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# The Natural Frontiers of a Global Empire: The Pineapple—*Ananas comosus*—In Portuguese Sources of the 16th Century

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**Abstract:** The great oceanic voyages had unexpected consequences on the pace with which plants moved between the most far-removed corners of the globe. From the mid-sixteenth century onwards, the huge distances covered led to an unprecedented change in the distribution of vegetable species. Settlers and voyagers took European plants with them and introduced them into the Americas, Africa, and Asia. African plants were transferred to America and Asia, and Asian species were dispersed across all continents. These biological transferences led to global changes in people's dietary habits and therapeutic practices, as well as giving rise to new business opportunities and previously untested ways of exploiting the land. Originally from Brazil, the pineapple—*Ananas comosus*—made a great impression on those who came across it. Refusing to take root in the cold European latitudes, the fruit crossed the Atlantic Ocean aboard Portuguese ships in search of other territories with an adequate climate. In this essay, I will analyze the references to pineapple in the chronicles, botanical texts, and missionaries' letters in circulation in the 1500s. I will examine the cultural context that permitted the diffusion of this botanical species and follow the oceanic routes traced by this exotic plant that allowed the wide dissemination of the fruit throughout the Portuguese empire.

**Keywords:** nature; *Ananas comosus*; pineapple; botanical knowledge; Portuguese Empire; Early Modern Botany

## 1. The Flora of the New World: An (In)Comparable Wonder

When Columbus arrived on the islands of Central America (1492), he recognized little of the natural world he encountered<sup>1</sup>. Ignorance of ancient references rendered the Admiral's descriptions inconsequential and revealed the absolute necessity of bringing, on subsequent voyages, erudite men who were familiar with the classical sources in circulation. The trees, herbs, and fruits recorded during the second Columbine expedition that left Spain in 1493 led to changes in the perception of the American nature and environments. The narrative of Dr. Alvarez da Chanca<sup>2</sup>, who knew the medical–botanical

<sup>1</sup> “All these islands are very beautiful, and distinguished by a diversity of scenery; they are filled with a great variety of trees of immense height, and which I believe to retain their foliage in all seasons; for when I saw them they were as verdant and luxuriant as they usually are in Spain in the month of May, some of them were blossoming, some bearing fruit, and all flourishing in the greatest perfection, according to their [sic] respective stages of growth, and the nature and quality of each; yet the islands are not so thickly wooded as to be impassable.” *Letter addressed to Noble Lord Raphael Sanchez Treasurer of the most invincible Majesties (1493)*. 1847, pp. 1–17. The information recorded by Columbus was recovered by his son, Ferdinand Columbus, and Bartolomé de las Casas, and was adapted by López de Gómara or Antonio de Herrera y Tordesillas. On the early impact of the New World flora and fauna in Europe, see, amongst others, (Chiappelli 1976; Greenblatt 1993; López-Piñero 1992; Grafton et al. 2002, pp. 159–94; Álvarez-Peláez 2007, pp. 147–54; Mason 2009).

<sup>2</sup> Alvarez de Chanca (?–1515) was appointed physician on Columbus's second expedition to Central America by order of May 1493. By the end of 1493 (or early 1494), he sent a detailed letter from Hispaniola to the Cathedral Chapter of Seville. In it, he describes, as an eyewitness, the flora, fauna, and peoples of Central America. A Latin version of this report was published by Peter Martyr d'Angleria. On Dr. Alvarez de Chanca, see: (de Chanca 1847, pp. 18–68; Gerbi 1985, pp. 23–26).

texts and was aware of the importance of confirming the success of Columbus's expedition, drew clear analogies between the plants observed and highly sought-after Asian spice trees<sup>3</sup>.

By alluding to botanical species that shared something in common with the trees and rhizomes of the East Indies, Dr. Chanca reinforced the importance of the Columbine achievement. Moreover, comparing the species encountered with nutmeg, cinnamon, lignaloes, and ginger plants would have added credibility to the route established by the Admiral.

The doctor's narrative thus kept the possibility of finding Asian drugs and spices open. However, this does not seem to have been the only reason why his focus was on species that were already known. There was also the difficulty of deciding which of the countless new species to describe, as well as the complexity of raising the profile of a plant world that was completely unknown to Europeans. These factors may have discouraged these first explorers from describing American flora. Nonetheless, they quickly turned their attention to the usefulness of American plants. As there was a complete lack of knowledge regarding the qualities and virtues of these botanical species, seafarers observed, tested, and recorded their local uses. It was by observing the daily lives of the native peoples of Central America that Europeans realized which barks, roots, balms, seeds, or fruits they could benefit from<sup>4</sup>. Reshaping the landscapes, Europeans began to cultivate local species alongside plants that arrived from Iberian ports and gradually adapted to the tropical environment. In addition to the roots, seeds, leaves, and balms that revealed unexpected medicinal qualities, the voyagers were also enticed by tasty American fruits<sup>5</sup>. Among these, the pineapple—*Ananas comosus*—stood out. This was a species that, due to its peculiar shape, intense perfume, and unique sweetness, enchanted the sailors and surprised their highest representatives at Court<sup>6</sup>. Just as they had done in Central America, pineapples attracted the attention of Europeans who landed on the Brazilian coast<sup>7</sup>. However, as I will suggest later in this essay, the botanical characteristics of this species and the consternation caused by some of the fruit's local uses appear to have held back the spread of this species throughout the Portuguese empire.

<sup>3</sup> "We found other trees which I think bear nutmegs, because the bark tastes and smells like that spice, but at present there is no fruit on them; I saw one root of ginger, which an Indian wore hanging round his neck. There are also aloes; [ . . . ] A sort of cinnamon also has been found; but, to speak the truth, it is not so fine as that with which we are already acquainted in Spain." *The letter of Dr Chanca on the Second voyage of Columbus*, (de Chanca 2003, p. 311). For an original version, see: (Navarrete 1825, p. 370).

<sup>4</sup> This way of appropriating the natural world of the tropics was used by 16th century voyagers who reached American, African, and Asian lands. See: (Henriques and Margarido 1989).

<sup>5</sup> A variety of botanical species were sent from Europe aboard Castilian and Portuguese ships. These would have carried dryland cereals and vines to ensure eucharistic rites could be performed, as well as fruit trees, vegetables, and crops that would meet the sailors' and settlers' everyday needs. For their part, the Americas supplied the world with a great diversity of food species, such as corn (*Zea mays* L.), sunflower (*Helianthus annuus* L.), cocoa (*Theobroma cacao* L.), vanilla (*Vanilla planifolia* Andrews.), cassava (*Manihot esculenta* Crantz.), potato (*Solanum tuberosum* L.), sweet potatoes (*Ipomoea potatoes* L.), tomatoes (*Solanum lycopersicum* L.), peppers (*Capsicum* spp.), beans (Gen. *Phaesolus*), and pumpkins (Gen. *Cucurbita*), as well as fruits, including pineapple (*Ananas comosus* L.), anona (*Annona* sp.), avocado (*Persea americana* Mill.), guava (*Psidium guajava* L.), passion fruit (*Passiflora edulis* Sims.), papaya (*Carica papaya* L.), cashews (*Anacardium occidentale* L.), and peanuts (*Arachis hypogea* L.); medicinal plants, for example, the physic nut (*Jatropha curcas* L.), cinchona (*Chinchona* spp.), and tobacco (*Nicotiana tabacum* L.); and even plant species with particular applications, such as annatto (*Bixa orellana* L.) and rubber (*Hevea brasiliensis* (Wild.ex. A. Juss) Mull. Arg.). The seeds and propagules of many of the American species sent to Seville were planted in the city's parks and vegetable gardens, where Castilian doctors could test their virtues. See, amongst others: (Pardo Tomas and Terrada 1993; Goodman 2002, pp. 209–60). On the intercontinental transference of plants in the 1500s see, amongst others, (Laufer 1938; Crosby 1972; Machuca 2013; Ferrão 2015). On the global diffusion of tropical spices, see also: (Donkin 2003; Tagliacozz 2005; Halikowski-Smith 2014, pp. 64–77).

<sup>6</sup> Ever since the Europeans had arrived on the islands of Central America, the pineapple had stood out amongst the wonders of the natural world. In this essay, I do not intend to conduct an exhaustive survey of every reference to *Ananas comosus* in Castilian or French sources. Verifying the importance of the fruit in these written sources (1493–1557) has led me to question the reason behind the persistent Portuguese silence towards the pineapple.

<sup>7</sup> According to Vavilov, the *Ananas comosus* was included in the group of fruits belonging to Center "Brazilian-Paraguayan Center of Origin of Cultivated Plants" Vavilov (Vavilov 1949–1950), p. 43. See also: (Collins 1960; Montinola 1991). Calling the pineapple a "fruit" is not strictly accurate because, in botanical terms, the edible structure is an "infructescence" (*infrutescentia*)—those fruits derived from an inflorescence. In the case of the pineapple, we are dealing with a *sorosis*: "An infructescence resulting from the fusion of fleshy fruits in which the axis core, flowers, bracts, and pedicels have also become fleshy" (Fernandes and Sales 2007). However, since it is usually considered a "fruit", in this essay, I have opted to maintain the commonly used term.

Therefore, the help of missionaries seems to have been called upon to untangle and better understand this natural wonder. As we will see, once it had been disassociated from Amerindian traditions, the fruit seems to have been taken as sort of a sign of encouragement for missionary activity in the tropics, beginning with the religious of the Society of Jesus<sup>8</sup>. Taken and transferred from its place of origin by missionaries to other tropical lands of the Portuguese empire, the *ananas* became common across the “colonial” world.

The aim of this article is to discuss how *Ananas comosus* was appropriated by Europeans in the 1500s. I will examine the first descriptions of pineapples found in Central America and the first records of this fruit in Brazil, as well as the cultural context that allowed their diffusion. In addition, I intend to shed some light on what may justify the silence of the Portuguese documents about this botanical species during the first half of the 16th century, as well as about the relevance it assumed in the second half of the same century, and, thus, contribute to a better understanding of the process that led to the cultural and scientific appropriation of this tropical fruit in the early modern times.

## 2. Pineapples from Central America

### 2.1. A “Wholesome” Fruit

The first reference to the pineapple appears in a letter written by the Italian voyager, Michele da Cuneo<sup>9</sup>. In this missive sent to Girolamo Aimari on 14 October 1495, he relates his Atlantic crossing and his visit to the islands of Central America. He praises aspects that, from a commercial, strategic, geographical, ethnographic, botanical, and zoological point of view, might be of most interest to the community to which Aimari belonged. A keen observer of the natural world, Cuneo focused his attention on the plants and animals used by the native peoples and, in his descriptions, frequently used analogies with European or Asian specimens so that the readers could build up an image of these distant lands. The case of pineapple, compared to artichoke, is paradigmatic<sup>10</sup>. This comparison with “artichoke plants” suggests that he saw the pineapple, planted or in the wild<sup>11</sup>. On the other hand, the descriptions of the size of the plants and their fruits could be an indicator of the extraordinary fertility of the lands he visited. In addition to these tasty fruits, Cuneo mentions plants of medicinal interest, as well as plants from which products for everyday use could be extracted. As in Chanca’s testimony, similarities with prized Indian spices were emphasized and, probably, he may have understood the marketable potential of the different plants he saw for the first time, namely pineapple.

### 2.2. The King’s Favorite

From the beginning of the 16th century, references to American trees, fruits, and vegetables began to appear in the letters, reports, and testimonies of European sailors, travelers, and chroniclers. However, while the pineapple was much appreciated by Amerindians and Europeans landing in

<sup>8</sup> In Early Modern times, Europeans believed that the seal of God was present in all living beings. Plants and animals were often associated with symbols that needed to be decoded. In the Americas, useful plants were frequently integrated into local cosmology. In these tropical lands, the interpretation of the *Book of Nature* was part of the missionaries’ work. The Jesuits were especially involved in this task. Like pineapples, many other American botanical species, such as cacao, cassava, corn, cinchona, tobacco, sweet potatoes, or passion fruit were “domesticated” by the Europeans. See: (Gruzinski 1999, pp. 59–104; Cañizares-Esguerra 2006; Pimentel 2009, pp. 93–114; Marcaida 2014, pp. 192–207; de Lima 2014; Machuca 2018).

<sup>9</sup> Michele da Cuneo (c.1448–1503) belonged to a family of businessmen, shipowners, politicians, diplomats, and great landowners from Savona, and, as such, was almost a countryman of Columbus. The letter he wrote to Aimari can be found at the Bologna University Library [Cod 4075, 24r–46r]. For a modern version, see: (Gil and Varela 1984, pp. 235–60). On Miguel de Cuneo, see also: (Gerbi 1985, pp. 31–35; Airaldi and Formisano 1996).

<sup>10</sup> “There are also some plants that resemble artichoke plants, but are about four times as tall and produce a fruit shaped like a pine cone, but twice the size. Their fruit is excellent and can be cut with a knife like a turnip, and it seems to be very wholesome.” (*Michel de Cuneo’s letter on the Second voyage*, 28th October 1495).

<sup>11</sup> The “artichoke plants” (probably a vegetable of the Genus *Cynara*) were known in Roman times. They gradually disappeared from Mediterranean cookery and were reintroduced as a novelty in European gastronomy during the 15th century. Like fruits and sweets, these vegetables were served at the end of the meal.

Central America, it was beyond the reach of the majority of those who remained in Spain, as it was too sensitive to survive the long ocean crossing.

Bringing together the information sent by the first explorers, Peter Martyr described the native fruits and trees of Darién (in Central America), which were both tasty and healthy<sup>12</sup>. The pineapple was lauded as the King's favorite fruit and soon rose to fame in Castilian texts<sup>13</sup>. Martyr adds some precision to Cuneo's description, comparing the consistency of the pineapple to that of the melon and draws a parallel with the "artichoke or acanthus". While the former might refer to a plant of the *Cynara* genus, the latter introduces a different plant, the *acanto*, perhaps a species of the *Acanthus* genus common in Mediterranean Europe which, despite its coarse appearance, had proven medicinal properties. Its leaves had long been depicted in heraldry and as the ornament of capitals and columns and its depiction conveyed a sense of purity and high status. Martyr concludes his description of the pineapple by mentioning the difficulty of bringing fruits to Europe. In fact, the specimens that had been transported had rotted during the ocean crossing<sup>14</sup>. The beautiful and pure natural world of the Americas seemed to crumble as it drew closer to Europe. Its fruits, just like the native people Columbus had tried to take to the King, had not withstood the Atlantic air or the proximity of Europe.

### 2.3. Naming the Fruit

The same difficulty was noted by Gonzalo de Oviedo<sup>15</sup>. In *Historia General y Natural de las Indias*, having listed the local animals, he emphasizes the diversity of the vegetable world. On reaching the chapter dedicated to "plantas y yerbas" (plants and herbs), Oviedo highlights the fertility of the soil on both the islands and the mainland, explaining that the plants grown there included ones which resembled those of Spain, as well as plants that had, in fact, been brought from Spain<sup>16</sup>. Thus, alongside the large-sized potatoes, melons, pumpkins, and eggplants, Oviedo writes about a fruit he calls "piña"<sup>17</sup>, highlighting a notable peculiarity of this fruit that reproduces through its shoots<sup>18</sup>.

<sup>12</sup> Pedro Martyr of Angleria (1457–1526) was a Milanese Humanist at the service of the Catholic Kings. The letters and pamphlets he sent to princes, bishops, and scholars spread news about the Columbine voyages throughout Europe. In *De Orbe Novo*, Martyr described American natural resources and the first contact between Europeans and Amerindians. The volumes of *De Orbe Novo/Decades* underwent several iterations and were widely disseminated. Regarding Peter Martyr, see: (Martyr de Angleria 1989; Gerbi 1985, pp. 50–75; Ladero Quesada 2008, pp. 17–28).

<sup>13</sup> The Italian chronicler wrote on it: "It is like a pine-nut in form and colour [*sic*], covered with scales, and firmer than a melon. Its flavour [*sic*] excels all other fruits. This fruit, which the King prefers to all others, does not grow upon a tree but upon a plant, similar to an artichoke or an acanthus." (Martyr of Angleria 1912).

<sup>14</sup> "I myself have not tasted it, for it was the only one which had arrived unspoiled, the others having rotted during the long voyage." (Martyr of Angleria 1912).

<sup>15</sup> Gonzalo de Oviedo (1478–1557) was one of the most high-profile chroniclers of the Indies. In early 1526, he published *Sumario de la Natural Historia de las Indias*. Later, as Chronicler of the Indies, he completed this work with his *Historia General de las Indias*, 1535. Referred to by many as the "Pliny of the Indies", he dedicated an important part of his work to the description of the natural riches of the "Indias, islas y tierra-firme." On de Oviedo, see: (Allain 2014, pp. 40–61; Alvarez Lopes 1940, pp. 13–35) and, amongst others, (Gerbi 1985, pp. 124–377; Bénat-Tachot 1997, pp. 193–230; Schiebinger and Swan 2007; Ladero Quesada 2008, pp. 17–28; Bleichmar et al. 2009). On Oviedo's pineapple, see: (Turner 1985, pp. 1–46; Myers 1993, pp. 182–213; Rabasa 1993, pp. 137–51; Daneri 2005, pp. 26–39; Pardo Tomas 2000, pp. 163–88; Oviedo y Valdez 2007, pp. 159–63).

<sup>16</sup> In European sources on the New World, in addition to Oviedo's *Historia*, the account of Benzoni's *La Historia del Mondo Nuovo* published in 1572 should be considered. There is also a reference to the pineapple written in the 1550s in López de Gómara's work, *Historia General de las Indias*, 1554. Years later, in the 1570s, Nicolas Monardes and Francisco Hernández mention the American fruit (which Hernández calls "Matzatli") as well as in Francisco Ximenez's version, *Quatro libros. De la naturaleza, y virtudes de las plantas y animales* published in 1615).

<sup>17</sup> Oviedo baptized the fruit "piña" because of its resemblance with the European "pine-cones" (the woody female cone structures—*mega strobilus*—of the conifers). As we will see, in Brazil, a French missionary preferred to adopt the local name "nana". The designation *ananas* was later adopted in Latin, Portuguese, Italian, German, and French. On the importance of naming the fruit, see: (Pavord 2005, pp. 294–328).

<sup>18</sup> "The truth is that it is not totally unlike an artichoke, or unlike the thistle and spines from which it comes, though it looks more like a pinecone than an artichoke because, in the crown above the pineapple, this fruit bears and has a spiny shoot which is very handsome to see. Some have another [shoot] in addition to this one, and some, two or more shoots around the stalk where the fruit is attached to the stem of the thistle and from whence it springs. In order to plant other thistles or pineapples, these shoots are the seeds or offspring of this plant, for, if you take the shoot on top of the pineapple (or any other shoot which is set on its stalk), and set it two or three fingers' breadth down into the ground, leaving half of the shoot uncovered, then it grows very well. In the length of time to which I referred, each shoot produces another thistle and

To overcome the challenges arising from the fact that “the shoots are the seeds”, he explains that it was enough to put the “crown” to root in order for a new fruit to be born the following year. This particular form of reproduction, whether it was a sign of the land’s wilderness or indicative of divine intervention, was more than European gardeners, missionaries, or scholars could comprehend<sup>19</sup>. There was something in this extraordinary phenomenon that went beyond the botanical knowledge of the age. However, Oviedo simply describes this unusual form of vegetative propagation without trying to explain it<sup>20</sup>.

This fruit, which, according to the chronicler, was one of the best in the world, was grown by the local population who knew how to identify the ripe and ready-to-use fruits (Figure 1). Oviedo’s text also reveals the ability of indigenous peoples to master certain techniques that allowed them to carry out agricultural tasks, namely planting “en carreras y en orden como cepas de viña” (as in vineyards), and underlines the fact that both “indios y cristianos” (Indians and Christians) practice large-scale pineapple cultivation. These references suggest that the fruit was appreciated by both Amerindians and Spaniards, and can be useful to understand probable changes in the landscape due to the possible increase of pineapple cultivation fields. Apparently, the large consumption of wine produced by fermenting fruit juices was also a common practice.

To prevent the fruits from rotting during the sea crossings, they experimented with harvesting the fruit while it was still green so that it would ripen during the voyage. However, as Oviedo notes, this method resulted in a deterioration of the fruit and made them “lose their goodness”<sup>21</sup>. Therefore, in order for the fruit to make it to Europe, it either had to be transplanted and acclimatized or taken in a sugar syrup preparation. Apparently, one of the fruits made it all the way to the court of Charles I (1500–1558) who, despite admiring it, refused to taste the gift. This episode would be related years later by José de Acosta<sup>22</sup>.

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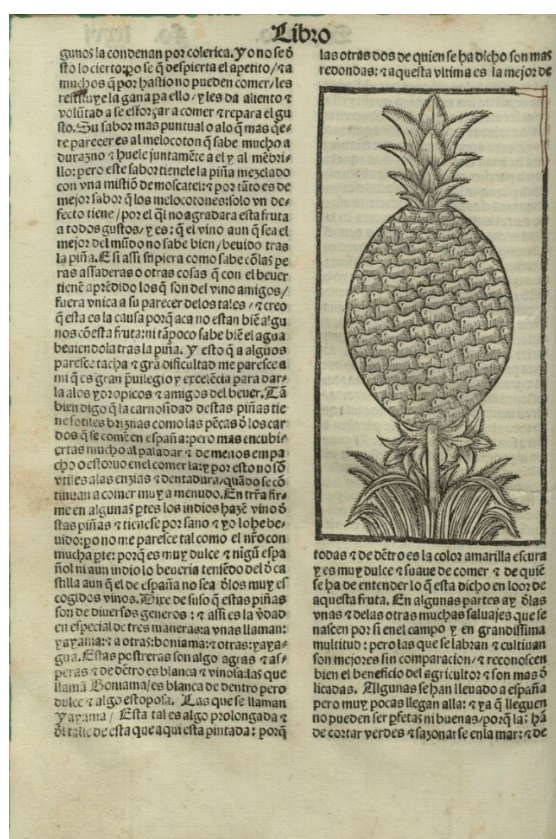
another pineapple, just as I have described. The leaves of this thistle are somewhat akin to aloe, except that they are longer and spinier, and not as thick or fleshy. This fruit would be far more appreciated were it not so abundant. After this fruit has ripened, it does not keep more than fifteen or twenty days, but in the meantime, before it has spoiled or rotted, it is excellent” (Oviedo y Valdez 2007, p. 162).

<sup>19</sup> In the *Book of Genesis*, the seed was considered an indispensable component of every fruit: “Let the land produce vegetation, seed-bearing plants and trees on the land that bear fruit with seed in it, according to their various kinds.” (*The Book of Genesis*, 1: 11)

<sup>20</sup> Later, some of the pineapples collected on the islands and mainland revealed seeds. In *Historia Medicinal de las cosas que se traen de las nuestras Indias Occidentales* (1565–1574), Nicolas Monardes (1493–1588) wrote: “tiene lo de dentro blanco y correoso, y se deshace en la boca con muy buen gusto; es sabroso fruto sino que tiene muchas pepitas diseminadas por todo él . . . ” (Monardes 1990, pp. 254–55) [1574] [the fruit inside is white and soft and melts in the mouth and tastes very good; it is a flavorful fruit although it has numerous small seeds all around it . . . ] (due to the absence of a modern English version, the present translation is proposed by the author). Might the Spanish physician have been referring to one of the wild pineapples described by Oviedo: [“the pineapples come in different species, and this is true, especially three kinds. Some are called *yayama*, others *boniama*, and others *yayagua*.” (Oviedo y Valdez 2007, p. 163)]? Or was he describing an *annonia*, fruit of the Annonaceae family, which bears some similarities to the pineapple and has several species originating from the Mesoamerican region? On this fruit tree: see: (*Annona Species* 2005).

<sup>21</sup> “Some have been taken to Spain [but] very few get there. And even if they get there, they cannot be perfect and good because they had to be cut green and ripen at sea, and in this way, they lose their goodness” (Oviedo y Valdez 2007, p. 163).

<sup>22</sup> José de Acosta (c.1540–1660) was an erudite Jesuit who lived part of his life as a missionary in the New World. The author of an important theological work, he published *Historia Natural y moral de las Indias* (de Acosta 1590), a volume that includes the first realistic descriptions of the peoples, lands, and natural resources of the New World. The *Historia Natural y Moral* was adapted and translated into several languages. In José de Acosta’s *Historia*, we read: “The emperor Charles was presented one of these pineapples, which must have required a great deal of effort to bring from the Indies on its plant, for otherwise, it could not have come. He praised the smell but declined to discover what it tasted like. In New Spain, I have seen an excellent preserve made of these pineapples” (de Acosta 2002, p. 204). From reading the text, the suggestion is that the fruit had travelled in potted form. Later in this article, I will report on a similar episode, this time featuring a different actor.



**Figure 1.** “Piña”—the first depiction of the pineapple in a printed text appeared in Gonzalo de Oviedo’s *Historia General de las Indias* (Oviedo y Valdés 1535) (courtesy of the Biblioteca Nacional de Lisboa Res 4058).

### 3. A Brazilian Wonder

#### 3.1. The Most Delicious Fruit

Soon, these tropical fruits attracted the attention of aristocrats, religionists, and wealthy people who sought, at all cost, to have them in their gardens and on their tables. In Brazil, the pineapple was within the reach of all and was one of the fruits referred to by Antonio Pigafetta during his journey through the region of Verzin (1519)<sup>23</sup> and by André Thévet in *Singularitez de la France Antartique*, 1557<sup>24</sup>. In Antonio Pigafetta’s text, we find a somewhat elusive reference to some “pignes douces” (sweet pine-cones), which seems to correspond to the pineapple<sup>25</sup>, while in Thévet’s description, the pineapple is referred by the native name “nana” and is considered according to its medicinal

<sup>23</sup> Antonio Pigafetta (1490–1531) was born in Vicenza. He joined Magellan’s expedition to the Spice Islands and was one of the survivors of the first voyage of circumnavigation (1519–1522). The report of the voyage was described by Maximiliano Transilvano’s *De Moluccis insulis* (1523) and later by Antonio Pigafetta, *Voyage autour de la terre*. For modern versions of this text, see: (Pigafetta 2007).

<sup>24</sup> André Thévet (1516–1590) was a missionary who embarked for Brazil in 1555 as the chaplain of Jean de Villegagnon’s fleet. He stayed in Rio de Janeiro for a short period. In 1556, he returned to France and served the Queen and King. He was the author of important cosmographic works, such as *Cosmographie de Levant*, 1554 and *Singularitez de la France Antartique*, 1557. For a modern version of this volume, see: (André Thévet, Le Brésil d’André Thévet. *Singularitez de la France Antartique*, 1997).

<sup>25</sup> “After we had passed the equinoctial line going south, we lost the North Star, and hence we sailed south-south-west until [we reached] a land called ‘the land of Verzin,’ which lies in twenty-three and one-half degrees of the Antarctic Pole [ . . . ] where we got a plentiful refreshment of fowls, potatoes, many *sweet pine cones* (in truth, the most delicious fruit that can be found), the flesh of the anta, which resembles beef, sugar cane, and innumerable other things, which I shall not mention in order not to be prolix . . . ” (Pigafetta 2007, p. 8).

properties<sup>26</sup>. Thevét refers to several Brazilian vegetable species of dietary value, medicinal value, or technical use<sup>27</sup>. It is important to emphasize at this point that these reports were the first two printed references on the Brazilian pineapple and that, given their wide circulation, they are relevant to the following section. It should be noted that, although neither of these men remained in Brazilian territory for long, the value of the fruit was obvious to both. This fact makes the fruit's absence from later Portuguese texts puzzling, written as they were by religious men who had long resided in the territory.

### 3.2. Unexpected Encounters

Despite the circulation of news about pineapples from Brazil, Portuguese sources remained silent on them. We have to wait until 1563 for the pineapple to appear in printed Portuguese sources, when it was mentioned in *Colóquios dos Simples, e Drogas he Coisas Mediciniais da Índia* (de Orta 1563), written by the Portuguese physician Garcia de Orta<sup>28</sup>. This work constituted the first medical–botanical text published in Goa wholly devoted to the natural resources of Asia. Written in Portuguese, the text consisted of a set of fictitious dialogues between two Iberian doctors (Orta and Ruano) who met in Goa. Over the course of 59 conversations, the two physicians discuss their knowledge of the written sources and exchange experiences of Asian products<sup>29</sup>. In the last colloquium, Dimas Bosque<sup>30</sup> is invited to participate in the work to correct Orta and clear up several points.

It is in this conversation between Dimas and Orta that the reference to the pineapple appears:

“Dimas: Have you written about this fruit called *ananaz*, for it is certainly the king of fruit as regards taste, and more so as regards scent? Orta: Oviedo has written on this fruit, he who wrote of the Western Indies, as one proper to that land, so that it was not necessary for me to treat of it. In the Province of Santa Cruz called by us Brazil, they know better how to describe it”. (de Orta 1913, p. 468)

Somewhat abruptly, the character of Orta deflects the subject of the pineapple to Oviedo, the Chronicler of the West Indies, or for those in the province of Santa Cruz. The underlying responsibility for the identification and description of botanical novelties did not belong, in this case, to Garcia de Orta, but to those who were in Brazil or the New World. Apart from Orta's refusal to provide information about the pineapple, the question posed by Dimas is an interesting one. What interest could an allusion to the pineapple hold for the Chief Physician of Dom Constantino of Bragança? Might he have been, in some way, involved in bringing the American fruit to Asia? Did he have privileged access to news of the Brazilian natural world? If so, then what news of the plants and animals of the Province of Santa Cruz circulated in Goa?

<sup>26</sup> “The fruit of which they commonly eat in their sicknesses is named Nana” [ . . . ] “being great, made in manner of a pine apple, this fruit, when it waxed ripe, becomes yellow, which is very excellent, as well for his sweetness as his relish, as pleasant as fine sugar and more: It is not possible to bring them into this country, but conserved, for being ripe, they will not long keep. Furthermore, it bears no grain, wherefore they plant them by little slippes [sic], as the fruits that are grafted in our country. Also, before it be ripe, it is so rough in eating, that it will pull off the skin of your lips. The leaf of this tree, when it grows, is like to the leaf of a large junk” (Thevét 1568, p. 72). The text has been modernized by the author. It is important to stress that, in *Singularitez de la France Antartique*, Thevet included the first printed image of a Brazilian pineapple.

<sup>27</sup> In addition to the pineapple, Thevét mentioned other “new” fruits and vegetables used by the Brazilian tribes, such as manioc, peanuts, or tobacco. Regarding André Thevet's descriptions of plants, see: (Dupont 2001, pp. 195–212; Marrache-Gouraud 2008, pp. 203–17). Like Thevét, Jean de Lery, suggested the importance of the Brazilian pineapple in local culture. On Lery's work, see: (Lestringant and Gomez-Géraud 1999; Lestringant 1981, pp. 205–56).

<sup>28</sup> Garcia de Orta (c.1500–1568) studied medicine at the Castilian Universities of Salamanca and Alcalá de Henares. He lived in India for more than thirty years. His long professional experience as a doctor at the Royal Hospital of Goa confirmed his medical authority. In the 16th century, *Colóquios dos Simples* became the new reference work on Asian botany.

<sup>29</sup> Regarding the importance of Garcia de Orta as a physician in Goa, see: (de Ficalho 1886; de Carvalho 1924; Carvalho 1934, pp. 6–640; Boxer 1963; de Gouveia 1985; Gruzinski 2004, pp. 181–225; Loureiro 2013, pp. 41–72; Pimentel and Soler 2014, pp. 101–20; de Carvalho 2013, pp. 13–28; de Carvalho 2015b, pp. 63–94; de Carvalho 2015a; Cook 2016, pp. 129–46; Pearson 2016, pp. 33–48; Brentjes 2016, pp. 95–137), amongst others.

<sup>30</sup> Dimas Bosque travelled to Goa as Dom Constantino of Bragança's Chief Physician (who served as Viceroy of India between 1558–1561). On Dimas Bosque, see: (Walter 1963, pp. 261–71).

From the early 1550s onwards, rulers and missionaries posted to the region of Brazil looked with growing interest at the natural resources of the Province. Not only were there mines with precious metals and stones at stake, but also agricultural production and livestock. The rains which followed the severe droughts of 1552–1557 revealed fertile lands particularly suitable for agriculture. The variety and quality of the region's produce led the Portuguese rulers posted in Brazil to introduce them into their diets. Apart from the information-gathering about the region carried out by the priests of the Society of Jesus at the behest of Ignatius of Loyola, the Portuguese elites awaited news on the natural resources of the region with interest. It would not be surprising if the tables of the Portuguese residents in Bahia had abounded with tropical delicacies. It would seem natural that rulers, such as D. Duarte da Costa<sup>31</sup> or Mem de Sá<sup>32</sup>, were won over by the excellence of the aroma and flavor of the local meats, fruits, and vegetables.

Indeed, it was D. Duarte da Costa who crossed paths with one of the leading figures in the diffusion of the pineapple: D. Luís Fernandes de Vasconcelos. He was the Captain-Major of the fleet that set sail from Lisbon in 1557<sup>33</sup>. Unfortunately, the voyage did not go as initially planned. The departure of the flagship, *Santa Maria da Barca*, had to be delayed because, while still in Restelo (Lisbon), she had already taken on several palms of water. Once the necessary repairs had been made, the ship departed, but was soon held up again by calm Atlantic waters. She then headed on to Brazil, where she arrived in mid-August and where the crew and ship overwintered. Bernardo Gomes de Brito relates that the Governor D. Duarte Costa welcomed the seafarers enthusiastically. It is highly likely that the Governor would have served local delicacies and, naturally, the pineapple would have been one of them. Therefore, it does not seem impossible that the *Santa Maria da Barca*, upon weighing anchor and heading to its final destination of Goa, would have taken with it some of these fruits to refresh the seafarers on their way<sup>34</sup>. The voyage then proceeded and, on the following year, the ship landed in Mozambique. The armada accompanying Dom Constantino of Bragança on his way to Goa (where the *fidalgo* would take office as Viceroy) was also wintering on this part of the East African coast, waiting for the good monsoon. It is not impossible that the Captain Fernandes de Vasconcelos told D. Constantino and his personal physician (Dimas Bosque) of the wonders he had witnessed in Brazil. Perhaps, all that would have remained of any pineapples aboard would have been the "crowns" that, carefully rooted in barrels, could be planted in Mozambique, and later, upon arrival in Goa, transplanted to the city gardens to produce new fruits. The *Santa Maria da Barca* finally arrived at its destination on September. D. Luís Fernandes de Vasconcelos remained in India until January 1559, when he set sail from Cochin back to the Kingdom. The *História Trágico Marítima* relates that the *Santa Maria da Barca* sank off São Lourenço (later Madagascar) with the Captain-Major and 60 crew members, who were rescued alive and returned to Goa<sup>35</sup>.

Back in one of the gardens of Goa, Vasconcelos might have left one of the Brazilian crowns of *Ananas comosus* to root; the fruits would only appear in the mid-1560s. If this scenario is true, Fernando Rego's statement would be confirmed: "With winter over, D. Luiz Fernandes de Vasconcelos set sail for India and is said to have taken the first pineapples from Brazil with him" (Rego 1989, pp. 5–76)<sup>36</sup>.

<sup>31</sup> Duarte Costa was Governor-General of Brazil (1553–1558). Amongst other posts linked to the Royal Council, he was Ambassador of Portugal at the court of Charles V. He would, therefore, have been familiar with the culture of the Spanish court. On D. Duarte Costa, see: (Leme 2019).

<sup>32</sup> Mem de Sá succeeded D. Duarte da Costa. He ruled between 1558 and 1572. On Mem de Sá's use of local fruits, see: (Marques 2017, pp. 157–74).

<sup>33</sup> The armada consisted of five ships. In addition to *Santa Maria da Barca*, "as outras quatro naus eram a *Santo António* de era Capitão Cid de Sousa, a *Assunção* que levava por Capitão Braz da Silva, da *Framenga* era António Mendes de Castro e da *Águia*, João Rodrigues de Carvalho." For further details, see: (de Brito 1942, vol. III, pp. 7–52).

<sup>34</sup> The fact this fruit was enjoyed by settlers, religious men, rulers, and seafarers and that it could be, with a degree of care, transported as a conserve or potted, might have convinced D. Luís Fernandes de Vasconcelos to take some of these fruits to Goa. This hypothesis, which seems quite plausible, requires, however, confirmation.

<sup>35</sup> This information was confirmed in *Livros de Armadas* of 1557, specifically in L. Abreu, 1992.

<sup>36</sup> "Passado o Inverno se fez D. Luiz Fernandes de Vasconcelos a vela para a Índia e dizem que levou do Brasil os primeiros ananases." (Due to the lack of an English version of Rego's text, this is the author's translation).



It is said that Dom Constantino of Bragança received this valuable fruit with a sense of great wonder, but, just like Charles V, did not try it<sup>37</sup>. The Portuguese scholar Manuel Severim de Faria (1584–1665) also referred to the introduction of pineapples in Goa during the rule of the Viceroy<sup>38</sup>. Dimas Bosque and, most likely, Garcia de Orta must also have taken the time to analyze this strange fruit. However, would the observation of a single specimen in Goa be enough for the evaluation and validation of the therapeutic qualities of a species of Brazilian origin? How could these Portuguese physicians forward opinions on a fruit about which they had no direct sources and knew little more than what the Castilian chroniclers and religious men passing through Brazil had mentioned? Did the Portuguese physicians in Goa have privileged access to information circulating in the Society of Jesus' epistolary network?

#### 4. First References to “Ananaz” in Portuguese Sources

##### 4.1. Jesuit Correspondence

The description of Brazilian natural resources in the Jesuits' letters revealed the need to gain a gradual overall understanding of the tropics. In 1554, Ignatius of Loyola, one of the founders of the Company of Jesuits, requested that religious men posted overseas began gathering information on the regions of their missions. Alongside information about the climate, geography, and peoples were descriptions of the natural world of these territories<sup>39</sup>.

In the letter Ignatius of Loyola addressed to Father Gaspar Barzeu<sup>40</sup>, we read that:

“Some important persons of this city (Rome) read with great interest the letters from India and expressed their desire to read about the cosmography of those regions where ours live; for example, how long are the days in summer and winter, when the summer begins, if the shadows fall to the left or to the right. Finally, they wish to know if there is anything else that seems to be extraordinary, as it may be about animals and plants not known in Europe or not with their size”. (Ignacio de Loyola in Agustín (Udías 2015, p. 105))<sup>41</sup>

While Loyola sent his letter to Asia, Father Manuel da Nóbrega received a similar missive from Rome asking him to supervise the collection of detailed information about the natural world of Brazil<sup>42</sup>. Busy directing and organizing the mission in Brazilian lands, Nóbrega, as can be seen in Jesuit correspondence, tasked Brother José with writing these letters. Joining the mission to Brazil in 1553, Brother José [José de Anchieta] stood out immediately for his solid intellectual education and his uncommon observational skills. In the letter that he addressed to the Father General on the last day of May of 1560, he attempted to respond to his superior's request.

<sup>37</sup> Francisco Soares Toscano, *Paralellos de Príncipes e varões illustres antigos* (Toscano 1629).

<sup>38</sup> “Alguns ditos e feitos illustres de notáveis varões portugueses” in Manuel Severim de Faria, *Compêndio de várias obras de autores portugueses*.

<sup>39</sup> Interest in gathering information about the mission lands appears in the correspondence of the religious. In addition to the information that the missionaries had collected since the late 1540s, such as “Enformação da China mandada por um homem a Mestre Francisco” or “Enformação do Japão a qual deu o Padre Nicolau da Ordem de Jesus que soube do Japão que veio à Índia” included in *Livro que trata das Cousas da Índia e do Japão*, much more information about Asian lands can be found in the extensive missives brought together in *Documenta para a História das Missões e do Padroado Português no Oriente*. The proliferation of this information in Jesuit documentation attests, therefore, to the commitment of the priests and brothers to understanding and compiling the singularities and riches of the natural world. Due to the strategic importance of the information collected, some would be validated and disseminated in handwritten or printed form, while others would circulate more discretely. See, amongst others: (Alden 1996; O'Malley et al. 1999) or (Udías 2015, pp. 105–32).

<sup>40</sup> Gaspar Barzeu was, at the time, the Vice-Provincial of India. Having entered the Society in 1546, he went to India in 1548, serving in Hormuz between 1549 and 1552. He died in Goa in 1553. Perhaps due to his premature death, Father Aires Bradão took on the task of compiling the information on Asia. The latter, at the behest of Provincial Melchior Nunes Barreto, sent news about the natural world to his brother at the Colégio de Coimbra in December 1554.

<sup>41</sup> “Patri Gaspari Barzaeo ex Comm (Rome, 24 February 1554)”, in Sancti Ignatii de Loyola, *Epistolae et Instructiones*, (Roma: (de Loyola 1966–1967)), Tomo VI, pp. 357–59.

<sup>42</sup> “Patri Emmanueli Nobregae ex Comm. (Rome, 13 August 1553)”, in Sancti Ignatii de Loyola, *Epistolae et Instructiones*, (Roma: (de Loyola 1966–1967)), Tomo V, pp. 329–31.

Regarding plants, it was essential to discover which were edible or useful and distinguish these from the poisonous. Recognizing the dietary and therapeutic value of the flora was a way of ensuring the success of the settling of Brazilian lands and the recovery of many missionaries who were held back by sickness. The shortage of drugs from Europe led to a growing interest in the everyday practices of the Amerindians and their use of local products. The survey of flora set out in his letters was therefore driven by the necessity to find pragmatic solutions for everyday life<sup>43</sup>. Disease, be it of the body or soul, resulting from a physical, moral, or spiritual disorder, could only be overcome through the expulsion of the offending humor. A cure found by these men of religion for physical ills was seen by the native peoples as a sign of their privileged relationship with the divine and, in many cases, led to their conversion. This, in addition to the combined effects of syrups, remedies, ointments, bleedings, and purges, resulted in confession and prayer. Throughout their missives, these religious men often allude to the importance of this holistic approach<sup>44</sup>.

In the letter sent from São Vicente to the Father General on the “last day of May 1560”, Brother José describes sea and land animals, insects and birds, roots and herbs, trees and medicinal herbs, and stones and shells, as well as extraordinary or monstrous beings<sup>45</sup>. Despite the rudimentary nature of the descriptions, it is important to note that many of the animals and plants described were recorded using their local names, which attests to the concern of the missionary–grammarians about maintaining consistency between the terms he used to describe this world and the context in which he recorded it. This missive written by Brother Anchieta includes information about the plants and animals of the region as well as news about the climate, seasons, the terrain, and the peoples. He begins by referring to subjects relating to the exoticness of the climate, the seasons of the year, and inclement atmospheric incidents, before mentioning land animals, such as panthers, anteaters, tapirs, sloths, monkeys, armadillos, mountain cats, fallow deer, wild boars, or lamas. He then describes insects, such as ants, bees, flies, and mosquitoes; reptiles, slithering beings, and creepy-crawlies such as snakes, serpents, alligators, scorpions, and spiders. He goes on to mention birds of prey, seabirds, and parrots, as well as numerous fish and marine animals. Although no reference is made to it, his narrative echoes Gonzalo de Oviedo’s *Historia General de las Indias*. In the report of 1560, the Jesuit does not seem particularly concerned about the description of flora, merely referring to “erva viva”, cassava, some trees, and medicinal roots<sup>46</sup>. Written in Latin, Brother José’s letter was translated into Italian and published in Venice in 1562 to the delight and edification of European readers, who awaited with growing interest the news related by the Jesuit priests. The long missive ends with the statement: “I have narrated these things briefly, as I was able to, though there are doubtless many others worth mentioning, which are still unknown to us” (Brother José de Anchieta)<sup>47</sup>. Perhaps because he did not have access to relevant information, or because he disapproved of the local use, or just because he did not deem it worthy of mention, the missionary did write of any tropical fruits, such as the pineapple.

<sup>43</sup> On the role of the Jesuits, in particular Father Manuel da Nóbrega (1517–1570), José de Anchieta (1534–1597), and Fernão Cardim (1549–1625), in the dissemination of knowledge relating to the natural world of Brazil in sixteenth-century Europe, there is a vast bibliography. In addition to (Leite 1936, pp. 1–12; Leite 1938–1950, vol. 10; Leite 1942, pp. 387–403; Leite 1953), we should also highlight the works of (Hoehne 1937; Assunção 2001). On the first Jesuits in Brazil, see also: (O’Malley 1993).

<sup>44</sup> See, for example: (Županov 2002, pp. 1–43; Županov 2010, pp. 24–74).

<sup>45</sup> The accounts of the natural world recorded in correspondence between Jesuits were analyzed by (de Castelau-Estoile 2000, pp. 343–447; Chinchilla and Romano 2008; Prieto 2011; de Asúa 2014). On the letters of the Jesuit mission, see: (Laborie 1999; Lestringant 1998).

<sup>46</sup> “Erva-viva”, probably *Mimosa pudica*, is an American wonder. The folioles on the leaves of this small perennial shrub can retract when touched. This phenomenon (thigmonasty; plant movements due to reversible changes in cell turgidity resulting from physical stimuli, namely contact) amazed the voyagers. The fact that Garcia de Orta referred to this plant originating from tropical America in his colloquium dedicated to herbs (Colloquium 26) suggests that, in the 1560s, *erva viva* was already growing naturally in the gardens of Goa. Perhaps the Franciscan missionaries who left Brazil and settled in India in the 1530s took this curious species with them. The symbolism associated with the plant’s behavior could testify to the morality of nature. On *Mimosa pudica*, see: (Khare 2004, pp. 313–14).

<sup>47</sup> “Narrei estas coisas brevemente, como pude, posto que não duvides que haja muitas outras dignas de menção, que são desconhecidas a nós, ainda aqui pouco práticos.” (Due to the lack of an English version of Anchieta’s letter, this is the author’s translation).

The fruit was mentioned by Father Manuel da Nóbrega in a letter sent two years later from São Vicente (Brazil) and addressed to Father Francisco Henriques. According to Serafim Leite, Father Francisco Henriques was then in Lisbon, where he was serving as Attorney General of the Province of Portugal and the three Overseas Provinces: India, Ethiopia, and Brazil. The information sent was, therefore, important for the whole Province. Manuel da Nóbrega's letter accompanied jars of pineapple conserve and marmalades made from tropical fruits like *ibás*, *camucis*, and *araçás*. In it, we read:

"The master takes these preserved fruits for the patients, the ananases [pineapples] for kidney stones; though the ripe ones do not have such virtues as the unripe, they are nonetheless still of use. The Brothers recovering from this illness would do well to come here for the treatment received. Along with the preserved fruits, I am also sending *ibás*, *camucis*, and *araçaze* jam and some pumpkin for diarrhea". (Father Manuel da Nóbrega)<sup>48</sup>

This passage contains a detail worth considering more closely: The reference to the virtues of "unripe" pineapples. What quality might Nóbrega be referring to here? The high levels of acidity in green fruits mean that consuming unripe pineapple can cause significant mucosal irritations. Many peoples link the acidity of unripe fruits to their medicinal properties<sup>49</sup>. Might the Jesuit be referring to some local use that, from the missionaries' perspective, was reprehensible?<sup>50</sup> Apart from some adverse effect arising from the pineapple's use, there was also the production of pineapple wine—a mixture that, due to its strong fermentation, resulted in a drink of high alcohol content. By keeping the indigenous people in a permanently dazed state, this drink would have been at odds with the Mission's work. Therefore, from a religious point of view, perhaps the pineapple needed to be converted and its use "domesticated" before it could be shared. If possible, it should be transferred from the region and converted into a product of evident virtues: A bearer of Salvation. As such, the conserves, products transformed by the missionaries, served two purposes: They were part of the cure not just for the priests participating in the Mission (thereby enabling the realization of the divine plan), but also of all those in the Kingdom who needed to be cured of their ills. So that the Society of Jesus could test the qualities described, Nóbrega sent jars of fruit conserve along with his letter. Therefore, through Nóbrega's quill and ingenuity, Brazil and its fruits were appropriately transformed and appeared as precious aids to the Salvation of body and soul<sup>51</sup>.

The economic survival of the missions was a problem often referred to in correspondence, and was one that afflicted the everyday life of the religious. It was up to them to find livelihoods consistent with Loyola's spirituality. Putting new formulations and local remedies into circulation on a global scale by way of the Society's network of colleges and apothecaries, the Ignatians could contribute to the subsistence of the mission across the globe. Jams made from local fruits and other sweet preserves could therefore contribute, through the joint work of local peoples and religionists, to the survival of the villages and the missions that supported them. Beyond providing new sources of income within the Company, Manuel da Nóbrega made no reference to the cultural value that the pineapple might have had amongst local populations. With this allusion to the medicinal qualities of the fruit conserve

<sup>48</sup> "O mestre leva estas conservas pera os enfermos *scilicet*, os *ananazes* pera dor de pedra, os quais posto que não tenham tanta virtude como verdes, todavia fazem proveito. Os Irmãos, que lá houvessem desta enfermidade, deviam vir para cá, porque se achariam cá bem, como se tem por experiência. Vão também marmeladas de *ibás*, *camucis* e *arasazes* e para as câmaras um pouco de abóbora" (due to the lack of an English version of Nóbrega's letter, this is the author's translation). The reference to the term "ananazes" seems to come from Nóbrega's letter (12.6.1561). See: (da Cunha 1978, p. 50; Leite 1955, pp. 377–78).

<sup>49</sup> Ripe pineapple is rich in bromelain and vitamin C. In addition to being a diuretic and anti-inflammatory, pineapple is a digestive aid. However, when unripe, the pineapple is, like other tropical fruits, a violent purgative. It should be used carefully, as some consider it a powerful poison and others use it to induce miscarriages. On the use of the fruit revealed in recent studies, see: (Robson 1980, p. 105; Ross 1999, vol. II, p. 26; Piper 1989, p. 12; Burkill 2002, p. 152).

<sup>50</sup> Regarding this topic, see: (de Lima 2014).

<sup>51</sup> See, for example: (Schiebinger 2004). In this book, the author analyzes the difficulty in disseminating a plant (the Peacock Flower) used by the local population to induce miscarriage. This practice, disapproved by Europeans of the 1700s, was used by the native peoples as a way of fighting slavery. Although no allusion to the use of the pineapple by Amerindian women has been found, Anchieta refers to the use of abortion in the local populations when there was the suspicion of adultery.

(properties that no one would question), a new history of the pineapple could be written. This was a task that Garcia de Orta would not take on, but one that was later taken up by the missionaries and chroniclers of Brazil.

In 1563, Father Juan de Polanco (at the behest of Father General Diego de Laynes) sent a letter to Father Gonçalo Vaz de Melo (Provincial of Portugal) from Trento. This city was, at the time, the nerve center of a changing Catholic world. In his missive, he mentions some of the requests and information sent by Nóbrega. On the subject of conserves made from tropical fruit, he writes:

“Manuel da Nóbrega talks of certain preserved foods for those with kidney stones and calls them *ananazes* [pineapples] and certain others for diarrhea. When you have the opportunity to send some of these things to these parts to assess their effectiveness, we would be happy to test them ourselves”. (Father Juan de Polanco)<sup>52</sup>

With the blessing of Trento, the pineapple could now be circulated as a vehicle for Salvation for both lay people and the Society’s own men of religion. As such, from 1563 onwards, news of the medicinal properties of pineapple conserves circulated around the Society of Jesus. The reports of chroniclers and religious men describing the characteristics of this American fruit, combined with these therapeutic properties and salvific qualities, meant that it was imperative to transport this plant from the West Indies to other tropical regions. As such, it would trace, step by step, the Society of Jesus’s presence across the world, especially those missionaries serving the Portuguese Province.<sup>53</sup>

#### 4.2. Chronicles and Reports

The first printed Portuguese report referring to the pineapple from Brazil was the text written by Pero Magalhães Gândavo<sup>54</sup>. His manuscripts on the Brazilian world have found themselves scattered across several locations<sup>55</sup>. The *História da Província de Santa Cruz a que vulgarmente chamamos Brazil* was published in Lisbon in 1576 (Figure 2). Dedicated to D. Leonis Pereira, son of the Count of Feira and hero of the defense of Malacca, it included poems by Luís de Camões. Between the manuscripts and the printed text, significant adjustments were made. In the latter, Gândavo left out references to fantastical beings. He also eliminated information that could have compromised the crown’s interests, such as some geographical coordinates, the number of sugar cane mills in each *capitania*, or information related to the sugar and cotton yields obtained in the region. He further excluded any allusions to animals whose existence could not be proved. With the aim of attracting settlers to Brazilian territories, the chronicler sought to give the land an image as credible and pleasant as possible, eliminating any aspect that might discourage interest in occupying the land<sup>56</sup>.

<sup>52</sup> “Habla [Manuel da Nóbrega] de ciertas conservas para los que tienen dolor de piedra, y las llama de Ananazes, y ciertas otras para camaras, y quando se ofreciese oportunidad de embiar algo desto por estas partes para ver si aprovecha, hariamos la prueba de buena voluntad.” *Monumenta (Brasiliae 1956–1958, vol. III, pp. 541–46)* (due to the lack of an English version of Polanco’s letter, this is the author’s translation).

<sup>53</sup> For an overview of the missionary work relating to the global circulation of products with therapeutic qualities and local knowledge, see, amongst others: (Meireles 2004, pp. 71–95; Harris 2005, pp. 71–79; Albano 2012; de Sousa 2015; Udías 2015, pp. 105–32; Cagle 2018; de Sousa 2018).

<sup>54</sup> Pêro Magalhães Gândavo (c.1540–c.1580) was Chamberlain of King Sebastian of Portugal. He was the author of *Regras que ensinam a maneira de escrever a ortografia da língua portuguesa* (1574) and *História da Província de Santa Cruz a que vulgarmente chamamos Brazil* (Gândavo 1576), two books which, at the time, achieved significant success.

<sup>55</sup> For an analysis of the differences in content, see: (Viana 1953, pp. 89–95; de Matos 1962, pp. 624–39; de Matos 1965, pp. 94–104). For Portuguese editions of the work, see, amongst others: Pero Magalhães Gândavo, “História da Província de Santa Cruz a que vulgarmente chamamos do Brasil”, (Gândavo 1858, 1984, 2004).

<sup>56</sup> It seems likely that, in producing his texts, Gândavo had access to some of the texts written by the Jesuits in the Brazilian mission.



**Figure 2.** The first information about “ananas” in a printed Portuguese source appeared in Pero Magalhães Gândavo’s *História da Província de Sancta Cruz a que vulgarmente chamamos Brasil* (Gândavo 1576) (courtesy of the Biblioteca Nacional de Portugal, RES 365 P).

Gândavo begins his description of the Brazilian natural world with plants, foodstuffs, and fruits. He refers to *mandioca*, *aipim*, and *macaxeira* (fundamental elements of the indigenous diet); to *zaburro* maize (probably of the *Sorghum* genus); to bananas, the cream nut, and Brazil nut; to pineapples [*Ananas comosus*] and cashews, as well as to other fruits prized by the Portuguese who had brought them from Europe: Pomegranates, cucumbers, grapes, and figs. He also mentions plants of economic importance: Cane sugar and cotton, whose harvest yielded great income for some of the *capitanias*. As such, Gândavo limited himself to describing plants admired by the Portuguese or to species for which a use had been discovered. He next moved on to animals. Surprised at the absence of domesticated animals, he notes that all horses, mares, cows, oxen, hens, and ducks had been taken there by the Portuguese. For hunting, there were deer and peccaries, capybaras, tapirs, agoutis, armadillos, and tapetis. There were also plenty of fierce animals, sloths, anteaters, howler and other smaller monkeys, snakes, alligators, and other dangerous reptiles. In addition to these wonders, Gândavo recorded the most notable sea creatures, like manatees and whales. After the description of the “monster” that attacked Baltazar Ferreira in 1564 (probably the *Ipupiara*, to which other reporters also alluded), the chronicler moves on to the customs, practices, and beliefs of the Amerindian populations. He dedicates the final chapters to the metals, stones, and other riches that were known to exist in the hinterland. It was, then, within the context of the extraordinary and robust Brazilian natural world that Gândavo presented his description of the pineapple<sup>57</sup>.

<sup>57</sup> “A very savory fruit grows in the land of Brazil, more prized than any other; it grows on a humble stalk close to the ground; it has spines like thistles; its fruit grows like artichokes; it resembles like pine-cones and is called pineapple [*ananas*]. When they are ripe, they have an excellent odor. They gather them at the proper time, and with a knife, cut off the coarse rind and carve them in slices, and in this way, they are eaten; they are better in flavor than any of the fruits which grow in this land” (de Magalhães Gândavo 1922, vol. II, p. 162).

It is curious that Gândavo, between the manuscript and the printed text, dropped the reference to the pineapple “roças” (areas of cultivation), which resembled those of the cardoon<sup>58</sup>. Might this mass production of the pineapple have been aimed at producing fruit for preserves? Is this a sign of significant intervention in the landscape? The production of these treats, previously referred to by Nóbrega and by Castilian chroniclers and physicians, seemed to take on some significance in the Brazilian context, since, as Gândavo writes: “They bring many of these pineapple preserves to this kingdom of ours” (author’s translation).

## 5. The Natural Frontiers of a Global Empire

In addition to ensuring the refreshment and health of seafarers at freshwater stopping points, the circulation of the pineapple in the areas where agents of the Portuguese Crown were present seems to have been linked to the desire of those who, foreseeing their value, were willing to take them aboard their ships on long ocean crossings. That would seem to justify their early introduction into Santa Helena, Santa Maria (on the west coast of São Lourenço island/Madagascar), and, a little later, into Goa<sup>59</sup>. The Portuguese also took other food species they found in Brazil to other latitudes. It might have been around this time that the Portuguese took sweet potato, cashew, peanuts, and cassava to regions as far away as India, the Maluku islands, or the Java archipelago. It should be emphasized, however, that some tropical species, including *Ananas comosus*, were transferred to the region of the Philippines from the Americas by Spanish voyagers and missionaries on galleons that linked Acapulco and Manilla<sup>60</sup>.

What the collection of data presented here seems to reveal is that the pineapple (which, for decades, was seen by the Portuguese as the everyday fruit of sailors and of officials and missionaries resident in Brazil) became, from the 1560s onwards, an object of interest amongst Portuguese elites and the religious men of the Society of Jesus. Indeed, it seems likely that traders and religious men took the pineapple to faraway oriental empires.

Due to its ease of propagation and speed of growth in the tropics, the fruit was quickly naturalized in India. Between 1568 and 1572, the abundance of pineapples at the Goa market was such that the purchase price had become accessible to all. In addition to the pineapple, the cashew tree also seems to have been brought from Brazil, as several testimonies refer to the joint presence of these two Brazilian species on the island of Monfim, near Zanzibar<sup>61</sup>, and in gardens and courtyards in India<sup>62</sup>. Like Goa, news arrived from Baçaim in 1575 of the profusion of pineapples that were growing there<sup>63</sup>. The natural reference of the Jesuits to these fruits “vindas do Brazil” (sent from Brazil) leads us to

<sup>58</sup> In *Tratado da terra do Brasil* (a work which remained handwritten), we read: “Uma fruta se dá nesta terra do Brasil muito saborosa, e mais prezada de quantas há. Cria-se uma planta humilde junto do chão, [...] excedem no gosto a quantas frutas há neste reino e fazem todos tanto por esta fruta, que mandam plantar roças dela, como de cardais: a este nosso reino trazem muitos destes ananases em conserva” P.M. Gândavo, *Tratado da terra do Brasil*, in: Pero Magalhães (Gândavo 2008, p. 63).

<sup>59</sup> On the circulation of the pineapple, in addition to the aforementioned work of Fernando Rego, see: (Laufer 1938; Ferrão 2015; Bogaert-Damien 2014, pp. 11–18; Allain 2014, pp. 37–40; Huetz de Lempes 1992, pp. 337–48).

<sup>60</sup> On the tradition of the pineapple in the Philippines, see: (Montinola 1991; Milgram 2005, pp. 223–46; Davis 1991, pp. 125–29).

<sup>61</sup> Letter of Father Francisco Monclaro. Account of the expedition to Monomotapa (1569–1573), *Documenta Indica*, vol. VIII (1569–1573), 1964, pp. 673–739. See also: *Relação do Padre António Gomes ao Monomotapa* (1648). (Axelson 1959, pp. 155–42) and the recent in-depth study by (do Carmo Viera 1996, vol. 2) [polycopied text].

<sup>62</sup> The cashew tree (*Anacardium occidentale*) attracted the attention of European voyagers, of whom André Thevet stands out for his inclusion of a textual description and image. The strange way in which its fruit developed intrigued those who described it. It should be noted that the fleshy and aromatic structure that the voyagers termed “fruit” is, strictly speaking, an accessory fruit, as it comes from the development of the flower peduncle. The nut (which, once roasted, was the part most prized by the native peoples and, subsequently, of high commercial value) is what constitutes the real fruit of the tree. The fact that Garcia de Orta did not refer to this species in *Colóquios dos Simples* suggests that, at the time he wrote his work, it was not yet known in Goa. It is important to note that, in the Latin epitome of Orta’s work published, in 1567, by Clusius, *Aromatum et Simplicium*, the cashew nut used by the native people to tackle scabies or “to stimulate the passions” was referred to and depicted. In Clusius’ description, there is one aspect that, in this context, it is important to highlight. When referring to this accessory fruit (which he termed “principal fruit”), he writes: “The principal fruit does not contain any seeds”. Once again, the absence of seeds was noticed by European scholars.

<sup>63</sup> “Letter from Fr. Francisco de Monclaro SJ to Fr. Everardo Mercuriano SJ” in: Joseph Wicki SJ, *Documenta Indica*, vol. X.

think that the religious men of the Society were familiar with these species, and suggests they were responsible for their intercontinental transference and acclimatization. The pineapple would later be treated as if it were an Indian species, for example, in the works of Jan Huygen van Linschoten<sup>64</sup> and Godinho de Erédia<sup>65</sup>. From the 1580s onwards, the accounts of Gabriel Soares de Sousa), José de Anchieta), and Fernão Cardim) never again lost sight of the pineapple, which became the Brazilian fruit, *par excellence*, and was transferred to all overseas territories ruled by the Portuguese<sup>66</sup>. Interestingly, the “ananás” of Brazil seems to have developed a different standing from that of the “piña” described in *Historia General de las Indias*. Like the pineapple from Central America, the Brazilian fruit was delicious and exotic. However, in addition to its sensorial qualities, the importance of the perceived medicinal and salvific properties of the fruit should be stressed. During the 16th century, *ananases* were taken from Brazil and introduced into Indian gardens, changing Asian landscapes and agricultural practices and proving a huge success in the most sophisticated courts and kingdoms of Asia<sup>67</sup>.

Tracing the ground trodden by missionaries, the pineapple (just like oranges, citrons, and lemons coming from the Kingdom) seemed to reflect the benignity of the land and the openness of its peoples to embrace the Christian message. Detached from the traditions and qualities that it held for Amerindian tribes, the fruit seems to have been taken as something of a sign of encouragement for missionary activity in the tropics, initially amongst the religious of the Society of Jesus and then amongst other orders. For this reason, it is important to bear in mind the emphasis that the fruit received in Simão de Vasconcelos’ text *Notícias curiosas e necessárias das coisas do Brasil* (1611) and, later, in the volume by Fr. António do Rosário, *Frutas do Brasil* (1702). Linked to Marian iconography, the pineapple, even in its local name *nana*, was evidence of its divine character<sup>68</sup>.

Taken from its land of origin and transferred by missionaries to the other lands of the Portuguese empire, the pineapple fields contributed to reshaping the landscape of the tropics. Praised by the elites as delicacy or medicine and prized by those serving in the tropics, the exotic fruit became common across the “colonial” world. The fertility of its crown suggested divine consent in the propagation of the ideals defended by the King of Portugal. The proliferation of the vast fields of *Ananas comosus* seems, after all, to establish the natural boundaries of the Portuguese empire.

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<sup>64</sup> van Linschoten (1956) attested to the fact that he had some pineapples and cashew trees growing in Goa, in his garden.

<sup>65</sup> de Erédia (1621). In addition to pineapples and cashews, Erédia also alluded to the “papeira” (*Carica papaya*)—another fruit of Brazilian origin that was apparently introduced in the late 16th century. Isabel Maria Madaleno refers to the common use of the term *mamão* in the Cochin pharmacopoeia. See: (Madaleno 2015, pp. 109–42).

<sup>66</sup> It should also be emphasized that many of these accounts remained unpublished. Given the growing interest from Northern Europe in their overseas territories, it is likely that the Portuguese and Spanish had no interest in disseminating new information. It should also be remembered that, as Pardo Tomas pointed out, after the publication of Nicolas Monardes’ *Historia Medicinal* in 1580), Philip II chose to limit the dissemination of news about the territories in the Indies. See: (Pardo Tomas 2016, pp. 195–212).

<sup>67</sup> The value that emperor Akbar and his heir Jahangir ascribed to the pineapple is well known, as is the interest that the fruit generated, in the following century, in the Chinese court. Jahangir cultivated the pineapple on a large scale in Agra. This fact was related in the memoirs of the emperor, where we read: “Many thousands [of pineapples] are produced every year in the Gulafshan garden in Agra” (Shaner 1999, p. 24). On the presence of the fruit in Oriental courts, see: (Lach 1965, vol. I, pp. 275–77; MacLagan 1932, pp. 342–58; Anagnostou 2007, pp. 293–312).

<sup>68</sup> Buarque de Holanda recalled the references to the pineapple as a metaphor for the Rosary. As he described, for the missionaries of the 1700s, the Tupi name for the fruit (“nana”) would have carried its own Marian symbolism, “*Anna nascitur*: Born of Saint Anne, the Mother of God.” See: (de Holanda 2000, pp. 287–88).

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