that represents weak statements such as, "[Cannabis was] possibly . . . brought directly by slaves or traders from Africa to the New World."[38] This portrayal of Africa as globally unimportant except (perhaps) for Brazil reflects conventional wisdom, not the documentary record.

Cannabis histories are almost uniformly bad when it comes to representing African experiences. There is no shortage of outlandish statements that belie ignorance of historical context, if not of documented facts. A book from 2005 announced that it "has been conjectured" that African slaves brought cannabis seeds to Brazil in "magical talismanic dolls."[39] This is a ridiculous conjecture, given basic knowledge of transatlantic slaving. Enslaved people were not allowed to retain personhood, let alone dolls, particularly dolls that might have been related to indigenous spirituality. Uninformed embellishments such as magical dolls belittle the experiences of the millions who endured enslavement and obscure the real involvement psychoactive cannabis had in slavery.

The idea that a fantastically primitive spirituality underlies the plant drug's African past resonates with—or, rather, is sustained by—notions about African backwardness. Cannabis histories offer fantastic rumors of the primitive and exotic—*talismanic dolls!*—to supplement thin knowledge. A book from 2012 generalized with no apparent basis that cannabis was "a staple of African shamanism."[40] Another from 2016 says that "the savants of Zululand . . . burned cannabis flowers . . . and prophesized the future,"[41] although such prophesizing is not traceable in the book's cited sources. Poor research practice sustains nonsensical—or, at least, misleading—anecdotes. A book from 2013 gossiped that "a somewhat obscure sect in the Sudan [was led by] a strange woman [who promoted] the smoking of *Cannabis* (*dagga*)."[42] The basis for this factoid *is* obscure: the book cites no source but obviously borrowed from a 1980 book that inaccurately summarized and incompletely cited a 1927 paper by a colonial administrator, who started the rumor to suggest that cannabis made the natives hard to rule.[43] Cannabis histories have preserved an array of outdated ideas and plagiarized errors by failing to perform the basic research practice of checking and citing sources. Plagiarism in the cannabis literature has a proud history, going back to sixteenth-century European scientific botany and following more than a millennium of embellished, distorted, and inaccurate repetitions of the Greek physicians Dioscorides and Galen.[44]

More widespread than plagiarism is uncritical repetition. Scholarly reviews of cannabis books have included such praise as "highly incestuous" (1975) and "less . . . careful scholarship than a polemic" (2007).[45] Common-knowledge stories supplement thin knowledge about Africa even in high-end histories. Consider the book *Forces of Habit: Drugs and the Making of the Modern World* (2001), which remains foundational to studies of drugs in global history. Nearly everything that *Forces of Habit* includes on cannabis and Africa is the quote: "Angolan slaves . . . brought cannabis [to] northeastern Brazil . . . sometime after 1549. One story has it that the slaves carried the seeds in dolls. . . . The planters

allowed the slaves to grow [cannabis] between the rows of cane, and to smoke and dream during periods of inactivity."[46] The entire passage is an unsourced rumor, presented as common knowledge. Its factoids can be traced alongside the errors they perpetuate. "Dolls" and "1549" come from a 1975 paper that has been widely repeated without citation, despite its critique of incestuous cannabis books.[47] The paper cites another paper from 1958 that no one seems to have read since 1975. The 1958 work introduced two errors. First, 1549 was when the Portuguese crown authorized sugarcane plantations in Brazil; the date is meaningless regarding cannabis for reasons related to labor history and because there is no evidence cannabis was present in western Africa until the 1700s. Second, it stated that Pio Corrêa, an author no one since 1958 has traced, wrote that slaves carried seeds in "dolls."[48] In 1926, the Brazilian botanist Manoel Pio Corrêa reported an oral history that was inaccurately summarized in 1958. Pio Corrêa wrote not about "dolls" but about captives who "tied [seeds] into the edges of their wraps and loincloths."[49] This anecdote is believable; slaves were sometimes allowed rags and at least occasionally succeeded in carrying valued seeds across the Atlantic.[50] The between-the-rows-and-smoke-and-dream factoid comes ultimately from a 1937 book that offers an impressionistic, idealized, and simplistic recollection of northeastern Brazil. It frames psychoactive cannabis as an unfortunate remnant of slavery and thus something to expunge from twentieth-century Brazil.[51] This factoid also betrays ignorance of historical context. A basic knowledge of Brazilian slavery suggests plantation bosses would not have tolerated slaves' planting anything in direct competition with a principal cash crop, especially not a drug plant that slave owners disdained (see chapter 7). The smoke-and-dream nonsense is contrary to documented uses of cannabis among laborers in Brazil and Central Africa, who valued the plant drug as a stimulant associated with work (see chapter 8).

Even the best academic works have treated Africa as an episode in cannabis history worth mentioning for its fantastic qualities—*between the rows and smoke and dream!*—but not worth examination. Unsourced, common-knowledge statements about cannabis history are mostly traceable rumors, errors, or omissions, whether about Africa or elsewhere.[52]

AFRICA HAS BEEN NEGLECTED in cannabis histories. The broader intellectual problem is the history of scholarship that neglects African contributions to world culture.

This problem has markedly affected knowledge of the sub-Saharan region and the African Atlantic Diaspora. Historically, Africans were portrayed as

recipients of knowledge introduced from Europe or Asia rather than as producers of knowledge that shaped societies elsewhere. However, recent studies of agriculture, technology, and ethnobotany have shown that African knowledge was foundational to practices of plant use and management within societies across the Americas.[53]

One notion I challenge is that Africa is backward technologically, that useful inventions have gone to Africa but none have come out. I raise this challenge with regard to smoking paraphernalia in chapter 3. The technologies of plant use are crucial components of people-plant interactions. Smoking pipes were unequivocally invented in sub-Saharan Africa centuries before 1492—in some locations, as much as two millennia before Europeans encountered American Indian pipes packed with tobacco.[54] Dry pipes were invented on both sides of the Atlantic. Water pipes originated in Africa, where they were historically associated with cannabis. The earliest direct evidence of cannabis smoking anywhere is residue that archaeologists scraped from fourteenth-century waterpipe bowls unearthed in Ethiopia.[55] Earlier pipes have been recovered widely across sub-Saharan Africa, just without evidence of what was smoked.

Most cannabis histories make no mention of paraphernalia, despite the dominance of smoking in current people-cannabis interactions worldwide. Histories that do mention pipes and Africa rely on two outdated narratives: that smoking pipes arrived in the Old World only with Europeans coming back from the New World, and that cannabis smoking arrived in Africa only with "Arabs" or "Muslims."[56]

The unchallenged dominance of these narratives has forced researchers to fit their data to them rather than interpret data to understand the past. The field of archaeology has particularly struggled to overcome belief in African backwardness.[57] Archaeologists have considered pipes in ancient African sites not as evidence of ancient pipes, but as evidence of erroneous radiocarbon dates, site disturbance, or mysteriously rapid sediment accumulation. Archaeologists have struggled to develop regional chronologies because some have taken pipes as indubitable indicators of the post-Columbian period regardless their broader context, while sites without pipes have been dated based on interpretation of the entire context. Some archaeologists have maintained ignorance of readily available, published evidence of ancient smoking in Africa. For example, the few archaeologists who have examined the origin of water pipes in southwestern Asia—Iran and Yemen specifically—have puzzled over their regional appearance around 1600. Some of this literature completely omits Africa,[58] despite the evidence of ancient smoking on the landmass mere miles across the Red Sea from Yemen. Other works dismiss African pipes as not indigenous but "more

likely to have . . . spread there . . . from the Middle East," with no justification offered for the presumption.[59] This statement from 1993 echoes a publication from 1930 that interpreted the mere presence of water pipes in Madagascar as proof that Portuguese ships had brought the technology there from Persia.[60] The 1993 statement neglects the best review of African pipe archaeology, published in 1983, which concludes that water pipes came to Persia from Ethiopia.[61]

Africans are portrayed as passive recipients of cannabis, too, not just of pipes. The stereotype that Arabic-speaking Muslims brought cannabis drug use into Africa has dominated interpretations of the plant for 150 years. In the 1860s, European visitors in Central Africa concluded that cannabis smoking "probably spread from the East—Egypt and her neighbours" and that "the negroes" were unable to resist the drug plant's "gradual but sure advances" across the continent.[62] Cannabis and tobacco came to symbolize colonialist belief in the fundamental character of western European versus Islamic culture. In 1886, one traveler concluded that cannabis had "penetrated a considerable distance westward [because] Islam, carrying its special cult from East to West by the instrumentality of fire and sword, accomplished its work far more speedily than the civilisation of Western peoples [has] advance[d]."[63] In 1932, the thesis was fully developed:

> [The] distribution [of cannabis smoking] is closely and curiously associated with the distribution of Islam. For some obscure reason—perhaps the prohibition of alcoholic beverages—it seems to be more attractive to Mohammedans than to others. Next to Mohammedans, African Negroes are the principal hemp smokers. [T]hey learned the habit from the Arabs . . . , though there may have been an earlier diffusion of it among the [South African] Bushmen.[64]

This stereotype has been updated—the terms "Mohammedan" and "Negro" are no longer used. The theme, characters, and narrative remained in 2005: "Under Arabic influence, cannabis use spread across North Africa and south into sub-Saharan eastern Africa, although even an approximate date for this expansion outside the Islamic sphere is uncertain."[65] The practice of attributing people-plant dispersal to some unknown, ancient moment discourages research.[66] Historical distancing makes the mythical drug trafficker and the passive smoker into characters whose existence is not worth questioning.

The only basis for the Arab/Muslim-influence narrative is its repeated publication. There is no evidence cannabis was used in the Arabian Peninsula at the time of Muhammad, and such use did not appear elsewhere in conjunction with the expansion of Islam in the late first millennium of the common era (CE). There are many examples in which psychoactive cannabis has been

prominent in non-Muslim societies, most obviously in South Asia, where secular and religious use traces back at least four thousand years in at least four religious traditions.[67] Cannabis drug use has never been prominent in some Muslim areas, conspicuously including the Sahel region immediately south of the Sahara. The earliest hints of psychoactive cannabis in the Levant are about three thousand years old, but there is no clear, consistent evidence until about nine hundred years ago in Persia and eight hundred years ago in Egypt and Arabia. Smoking pipes existed widely in eastern and southern Africa by that time and held cannabis in fourteenth-century Ethiopia, where Christianity was practiced. There were few Arabic speakers or Muslims south of the Sahel until centuries later. The earliest documentation of cannabis from the sub-Saharan region came in the 1600s from locations far removed from the influence of Islam or Arabs, including southern Mozambique, Madagascar, and South Africa.[68] East African coastal entrepôts—most notably, Zanzibar—hosted Arabic- and Farsi-speaking merchants beginning in the first millennium CE, but they had essentially no presence on the continent beyond these towns. Instead, Swahili traders organized caravans to inland areas.

Nineteenth-century European travelers referred to "Arab" traders in East Africa and Central Africa and alleged that they spread cannabis smoking. However, the so-called Arabs were Swahili-speaking Africans who perhaps spoke Arabic, too, because it was useful in commerce. They also likely professed Islam, wrote Swahili with the Arabic script, and dressed in styles that Europeans considered stereotypically Muslim, with flowing robes and turbans. There is scant evidence that traders used cannabis themselves but abundant evidence that their employees—the porters who carried commercial goods—smoked the plant drug. Porters carried cannabis on their travels and acquired it en route, but they were definitely not Arab and mostly not Muslim. Commercial porters were predominantly younger men, poorly paid, poorly fed, and poorly sheltered for months-long hikes, made while carrying fifty or more pounds at the rate of twenty miles per day.[69] They were often forced into service by political leaders who found benefit in supplying labor to traders, colonial bureaucrats, or European travelers. (For more on porters, see chapters 5–8.) There was no sweeping Arab, or even Muslim, expansion through the continent's center, particularly one bearing cannabis. Africans at the very bottom of international commerce—those who carried the political economies of slavery and colonialism directly upon their backs—helped the plant cross Africa, not some mythical Arab overseer.

By 1800, water pipes and hashish had become stereotypical motifs in European images of the Orient. These motifs diversified and flourished with Orientalist thought. Cannabis smoking was rhetorically important in establishing an

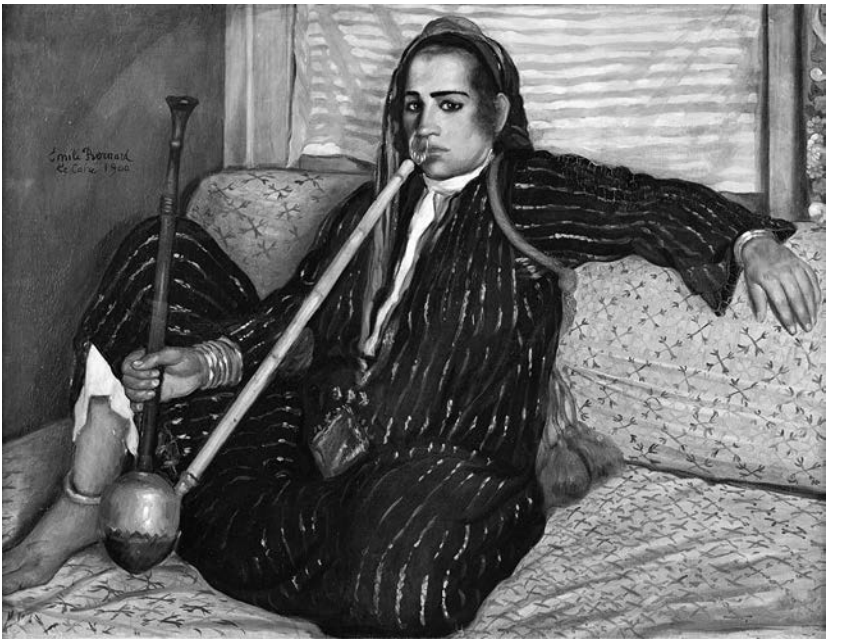


FIGURE 1.3. Émile Bernard's painting situates hashish in Egypt's lowest social class. The woman's clothing, jewelry, and *gozeḥ*-type water pipe are symbols that would have indicated poverty to many European viewers and would also have suggested that she was a prostitute. These symbolic elements were common in contemporaneous postcards from exotic Egypt—indeed, the painting was reproduced abundantly as a postcard in the early 1900s. Yet Bernard simultaneously challenged customary Orientalist imagery. The woman is fully clothed and appears lucid, rather than drug-addled. Émile Bernard, *La fumeuse de haschisch* [The Hashish Smoker], oil on canvas, Cairo, 1900. See P. A. Conley, "Émile Bernard in Egypt," *Nineteenth-Century Art Worldwide* 5, no. 2 (2006): article 3.

exotic, non-European character for people and places worldwide, in situations as far-ranging as West Africa in the 1870s, Algeria in the 1890s, and Mexico in the 1910s, as well as in the works of Allen Ginsberg, The Beatles, Timothy Leary, and other marijuana aficionados of the 1960s.[70] In these imagined, Orientalist contexts, psychoactive cannabis evokes a dreamy, sensuous hedonism, an inversion of idealized Western pragmatism and industriousness. In 1873, a travel writer portrayed a fictional British physician in Sierra Leone as someone who "moderately smok[ed] the *liamba*, or African haschisch" and "possessed an Oriental temperament, and shunned the . . . social restrictions of the North [Europe]."[71] Europe imagined psychoactive cannabis as best typified in the Levant, where many travelers first encountered the plant drug.

The People of African Cannabis History

The tales of European travelers have captivated readers for centuries. Their travelogues are key sources for cannabis history, and it's important to understand their perspectives, but this book is mainly about the anonymous people foreign travelers observed.

Travelers had varying views about drugs. On one extreme were people like Mary Kingsley (English, 1862–1900) and Henry Morton Stanley (American, 1841–1904) who found African drug use absolutely foul and a cause of the uselessness they perceived in many Africans. David Livingstone, the English missionary (1813–73), was more sympathetic, but he still got "a feeling of disgust" from cannabis smokers.[72] Most travelers were indifferent. The strange use of the familiar plant was notable but not particularly interesting to many observers, including João dos Santos (Portuguese, circa 1560–1622), Peter Kolbe (Dutch, 1675–1726), and Paul Du Chaillu (French American, 1831–1903). Their uninterested mentions of cannabis are among the best records of the plant's past. Some travelers discussed the plant drug more extensively, although extensiveness usually did not produce insightfulness. Alexandre Dumas (French, 1802–70) was less interested in understanding hashish than in using it to produce exotic literary atmospheres; Hermann von Wissmann (German, 1853–1905), was more concerned with political-economic machinations than ethnography in his accounts of the Bena Riamba movement (see chapter 6).

The British voyager Richard F. Burton (1821–90) was a particularly important source writer. He provided firsthand accounts of cannabis in India; Arabia; North, East, Central, and West Africa; and Brazil. His relationship with the plant drug was fraught. In 1851 he decided that Indian users were a "debauched . . . set of half savages."[73] Cannabis was a "poison" among slaves in Brazil in 1869.[74] But in 1876 he admitted smoking cannabis "for months together" in Central Africa,[75] and in 1857 he wrote, "Egypt surpasses all other nations in the variety of compounds into which this fascinating drug enters, and will one day probably supply the Western world with 'Indian hemp,' when its solid merits are duly appreciated."[76] Despite his global knowledge, he finished by portraying hashish as a "Mohammedan paradise" in his rendition of the Thousand-and-One Nights folk tales (1885–88).[77]

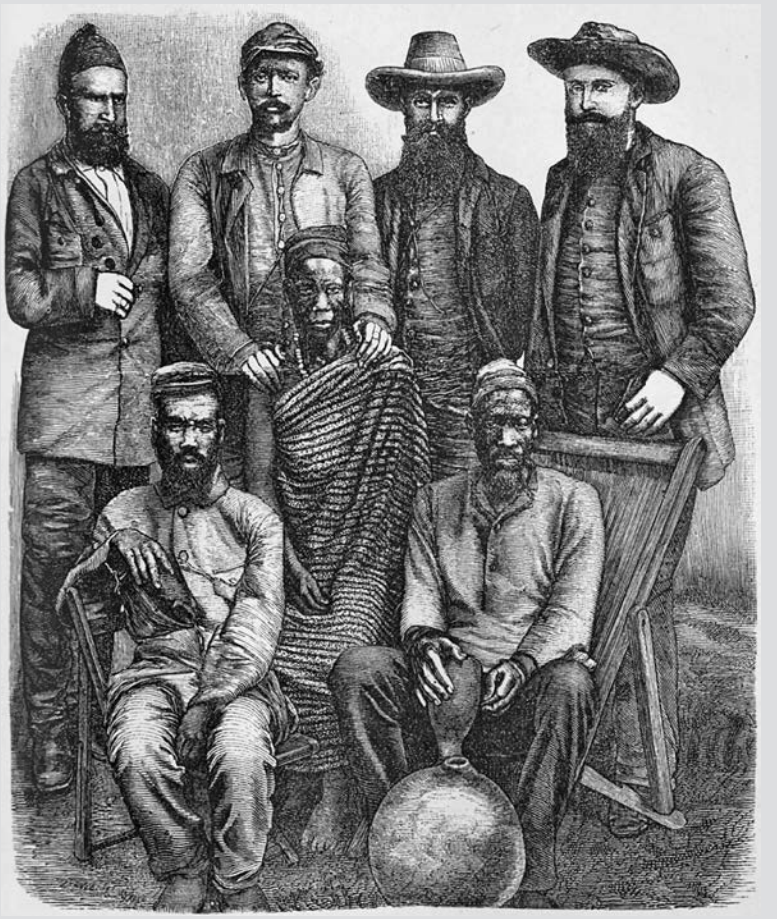


FIGURE 1.4. Like all European travelers, Hermann von Wissmann (standing, second from left) depended on Africans as guards and porters during his travels in the southern Congo Basin in the 1880s. Wissmann particularly relied on Chingenge, Sangula, and Mukenge (seated, left to right), who were leaders of the Bena Riamba political movement. Bena Riamba adherents used large, calabash-based water pipes, such as Mukenge holds between his legs in this engraving. "Am Kongo," engraving, in H. von Wissmann, L. Wolf, C. von François, and H. Mueller, *Im Innern Afrikas: Die Erforschung des Kassai während der Jahre 1883, 1884, und 1885*, 3d ed. (Leipzig: Brockhaus, 1891), facing page 414.

More important to me are the people whose names I don't know—the slaves, porters, prostitutes, soldiers, sailors, and laborers whom travelers saw smoking cannabis. Unfortunately, I can learn of these people only through past writers, who recorded scant information about them. I can name very few of the people this book is about, such as Nimo and Musulu. Nimo (Congo Basin, lived in the 1920s) was a teenage servant of an American traveler who smoked cannabis while working (see chapter 8). Musulu (Congo Basin, lived in the 1890s) was a young man abandoned into slavery by his fellow travelers after he suffered a foot injury (see chapters 6 and 9). Musulu was a subject of the cannabis-smoking Bena Riamba movement, which Wissmann found useful. He thus recorded much about the movement's leaders, particularly Mukenge, Chingenge, and Sangula (who were active from 1870 to 1890). Again, though, I am more concerned with those who were unnamed, including the people who emerged from slave ships in Sierra Leone in the 1840s "so deplorably emaciated that the skin appeared tensely stretched over, and tied down to the skeleton."[78] Forgotten people such as these carried cannabis seeds across Africa and the Atlantic, helping it become one of the world's most widespread drug plants. Many European travelers led fascinating lives, but their stories are not those to learn to understand cannabis, despite my repetition of their names in this book.

Islam was wound into Orientalist caricatures as the compelling force behind the drug plant's dispersal. This stereotype ignores a long history of Islamic prohibitions raised by political-religious authorities, earliest documented in Egypt in the thirteenth century CE.[79] The stereotype also neglects processes of historical change. Psychoactive cannabis initially arrived in Europe, for example, not with Muslims or outsiders in general, but with European sailors who began using the plant drug in India before 1540.[80] Early modern Europe had cultures of smoking herbs other than tobacco—including hallucinogens and perhaps psychoactive cannabis—that are scarcely remembered.[81] It's important to recognize this shadowy European past, because the small historical population of sailors on European ships carried knowledge of smoking and psychoactive cannabis to port cities worldwide, including many in Africa. This shadowy past extended into the early 1900s in the activities of drug runners such as the Frenchman Henri de Monfried, a sailor turned smuggler turned best-selling author of dozens of semifictional adventures.[82]

Accounts of cannabis in Africa were important in forming European ideas about the plant drug. Explicitly fictional and ostensibly nonfictional portrayals of cannabis overlapped to produce a common knowledge of its cultural geography. Stereotypes are often inextricable from portrayals of cannabis use.[83] Historical European observers purposefully blurred real observations with fictional embellishments, because their accounts served simultaneously to produce an imagined geography of their travels and to impart authenticity to their writing. The Englishman Winwood Reade, who in 1873 created the *liamba*-smoking European doctor in Sierra Leone, had earlier created the image of *Savage Africa* (1864) in a travel account. His fiction was poorly researched, despite his traveler's credentials. In 1864, he showed scant knowledge of cannabis among the savages: "In Angola, [they have] a kind of narghileh or water-pipe. The narghileh is generally used to soften the niamba [*sic*], a kind of haschisch which they smoke. . . . So powerful is this drug that one whiff will make these inveterate smokers cough."[84] Reade at best watched non-European smoking practices from afar and betrayed no particular interest in them. Reade's word choices were dismissive of Angolan cannabis. *Ḥashīsh* and *nargīleḥ* were Levantine Arabic terms for a drug product and a type of water pipe, respectively; the product, the pipe, and the terms were not used in Angola. Orientalist thought created holes in the historical record because it offered easy rhetorical shortcuts to conceal ignorance of unfamiliar smoking practices.

African practices were overlooked partly because European writers framed the Levant as where psychoactive cannabis reached its cultural pinnacle. Cannabis consumption in the eastern Mediterranean region included sweet, hashish-based confections with lengthy recipes, such as *majūn* (an Arabic word).[85] Edible cannabis concoctions that existed south of the Sahara were overlooked and uncommon anyway. Historical sub-Saharan societies were satisfied with smoking cannabis. Smoking transforms the plant drug as a pharmacological agent; its effects are felt quickly after inhaling, compared with a half-hour or more after eating cannabis-laced food. It is easy for smokers to control dosage but difficult for hashish eaters. Nonetheless, Europeans perceived this preference for smoking as backwardness. "Orientals use refined preparations of cannabis resin," reported a French traveler in 1889, but Central Africans only smoked "the rustic form" of mixed flowers, leaves, and seeds.[86] A paper from 1972 stated, "None of the more elaborate techniques of using *Cannabis* in the Mediterranean or the Near East accompanied the plant into Africa, and practices in the central part of the continent in the thirteenth century were very simple."[87] (Evidence describing uses of *any* plant in thirteenth-century Central Africa would be unprecedented; it is unfortunate this evidence was not cited. It is likewise unfortunate

that the 1972 passage was repeated uncritically in 2013.[88]) The very presence of the plant in African landscapes has been taken as evidence of prehistoric visits from more civilized peoples. One traveler determined that ancient Phoenicians must have built the Great Zimbabwe ruins, because cannabis grew on the site in the 1890s.[89]

Cannabis smoking in Southern Africa troubled historical European observers because no Levantine influences were obvious in the region. Observers struggled to find evidence to fit the narrative. In the 1950s, a German missionary in what is now Namibia concluded that *dagga* came from the Arabic word *dukhān* (smoke). Indigenous Khoikhoi people must have adopted the foreign word, he thought, because there might be a similar-sounding Khoikhoi phrase meaning "drunkenness." His critics considered the Khoikhoi link "rather too tortuous" but accepted the proposed Arabic derivation, for which no historical, linguistic, or other evidence was supplied.[90] There was no historical presence of Arabic speakers in southwestern Africa, and no languages south of the Sahel have any Arabic loanwords related to cannabis or smoking in general.[91] Presumptions of Africa's backwardness have for decades necessitated that scholars seek outside influences to explain cannabis on the continent. Orientalist thought established the Muslim Levant as the only reasonable source of influence, and uncritical repetition has maintained this bias in cannabis histories.

Cannabis history must be rethought, especially in relation to Africa. Historians have overlooked considerable evidence while repeating rumors. The assumption that Africa is a cultural backwater must be rejected. The minimum facts of cannabis in Africa—the plant and smoking pipes existed on the continent centuries before 1492—necessitates paying attention to African cannabis. This book offers a cannabis history with Africa at the center, not the margins.

THIS BOOK HAS HISTORICAL and geographic limits. The time period I consider has an indefinite beginning and an approximate end in 1925, the date of the Geneva opium convention. The indefinite beginning encompasses prehistoric evidence for cannabis, stretching back to uncertain hints three thousand years old. The approximate end date reflects two considerations. First, the historical record on psychoactive cannabis shrank as antidrug sentiments arose; smokers hid their activities from observers. In most locations I touch on, the documentary record ends sometime before 1925, because many jurisdictions had already banned the plant drug. Second, in a few locations there are important accounts of psychoactive cannabis more recent than 1925, and I cite these newer studies as sometimes relevant for understanding earlier conditions. I want particularly

to mention anthropological studies from the 1970s that examined why workers used cannabis and how it affected their performance, in Colombia, Costa Rica, Jamaica, Cuba, Trinidad, and South Africa.[92] The results of these studies are broadly generalizable and relevant for understanding past and present drug use among laborers (see chapter 8).

My main historical focus is the nineteenth century, partly because this was when Europeans began to notice and regularly document psychoactive cannabis worldwide. More important, the century was crucial in the plant's global dispersal, because the last and largest flows of captives in transatlantic slavery came from western Central Africa, where slavers supplied *mariamba* in their feeble efforts to manage slaves' health. During the last century of transatlantic shipping (approximately 1760–1860), this Central African captive migration grew to exceed all other geographic segments in the history of the transoceanic trade.[93] This group of people included about three million who entered the Middle Passage; many million more died during forced marches from inland towns to seaports. This migration by far surpassed in size and geographic extent that of all other groups of people who carried knowledge of psychoactive cannabis across the Atlantic. This book is about the broader histories and geographies that surrounded the unknowable experiences of these enslaved people.

My geographic focus is the continent of Africa, but my spatial scope is global. In organizing my thoughts, I will generalize about Africa as a continental region and about several other regions worldwide. My geographic scope and focus vary by chapter, but my broad limits reflect four historical processes. First, I outline conditions in southern Asia, where psychoactive cannabis originated evolutionarily and had a long history with humans before it came to Africa. Second, I sketch the global commerce in pharmaceutical cannabis indica that endured from about 1840 to 1925. This drug trade linked growers in British India to commercial traders in London, then to pharmacists worldwide. Third, I consider Africa as a whole, to identify social-ecological conditions that have existed widely, and to identify limits to generalization about people-cannabis relationships across the continent. Finally, my narrowest scope is western Central Africa and the diaspora of people taken from that region.

My work also has limitations due to my research methods. I have relied only on published data; I cite two unpublished, archival sources. There are untapped archives of cannabis in African history, but the published literature has been untapped, too. Scholarly histories have overlooked major episodes in the plant's history because they have overlooked published works that were not obscure in their day. An article that described cannabis drug use among slaves in Angola, for instance, appeared in 1850 in London's *Pharmaceutical Journal*

MAP 1.2. African regions, countries, and territories mentioned in the text. The Cape Verde islands, which lie several hundred miles west of Senegal, are also mentioned once in the text. Map by Chris S. Duvall.

and Transactions,[94] which was widely read by nineteenth-century medical scientists. The journal's pharmaceutical content suggests that recent researchers reasonably should have encountered the article when studying the plant drug's history in medicine, a topic several authors have claimed.[95] None, however, have mentioned this documented use of cannabis in chattel slavery. Of course, some of the published primary sources I've read were obscure, such as trade records from secondary colonial ports. My review of the published literature is a necessary step toward locally or regionally focused archival studies. My broad geographic scope matches my reliance on the published record, which offers mostly sparse information about particular locations, though about many locations. I offer a spatially and topically broad overview that may help readers identify archives relevant to cannabis research in specific locations.

Further, unlike Thembela Kepe, Laurent Laniel, Franco Loja, Julian Bloomer, Ann Laudati, Brian du Toit, Pierre-Arnaud Chouvy, Kenza Afsahi, and others, I have not conducted field research on cannabis in Africa. My research trajectory began with historical documents, not field experience. In 2011, I found reference to psychoactive cannabis as "Angolan tobacco," but found no mention of this plant in recent works on Africans in transatlantic crop dispersal.[96] I then consulted the principal world histories of cannabis but became distrustful of what I read. I independently researched the plant's world history, which I published in the blandly titled book *Cannabis* (2015).[97] After that, I refocused on Africa. This is a broad focus; regional and national histories, including field research, are needed. I have studied overarching themes.

Published literature is heavily filtered through the writer's view of the world and choice of words, the editor's purview, and the publisher's willingness to put something in print. A frustrating aspect of the published, primary record is that European documentarians often just didn't care much about psychoactive cannabis drug use. I am saddened that Du Chaillu began his comments on *liamba* in 1850s Gabon with the disclaimer, "Hasheesh and the *Cannabis Indica* are so well known that it is not necessary to say anything about them here."[98] He went on to describe a slave who was keeping cannabis seeds—the only known observation of seed saving by a slave in Africa of any plant. I am saddened that the British botanist William Daniell concluded his comments about Angolan cannabis in 1850, "It would be unnecessary here to enter into any further details connected with this subject, as it has been fully treated of in the works of several able writers, who have given ample descriptions of this plant."[99] He had just described how slavers gave *liamba* to their captives, who were loaded with commercial cannabis drug shipments while themselves bound for sale. These were among the most detailed accounts of African cannabis; most observers were succinctly dismissive. "What is iamba?" asked a Frenchman in 1883 after having lived four years on the Lower Congo. "I do not know, and, to my great regret, I neglected to collect it; but, if it is necessary to believe certain travelers, it will be the leaves of hemp or flax."[100] The majority of travelers didn't mention it at all. I take the minority view, as expressed in 1853 regarding North Africa: "The mention of hashish leads me to speak about this plant, on which much has been written for several years now and on which there remains much to say."[101]

There are no historical accounts of cannabis from drug users other than tales from a handful of European experimenters, people such as the writers and artists who formed the Parisian Club des Haschichins in the 1840s. Other than these men, who sampled hashish because they wanted to sample an imagined Oriental experience,[102] I do not know why historical people used psychoactive

cannabis. Some European observers ostensibly recounted what users said about the plant drug. The attributed statements are informative, though filtered. In one example from 1843, freed slaves from Angola allegedly considered *diamba* "a sovereign remedy against all complaints," according to a colonial surgeon.[103]

To evaluate such claims, I assume that the past pharmacology of cannabis can be estimated from current medical science. Cannabis is chemically complex. All plants in the genus produce chemicals called cannabinoids, of which about 110 are known to occur naturally. I mention just three: Δ9-tetrahydrocannabinol (THC), the psychoactive one; cannabidiol (CBD), which affects pain sensations, appetite, and immune response; and tetrahydrocannabivarin (THCV), an appetite suppressant. Plant cannabinoids interface with the mammalian endocannabinoid system, made up of nerve receptors and endogenous chemicals, such as the neurotransmitter anandamide. The endocannabinoid system has roles in motor learning, sensing appetite and pain, recalling memories, and modulating mood.[104] Plant cannabinoids can chemically mimic endocannabinoids, as THC mimics anandamide.

Present knowledge of cannabis pharmacology is strong, with thousands of articles published annually in the medical sciences and major summaries in books such as *The Handbook of Cannabis* (2014), *Marijuana and Madness* (2011), and *The Health Effects of Cannabis and Cannabinoids* (2017).[105] The medical consequences of consuming any drug are categorized as objective effects (physiological responses with biochemical explanations) and subjective effects (the individual experiences of users). I assume that objective effects of cannabis drug use that are known in current medical science existed for past users. Thus, Algerian hunters who smoked before going out in the 1840s perhaps valued the plant drug for enhancing their night vision, a pharmacologically verified effect among current Moroccan fishermen.[106]

An important, objective aspect of cannabis pharmacology is its toxicity, which is very low. Nonetheless, cannabis overdoses are unpleasant, if not debilitating, and can cause fatal cardiovascular events.[107] Historical accounts of cannabis smoking that led to unconsciousness and death (see chapters 5 and 6) are medically believable. Further, current medical science robustly links cannabis drug use to increased risk of psychosis, schizophrenia, and other mental illnesses.[108] Not all past reports of mental health crises—of smokers running amok or going mad—came from ethnocentric, racist, or anti-cannabis biases.[109]

Unlike objective effects, subjective effects are context-dependent. People have widely varying experiences from taking psychoactive cannabis, partly because genetic variation among people affects cannabinoid uptake and metabolism.[110]

Further, subjective effects depend upon the mind-set of the user and the social setting of drug use.[111] By *thinking* psychoactive cannabis will produce an effect, the user's expectations help produce that effect, aided by plant biochemistry. Thus, context determined whether cannabis stimulated boldness and bravery or relaxation and sociability among Zulu men (in South Africa) in the 1890s, one of several examples I mention in chapters 4 and 5.

An important form of subjective experience with cannabis is nowadays called "addiction," or, more formally, cannabis use disorder. In current societies, approximately 10 percent of regular users develop behavioral dependence on psychoactive cannabis.[112] Historical users also sometimes developed attractions to the plant drug that are analogous to the current diagnosis of cannabis use disorder. In South Africa in 1913, a physician reported symptoms from smokers that modern physicians have associated with dependence: fixation on the plant drug, irritability when deprived of it, and continued use despite negative health effects.[113] Users sometimes had strained relationships with cannabis. An extreme example is the Ḥeddawa brotherhood in Morocco, a group of mendicant Islamic monks who considered *kif* a sacrament and a curse.[114] Some Ḥeddawa adherents found their drug use beyond control and a self-diagnosed cause of mental illness.[115] Those afflicted in this way made a pilgrimage to the tomb of the sect's founder to seek release from the plant drug. This ambivalence—of psychoactive cannabis being both good and bad to its users—extends widely in its global history.

It is necessary to restrain estimates of the plant drug's past importance. First, cannabis consumption was not uniform within or between societies, although there are almost no quantitative data. Perhaps one in twenty adult male Egyptians used *ḥashīsh* in 1893, or perhaps one in one hundred adults.[116] Perhaps one in thirty or forty adults smoked in the southern Congo Basin in 1913;[117] more generally in Central Africa, during the 1850s–1910s, scattered observers had impressions that cannabis was not heavily consumed.[118] Rates of consumption at the population level varied between societies. The two estimates I can make are for 1891 for British Guiana (42.8 grams of *ganja* per capita), just one-ninth the consumption estimated in 1899 for a town in northern Morocco (360 grams of *kif* per person—a gram per day, on average, for every townsperson).[119] Rates of consumption varied between individuals, of course. Some who tried cannabis didn't like it and didn't adopt it, as documented in South Africa in 1913.[120] I have found only one quantitative estimate of what a European observer considered heavy use. A physician in British Guiana recorded that a patient in a mental hospital—an indentured Indian laborer—had been spending 3–4 shillings per

week on *ganja* in 1893, at a time when indentured workers could be fined a shilling per week for absenteeism.[121] In 1895, *ganja* cost 16 shillings per pound, which suggests that the man was smoking 12–16 grams *per day*.[122]

Such heavy use was exceptional. Most historical users received low doses of THC and other cannabinoids. There were no robust tests of psychoactive potency until THC was identified in 1964,[123] and, anyway, there were no earlier efforts to test plants outside the Western pharmaceutical industry. Since 1964, researchers have chemically assayed cannabis worldwide, primarily material seized by police. In the 1970s, plants tested around the tropical Atlantic exhibited low THC concentrations, in the range of 0–10.5 percent.[124] People were not smoking flowers with 20–30 percent THC, as are now sold in open markets in the United States. Historical accounts similarly suggest weakly psychoactive material. "Our *maconha* [is] weak in active principles," reported a Brazilian in 1937, "and often it is smoked without giving any strong sign of intoxication."[125] There is little historical evidence on other cannabinoids, mainly tests for CBD since the 1970s. Historically, people preferentially smoked inflorescences, where THC is concentrated, but sometimes also burned leaves mixed with flowers. Prices limited individual intake based on income, while shared pipes in group settings limited how much each person could inhale. Some people, of course, took high doses via intense smoking bouts, and some smoked constantly for years on end.

It is unnecessary to characterize instances of drug use as "medicinal" or "recreational" (to employ current language). People who consider cannabis simply a good-time intoxicant receive the same chemicals that cause others to consider it therapeutic. Regardless of the contexts of consumption, the plant drug has objective effects for all users, although the strength of an effect can depend on individual health factors. Notably, malnutrition can produce endocannabinoid deficiency, which means that small doses can produce marked therapeutic effects in users with extremely poor diets.[126] Good-time feelings may arise from generalized if unrecognized therapeutic benefits, magnified by euphoriant objective effects and enjoyable social contexts. For people facing physical and emotional challenges, cannabinoids can be beneficial even in small doses, and even if the plant drug is not explicitly considered therapeutic.

People-plant relationships bear health meanings, for humans and the environment, and are products of entangled social, cultural, and ecological conditions.[127] In Trinidad, the anthropologist Ainsley Hamid studied the social-ecological conditions of psychoactive cannabis farming, distribution, sales, and use, calling this "the ganja complex."[128] I examine many such complexes in varying detail. I provide names for psychoactive cannabis in many languages and regard

these names as representing unique people-plant relationships, often similar to others but nonetheless historically distinct. Several names are the principal foci: *dagga*, *ḥashīsh*, *maconha*, *marihuana*, *cangonha*, *kif*, *takrūri*, *soruma*, *ganja*, and the cognate word groups *bhang/bang/bangue/bangi* and *diamba/riamba/liamba/iamba*. Each people-plant relationship combines human cultures of practice and knowledge, genetic lineages of both people and plants, environmental conditions necessary for human and plant survival, and the political-economic conditions that enable the system's reproduction.

I emphasize context because I am influenced by ideas in the scholarly field of political ecology, in which human-environment interactions are thought of as simultaneously social and natural events.[129] Three threads of thought I will mention. First, I am convinced of the value of understanding health as a product of political-economic and environmental processes.[130] Wellness and illness are not simply characteristics of individuals; they are aspects of more-than-human ecosystems. Social structures differentially expose people to health risks, to knowledge about risks, and to resources for managing illness and injury. Drugs can be risks and resources for individuals, but their use can also be more broadly symptomatic of health vulnerabilities produced by human activities and ecological change.[131] In terms of public health, I take the perspective of descriptive epidemiology.[132] I identify and describe social-ecological conditions associated with historical cannabis drug use (especially in chapter 8). Although I suggest causal linkages between cannabis use and individual and public health conditions, the historical data are insufficient for an analytical epidemiological study. I argue that the plant drug has been symptomatic of trauma produced on the social and ecological margins of capitalist political economies, but I do not identify particular processes that lead to drug use.

The second thread I follow is to use political-economic approaches to evaluate human-environment interactions.[133] This I do mostly in chapters 6–9. I argue that cannabis has helped social elites extract value from workers by enhancing the capacity of people to endure risky environments while caught in exploitative labor relationships—chattel slavery, indentured servitude, coerced labor, wage slavery, and so on. Cannabis must be included among the drugs that were "labor enhancers" in colonial Africa, functioning to draw people into labor relationships and to improve their endurance while working.[134] At the same time, though, cannabis drug use enhanced the capacity of these workers to resist their exploitation by aiding purposeful inefficiencies, mental escapes, conspiracies against bosses, and so on.[135] Understanding psychoactive cannabis as an element of capitalist political economies helps clarify the historical epidemiology of drug use. Historical precedent has strongly shaped current opinion

in medical science, yet past epidemiologies of psychoactive cannabis use have been mostly overlooked—in part because medical scientists have completely overlooked Pan-African experiences with the drug plant (see chapter 10).

The final political-ecological thread I take is to analyze environmental knowledge as expressions of social and cultural power.[136] Knowledge of people-cannabis relationships is rooted deeply in the colonial past, although these roots mostly have been forgotten. Common ways to think about cannabis nowadays commonly reflect outdated assumptions first made by people with arrogant faith in the objectiveness, accuracy, and completeness of their worldviews, and with disdain for the worldviews of others. Colonial scientists, travelers, and bureaucrats who observed cannabis in faraway lands presumed to know better than the natives how the plant should be used. During the past half-century, pro-marijuana activists and anti-cannabis prohibitionists have exchanged presumptions about the faultiness of the other side's knowledge. In interpreting the cannabis literature, I have been inspired by political-ecological studies showing that conventional wisdom about environmental problems in Africa—such as deforestation, desertification, and erosion—often reflect antiquated presumptions and political-economic machinations rather than actual observations.[137] I am ambivalent toward all accounts of cannabis, reading each as objective description and subjective portrayal alloyed in varying ratios. Cannabis histories should not be accepted uncritically, because the same politically motivated errors have been repeated for decades, in both high-end research and low-end pulp.

The greatest error has been to overlook African cannabis.

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(2012); the Annual Conference of Harvard University's Center for Geographic Analysis (2012); and the 50/Forward conference of the University of Wisconsin's African Studies Program (2012). Finally, I thank family in New Mexico, Wyoming, Colorado, South Australia, and elsewhere for indispensable support, especially S. G. D., L. & L. D., S. L. B., and E. J. B., and, of course, R. W. D., H. L. D., and M. J. B. Lastly, F. and S. attended much of the actual writing.

Notes

1. CANNABIS AND AFRICA

1. Data sources for the graphic on arrest rates in New York and Chicago are: Census Data.gov; M. Dumke, "Chicago Decriminalized Marijuana Possession—but Not for Everyone," *Chicago Reader*, 2014, accessed 28 August 2017, https://www.chicagoreader.com/chicago/police-bust-blacks-pot-possession-after-decriminalization/Content?oid=13004240; Substance Abuse and Mental Health Services Administration (SAMHSA), *Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings* (Rockville, MD: Substance Abuse and Mental Health Services Administration, 2011); H. G. Levine, "New York City's Marijuana Arrest Crusade . . . Continues," Sociology Department, City University of New York, 2009, accessed 28 August 2017, http://marijuana-arrests.com/docs/NYC-MARIJUANA-ARREST-CRUSADE-CONTINUES-SEPT-2009.pdf.

2. By "Pan-African," I mean the peoples worldwide of recent African ancestry (roughly the past five centuries) and the intellectual movement that recognizes and seeks to strengthen solidarity among these peoples.

3. R. C. Clarke and M. D. Merlin, *Cannabis: Evolution and Ethnobotany* (Berkeley: University of California Press, 2013); E. L. Abel, *Marihuana: The First Twelve Thousand Years* (New York: Springer, 1980); M. Booth, *Cannabis: A History* (New York: St. Martin's, 2005); M. A. Lee, *Smoke Signals: A Social History of Marijuana—Medical, Recreational, and Scientific* (New York: Scribner, 2012).

4. J. Herer, *The Emperor Wears No Clothes*, 12th ed. (Van Nuys, CA: Ah Ha, 2010).

5. E. B. Russo, "The Pharmacological History of Cannabis," in *Handbook of Cannabis*, ed. R. Pertwee (Oxford: Oxford University Press, 2014), 23–43.

6. George somehow treated tooth pain with colonial European cannabis plants grown for fiber, according to P. G. Fine and M. J. Rosenfeld, "Cannabinoids for Neuropathic Pain," *Current Pain and Headache Reports* 18, no. 10 (2014): art. 451.

7. C. S. Duvall, *Cannabis* (London: Reaktion, 2015).

8. P. Sharpe and G. Smith, "Cannabis: Time for Scientific Evaluation of This Ancient Remedy?" *Anesthesia and Analgesia* 90, no. 2 (2000): 237–40.

9. See introduction chapters in J. H. Mills, *Cannabis Britannica: Empire, Trade, and Prohibition, 1800–1928* (Oxford: Oxford University Press, 2003); J. H. Mills, *Cannabis Nation: Control and Consumption in Britain, 1928–2008* (Oxford: Oxford University Press, 2012).

10. I. Campos, *Home Grown: Marijuana and the Origins of Mexico's War on Drugs* (Chapel Hill: University of North Carolina Press, 2012).

11. S. Scheerer, "North-American Bias and Non-American Roots of Cannabis Prohibition," n.d. [2011], accessed 7 August 2017, http://www.bisdro.uni-bremen.de/boellinger/cannabis/04-schee.pdf.

12. Good summaries of Anslinger's role in cannabis prohibition are D. Bewley-Taylor, T. Blickman, and M. Jelsma, *The Rise and Decline of Cannabis Prohibition* (Amsterdam: Transnational Institute, 2014); J. C. McWilliams, "Unsung Partner against Crime: Harry J. Anslinger and the Federal Bureau of Narcotics, 1930–1962," *Pennsylvania Magazine of History and Biography* 113, no. 2 (1989): 207–36; R. Carroll, "Under the Influence: Harry Anslinger's Role in Shaping America's Drug Policy," in *Federal Drug Control: The Evolution of Policy and Practice*, ed. J. Erlen, J. F. Spillane, R. Carroll, W. Mcallister, and D. B. Worthen (Binghamton, NY: Pharmaceutical Products Press, 2004), 61–100; A. Rathge, "Cannabis Cures: American Medicine, Mexican Marijuana, and the Origins of the War on Weed, 1840–1937," Ph.D. diss., Boston College, 2017. Adam Rathge's dissertation will be published as a book. I thank him for sharing a copy of his work with me.

13. H. J. Anslinger and C. R. Cooper, "Marijuana, Assassin of Youth," *American Magazine* 124 (July 1937): 19–25.

14. J. Herer, *The Emperor Wears No Clothes*, 11th ed. (Van Nuys, CA: Ah Ha, 1998), 89.

15. M. J. Routh, "Re-thinking Liberty: Cannabis Prohibition and Substantive Due Process," *Kansas Journal of Law and Public Policy* 26, no. 2 (2017): 145; M. Render and E. Nielson, "How States Can Bring African-Americans into the Marijuana Industry," 2016, accessed 9 August 2017, http://www.rollingstone.com/culture/how-to-bring-african-americans-into-marijuana-industry-w454920; W. T. Hoston, "The Racial Politics of Marijuana," in *Race and the Black Male Subculture: The Lives of Toby Waller* (New York: Palgrave Macmillan, 2016), 101.

16. Routh, *Re-thinking Liberty*, 145.

17. Rathge, "Cannabis Cures"; N. Johnson, *Grass Roots: A History of Cannabis in the American West* (Corvallis: Oregon State University Press, 2017).

18. Johnson, *Grass Roots*; D. H. Gieringer, "The Forgotten Origins of Cannabis Prohibition in California," *Contemporary Drug Problems* 26 (1999): 237–88.

19. Scheerer, "North-American Bias and Non-American Roots of Cannabis Prohibition"; Mills, *Cannabis Britannica*; Bewley-Taylor et al., *The Rise and Decline of Cannabis Prohibition*; L. Kozma, "Cannabis Prohibition in Egypt, 1880–1939: From Local Ban to League of Nations Diplomacy," *Middle Eastern Studies* 47, no. 3 (2011): 443–60; C. S. Duvall, "Drug Laws, Bioprospecting, and the Agricultural Heritage of *Cannabis* in Africa," *Space and Polity* 20, no. 1 (2016): 10–25.

20. Two qualifications. First, South Africa and Egypt were independent in 1925, but attitudes toward cannabis in those countries originated earlier, in colonial contexts. In

both countries, colonial social structures remained in place for decades after independence. Second, some other locations had strict cannabis controls before 1900—notably Greece, Turkey, and Sri Lanka. For further legal history, see chapter 9 below.

21. K. W. Hillig, "Genetic Evidence for Speciation in *Cannabis* (Cannabaceae)," *Genetic Resources and Crop Evolution* 52 (2005): 161–80; K. W. Hillig and P. G. Mahlberg, "A Chemotaxonomic Analysis of Cannabinoid Variation in *Cannabis* (Cannabaceae)," *American Journal of Botany* 91, no. 6 (2004): 966–75; J. Sawler, J. M. Stout, K. M. Gardner, D. Hudson, J. Vidmar, L. Butler, J. E. Page, and S. Myles, "The Genetic Structure of Marijuana and Hemp," *PLoS One* 10, no. 8 (2015): e0133292.

22. Sawler et al., "The Genetic Structure."

23. Jute (*Corchorus* species) from India was an early candidate and was the species George Washington grew when he instructed his gardener to grow "Indian Hemp," an incident that pro-marijuana activists have spun fancifully: Duvall, *Cannabis*, 182–85.

24. C. Fyfe, "Using Race as an Instrument of Policy: A Historical View," *Race and Class* 36, no. 2 (1994): 69–77.

25. M. Rogers, "Paul Bowles: The Rolling Stone Interview: Conversations in Morocco with the Expatriate Author and Composer," *Rolling Stone*, 23 May 1974, accessed 7 August 2017, http://www.rollingstone.com/culture/features/the-rolling-stone-interview-paul-bowles-19740523. Hashish was made in Morocco, by Moroccans, early in the twentieth century: R. Brunel, *Le monachisme errant dans l'Islam* (Paris: Maisonneuve and Larose, [1955] 2001).

26. S. J. Altoma, "Paul Bowles' Knowledge of Arabic: Personal Observations," *Journal of North African Studies* 17, no. 1 (2012): 157–72.

27. Bewley-Taylor et al., *The Rise and Decline of Cannabis Prohibition*; D. R. Bewley-Taylor, *International Drug Control: Consensus Fractured* (Cambridge: Cambridge University Press, 2012).

28. J. C. Miller, V. Brown, J. Cañizares-Esguerra, L. Dubois, and K. Ordhal Kupperman, eds., *The Princeton Companion to Atlantic History* (Princeton, NJ: Princeton University Press, 2015).

29. A. Sluyter, *Black Ranching Frontiers: African Cattle Herders of the Atlantic World, 1500–1900* (New Haven, CT: Yale University Press, 2012); R. A. Voeks, *Sacred Leaves of Candomblé: African Magic, Medicine, and Religion in Brazil* (Austin: University of Texas Press, 1997); R. A. Voeks and J. Rashford, eds., *African Ethnobotany in the Americas* (New York: Springer, 2013); L. Schiebinger, "Agnotology and Exotic Abortifacients: The Cultural Production of Ignorance in the Eighteenth-Century Atlantic World," *Proceedings of the American Philosophical Society* 149, no. 3 (2005): 316–43.

30. Duvall, *Cannabis*; Clarke and Merlin, *Cannabis*; B. M. du Toit, *Cannabis in Africa: A Survey of Its Distribution in Africa, and a Study of Cannabis Use and Users in Multiethnic South Africa* (Rotterdam: A. A. Balkema, 1980).

31. Booth, *Cannabis*, 54.

32. Clarke and Merlin, *Cannabis*, 236; Booth, *Cannabis*, 154; Lee, *Smoke Signals*, 14; M. S. Ferrara, *Sacred Bliss: A Spiritual History of Cannabis* (New York: Rowman and Littlefield, 2016), 78.

33. Abel, *Marihuana*, 143.

34. Du Toit, *Cannabis in Africa*.

35. Du Toit, *Cannabis in Africa*, 11.

36. Gambia and Senegal: E. Poisson, "Itineraire suivi par les habitants de Bakel pour se rendre à Kaouroco, d'où ils descendent la Gambia jusqu'à Sainte-Marie de Bathurst, et vocabulaire du pays de Guey," *Bulletin de la Société de Géographie* 17, 4th series (July 1859): 46–47. Liberia: J. Büttikofer, *Reisebilder aus Liberia*, vol. 2 (Leiden: E. J. Brill, 1890), 276–77; L. Lewin, *Phantastica: Die betäubenden und erregenden Genussmittel* (Berlin: Stilke, 1924), 105. Nigeria: Anonymous [Richard F. Burton], *Wanderings in West Africa from Liverpool to Fernando Po*, vol. 2 (London: Tinsley Brothers, 1863), 224–25. Sierra Leone: R. O. Clarke, "Short Notice of the African Plant Diamba, Commonly Called Congo Tobacco," *Hooker's Journal of Botany* 3 (1851): 9–11. Senegal: A. Sébire, *Les plantes utiles du Sénégal: Plantes indigènes–plantes exotiques* (Paris: J.-B. Baillière and Sons, 1899), 163; T. Chazarain, "Traitement du tétanos," *Union Médicale* 10, 3d series, no. 96 (August 13, 1870): 229–31. Guinea: H. Pobéguin, *Essai sur la flore de la Guinée Française: Produits forestiers, agricoles et industriels*, Côte Occidentale d'Afrique (Paris: Augustin Challamel Librairie Maritime et Coloniale, 1906), 110. Togo: H. L. Hammerstein, "Die Landwirtschaft der Eingeborenen Afrikas," *Beihefte zum Tropenpflanzer* 19, no. 1 (1919): 108. Niger: F. Foureau, *Documents scientifiques de la Mission Saharienne (Mission Foureau–Lamy d'Alger au Congo par le Tchad), Premier fascicule* (Paris: Masson, 1903), 467, 519.

37. Important repositories include Google Books, Hathi Trust, Persée.fr, Gallica (of the Bibliothèque Nationale de France), and Archive.org.

38. Clarke and Merlin, *Cannabis*, 368.

39. Booth, *Cannabis*, 157.

40. Lee, *Smoke Signals*, 14. As an indication of its dismissiveness of Africa and reliance on stereotypes, the book includes in its index, "Africa, 4, 13, 14, 20/African Americans. *See* blacks": Lee, *Smoke Signals*, 495. In a five hundred-page book, ostensibly a world history, the continent garners four page mentions; a racial category is more salient than specific cultural, social, historic, geographic, linguistic, ethnic, or other more precise human descriptors.

41. Ferrara, *Sacred Bliss*, 82.

42. Clarke and Merlin, *Cannabis*, 236.

43. Abel, in 1980, offered embellishments not included in the 1927 source, which Clarke and Merlin thankfully did not repeat in 2013: Abel, *Marihuana*, 145–46; P. M. Larken, "Impressions of the Zande (Continued from Vol. IX, Part 1)," *Sudan Notes and Records* 10 (1927): 93.

44. J. M. McPartland and K. W. Hillig, "Early Iconography of *Cannabis Sativa* and *Cannabis Indica*," *Journal of Industrial Hemp* 13, no. 2 (2008): 189–203.

45. H. W. Hutchinson, "Patterns of Marihuana Use in Brazil," in *Cannabis and Culture*, ed. V. Rubin (The Hague: Mouton, 1975), 176; D. T. Courtwright, "Review of *The Cult of Pharmacology* by Richard DeGrandpre," *Addiction* 102, nos. 1006–7 (2007): 107–8.

46. D. T. Courtwright, *Forces of Habit: Drugs and the Making of the Modern World* (Cambridge, MA: Harvard University Press, 2001), 41.

47. Hutchinson, "Patterns of Marihuana Use," 176.

48. P. Rosado, "O Vício da Diamba no Estado do Pará. Uma toxicose que ressurge entre nós," in *Maconha: Coletânea de trabalhos Brasileiros*, ed. Serviço Nacional de Educação Sanitária (Rio de Janeiro: Ministério da Saúde, 1958), 91.

49. M. Pio Corrêa, *Diccionario das plantas úteis do Brasil e das exóticas cultivadas*, vol. 1 (Rio de Janeiro: Imprensa Nacional, 1926), 472. Pio Corrêa's original reads, "Com o nefando trafico, [*Cannabis*] vir de uma á outra margem do Atlantico, trazidas as sementes amarradas em boneca na ponta dos pannos ou tangas pelos desventurados captivos." Although the primary meaning of *boneca* is "doll," a secondary meaning is "[uma b]olinha de qualquer substância, amarrada num pano" (a little ball of whatever substance, tied in a cloth). This secondary meaning is connoted by the construction *em boneca*: J. P. Machado, *Dicionário da língua portuguesa*, vol. 1 (Lisbon: Sociedade de Língua Portuguesa, 1958), 1012.

50. M. Rediker, *The Slave Ship: A Human History* (New York: Viking, 2007); J. A. Carney and R. N. Rosomoff, *In the Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World* (Berkeley: University of California Press, 2009).

51. G. Freyre, *Nordeste: Aspectos da influencia da canna sobre a vida e a paizagem do Nordeste do Brasil* (Rio de Janeiro: José Olympio, 1937), 15.

52. Duvall, *Cannabis*, chap. 7.

53. Carney and Rosomoff, *In the Shadow of Slavery*; J. A. Carney, *Black Rice: The African Origins of Rice Cultivation in the Americas* (Cambridge, MA: Harvard University Press, 2001); J. A. Carney and R. A. Voeks, "Landscape Legacies of the African Diaspora in Brazil," *Progress in Human Geography* 27, no. 2 (2003): 139–52; Sluyter, *Black Ranching Frontiers*; T. R. van Andel, C. I. E. A. van't Klooster, D. Quiroz, A. M. Towns, S. Ruysschaert, and M. van den Berg, "Local Plant Names Reveal That Enslaved Africans Recognized Substantial Parts of the New World Flora," *Proceedings of the National Academy of Sciences of the United States of America* 111, no. 50 (2014): E5346–53; C. S. Duvall, "A Maroon Legacy? Sketching African Contributions to Live Fencing Practices in Early Spanish America," *Singapore Journal of Tropical Geography* 30, no. 2 (2009): 232–47; A. Sluyter and C. S. Duvall, "African Rangeland Burning and Colonial Ranching Landscapes in the Neo-tropics," *Geographical Review* 106, no. 2 (2016): 294–311.

54. There is no single, overarching term accepted for generalizing about the Indigenous peoples of the Americas, comparable to "Africans" or "Europeans." Since I am writing in the United States, I will use "American Indian" as an overarching term, though I recognize it is not used in many countries and contexts. In specific countries and contexts, I will use narrower terms—most notably "Indigenous people" in the case of Brazil. My selection of "American Indian" over "Native American" in the United States follows the perspective of Russell Means, an Oglala Lakota leader: see I. Watson, "Introduction," in *Indigenous Peoples as Subjects of International Law*, ed. I. Watson (New York: Routledge, 2017).

Sources on pipe history and archaeology: E. Zangato, "Early Smoking Pipes in the North-Western Central African Republic," *Africa* (Rome) 56, no. 3 (2001): 365–95; J. E. Philips, "African Smoking and Pipes," *Journal of African History* 24, no. 3 (1983): 303–19; N. J. van der Merwe, "Antiquity of the Smoking Habit in Africa," *Transactions of the Royal Society of South Africa* 60, no. 2 (2005): 147–50; J. P. Ossah Mvondo, "L'archéologie des pipes en Afrique intertropicale," Ph.D. diss., Université de Paris I Panthéon-Sorbonne, 1988.

55. N. J. Van der Merwe, "Cannabis Smoking in 13th–14th Century Ethiopia: Chemical Evidence," in *Cannabis and Culture*, ed. V. Rubin (The Hague: Mouton, 1975), 77–80.

56. Booth, *Cannabis*, 53; W. La Barre, "History and Ethnography of Cannabis," in *Culture in Context: Selected Writings of Weston La Barre* (Durham, NC: Duke University Press, 1980), 93–107.

57. Ossah Mvondo, "L'archéologie des pipes en Afrique intertropicale," 24–32, 744–53; Zangato, "Early Smoking Pipes in the North-Western Central African Republic"; Philips, "African Smoking and Pipes"; J. P. Ossah Mvondo, "La question des pipes archéologiques en Afrique: Les nouvelles évidences," *West African Journal of Archaeology* 24 (1994): 1–19.

58. E. J. Keall, "Smokers' Pipes and the Fine Pottery Tradition of Hays," *Proceedings of the Seminar for Arabian Studies* 22 (1992): 29–46; W. Floor, "The Art of Smoking in Iran and Other Uses of Tobacco," *Iranian Studies* 35, nos. 1–3 (2002): 48.

59. E. J. Keall, "One Man's Mead Is Another Man's Persian: One Man's Coconut Is Another Man's Grenade," *Muqarnas* 10 (1993): 275–85.

60. B. Laufer, "The Introduction of Tobacco into Africa," in *Tobacco and Its Use in Africa*, Anthropology leaflet no. 29, ed. B. Laufer, W. D. Hambly, and R. Linton (Chicago: Field Museum of Natural History, 1930), 10.

61. Philips, "African Smoking and Pipes," 313.

62. Burton, *Wanderings in West Africa from Liverpool to Fernando Po*, 2:224; P. B. Du Chaillu, *Explorations and Adventures in Equatorial Africa* (New York: Harper Brothers, 1861), 420.

63. H. Nipperdey, "The Industrial Products and Food-stuffs of the Congo," *Scottish Geographical Magazine* 2, no. 8 (1886): 485–86.

64. F. R. Wulsin, *Varia Africana V: An Archaeological Reconnaissance of the Shari Basin*, ed. E. A. Hooton and N. I. Bates (Cambridge, MA: Harvard African Studies, 1932), 52–53.

65. Booth, *Cannabis*, 53. See also Courtwright, *Forces of Habit*, 40; Clarke and Merlin, *Cannabis*, 127.

66. Sluyter, *Black Ranching Frontiers*, 218.

67. Duvall, *Cannabis*, chap. 2.

68. J. dos Santos, *Ethiopia oriental e varia historia de covsas* (Evora, Portugal: Impressa no Conuento de S. Domingos, 1609), 20B; E. de Flacourt, *Histoire de la grande isle de Madagascar* (Paris: François Clouzier, 1661), 145; P. Kolbe, *Naaukeurige en Uitvoerige Beschryving van de Kaap de Goede Hoop*, vol. 1 (Amsterdam: Balthazar Lakeman, 1727), 314.

69. A. Margarido, "Les Porteurs: Forme de domination et agents de changement en Angola (XVIIe–XIXe siècles)," *Revue Française d'Histoire d'Outre-mer* 65, no. 240 (1978): 377–400.

70. Duvall, *Cannabis*, 173–75; M. Alloula, *The Colonial Harem* (Minneapolis: University of Minnesota Press, 1986), 74.

71. W. W. Reade, *The African Sketch-Book*, vol. 2 (London: Smith, Elder, 1873), 343–44.

72. D. A. Livingstone, *Missionary Travels and Researches in South Africa* (London: John Murray, 1857), 540.

73. R. F. Burton, *Scinde; or, The Unhappy Valley*, vol. 2 (London: Richard Bentley, 1851), 234–35. Despite this comment, Burton likely first used *bhang* while in the royal army in India in the 1840s.

74. R. F. Burton, *Explorations of the Highlands of Brazil*, vol. 2 (London: Tinsley Brothers, 1869), 276.

75. R. F. Burton, *Two Trips to Gorilla Land and the Cataracts of the Congo*, vol. 2 (London: Sampson Low, Marston, Low, and Searle, 1876), 296.

76. He admitted using it in Arabia, not Egypt: R. F. Burton, *Personal Narrative of a Pilgrimage to El Medinah and Meccah*, 1st ed., vol. 1 (London: Longman, Brown, Green, Longmans, and Roberts, 1856), 51.

77. See, e.g., R. F. Burton, *The Book of the Thousand Nights and a Night*, vol. 3 (London: Private Printing for the Burton Club, n.d. [1886–1888]), 93.

78. R. O. Clarke, "Short Notes of the Prevailing Diseases in the Colony of Sierra Leone," *Journal of the Royal Statistical Society* 19 (1853): 65.

79. G. Wiet, ed., *Maqrizi: El-Mawâ'iz wa'l-i'tibâr fî dhikr el-khitat wa'l-âthâr*, vol. 2 (Cairo: Institut Français d'Archéologie Orientale, 1913), 90; J. Ohrwalder, *Ten Years' Captivity in the Mahdi's Camp: 1882–1892* (Leipzig: Heinemann and Balestier, 1893), 17.

80. Duvall, *Cannabis*, 95.

81. J. F. Thackeray, N. J. Van der Merwe, and T. A. Van der Merwe, "Chemical Analysis of Residues from Seventeenth-Century Clay Pipes from Stratford-upon-Avon and Environs," *South African Journal of Science* 97 (January–February 2001): 19–21.

82. For information on Monfried, see R. P. T. Davenport-Hines, *The Pursuit of Oblivion: A Global History of Narcotics* (New York: W. W. Norton, 2004), 255. Monfried's books most relevant to cannabis are H. de Monfried and I. Treat, *Pearls, Arms, and Hashish* (New York: Coward-McCann, 1930); H. de Monfried, *La cargaison enchantée: Charas* (Paris: Bernard Grasset, 1962); H. de Monfried, *Charas* (Paris: Pavois, 1947); H. de Monfried, *La croisière du hachich* (Paris: Bernard Grasset, 1933).

83. Alloula, *The Colonial Harem*, 74.

84. W. W. Reade, *Savage Africa* (New York: Harper and Brothers, 1864), 423.

85. Paul Bowles offered a Moroccan *majūn* recipe in the *Rolling Stone* article from 1974: see Rogers, "Paul Bowles."

86. É. Dupont, *Lettres sur le Congo: Récit d'un voyage scientifique entre l'embouchure du fleuve et le confluent du Kassaï* (Paris: C. Reinwald, 1889), 644.

87. W. A. Emboden, "Ritual Use of *Cannabis Sativa* L.: A Historical-Ethnographic Survey," in *Flesh of the Gods: The Ritual Use of Hallucinogens*, ed. P. T. Furst (Prospect Heights, IL: Waveland, 1972), 226.

88. Clarke and Merlin, *Cannabis*, 127, 235.

89. H. L. Tangye, *In New South Africa: Travels in the Transvaal and Rhodesia* (London: Simpkin, Marshall, Hamilton, Kent, 1900), 313–14.

90. F. Ames, "A Clinical and Metabolic Study of Acute Intoxication with *Cannabis Sativa* and Its Role in the Model Psychoses," *British Journal of Psychiatry* 104 (1958): 975–76.

91. C. S. Duvall, "Linguistic Evidence on the Historical and Cultural Geographies of Cannabis, Tobacco, and Smoking Pipes in Africa," *Economic Botany* (forthcoming).

I discuss my linguistic data in chapter 3, which comprises words for cannabis, tobacco, and smoking pipe in several hundred African languages. I have posted my raw data openly on the internet, in the University of New Mexico's Digital Repository (https://digitalrepository.unm.edu/). To locate the data in this repository, search for the title of the forthcoming paper identified in this note.

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