Histories of Medicine and Healing in the Indian Ocean World: The Medieval and Early Modern Period, Volume One

Edited By Anna Winterbottom and Facil Tesfaye

Histories of Medicine and Healing in the Indian Ocean World: The Modern Period, Volume Two

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The Modern Period

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HISTORIES OF MEDICINE AND HEALING IN THE INDIAN OCEAN WORLD

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*These volumes are dedicated to medical workers around the world
who risk their lives to help others in situations of conflict.*

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Medicine on the Edge: Luso-Asian Encounters in the Island of Chiloane, Sofala

Cristiana Bastos and Ana Cristina Roque

Introduction

In this chapter we address colonial perceptions of African botanical knowledge and healing practices as expressed in the writings of two different social actors, both connected with the Portuguese empire in the Indian Ocean, both living in the island of Chiloane (Sofala, Mozambique) in the 1870s: Arthur Ignacio da Gama, a graduate of the Medical School of Goa (India) placed in Sofala in 1876; and Ezequiel da Silva, a third-generation Portuguese local teacher whose ancestors had first moved from Portugal to Macau (China) and from there to Mozambique. We analyze their writings within the context of the shifting European imperial politics in Africa and within a large-scale circulation of people, things, elements of knowledge, practices, and experiences across the Indian Ocean. They stand for distinct styles of circulation through the Indian Ocean: Arthur Ignacio da Gama was part of a flow of Goan skilled professionals who sought work outside Goa and saw themselves as part of a project of civilizing the world using modern standards, European medicine among them; Ezequiel da Silva belonged to the more mobile group of Indian-Ocean-born Eurodescendants who lived close to local populations and used local knowledge for practical purposes, including healing.

Goan Physicians and Empire

Between 1842 and 1961, hundreds of young men and a much smaller number of women studied medicine, surgery, or pharmacy in the Medical School of Goa. After graduation, many of them served in the Portuguese colonial health services in Asia and Africa, in places like Macau, in China, the eastern section of the island of Timor near Australia, the Cape Verde islands in the mid Atlantic, the West Africa coast of Guinea, or, in larger numbers, Angola and Mozambique (Figure 7.1). Regardless of what might have been the personal motivation behind each of the individual trajectories, the collective endeavor of Goan physicians in Africa during the nineteenth century would later be celebrated as a pillar of the Portuguese empire. In oral lore, in public ceremonies, or in print, Goan doctors were depicted as those who had been out there where no one else wanted to be, risking their lives for the safety of the troops and for the noble mission of treating the indigenous populations. Rather than products of empire, Goan physicians were presented as agents of empire-building. Such views were solemnly expressed at the centennial anniversary celebrations of the medical school in 1942.¹

Figure 7.1 Indian Ocean map showing Chiloane, Goa, and Macau

Given the political atmosphere of the 1940s, it is not surprising that the government-appointed directors of the school chose to cheer, celebrate, and befriend the Portuguese administration, present and past, rather than criticize it. Indian nationalism was at its peak, the British rule in the subcontinent was near the end, and Goa was then—after having been neglected to quasi-irrelevance through the eighteenth and nineteenth centuries—under pressure to take advantage of its connections to Portugal and keep away from the surrounding upheavals. When India became a new nation, in 1947, Goa remained one odd “Portuguese pimple on the face of Mother India,” as in the quote attributed to Nehru. Neither diplomacy, nor the nationalist struggle of the *satyagrahas* through the 1950s, or international pressure, changed the stubborn position of Salazar’s Portugal; the annexation to the Indian Union occurred only in 1961, after a display of military power followed by peaceful surrender. In 1987, Goa became a state of the Indian Union, after a referendum (the 1967 Opinion Poll) in which Goans showed their preference for remaining a small state rather than merging with Maharashtra.²

Back in the 1940s, Goa was at the crossroads of major changes in world politics. The Portuguese administration insisted on following an idiosyncratic path against decolonization and presented empire as an imagined transcontinental community in which different identities happily combined with one another and merged in a single destiny. Goa was assigned a prominent role in that imagined community. Goa was the evidence that West and East could meet. Goa evoked the golden age of sea trade, great churches, and heroes like Vasco da Gama and Francis Xavier. Lusotropicalism, the ideological cement fabricated in the 1950s and adopted in the 1960s by the Portuguese just at the moment when the European empires were collapsing for good, was yet to be available with its repertoire of friendly colonialism and of Portuguese easy ways in the tropics.³ In the 1940s, the rhetoric of empire was still about conquest, precedence, bravery, and the civilizing mission. Those were also the key words in the speeches made at the centennial of the medical school.

It is not clear whether those who actually served in the African health services were imbued with the sense of mission that was later attached to their trajectories. Did they choose serving in Africa and caring for the African bodies and souls, or was their route more of a contingency? Did they take sides with the Portuguese and feel that they were treated like equals in a shared mission of civilizing by colonizing, or were they treated as colonial subjects and kept in secondary roles? On other occasions, we have addressed the ambiguities experienced by

Goan doctors in Africa. In this chapter we read further into the writing of one of those doctors, Arthur Ignacio da Gama, and compare him with his contemporary Ezequiel da Silva. Both men lived in the island of Chiloane (Sofala) during the 1870s.⁴

Arthur Gama: A Christian Brahmin from the Goa Medical School

Arthur Ignacio da Gama was born in 1851 in Verna, Salcete, into a family of Christian Brahmins. He attended medical school in nearby Panjim and graduated in 1875.⁵ Although we do not know enough about his childhood and teenage years to assert why, when, and if he wanted to become a doctor, we know that it was a choice of election among the social group with the peculiar reference of Christian Brahmins, about whom some comment should be made.

Christianized since the sixteenth century, when pressured by the Portuguese to convert or otherwise leave their land—which some preferred to do, and fled to the neighboring counties⁶—many families had adopted the language, religion, clothing, architecture, and tastes of the Portuguese, while keeping relatively intact their role in the local social hierarchies. Christian Brahmins represented the upper crust of the accommodation between the European ways and the caste-evoking traditional social hierarchy. Highly influential in the Catholic Church, Brahmins competed with the Chardo, another prominent, caste-evoking group that was influential in other spheres, and with the small minority of Luso-descendants, who claimed direct lineage from the ruling Portuguese and received the highest privileges in the administration.⁷

Some Christian Brahmins had long been familiar with medicine, by learning from their elders, from assisting Portuguese physicians and surgeons in the military or religious hospitals, or via one-on-one transmission of knowledge by the head physician in charge. The institutionalization of the Medical School of Goa—which should be credited to this group, who provided the majority of the student body—should be seen as one step in this process, rather than an initiative of the Portuguese administration.⁸ Partly a continuation of a long process, and partly a rupture with the past and an attempt to endorse European modernity, the school allowed no compromise with traditional medicines (Figure 7.2). Whatever might have been the students' previous knowledge of local healing traditions, they were supposed to leave it outside the walls of the Maquineses palace, where, in the

Figure 7.2 Medical School of Goa

Source: J. Pacheco and D. E. Figueiredo (1960), *Escola Médico-Cirúrgica de Goa—Esboço Histórico* (Bastorá: Tipografia Rangel)

annex of the military hospital, facing the Mandovi River, the school had functioned since its foundation in 1842. Meanwhile, life went on beyond the school walls, and head physicians reported that students and graduates were so immersed in local healing that they would rather use traditional medicines when sick and, sometimes, included them in their clinical practice.⁹

We do not know if the young Arthur Gama had much exposure to traditional medicines before he attended medical school. We do know

they were not encouraged in its all-European curriculum, fashioned after those of the Medical-Surgical Schools of Lisbon and Porto, which had started in 1836, offering a modern, hands-on training, as opposed to the old scholastic ways of the legendary University of Coimbra.

Whether Arthur had hands-on training or sat through a more scholastic type of teaching is debatable. There is evidence that students objected to using their hands in general and in dissections in particular; faculty members condescendingly accommodated themselves to the use of anatomical models rather than human corpses, which, they claimed, were in shortage at the hospital.¹⁰ Therefore, it is likely that Arthur did not have to perform dissections as part of his schoolwork routine. He attended classes lectured in Portuguese by Portuguese-born professors or by Goan doctors trained in Portugal; he took his exams in Portuguese, after studying French, Portuguese, or English textbooks, and used supplies shipped from Europe. He learned what was learned in Europe, and came out of school with a degree in European medicine. Then he went on to Africa.

From Goa to Mozambique

Besides Africa, what other options were there for the graduates of the Medical School of Goa? Not that many. Some of Arthur's classmates would never even practice medicine; a number of them went into the public administration, something that a college degree—regardless of its discipline—helped make possible.¹¹ Opening a local clinic was hardly viable; at the time, not even the higher-ranking Portuguese-certified physicians stationed in India could make their living from the earnings of a private practice. They complained that there was not enough local clientele for their services, noting that most people would rather go to traditional healers, and the only clients for European medicine were the few Portuguese residents who felt entitled to be treated for free by their compatriots.¹²

Entering a career as a military physician was a more likely option for the graduates of the Medical School of Goa, and many of them found that this path led them to distant locations in Asia and Africa. Some of their routes followed preexisting paths and connections through the Indian Ocean and into the Atlantic, with Portugal as one possible destination, but also including Bombay, the Gulf, and other parts of the world as viable places to settle, serve, come back from, and eventually go back to, in one or another's generation. These trajectories followed broadly the routes framed by Engseng Ho for the centuries-

old spread of Muslim families throughout the Indian Ocean, as well as those recently depicted in detail by Pamila Gupta, Selma Carvalho, and Stella Mascarenhas-Keyes for Goan diasporas in Mozambique, the Gulf, and East Africa.¹³

Among the many routes across the Indian Ocean, the path to the coast of Mozambique had been attracting generations of Goans and other populations from the northwestern coast of India.¹⁴ Mozambique had been under the jurisdiction of Goa until the eighteenth century and many Goan families extended their trans-Indian Ocean networks into the eastern coast of Africa; when João Julião da Silva referred to the district of Sofala, he listed Goans as regular residents.¹⁵

Collating a number of different sources for the nineteenth century, we were able to identify 40 graduates of the Medical School who held official positions in the health services in Mozambique (see appendix 7.1). Willingly or unwillingly, they provided a steady workforce at a relatively low cost for the Portuguese government, given that their training had mostly been self-financed and their earnings were meager. Goan graduates were kept in secondary positions and could only progress in their careers if they went for further training in Portugal—which most did not. Many complained about what they regarded as an intrinsically unfair system that made them eternal subalterns, regardless of their quality.¹⁶ Adding insult to injury, some had to work under Portuguese supervisors who scorned their medical degrees and laced their comments with anti-Asian prejudice.¹⁷ Despite these difficulties, the idea that Goans would provide the ideal workforce for the Portuguese health services in Africa was first suggested by a Goan doctor; not just any doctor, but Rafael Antonio Pereira (1847–1916), a Benaulim-born Christian Brahmin who studied medicine in Portugal and returned to Goa, where he attained higher positions and directed the medical services between 1884 and 1893. At a time when the school was under siege and the Portuguese administration considered closing its doors, Rafael Pereira developed an argument about the special qualities of Goan doctors for the colonial services: they were the best intermediaries between Europeans and Africans, knowledgeable enough to be the carriers of civilization, and accustomed to tropical harshness and illnesses.¹⁸ The same line of argument was later presented to the Portuguese parliament in favour of the Medical School of Goa—with success.¹⁹

Yet before Goan physicians were defined as the doctors of empire in Africa, their lives in the colonial outposts were often random experiences of disorder and improvisation under harsh conditions and with little support from the colonial administration. It was largely on his

own, albeit carrying a sense of mission, that Arthur Gama acted when he took his position Chiloane, in 1876, at the young age of 25, where he would stay until his premature death in 1882.

Into the Island of Chiloane

The capital of the Sofala District was transferred from the mainland port of Sofala to the Island of Chiloane, located nine leagues southward, in the year 1860, owing to environmental constraints and political instability that included warfare and retaliation by African groups.²⁰ Portuguese sailors had been using the island as an alternative to the mainland port of Sofala since the mid-sixteenth century, but there was no political or military role assigned to the place (Figure 7.3). Described in the sources as of “six leagues north and south, and the same east and west,”²¹ it was either presented as a potentially welcoming location for settlers, with its deep and sheltered bay, well supplied with pastures, fish, wood, and plant resources, or as a barren desert with no comparison to the fruitful land of the continent where people had their farms. In the absence of an official census, it is believed that until the 1860s the island was inhabited seasonally by fishermen or used as a sort of trade station, for transshipment and distribution of goods, by local traders. In 1890, there were about three thousand people in the place, of which fifty were classified as “white”;

Figure 7.3 The Harbor and Islands of Chiloane (IICT—CDI-0483–1952). (courtesy of the Historical Overseas Archive [AHU] and the Tropical Research Institute [IICT], Lisbon.)

there were eight European-descent “children of the land,” plus some Luso-Asian families, while the majority were drawn from the indigenous population.²²

When Arthur Ignacio da Gama was appointed to Chiloane, in 1876, he was estranged by what he considered its wilderness, and did not abstain from exhibiting his impressions in the official report.²³ In contrast with Ezequiel da Silva’s appreciative depictions of the place (see *infra*), Gama’s writings were all about disillusionment with the local lack of infrastructure, lack of civilization, lack of perspectives, and lack of viability. He suggested that the Portuguese administration should not insist on colonizing the place, which might better be left to the clouds of insects that emanated from its swamps.²⁴ In his opinion, there were more appropriate environments for settlers in the mainland; he did not refer to the reasons why the capital had moved to the island in the first place. The Portuguese would indeed move back to the mainland in due time; in 1892, the capital of Sofala was transferred to Chiveve, renamed City of Beira in 1907, which would have a notorious future as Mozambique’s second city. Gama would not live to see the new capital: he died in 1882, succumbing to the fevers that plagued the island.

Ahead of Gama were the many tasks assigned to colonial physicians. They had to handle the patients—mostly soldiers and settlers, as the indigenous populations were reluctant about receiving medical care from the Portuguese;²⁵ they had to report to their superiors in the Ministry of Navy the morbidity and mortality figures; and they had to provide an inventory of the causes behind the health conditions in the place, according to the prevailing beliefs on the influence of climate on human health. Apart from these duties, they also had to act as naturalists and gather scientific data, samples, and objects; they had to observe, collect, and report on zoological, botanical, and mineralogical matters. They were required to send specimens, plants, grains, seeds, and whatever objects might be of interest to the museums and scientific collections of the kingdom—such as the *Real Gabinete de História Natural da Ajuda* in Lisbon, the institution that later evolved into the Museum of Natural History.²⁶

People in the position of Gama were pressured to compile, amass, and report, not just for the sake of knowledge as a goal, but also because knowledge was a commodity in the inter-European competition for the political and economic control of Africa. Lisbon was a center of knowledge compilation, with multiple outsourced data gatherers, but the whole endeavor did not match up to the ambitious claims held by Portuguese governments for Africa. Colonial officers in

the field were required to help fill the gaps. Explorers sponsored by the Geographical Society had the mandate to map river sources, mountains, and potential mines.²⁷ Practicing physicians had to compile local knowledge on plants and remedies. In a booklet clearly made for the purpose of inter-European competition, Joaquim Almeida Cunha, an officer of the colonial administration in Mozambique, gathered the knowledge on medical plants that had been compiled in the first place by Ezequiel da Silva in Chiloane.²⁸

Arthur Ignacio da Gama did not show much personal interest in the medical uses of local plants. He wrote the report using secondhand knowledge, for, he claimed, he could not afford the time to go out in the field to collect data when he was needed as a doctor in what was often a life-and-death struggle. He was neither eager to survey, collect, and report on the minerals, flora, and fauna, nor to know the indigenous peoples close enough to report their lifestyles and ship their artifacts into some distant European destination; he was not trained as a knowledge-collector, but as a doctor, who did not trade his place at the patient's bedside for the outdoors, wandering for bits and pieces that might, or might not, be relevant for humankind.²⁹

For someone who was so nonchalant about data collecting, Gama's depiction of the healing rituals practiced by the indigenous peoples of Chiloane is impressive—making it a sort of ethnomedical narrative all too similar to those produced in the twentieth century. He depicted the role of the “inhamessoro” (*nyamasoro*), the people's quest for his or her services, the sort of afflictions they brought to the healers, the worldview they espoused, the instruments, gestures, dress code, sounds, smokes, substances, and other material elements involved in diagnosis and treatment. He also made an attempt to attribute meaning to all these things. His prejudice, though, was patent all through the narration. Gama could not help but formally distance himself from traditional healing, perhaps as a good child of his alma mater, perhaps as someone who had to always emphasize, more than others who took it for granted, his Europeaness and his commitment to civilization and science.

Trying to be objective, yet unsympathetic, Gama displayed his prejudice against African islanders' lifestyles, which he regarded as marked by a negligent attitude of living for the moment, founded upon what we would refer to today as gender inequities: women had to perform all the hard labor, and men measured their wealth by the number of wives they controlled.³⁰ Gama's opinions seem to accord with the established views about Africans held by Portuguese settlers,

administrators, and missionaries. What stands out in his writings is that despite his distance and disdain for empirical work, he provides a detailed, ethnographic-like account of African healing. Could he have obtained it from Ezequiel da Silva, who was so immersed in the local life to the point of being depicted as a *Ganga*, the “halfway witch-doctor,” by the officer Cunha in 1883? Or perhaps from Cunha himself? With no record of their interaction, we can only guess by comparing their writings—and conclude that Gama's depiction is a much more diluted and impressionist approach to local knowledge than that of Ezequiel, who was fully immersed in local culture.

Plants, Healing, and Knowledge

It is unlikely that in such a small place as Chiloane Arthur Ignacio da Gama and Ezequiel da Silva never met, as both were part of the inner circle of those upon whom the Portuguese authorities relied. The Portuguese community living in Sofala had always been quite small.³¹ People from Portugal (*reinóis*) were very few and most of those who qualified as Portuguese had first gone to India or Macau before settling in Sofala. There were also convicts or prisoners, who did not represent mainstream European culture. In other words, the local Portuguese community was socially, culturally, and historically distant from Europe; they might rather be regarded as belonging to the Indian Ocean World (IOW). Unlike Gama, who had come from India imbued with a sense of mission about rescuing and “civilizing” Africans, people like Ezequiel did not feel obliged to follow any external agenda regarding the indigenous peoples—in fact, Ezequiel and his folks were regarded by the Portuguese authorities as halfway natives who shared much of the lifestyle of the actual indigenous population.

Ezequiel was the son of Zacarias Herculano da Silva, who began his career as a military man in Sofala in 1810. His grandfathers were João Julião da Silva, a second-generation Portuguese who was born in Macau in 1769 and moved to Sofala in 1790, and Francisco Honorato da Costa, who in the early nineteenth century had been director of the “Cassange fair,” a trading post in the Cuango, Angola. Ezequiel's family was closely connected to the Portuguese colonial administration, like many others; unlike many others, however, was their profound knowledge of Africa and of the experience of the IOW. Joining the Portuguese administration at a young age, Ezequiel da Silva took the position of schoolteacher in Chiloane. He was already there when Ignacio da Gama was appointed to Sofala.

Besides their differences in social background and education, Ignacio and Ezequiel had different worldviews and different attitudes about the place they were in and the people who lived there. Ignacio was a passerby; Ezequiel was a resident. Ignacio was an outside observer; Ezequiel was part of the community. Those different positions are apparent in the ways they observe and describe the island of Chiloane, its characteristics, resources, and potentialities. The worthless, unsuitable island described by Ignacio is referred to by Ezequiel da Silva as a complex ecosystem, providing different resources that local people knew how to use and capitalize upon.³² Unlike Ignacio's, Ezequiel's observations were the direct result of his own knowledge of the region. He combined observation and living experience in a continuous learning process legitimized by local traditional uses and practices. Therefore he was able to look far beyond the "poor lands of Chiloane," identifying resources and potentialities, namely, medicinal herbs and plants that, once analyzed, could come to integrate the Western pharmacopoeia and be a source of income for the colony.³³

Informing on the different medicinal herbs and plants existing in the island of Chiloane, Ezequiel da Silva provides data on the local ecosystem and specific different habitats—sandy lands, sandy dry lands, wetlands, sandy wetlands, mangroves, beaches, and coastal lagoons—all of them testifying to the island's biodiversity and his own knowledge on the territory. For this reason Cunha refers to him as a *Ganga*, the "graduate healer," the one to be consulted whenever the community had a health or a political problem.³⁴ When informing on traditional knowledge and practices related to the knowledge, identification, and use of medicinal flora, Ezequiel shows how he was an insider to local culture. Moreover, he supplies additional information on the way people exploit and manage the local natural resources. This "being part of the group" became essential either to report uses and prove its effectiveness or to substantiate traditional knowledge.

As a physician and having to face the many difficulties related to the operability and effectiveness of the health services in Mozambique (lack of funds to guarantee basic operating services, lack of facilities, lack of human and technical resources, and lack of medicines), Gama gave priority to clinical observations, seeking to act according to his scientific background and neglecting a more empirical approach to the local medical solutions. This approach would have required long-term research, for which he had no time to spare and was not convinced would be worthwhile.³⁵

Thus, although both Ignacio and Ezequiel looked into the problems of disease and healing, their perspectives were rather different. Ignacio advocated the defense of scientific medicine and its role as a vector of civilization; whether or not he might be personally sympathetic to traditional healing, or even exposed to it outside medical school, his formal training was all about rejecting the argument that non-European knowledge might be valuable and effective; for him, only European medicine should be supported, used, and promoted. In such a corner of the world, with so many adversaries, he might have felt that his task was immense and perhaps he was alone as the paladin of scientific medicine. Unlike Ignacio, Ezequiel was well aware of his lack of "scientific training" in medicine; on the other hand, he had a profound knowledge of the place, its resources, and the uses people made of them—particularly in the field of herbal medicine. He stressed the importance of making a rigorous and systematic survey of the local medicinal-pharmaceutical flora, which required learning about its uses from the local practitioners; the results of such research, he foresaw, would have an impact not only in Sofala and Mozambique but also in the other Portuguese overseas territories and even in Europe.³⁶

This particular position of Ezequiel does not mean he completely supported the healing practices performed by the local healers. In fact, though he understood the role of the healers in the community, he was very critical of their performance and even doubted that their practices could be aptly named medicine, although he referred to them as "Kaffir medicine."³⁷ He distinguished clearly between the healer's performance and the healing properties of certain plants when applied to practical situations. He regarded the healers' procedures with suspicion; only in a very few situations did he consider the efficacy of the way the healer acted. As for the medicines used, they were worth considering because they proved to be effective.³⁸

While pointing out the lack of a pharmacopoeia in the Western sense and the difficulty of compiling recipes in the absence of preestablished doses, Ezequiel's work combined modern scientific methods of registry and collection of samples for study (Figure 7.4 and Table 7.1) with traditional procedures of diagnosis and treatment.³⁹

Ezequiel's work reveals a profound knowledge of Sofala's natural environment and of the local phytotherapeutic practices based on the perceived relationship between disease, plant, and habitat of occurrence. His aim was to identify possible solutions for health problems both in Sofala and in other regions under Portuguese rule. He collected and identified 74 different specimens of medicinal herbs and plants

Figure 7.4 Excerpt from the registry book of the plant samples collected by Ezequiel da Silva (1883), IICT, AHU, Códice_SEMU_2186. (courtesy of the Historical Overseas Archive [AHU] and the Tropical Research Institute [IICT], Lisbon.)

used in Chiloane and Sofala District, and compiled the different recipes listed in 1883 by Cunha in his booklet.⁴⁰

As often acknowledged, “one could take considerable advantages from the use of most of these medicines”—and thus he advocated the use of the local medicinal flora and its study (including both plant potentialities and habitat of occurrence), assuming that certain health problems, in other regions, could be avoided with the introduction of specific medicinal plants that did not grow naturally there.⁴¹

Ezequiel illustrated this point with the cases of *Durura*, *Chicarafunda*, *Gambacamba*, and *Mutivari*. *Durura* and *Chicarafunda*, if introduced into regions with similar habitats, could provide possible solutions to decrease the neonatal mortality rate. That could be the case for the Inhambane District (south of Sofala), noted Ezequiel, who knew that none of those plants were growing there either because he had the opportunity to go there or because he had a good informant on those matters.⁴²

As for *Gambacamba* and *Mutivari*, introducing them to other areas could provide good local substitutes for the marshmallow roots (*Althaea officinalis*) and the extract of liquorice (*Glycyrrhiza glabra*), thereby minimizing the constant failures of these drugs in the pharmacies of hospitals and health care centers.

Knowing the diversity and specificity of each habitat and the way it influences the occurrence or absence of certain species and, consequently, the fact that they are used there or not, Silva underlines that the use of each plant for the treatment of a specific disease is

Table 7.1 Registry table for the collected samples. Reproduction of the table used by Ezequiel da Silva for the registry of the medicinal herbs and plants collected (AHU Manuscript, fl.8v–9)

Number of plants providing these samples			3
Designation of the species of the several samples and weight	Root	Pounds	1
		Ounces	"
		Octaves	"
	Bark	Pounds	
		Ounces	
		Octaves	
	Leave	Pounds	
		Ounces	
		Octaves	
	Resin	Pounds	
		Ounces	
		Octaves	
Local name		<i>Goche</i>	
Type and <i>habitat</i>		Trailer with long and rough leaves living in sandy areas	
Areas of ocurrence		Chilluane Island and Sofala	
Quantities used	Root	Pounds	
		Ounces	
		Octaves	
	Bark	Pounds	
		Ounces	
		Octaves	
	Leave	Pounds	
		Ounces	
		Octaves	
	Resin	Pounds	
		Ounces	
		Octaves	
Medicinal virtues		Fevers, marsh-fevers, and urinary problems	
Preparation and application		Decoction of the leaves, branches, and roots. Drink hot for the fevers and cold for the urinary problems	
Observations		Efficient results in both cases though it seems that it is not relevant the fact it is taken hot or cold. The reason I mention this is because I was told these were the right procedures accordingly to each disease.	

an important part of the cultural heritage of each community, thus revealing both a solid knowledge of the local natural resources and the capacity of using them to solve their basic needs.⁴³ This explained how, in a small island such as Chiloane, the inhabitants of the sandy lands knew that the leaves and flowers of *Muanga* (*Gynandropsis gynandra*) (Figure 7.5) would heal fevers associated with colds, while those living in the mangroves of the same island, where *Muanga* do not occur, knew that *Mutungumuja* leaves would cure the same symptoms.⁴⁴

Figure 7.5 *Gynandropsis gynandra*

Source: Hermann Herbarium, Natural History Museum, London (<http://www.nhm.ac.uk/research-curation/research/projects/hermann-herbarium/search/detail.dsm?PageBarcode=000594432>)⁴⁵

All these references underline what is common knowledge based on life experience and traditional use, complementing the more specific know-how of the traditional healer that no community can decline, with that of each specific habitat, so that people find different solutions to solve trivial daily problems always in view of preserving their balance and welfare as a community. Just as in Paracelsus's saying that "each country has specific diseases and for each country nature provide[s] the solution to heal them,"⁴⁶ Ezequiel's findings reveal different types of herbs and plants with medicinal virtues—in wetlands, salt-marshy areas, dried, or sandy lands. These herbs were applied to solve or slow down the most common ailments and diseases.

Concluding Note

In brief, in the context of establishing the Portuguese colonial rule in Mozambique there is evidence that many actors—Africans, Europeans, Luso-Africans, and Luso-Asians—were involved in different forms of knowledge exchanges, some of them with therapeutic value. The brief analysis of two different colonial actors who lived at the same time in the island of Chiloane, Sofala, and referred to local knowledge of plants and healing practices, show that the scope of interactions across the Indian Ocean is multisided, complex, and irreducible to a monolithic understanding of the relationship between colonizers and colonized, foreigners and locals, and external and indigenous knowledge. Arthur Ignacio da Gama went to Mozambique like many of his Goan peers—a colonial subject born into a local elite, achieved higher education in Goa, and started his career in colonial medicine by serving in Africa. In Africa he enacted Europeanness and expressed reservations regarding the lifestyles of local populations, their healing practices, and their knowledge about them—at least, those that he got to partially know. Ezequiel da Silva, on the other hand, was a third-generation Eurodescendant whose grandparents had been crossing the Indian Ocean and serving the empire in several locations. He lived closer to local populations and adopted much of their knowledge—particularly in matters of potentially healing plants, which he compiled carefully. Ezequiel had no higher training, yet he used his skills and proximity to the local population to gather knowledge and make it available to the colonial and European circles, which used them in ways that are yet to be known in detail and deserve further research.

Appendix 7.1: The Flow of Medical Graduates from Goa Serving in Mozambique

Sources include Peregrino da Costa's publications about Goan physicians in the overseas medical services (Costa, 1943, 1943a, 1944, 1957, 1957a) and manuscripts from the Overseas Historical Archives: AHU, sala 12, Índia—Informações anuais 1856–1907, 2070, «Mappa dos Empregados de Saude no Estado da India no dia 30 de Setembro de 1863», Eduardo de Freitas e Almeida (físico mor do Estado da Índia); AHU, sala 12, Índia—Informações anuais, 1856–1907, 2070, «Relação nominal por graduação e antiguidade dos facultativos e pharmaceuticos do quadro de saude do Estado da India, a quem dizem respeito as informações juntas, referidas ao dia 31 de dezembro de 1898,» 21–01–1899 (ass. ilegível); AHU, sala 12, Índia—Informações anuais, 1856–1907, 2070, «Relação nominal por graduação e antiguidade dos officiaes do quadro de saúde d'este Estado, a quem dizem respeito as informações juntas referidas ao dia 31 de dezembro de 1900,» 1901 (ass. ilegível); AHU, sala 12, Índia—Informações anuais 1856–1907, 2070, «Relação dos facultativos e pharmaceuticos do quadro de saude, cirurgiões militares e sargentos ajudantes e primeiros sargentos da companhia de saude, com informações referidas a 31 de dezembro de 1901,» José Maria da Costa Alvares (chefe do serviço de saúde); AHU, sala 12, Índia—informações anuais 1856–1907, 2070, «Modelo n.º 1 (Regulamento disciplinar do exercito). Quadro de saude do Estado da India. Informação annual referida ao facultativo de 1.ª classe abaixo mencionado [Miguel Caetano Dias]», Rafael António Pereira (Chefe do serviço de saúde) [1897]; AHU, sala 3, Liv. 53–5202 N.º V.º 450, Livro Mestre—processos individuais [Índia 1859–1912]. AHU, sala 3, Liv. 62—5207 N.º V.º 455, Livro Mestre—processos individuais [Moçambique 1883–1896].

Name	Year of graduation	Place of birth in Goa
Joaquim Francisco Colaço	1847	Margão, Salcete
Caitano António de Melo	1851	Mercês, Ilhas
Albino Pascoal da Rocha	1851	Aldoná, Bardez
José Francisco Cornélio Filipe Dias	1853	Margão, Salcete
Caetano Florêncio Colaço	1853	Margão, Salcete
Aleixo Mariano Fernandes	1854	Piedade, Ilhas
José António Miranda	1854	Margão, Salcete

Continued

Name	Year of graduation	Place of birth in Goa
António Francisco Pais	1854	Sangoldá, Bardez
João José Salvador Crisóstomo de Figueiredo	1854	Loutolim, Salcete
José Dionísio Carneiro de Sousa e Faro	1859	Ribandar, Ilhas
Martinho da Paixão Xavier Soares	1859	Loutolim, Salcete
Aleixo Caetano de Sousa	1861	Parra, Bardez
André Eustáquio Francisco Monteiro	1861	St.º Estêvão, Ilhas
José Agostinho Maria de Sousa	1870	Nova-Goa, Ilhas
Cláudio Henrique Barreto	1871	Vernã, Salcete
Aureliano José de Assunção Rodrigues	1872	Neurá, Ilhas
António Higinio Xavier Faria	1873	Loutolim, Salcete
João Olegário Pestaninho da Veiga	1874	Curtorim, Bardez
Claudino António da Silva	1875	Ribandar, Ilhas
Damasceno Isaac da Costa	1875	Navelim, Salcete
Artur Inácio da Gama	1875	Verná, Salcete
Agostinho Gabriel Arcanjo Salustiano Pinto	1876	Nova-Goa
António Mariano Gabriel do Rosário e Sousa	1876	Mapuçá, Bardez
Caetano Francisco Dias	1877	Ibo (Moçambique)
Custódio Joaquim Barreto Xavier	1878	Margão, Salcete
Aristides Luciano Evaristo de Menezes	1880	Batim, Ilhas
Baltazar Custódio Epifânio de Sá	1880	Betalbatim, Salcete
Jesús Octaviano José Pedro Lobo	1881	Calangute, Bardez
Roque Francisco Gonçalves	1881	Santa-Cruz, Ilhas
Pedro Paulo Fermiano de Sousa	1884	Aldoná, Bardez
Caetano Paulo Maria de Melo	1885	Saligão, Bardez
Hipólito Cassiano Xavier do Rêgo	1886	Santa-Cruz, Ilhas
Servínio Agostinho Colaço	1887	Margão, Salcete
Luis Caetano de Santana Álvares	1887	Margão, Salcete
António Maria da Cunha	1887	Arporá, Bardez
João Mariano Gonzaga	1889	Ibo (Moçambique)
Francisco Xavier de Brito	1889	Ibo (Moçambique)
António Francisco Zacarias Dias	1890	Taleigão, Ilhas
Adriano José Ernesto Couto	1890	Salvador, Bardez
António Carneiro de Sousa e Faro	1893	Ribandar, Ilhas

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Notes

1. The centennial speeches were compiled in the volume *Escola Médica: Comemorações centenárias* (Bastorá: Rangel, 1955). Other important sources are the writings of Dr. Pedro Joaquim Peregrino da Costa, a prolific narrator of the role of Goan physicians in Africa: in 1943, he published two articles titled "Médicos da Escola de Goa nos Quadros de Saúde das Colónias (1853–1942)" in the *Boletim do Instituto Vasco da Gama* (no. 57, pp. 1–43 and no. 58, pp. 1–66); in 1944, "Notas Biográficas de Médicos dos quadros de Saúde das Colónias—Médicos pela Escola Médica de Nova Goa, pela Universidade de Bombaim e pela Escola Médica de Goa, que repetiram o curso nas Faculdades de Medicina de Portugal," in the volume *Médicos da Escola de Goa nos Quadros de Saúde das Colónias (1853 a 1942)*, published in Bastorá; in 1957, the articles "A Escola Médica de Goa e a sua Projecção na Índia Portuguesa e no Ultramar" and "Notas Biográficas e Relatórios dos Médicos dos Quadros de Saúde do Ultramar só com o Curso da Escola Médica de Nova Goa," both in the volume *Escola Médico-Cirúrgica de Goa (1842–1957)*. For a discussion on the topic, see C. Bastos (2006), "Goa em 1942: A Retórica do Império e as Ambiguidades do Nacionalismo," in *Portugal Não É um País Pequeno: Pensar Império na Pós-Colonialidade*, ed. M. R. Sanches (Lisboa: Cotovia), pp. 229–247.
2. There is a vast literature on the specificities of Goa—e.g. Teotonio de Souza (1979), *Medieval Goa* (New Delhi: Concept); G. V. Scammell (1988), "The Pillars of Empire: Indigenous Assistance and the Survival of the 'Estado da Índia' c. 1600–1700," *Modern Asian Studies*, 22: 473–489; Rowena Robinson (1988), *Conversion, Continuity and Change: Lived Christianity in Southern Goa* (Delhi: Sage); Pratima Kamat (1999), *Farar Far (Crossfire): Local Resistance to Colonial Hegemony in Goa, 1510–1912* (Panaji: Institute Menezes Braganza); Alexander Henn (2000), "The Becoming of Goa: Space and Culture in the Emergence of a Multicultural Lifeworld," *Lusotopie*, 333–339; Ângela Barreto Xavier (2008), *A Invenção de Goa* (Lisboa: Imprensa de Ciências Sociais); Robert Newman (2001), *Of Umbrellas, Goddesses, and Dreams: Essays on Goan Culture and Society* (Mapusa, Goa: Other India Press). For a discussion on the referendum, see Ashley D'Mello, "Portuguese Colonial History and Contemporary Goan Elections: Impact of the Catholic Church on the Electorate," Lecture at Yale University, April 5, 2013, as part of the *Goa: A Postcolonial Society between Cultures* conference (org. K. David Jackson).
3. The ideological source of those politics is expressed in Marcelo Caetano (1951), *Colonizing Traditions, Principles and Methods of the Portuguese* (Lisboa: Agência Geral das Colónias). For a discussion on the development of the Portuguese ideologies of empire, see Claudia Castelo (1998), "O Modo Português de Estar no Mundo": O Luso-Tropicalismo e a Ideologia Colonial Portuguesa (1933–1961) (Porto: Afrontamento); Omar R. Thomaz (2002), *Ecos do Atlântico Sul* (Rio de Janeiro: Ed. UFRJ); Cristiana Bastos (2001), "O Espelho de Goa: Paradoxos do Pantropicalismo Lusófilo de Gilberto Freyre," in *Brasil-Portugal: Entre o Passado e o Futuro—O Diálogo dos 500 Anos*, ed. Amélia Cohn, Aspásia Camargo, and Boaventura Sousa Santos (Rio de Janeiro: ECM), pp. 133–148.
4. Arthur Ignacio da Gama (1879), *Relatório da Ilha de Chilonane, capital de Sofala, apresentado pelo facultativo de 2ª classe em comissão do quadro de saúde de Moçambique*, Arthur Ignácio da Gama (1878), AHU 1506 DGU 5º Rep. Mç 1848–1890/Serviço de Saúde de Moçambique; Hermenegildo Ezequiel da Silva (1884), *Breves noções sobre a medicina cafreal do districto de Sofalla (Chilluane, 4 de Março de 1884)* Sociedade de Geografia de Lisboa (SGL), Res.1—Pasta E—nº22 fl.8. Gama's report was preliminary analyzed in C. Bastos (2004), "O Médico e o Inhamessoro: O Relatório do Goês Arthur Ignacio da Gama em Sofala, 1879," in *A Persistência da História: Passado e Contemporaneidade em África*, ed. C. Carvalho and J. P. Cabral (Lisboa: Imprensa das Ciências Sociais), pp. 91–117; and C. Bastos (2005), "Race, Medicine and the Late Portuguese Empire: The Role of Goan Colonial Physicians," *Journal of Romance Studies*, 5 (1): 23–35. Ezequiel da Silva's report was published and analyzed by A. C. Roque (2001), "Breves Noções sobre a Medicina Cafreal do Districto de Sofala' ou sobre o conhecimento que os portugueses tinham das virtudes e usos das plantas e ervas medicinais na costa sul oriental de África na segunda metade do séc. XIX," *Anais de História de Além-Mar*, 2: 211–272.
5. Using, as a source, the list of graduates provided by Peregrino da Costa, the combination of family names, and place of birth helps to identify the social background of most graduates. See C. Bastos (2006), "A Escola Médica de Goa," in *Os Portugueses e o Oriente*, ed. Rosa Maria Perez (Lisboa: Dom Quixote), pp. 167–192; C. Bastos (2007), "Medical Hybridisms and Social Boundaries: Aspects of Portuguese Colonialism in Africa and India in the Nineteenth Century," *Journal of Southern African Studies*, 33 (4): 767–782; and C. Bastos (2010), "Medicine, Colonial Order and Local Action in Goa," in *Crossing Colonial Historiographies*, ed. Anne Digby, Waltraud Ernst, and Projit Mukharji (Newcastle: Cambridge Scholars), pp. 185–212.
6. Paul Axelrod and Michelle Fuerchs (1996), "Flight of the Deities: Hindu Resistance in Portuguese Goa," *Modern Asian Studies*, 30: 387–421.
7. See Maria Aurora Couto (2005), *Goa: A Daughter's Story* (Harmondsworth: Penguin); and Ângela Barreto Xavier (2008), *A Invenção de Goa* (Lisboa: Imprensa de Ciências Sociais).

8. Cristiana Bastos (2004), "O ensino da medicina na Índia colonial portuguesa: Fundação e primeiras décadas da Escola Médico-Cirúrgica de Nova Goa," *História, Ciência Saúde—Manguinhos*, 11 (1): 11–39.
9. José António de Oliveira (1853), *Relatório do Estado das Repartições de Saúde do Estado da Índia (Julho 1853)*, AHU, Serviço de Saúde da Índia, sala 12, Maço 1987; Eduardo de Freitas e d'Almeida, *Ofício* (July 11, 1854), *Ofício* (February 8, 1856); *Ofício* (April 6, 1861), Arquivo Histórico Ultramarino, Sala 12, Índia, Serviços de Saúde, Maço 1987.
10. Francisco Maria da Silva Torres, José António de Oliveira, and António José da Gama (1845), *Anexo ao Regulamento para a Escola Médica de Goa*, Doc. # 5, Arquivo Histórico Ultramarino, Índia, Serviços de Saúde, Ofícios dos empregados, 1840–1868, Maço n° 1987; Eduardo de Freitas e d'Almeida, *Ofício* (July 11, 1854).
11. Eduardo de Freitas e d'Almeida *Ofício* (8 February 8, 1856).
12. Ibid.
13. Engseng Ho (2006), *The Graves of Tarim: Genealogy and Mobility across the Indian Ocean* (Berkeley: University of California Press); Pamela Gupta (2009), "The Disquieting of History: Portuguese (De)colonization and Goan Migration in the Indian Ocean," *Journal of Asian and African Studies*, 44: 19–47; Selma Carvalho (2010), *Into the Diaspora Wilderness* (Goa: 1556 Trust, and Broadway); Stella Mascarenhas-Keyes (2011), *Colonialism, Migration and the International Catholic Goan Community* (Saligão, Goa: 1556 Trust).
14. Susana Trovão Pereira Bastos and José Gabriel Pereira Bastos (2001), *De Moçambique a Portugal: Reinterpretações Identitárias do Hinduísmo em Viagem* (Lisboa: Fundação Oriente).
15. José Fialho Feliciano and Victor Hugo Nicolau (orgs.) (1998), *Memória de Sofala (1790–1884), de João Julião da Silva, Zacarias Herculano da Silva e Guilherme Ezequiel da Silva* (Lisboa: Comissão Nacional para as Comemorações dos Descobrimentos Portugueses).
16. A. J. Sócrates da Costa (1880), *Os Médicos Ultramarinos: Mais um brado a favor dos facultativos formados pela Escola Médico-Cirúrgica de Nova Goa* (Lisboa: Tip. Universal); for a discussion, see C. Bastos (2001), "Doctors for the Empire: The Medical School of Goa and Its Narratives," *Identities*, 8 (4): 517–548; C. Bastos (2002), "The Inverted Mirror: Dreams of Imperial Glory and Tales of Subalternity from the Medical School of Goa: Special Issue 'Mirrors of Empire,'" *Etnográfica*, 6 (2): 59–76; C. Bastos (2007), "Subaltern Elites and Beyond: Why Goa Matters for Theory," in *Metahistory: History Questioning History*, ed. C. J. Borges, and M. N. Pearson (Lisboa: Vega), pp. 129–141; C. Bastos (2007), "Medicina, império e processos locais em Goa, século XIX," *Análise Social*, 182: 99–122.
17. José d'Oliveira Serrão d' Azevedo (1893), *Relatório do Serviço de Saúde da Província de Moçambique—1893*, Arquivo Histórico Ultramarino, Serviço de Saúde do Ultramar, maço 2817. For a discussion, see Bastos, "Medical Hybridisms."
18. Rafael A Pereira (1889), *Relatório*, 30 Outubro 1889, Arquivo Histórico Ultramarino, Serviço de Saúde da Índia, maço 1987; see Bastos, "O Ensino da Medicina na Índia."

19. Miguel Bombarda (1902), "Escola de Nova Goa," *A Medicina Contemporânea*, série 2, 5: 93–95.
20. René Pelissier (2000), *História de Moçambique: Formação e Oposição* (Lisboa: Editorial Estampa).
21. "Account of the Portuguese possessions within the captaincy of Rios de Sena written by, Captain of Sena, and translated and published by Captain W. F. W. Owen, of His Majesty's ship Leven," in *Records of South-Eastern Africa*, Vol. 7, 1964: 371.
22. Hypollito Cassiano Xavier do Rego (1891), *Delegação de Saúde do Districto de Sofala em Chiloane—Relatório sobre o Serviço de Saúde do mesmo Districto referido ao anno de 1890, Chiloane, 30 de Abril de 1891*, AHU 1506 DGU 5° Rep. Mç 1891/Serviço de Saúde de Moçambique.
23. Gama, *Relatório*.
24. Ibid., ff. 9v–10.
25. See, for instance, *Boletim sanitário de Moçambique*, Novembro 1899. AHU, 1514 DGU 5° Repartição, Moçambique 1897, Serviço de Saúde. See Bastos, "Medical Hybridisms."
26. Decree of September 14, 1844... (Boletim 1867: 384); A. da Silva Lúcio (1890), *Apontamentos sobre a organização do Serviço de Saúde das Províncias Ultramarinas* (Lisboa: Tipografia Viúva Sousa Neves), p. 41. The procedures for collecting and surveying were inspired in the *Breves Instruções aos correspondentes da Academia das Sciencias de Lisboa sobre as remessas dos productos e noticias pertencentes à História da Natureza para formar um Museu Nacional* (Lisboa, 1781) and the structure of reporting was established in legal documents, like the *Portarias*, August 14 and September 12, 1838; *Regulamento Geral do Serviço de Saúde das Províncias Ultramarinas*, October 20, 1860; *Decreto*, December 3, 1868.
27. C. Bastos (2013), "Das viagens científicas aos manuais de colonos: A Sociedade de Geografia e o conhecimento de África," in *O Colonialismo Português—Novos Rumos na Historiografia dos PALOP*, ed. Centro de Estudos Africanos da Universidade do Porto and Instituto de Investigação Científica Tropical (Porto: Húmus), pp. 321–346.
28. Joaquim d'Almeida Cunha (1883), *Breve Memoria sobre a Medicina entre os Cafres da Provincia de Moçambique, offerecida ao Illmo Exmo Sr. Conselheiro Agostinho Coelho, Governador da Provincia de Moçambique* (Moçambique: Imprensa Nacional).
29. "Não devo, Exmo. Sr. abandonar a cabeceira do enfermo, que tenho de disputar à morte, para voar em cata de conhecimentos, que não sei se adquirirei, ou se aproveitarão à humanidade" (I should not, your honor, leave the patient's bedside, one I have to rescue from death, just to fly after elements of knowledge, which I am not sure I will achieve, or whether they will have any interest for the humankind) (Gama, 1878: f.2).
30. Gama (1878), ff. 5–5v.
31. A. C. Roque (2012), *Terras de Sofala: Persistências e mudança. Contribuições para a História da Costa Sul-Oriental de África nos séculos XVI–XVIII* (Lisboa: Textos Universitários de Ciências Sociais e Humanas, Fundação Calouste Gulbenkian/FCT).

32. A. C. Roque (2011), "‘Breves Noções sobre a Medicina Cafreal do Districto de Sofala’ Ou sobre o conhecimento que os portugueses tinham das virtudes e usos das plantas e ervas medicinais na costa sul oriental de África na segunda metade do século XIX," *Anais de História de Além-Mar*, 2: 228–229.
33. A. C. Roque (2012), "Conhecimento versus ciência: Circulação de saberes e práticas fitoterapêuticas em Moçambique nos finais do século XIX," *Actas do VIII Congresso Ibérico de Estudos Africanos—CIEA 8*, Madrid, June 14–16, 2012, <http://www.ciea8.org/ocs/index.php?conference=CIEA2012&schedConf=pan10&page=schedConf&cop=presentations>.
34. Cunha, *Breve Memória*, p. 7.
35. Gama, *Relatório*, f. 2.
36. Silva, *Breves Noções*, fl. 1.
37. *Ibid.*, fl. 8v.
38. A. C. Roque (2013), "Historical Information on Biodiversity and Traditional Knowledge: Medicinal Plants and Phytotherapeutic Practices in Central Mozambique," *Revista da Rede Internacional de Gestão de Conflitos Ambientais*, 2 (1): 32–44.
39. Silva, *Breves Noções*, fl. 8.
40. *Ibid.*, fl. 4–7v; and Cunha, *Breve Memória*, pp. 10–19.
41. Silva, *Breves Noções*, fl. 1.
42. Hermenegildo Ezequiel da Silva (1883), *Descrição de várias amostras dos remédios que os povos do sertão de Sofalla empregão nas suas doenças* (*Chilluane*, 24 de Setembro de 1883), Arquivo Histórico Ultramarino (AHU), Cod. 2186, fl. 25. This is a very interesting remark as it also testifies to Ezequiel's knowledge on the potentialities and problems of other areas in Mozambique. For this same period, Inhambane district was under deep political and military instability and there is very little information on the territory ("Inhambane," *Arquivo—Boletim do Arquivo Histórico de Moçambique*, nº8, Outubro de 1990, 198pp.).
43. A. C. Roque and M. M. Torrão (2011), "Collecting Medicinal Plants in Tropical Africa: Historical Approach and Present Day Perspectives," in *VIIIth International Ethnobotany Symposium—Proceedings*, ed. O. Silva, R. Serrano e R. Chaves, Friends—The University for Peace Foundation/Faculty of Pharmacy, Lisbon University, pp. 267–286.
44. Identified by Jansen and Mendes as *Gynandropsis gynandra*, Muanga is one of the local names for the African spiderflower. It is widely distributed as a weed in the world's tropical and subtropical regions and largely used as a medicinal plant in Africa and in the Indian Ocean zone. It is not likely Ezequiel da Silva had any knowledge on the use of this plant in India or in Sri Lanka, where the leaves are commonly used for ear infections and the seeds as an anti-helminthic, but he was well aware of its local traditional use to calm fevers. P. C. M. Jansen and O. Mendes (1990), *Plantas Medicinais: Seu uso tradicional em Moçambique*, Tomo 3 (Moçambique: Ministério da Saúde, Gabinete de Medicina Tradicional), pp. 230–237.
45. This sample of *Gynandropsis gynandra* is part of one of the most important collections of dried plants, collected in the seventeenth century in present-day Sri Lanka—Ceylon or Colombo, as it was called by the Portuguese—by

- Paul Hermann, a medical officer to the Dutch East India Company in 1672–1677. This plant was mentioned in 1612 by Manuel Godinho de Erédia as one of the medicinal plants widely used in India: Manuel Godinho de Erédia (2001 [1612]), *Suma das Árvores e Plantas da Índia Intra Ganges*, ed. J. G. Everaert, J. E. Mendes Ferrão, and M. C. Liberato (Lisbon: CNCDP). However, there is no information on any existent herbarium sample in Portugal that was collected at the time in India or Mozambique.
46. Paracelsus (1493–1541), quoted by M. L. Carrion (2000), *Las hierbas del Monasterio* (Barcelona: Oviedo, Ed. Nobel), p. 26.