

# Local knowledge in Portuguese words: Oral and manuscript sources of the *Colloquies on the simples* by Garcia de Orta

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## ABSTRACT

Published in Goa in 1563, the work of Garcia de Orta (ca. 1500–1568), *Colóquios dos Simples e Drogas he Cousas Mediçinais da Índia* [*Colloquies on the simples & drugs of India*], revealed the impressive scholarship of its author. His academic training in Castilian universities and an important library gave him a solid medical and botanical knowledge supported by a vast specialised literature. Nevertheless, in his search for novelties about nature in Asia, Orta did not dispense with the contribution of local informants and royal officials, who by travelling through the innermost recesses of the East collected news and novelties of Asia's natural resources. The participation of these agents from very different social and cultural strata in the reconfiguration of knowledge about the Asian natural world was one of the most original contributions of Orta to European science. This paper focuses on Orta's Portuguese sources with emphasis on some of the oral testimonies and manuscript reports that travellers and royal officials collected during their journeys in Asia. These, having being tested and validated by Orta became the foundation of a new truth about the natural world of the East described in his *Colloquies on the simples*.

**Keywords:** Garcia de Orta, *Colóquios dos Simples*, Orta's Portuguese sources, knowledge circulation

## The diffusion of novelties

Until 1515, that is, during the first decade of the Portuguese presence in the East, the collection of information about the Asian natural world was fragmentary and revealed a poorly

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organised exploration. The testimonies of travellers, soldiers and adventurers who landed in Lisbon coming from the East and the letters sent to the Crown by royal officials posted in Asia were the main source of news about Indian nature, in the beginning of the sixteenth century.

Tome Pires (ca 1465–ca 1540) and Duarte Barbosa (ca 1480–1521) marked a turning point in the observation of the Asian natural world. The former sailed to the East in 1511 with a mission to identify and select drugs that should be sent back to the Portuguese kingdom. Druggist by profession, in 1515, Pires completed the *Suma Oriental*, considered the first modern geography of the East, where he collected information on Asian nature provided by local informants.<sup>1</sup> Due to the relevance of this work, he was appointed to head the first Portuguese diplomatic mission to Beijing.

Also at the beginning of the sixteenth century, Duarte Barbosa went to Asia where he lived most of his life. He was for a long period a scrivener in the Cannanore factory. Living in that area, he was able to learn Malayalam, the language spoken in this region of India by every merchant, and proved to be a skilled tradesman. He wrote an extensive and detailed report, *O Livro de Duarte Barbosa* (1516), which had a wide distribution as shown by the different manuscript versions known today. In this report, which resulted from his observations and contacts with local traditions and manuscript sources, Barbosa provided a detailed description of Eastern kingdoms, cities, ports, people, wealth and natural resources.<sup>2</sup>

Therefore, during their stay in the East, both men wrote detailed accounts of nature based on their observations and on testimonies provided by reliable local informants. Through the work of these two authors, the Portuguese kingdom was informed of the regional outline of the East, its ports and markets, its people, the eating habits of its societies and its wealth of natural resources. The work of the two Portuguese men shed light on a part of the world hitherto unknown in the West.

In addition to frequent geographical, political and economic reports, they made reference to a huge variety of tropical fruits and peculiar exotic plants, and included the necessary descriptions of spices and drugs. Palm trees, pepper, cinnamon, lacquer, benzoin,

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<sup>1</sup> Part of this text was published by G. B. Ramusio, who included it in his book *Delle Navigationni et Viaggi*, Venice, Giunti, 1550. For more information on the work of Pires, see: *A Suma Oriental de Tomé Pires*, ed. Armando Cortesão, and its English version: *The Suma Oriental of Tomé Pires*, tr. and annot. A. Cortesão, London, The Hakluyt Society, 1944, in addition to the recent critical edition, *O manuscrito de Lisboa da "Suma Oriental" de Tomé Pires*, critical ed. Rui Manuel Loureiro, Macau, Instituto Português do Oriente, 1996.

<sup>2</sup> The news he reported were widely disseminated through the referred Ramusio's collection, *Delle Navigationni et Viaggi*. Barbosa's work has several Portuguese editions, namely: Duarte Barbosa, *Livro do que viu e ouviu no Oriente*, ed. Luis de Albuquerque, Lisbon, ALFA, 1989; Duarte Barbosa, *O Livro de Duarte Barbosa*, ed. Maria Augusta da Veiga e Sousa, 2 vols. Lisbon, ICT, 1996-2000. For an English version, see: *The Book of Duarte Barbosa*, translation and notes M. L. Dames, London, The Hakluyt Society, 1918-1921.

nutmeg, cloves or camphor were some of the products that gained Barbosa's attention. The pragmatic clerk attached to his book an appendix recording data about the origin and price of the main spices —pepper, cloves, cinnamon, ginger—and noted the prices of the most important drugs in the Calicut market—tincal, camphor, agarwood, linaloes, musk, benzoin, tamarinds, calamus, myrrh, incense, amber, cassia, sandalwood, nutmeg, spikenard, mace, indigo, zedoary, zerumbet, cardamom, rhubarb, tutty, cubeb, mirabolanos or opium.

Tome Pires, in turn, filled the folios of his *Suma Oriental* with information on the origin, quality and value of many Asian products. In his report he collected information on: pearls, musk, aloes, amber, indigo, areca, sulphur, benzoin, betel nut, camphor, cinnamon, coconut, copra, cloves, folio indo, ginger, sesame, jackfruit, jangomas, lac, aloewood, mace, mangoes, mirabolanos, nutmeg, opium, alum, pepper, rhubarb, sandalwood, dragon's blood, tutty, tamarind, and cinnabar..

Later confirmed and validated by Orta's inquires, observations and medical experience, much of the information collected by these royal officials was included in Garcia de Orta's work.

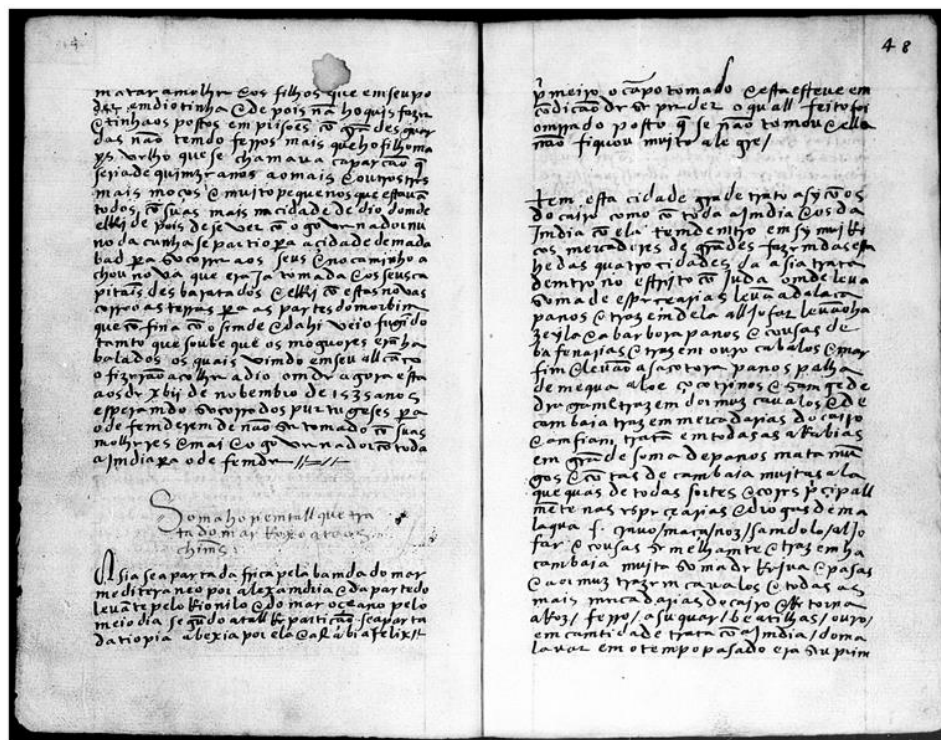


Figure 1 - The *Suma Oriental* of Tome Pires (BNP – National Public Library).

In a letter Tome Pires sent in January 1516 to King Manuel (reigned 1495–1521), he identified the regions of origin, the local customs and the main markets where oriental products

were traded. Pires did not overlook drugs used in the Portuguese pharmacopoeia such as: rhubarb, incense, opium, tamarinds, galangal, mirabolanos, aloes, spikenard, asafoetida, bdellium, myrrh, betel nut, zedoary, rubies or pearls, among others.<sup>3</sup>

Through the reports and letters of royal officials, the Portuguese elites were becoming aware of the geographical origin, the distribution routes and the therapeutic qualities of the natural resources of the East. Curious travellers, sailors and merchants thus became the vehicle of an innovative speech about the world as they saw it. Confirmed by eyewitnesses, these reports spread in Europe a new kind of description of nature that dispensed with texts and was based on first-hand experience.<sup>4</sup>

### Regulation of the drug trade in the East

In order to maintain the Portuguese presence in the East, forts were built and trading posts (factories) were established at strategic points. With a view to ensuring the health of soldiers and royal officials, the Portuguese Crown invested in building a network of hospitals. All these entities were served by apothecaries who provided drugs and products essential to preserving the health of the seconded officials. Note that, at the time, the term “apothecary” had a much broader sense than it has today. In addition to medicines and drugs, they provided soap and opium, as well as supplies for the city, as shown in the documents of Goa’s Customs.<sup>5</sup>

Aware of the huge amount of drugs in circulation and of the serious inconvenience caused by setting up apothecaries without royal control, King Manuel imposed the regulation and inspection of their activities. This evaluation was not limited to the technical staff. Products for sale also underwent careful analysis. If the quality of the medicines examined did not meet the inspectors’ criteria, regulations provided for heavy fines for the owner and the public burning of the products in question.

The sovereign also required apothecaries in the cities, towns and villages under his rule to abide scrupulously by the prices set for medicines and drugs. The “Regimento de Preços de 1497” [Price Regulation of 1497] was in force throughout his reign and it was only officially

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<sup>3</sup> “Carta de Tomé Pires”, in Armando Cortesão, 1978. *A Suma Oriental de Tomé Pires e o Livro de Francisco Rodrigues*, pp. 445-459.

<sup>4</sup> It is interesting to note that in the South American Continent there was a similar movement to collect reports about the natural resources. For further examples, see: José Pardo Tomas, Maria Luz Lopez Terrada, *Las primeras noticias sobre plantas americanas en las relaciones de viajes y crónicas de Indias* (1493-1553), Valencia, CSIC, 1993, 364 pps.

<sup>5</sup> Vasconcellos e Menezes, J., *Armadas Portuguesas. Apoio sanitário na época dos Descobrimentos. Parte II: Boticas e Boticários de Além-mar*, Lisboa, Academia de Marinha, 1987, p.113.

amended by order of Martim Afonso de Sousa (1500–1572).<sup>6</sup> De Sousa travelled to the East where he held several government posts, namely captain-major of the fleet (1534–1538) and governor (1542–1545). As governor, he played an important role in the development and organisation of the Royal Hospital in Goa. Apparently concerned about the trade in drugs and medicines, he ordered the then overseer, Fernão Rodrigues de Castelo Branco, to establish a “Pauta das Mezinhas” [Tariff of Medicines], where the price of drugs was set to be abided by in the whole kingdom and in most of the “Estado da Índia”. The 1542 *Tariff*, which redesigned former rules, remained in force until 1573.<sup>7</sup>

This list of spices, medicines and therapeutic formulas, and their purchase and sale prices, prevailed in the eastern hospitals and apothecaries for thirty years. During the rule of D. Constantino de Bragança (Viceroy 1558–1561), the prices of some drugs were reviewed and updated, while the rest of the list remained unchanged.<sup>8</sup> According to the introductory note to the 1573 “Pauta das Mezinhas”, some officials had brought to the attention of Dom Constantino the disparity between regulated prices and actual prices, leading the governor to update some of them. They remained valid until 1573, when the team of physicians and apothecaries led by surgeon-general Duarte Lopes updated it again.

Thus, price regulation for drugs and medicines depended on technical advice from apothecaries, physicians and officials who together calculated the new price. Only in 1572, did apothecary Baltazar Rodrigues asked D. Antão de Noronha (Viceroy 1571-1573) to allow the complete review of the “Pauta” then effective, with the corresponding price update. Having immediately complied with this suggestion, the governor instructed Luis Freire de Andrade to appoint a committee that would carry out the task quickly and effectively. The new “Pauta das Mezinhas” was approved in April 1573 and the price list for the purchase and sale of medicines in all hospitals, fleets and fortresses in Portuguese India immediately entered into force. This “Pauta” lasted until the late sixteenth century, when the health policy imposed by King Philip II of Spain, who also ruled Portugal as Philip I from 1581 to 1598, led to new approaches that are beyond the scope of this paper.

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<sup>6</sup> For further information on this aristocrat, see Luís de Albuquerque, *Martim Afonso de Sousa*, Lisbon, ALFA Editions, 1989, and Alexandra Pelúcia, *Martim Afonso de Sousa e a sua linhagem: trajetórias de uma elite no império de D. João III e D. Sebastião*, Lisboa, CHAM, 2009.

<sup>7</sup> Tello da Fonseca, *História da farmácia portuguesa através da sua legislação*, Porto, Emp. Ind. Gráfica do Porto, vol. 3, pp. 12–21.

<sup>8</sup> Pedro José da Silva, *Jornal de Pharmacia e Sciencias Medicas da India Portuguesa*, 1868, pp. 88 – 93.

## The Elvas Codex: a collection of individual reports

Perhaps due to a greater stability in the administration or to a more favourable political situation, it seems that it was under the rule of Martim Afonso de Sousa (Governor 1542–1545) or D. João de Castro (Viceroy 1545–1548) that overseers, factors and apothecaries living in the East were requested to systematically provide reliable information on Asia's main natural resources. Some of these officials promptly responded to this request and the data they provided was integrated into what is now known as the *Elvas Codex*. Identified by Domingos e Lavadinho as *Livro que trata das cousas da Índia e do Japão* (*Book about things from India and Japan*), the book had a critical edition in the twentieth century by Adelino Almeida Calado.<sup>9</sup> As shown in the handwritten dedication, this collection was offered in 1901 to Antonio Thomaz Pires by Francisco de Paula Santa Clara and, since 1913, it has been part of the collection of manuscripts of the Elvas Public Library. Thomaz Pires died in 1913 and, according to Almeida Calado, his private library was then donated to the City Library.<sup>10</sup>

The manuscript has the provisional book number 5/381 and consists of 101 sheets, about a dozen of which were left blank. It consists of two types of paper that Almeida Calado was able to date to the mid-sixteenth century. Bound with “a large sheet of parchment, undoubtedly torn out from a missal, of which are still left staves, musical notes and verses in brown with green capital letters,”<sup>11</sup> Although there are no notes about their sixteenth-century owners, there are in the Codex multiple direct evidence and indirect indications that allow it to be dated with certainty to 1546–1548.

The volume collects twenty-five reports produced in the East by local prominent agents. Since some of the reporters signed their reports, the authorship of part of these texts is indisputable. Apparently, information was collected and recorded by informants selected for their professional integrity and obvious technical skills. Thus, in order to identify the region of origin of the drugs, they used the experience of the chief apothecary of D. João de Castro, Simão Alvares<sup>12</sup>; to describe the supplies that arrived in Goa they asked for the knowledge of

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<sup>9</sup> Domingos e Lavadinho, *Manuscritos e outros documentos da Biblioteca Municipal de Elvas*, 2 vol. 1945–1948; Adelino Almeida Calado, “Livro que trata das cousas da Índia e do Japão”, *Boletim da Biblioteca da Universidade de Coimbra*, Coimbra, Vol. XXIV, 1960, pp.1–138.

<sup>10</sup> For further information on António Thomaz Pires, see Alberto Iria, “Dos biógrafos portugueses de Garcia de Orta (nótulas bio-bibliográficas)”, *Garcia de Orta*, vol. 11, n<sup>o</sup>4, 1963, pp.833–856.

<sup>11</sup> Adelino Almeida Calado, “Livro que trata das cousas da Índia e do Japão”, p.3.

<sup>12</sup> Simão Alvares, who when he wrote the report had been serving in the East as an apothecary for thirty-nine years, signed the information on the “nacimento of todas as drogas que vão para o Reyno” (origin of all drugs going to the kingdom). In the “Enformação que me deu Symão Alvarez” [Information provided to me by Symão Alvarez], the apothecary presented his interlocutor a list of Asian products used in medicine. For each “simple”, such as camphor, galangal, linaloes, cubeb,

the overseer and treasurer, Rui Goncalves de Caminha<sup>13</sup>; to talk about the Cochin rivers they asked the chief pilot of Cochin, Nicolau Goncalves<sup>14</sup>; to gather information about Ceylon or Hormuz, they used the experience of their factors, namely Antonio Pessoa<sup>15</sup> and Bastião Lopes Lobato<sup>16</sup>; to disseminate information about Persia, they resorted to the knowledge of the secretary of the Governor, Khwaja Pir Quli (Coje Percolim)<sup>17</sup>.

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sandalwood, peppers, cashew, cardamoms, canafistola, mirabolanos, aloes, incense, asafoetida, rhubarb, spikenard, costo, opium, myrrh or bdellium, Alvares identified the regions of origin of the best quality products. For further details, see: Jaime Walter, “Simão Álvares e o seu rol das drogas da Índia,” *Studia*, Lisboa, 10, 1962, p.117–149, and Adelino Almeida Calado, “Livro que trata das cousas da Índia e do Japão,” pp.50–57. For more information on this apothecary, see: *Obras Completas de D. João de Castro*, Luís de Albuquerque e Armando Cortesão (eds.), Coimbra, Academia Internacional da Cultura Portuguesa, 1982, vol. 4, p.41 and pp.80–81.

<sup>13</sup> According to Schurhammer, Rui Goncalves de Caminha, “was one of the most influential citizens of Goa and was held in the highest repute throughout the land, even by the pagan and Mohammedan merchants and princes. [...] He had also had been able to win the favor of the governors with his money, gifts and business acumen.” Georg Schurhammer S.J. *Francis Xavier. His life, his times*. Vol II: India (1541–1545), translated by M. Joseph Costelloe S.J. Rome, The Jesuit Historical Institute, 1977, p. 173. Overseer, trusted by Governor Joao de Castro, he wrote a report where he informed his “Lordship” about “the origin of the supplies arriving in Goa, which, contrary to what many say, are not all from Balaghat.” Adelino Almeida Calado, “Livro que trata das cousas da Índia e do Japão,” pp.62–67.

<sup>14</sup> Nicolau Goncalves signed a detailed report that identified some local rulers and informed of “the names of the rivers north of Cochin, from where timber comes to Cochin...” Adelino Almeida Calado, “Livro que trata das cousas da Índia e do Japão,” pp.43–48. This official acted as chief master and chief pilot of Cochin and participated in the second siege of Diu. For some biographical notes, see: *Obras Completas de D. João de Castro*, vol. 4, p.112.

<sup>15</sup> Antonio Pessoa sailed to India for the first time in 1515, and he was in the Moluccas in 1524, in Malabar in 1525, in Diu from 1530 to 1531, as factor of Vasai in 1539, as factor and mayor of Ceylon in 1541–43. After fighting in Diu during the second siege, participating in the reconstruction of the fortress, he was sent to Bengal and the Moluccas in 1547 and returned to Ceylon in 1551. As factor of Ceylon, he signed the “Enformação das cousas do Ceylão” [Information on the things of Ceylon], which is included in the *Elvas Codex*. In this report, he gives a detailed description of the many riches of the island, with particular emphasis on cinnamon (Adelino Almeida Calado, “Livro que trata das cousas da Índia e do Japão,” p.36–39). By order of the Governor João de Castro, in 1545 he was paid the salaries owed by his previous stays in India and in 1546 he was given a prize of 50 *pardaus* for having wintered in Diu. João de Castro had a deep admiration for Antonio Pessoa. In the text written on 22 October 1548 by the priests who attended the governor in his last moments, he justified to King Joao III the offer made to the factor, on behalf of the sovereign, of some villages in Vasai with Pessoa’s mighty deeds in the fleet sent to Diu. For more information on Antonio Pessoa, see: *Obras Completas de D. Joao de Castro*, vol. 4, p.129, or Banha de Andrade, A. “Drogas do Oriente”, *Arquivo do Centro Cultural Português*, Paris, vol. 3, 1971, p.183. See also Georg Schurhammer S.J. *Francis Xavier - His life, his times*, vol. II: India (1541–1545), p.279.

<sup>16</sup> Bastião Lopes Lobato was factor of Hormuz between 1545 and 1547, when he was appointed Mayor of Goa. In the *Elvas Codex*, this factor of the Hormuz fortress provides detailed reports called “Enformação do enxofre que vem de dentro do estreyto de Ormuz, dada per Bastião Lopes Lobato, feytor que foy na dita cydade e fortaleza” [“Information about the sulphur that comes from the strait of Ormuz, given by Bastião Lopes Lobato, factor of the said city and fortress”] and “Enformação do rendimento da cidade e reino dUrmuz, dada per Bastião Lopes Lobato, feitor que foy na dita terra” [“Information about the income of the city and kingdom of Ormuz, given by Bastião Lopes Lobato, factor of the said city”]. Adelino de Almeida Calado, “Livro que trata das cousas da India e do Japão,” pp.117–120 and pp.128–130. See also Georg Schurhammer S.J., *Francis Xavier. Obras Completas de D. Joao de Castro, vol.3, p.117. His life, his times*, vol. II: India (1541–1545), p.395.

<sup>17</sup> According to Luis Filipe Thomaz, Coje Percolim did not enjoy the same favourable reputation with Governor Joao de Castro that he had had with his predecessors, namely Martim Afonso de Sousa. However, during Castro’s rule, Percolim translated in 1547 a letter to the Sultan of Bijapur and in 1548 a treaty with Bijapur’s Adil Shahi. The brief description of Persia included in the *Elvas Codex* was, according to Luis Filipe Thomaz, the last document written by Coje Percolim, before disappearing from the Portuguese political scene in the East. See: Luis Filipe Thomaz, “Hwaje Pir Qoli et sa brève relation de la Perse”, *Eurasian Studies*, V.1/2, 2006, pp.357–369. The “Enformação de algumas cousas da pérsia” [Information about some things of Persia] is in Adelino de Almeida Calado, “Livro que trata das cousas da India e do Japão,” pp.132–133.

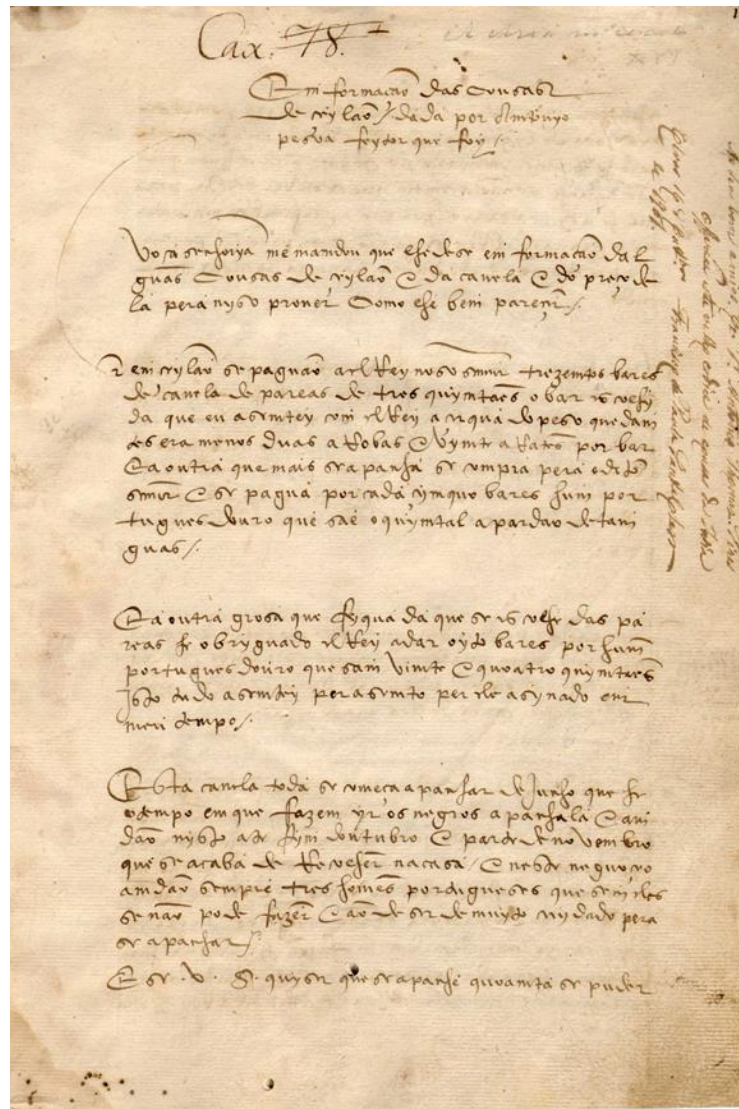


Figure 2 - The *Elvas Codex* (BPME – Elvas Public Library)

Topics range from listings of goods and natural resources to the identification of routes and markets, and the description of the origin of certain drugs and spices, as well as groundbreaking news about China and Japan.<sup>18</sup>

Each of the texts included in the collection seems to respond to pre-established questionnaires, thus revealing the targeted nature of the information collected. This method of gathering news about the Indies' natural resources would be years later repeated in the New World.<sup>19</sup>

<sup>18</sup> The Codex collects some of the first reports about the Far East such as the “Enformação da Ilha do Japão dada por mestre francysquo...” [Information about the island of Japan given by master Francisco...], “Mais emformação das cousas do Japão” [More information about things from Japan], “Enformação da Chyna” [“Information about China”] and “Mais emformação do Japão...” [More Information about Japan]. See: Adelino de Almeida Calado, “Livro que trata das cousas da India e do Japão,” pp.88–117 and pp.121–125.

<sup>19</sup> Cf. *Relaciones Geograficas*. With these surveys, the Spanish Crown sought to make an inventory of resources, describe landscapes, characterise populations and collect native knowledge. For further information, see: Raquel Alvarez-Pelaez, *La*



Besides contributing to provide a clearer geographical outline of the East, these summaries, reports and lists of drugs seem also to have been important for strategic decision-making. While the analysis of the impact of this information is still to be completed, these documents reveal the interest of Portuguese rulers in the East in making an inventory of the natural resources and commercial potential of each region.<sup>20</sup>

Whereas Tome Pires and Duarte Barbosa directed their reports primarily to the government in Lisbon, Antonio Pessoa, Nicolau Goncalves, Simao Alvares, Joao de Magalhaes, Mestre Pedro, Rui Goncalves de Caminha, Francisco Pereira, Alvaro de Sousa, Coje Percolim, among others who signed the reports collected in the *Elvas Codex*, addressed a Portuguese authority in Goa, perhaps Martim Afonso de Sousa or Joao de Castro. As we will show below, Garcia de Orta had access to this classified information and used it in writing the *Colloquies on the simples*. The authors of these documents can thus be identified with some of the “Portugueses dignos de fé” [Portuguese of credit] to whom Garcia de Orta refers to in his text.<sup>21</sup>

On the death of Governor Joao de Castro, Garcia de Sá, governor from 1548 to 1549, continued this project of gathering news. Almeida Calado gives credit to the Governor for the compilation of reports written by Portuguese officials.<sup>22</sup>

At the time, the absence of printing in the East hindered the wide dissemination of duly authorised news. Besides manuscripts, only oral testimonies could fill the gap of information on natural resources. In addition, the expansion into the Far East, China and Japan, was occurring at an intense pace and it was crucial to standardise information and prices of local products throughout the area where the Portuguese then freely moved.

Publishing a book on India’s drugs and medicines became an increasing priority as it could enable not only market regulation and stability of distribution routes, and the establishment of strategic resource exploitation priorities, but also the standardisation of health

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*conquista de la naturaleza americana*, Valencia, CSIC, 1993, pp.141-318; Antonio Barrera-Osorio, *Experiencing Nature. The Spanish American Empire and the Early Scientific Revolution*, Austin, University of Texas Press, 2006, pp.56–100; Barbara Mundy, *The mapping of New Spain: Indigenous cartography and the maps of the Relaciones Geograficas*, Chicago, University of Chicago Press, 2000, pp.29–60 or David N. Livingstone, *Putting science in its place. Geographies of Scientific knowledge*, Chicago, Chicago University Press, 2003, pp.99–134.

<sup>20</sup> For a broader view on the diversity of testimonies that provided information about the natural world in the East, see the work of Luis de Pina, “As ciências na História do império colonial português (séculos XV a XIX)”, excerpt of the vols. 1937–1945 of the *Anais da Faculdade de Ciências do Porto*, Porto, Imprensa Portuguesa, 1945, and Donald Lach, *Asia in the making of Europe*, Chicago, University of Chicago Press, 1965, vol. 2, 1970.

<sup>21</sup> For further information on this topic, see: Rui Manuel Loureiro, *Animais Orientais: Fauna Exótica do tempo dos Descobrimentos*, Lagos, Câmara Municipal de Lagos, 2008, p.58, and Teresa Nobre de Carvalho, “Invisible travellers and virtual tracks: knowledge construction in *Colóquios dos simples e Drogas da Índia* of Garcia de Orta (Goa, 1563)” *Proceedings of the 4th ESHS Conference*, Barcelona, 2010, pp.288–293.

<sup>22</sup> Adelino Almeida Calado, “Livro que trata das cousas da Índia e do Japao”, pp.1–35.

practices in the various hospitals of the cities and fortresses that the Portuguese were building in the East. In fact, the specificity of the diseases and the new drugs available made many physicians recently arrived from Portugal unable to effectively lead hospital teams effectively. Physicians who accompanied governors and viceroys remained in the East for little more than three years. This period was clearly insufficient to make them aware of the complexity of the therapeutic properties of Asian medicines. The inability of these “seasonal” physicians to cure tropical diseases was so harshly criticised that, in 1607, they were banned by royal charter from directing medical practice in Goa’s Royal Hospital during the few years that their missions lasted.<sup>23</sup> Despite the concern of druggists, overseers, physicians and merchants, the long-awaited text only emerged in 1563 with the Goan edition of the *Colloquies on the simples*.<sup>24</sup>

### *Colloquies on the simples* by Garcia de Orta

Born in Castelo de Vide, Garcia de Orta (ca. 1500–1568) did his medical studies in the Castilian universities of Salamanca and Alcalá de Henares. He taught for a short period in the *Escolas Gerais* in Lisbon, having sailed to India in 1534 as personal physician of Martim Afonso de Sousa, then captain-major of the fleet.

He would never return to Europe. Aware of his discreet place in contemporary Portuguese chronicles, Orta decided to reveal to his readers moments of his life in Asia and aspects of his personality. Therefore, the book often becomes autobiographical. To the eyes of his readers, Orta emerges as a man of sophisticated tastes, an experienced physician, a competent professional, an elegant conversationalist, a skilled manager of words. He describes himself, in short, as a wealthy physician living in Goa, the capital of the Portuguese ‘Estado da India’. Textual references to a wide range of scientific works gave credit to his arguments.<sup>25</sup>

<sup>23</sup> Silva Carvalho, “Garcia d’Orta”, *Revista da Universidade de Coimbra*, Coimbra, 12, 1934, p.158, note 1. For more information on the presence of Portuguese physicians who sailed East see also: Anibal de Castro, “Físicos, cirurgiões e boticários nas naus dos descobrimentos”, *Arquipélago*, História, 2<sup>nd</sup> Series, 4, No. 2, 2000, pp.546 – 547.

<sup>24</sup> After the *editio princeps* published by the Goan workshop of Joao de Endem, the *Colloquies on the simples* was republished twice during the nineteenth century: the first time by Francisco Adolfo Varnhagen (1872) and the second time in two volumes by Ficalho, Imprensa Nacional, Lisbon (1891 – 1895). Text updating, extensive notes and scholarly comments made this third Portuguese edition the reference version of De Orta’s work, used by the vast majority of scholars. In fact, it was based on this edition that Sir Clements Marckham published in 1913 his English version, *Colloquies on the Simples and Drugs of India*, and Sylvie Messenger-Ramos and Antonio Ramos coordinated the recent French version published by Actes Sud in 2004. This paper uses a recent version of Sir Clements Marckham’s edition.

<sup>25</sup> Orta pictured himself as a scholar in his working office, supported by a vast library where he kept the most renowned medical and botanical works. For more information on Orta’s library, see Conde de Ficalho, *Garcia de Orta e o seu tempo*, Lisbon, Imprensa Nacional, 1886, pp.280–298 and Rui Manuel Loureiro, “Garcia de Orta e os *Colóquios dos Simples*: Observações de um viajante sedentário.” *Actas do Colóquios Internacional e Interdisciplinar Garcia de Orta e Alexander von Humboldt*, Lisbon, 2008, pp.135–145.

This description of his versatile and learned persona proved of the utmost importance since it would be the basis for his reliability as a witness of credit.

One of the novelties of this treatise devoted to the medical products of the East resulted from the valorisation of reports of numerous witnesses, which only his authority as a physician could accept or decline. Thus, the reader's trust in his judgment was crucial for the success of this editorial project.<sup>26</sup>

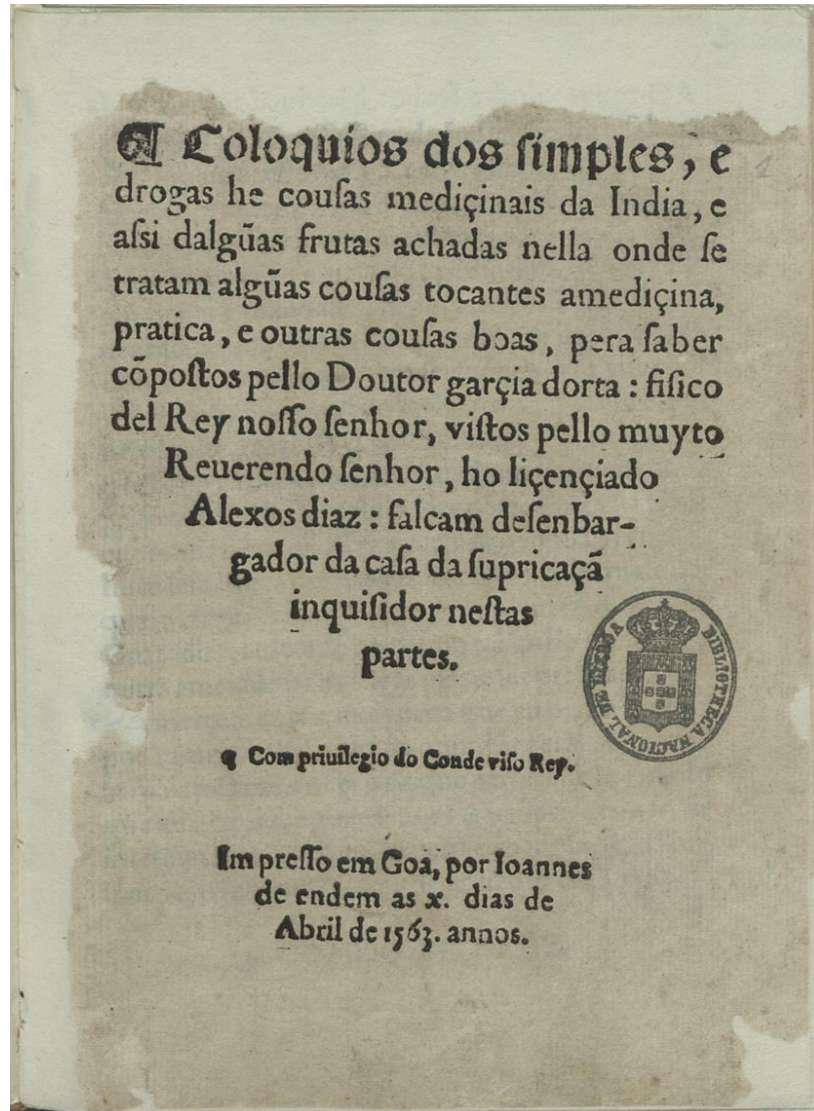


Figure 3 - Front cover of *Colloquies on the simples* (Goa, 1563) (BNP)

<sup>26</sup> Orta's authority was largely based on the trustworthy figure he created for himself. On Orta's self-representation, see: Teresa Nobre de Carvalho, *O mundo natural da Ásia aos olhos do Ocidente. Contribuição dos textos ibéricos quinhentistas para a construção de uma nova consciência europeia sobre a Ásia*, Ph.D. Thesis in History and Philosophy of Science, UL-FCUL, Lisbon, 2012 (photocopied document), pp.33–48.

The *Colloquies on the simples*, written in Portuguese and depicting the conversation between two Iberian physicians, provided the most updated knowledge on the main Oriental products, in alphabetical order. For each product, Garcia de Orta presented detailed data about its origin, use, prices, markets, distribution routes and therapeutic applications.<sup>27</sup> Useful both in Eastern hospitals and apothecaries of forts, valuable in ports and local markets, the work acquired not only great scientific and practical relevance, in Portugal and in Europe, but also an enormous strategic and commercial importance.<sup>28</sup>

### Oral and manuscript sources in the *Colloquies on the simples*

In addition to the information contained in the above-mentioned texts of Duarte Barbosa or Tomé Pires, Orta used a wide range of informants whose participation the narrative he managed with great skill.<sup>29</sup>

Physicians of Cairo and Damascus<sup>30</sup>, of Nizamoxa<sup>31</sup> and Sultan Bahadur; factors<sup>32</sup> and druggists<sup>33</sup>; employees and servants, or merchants<sup>34</sup> and lapidaries<sup>35</sup>, they all passed on to Orta their knowledge about drugs and their applications, prices and markets of origin.

<sup>27</sup> In addition to the work of Conde de Ficalho, *Garcia de Orta e o seu tempo*, Lisbon, Imprensa Nacional, 1886, which provides valuable assessments of the work of this physician, it seems useful at this point to mention some of the studies on Orta and his *Colloquies* that have recently been published in Portugal, namely: Gabriela Fragoso and Anabela Mendes (eds.) *Actas do Colóquio Internacional e Interdisciplinar Garcia de Orta e Alexander von Humboldt*, Lisboa, Portuguese Catholic University, 2008; Anabela Mendes (coord.) *Garcia de Orta and Alexander von Humboldt across the East and the West* [Proceedings of the International and Transdisciplinary Conference, Goa, 2009], Lisbon, Portuguese Catholic University, 2009; and Teresa Nobre de Carvalho, *O mundo natural da Ásia aos olhos do Ocidente*. Ph.D. Thesis, pp.23-346.

<sup>28</sup> See, for example, Harold J. Cook, *Matters of Exchange, Commerce, Medicine, and Science in the Dutch Golden Age*, London, Yale University Press, 2007, pp.93–104; M. A. Meadow, “Merchants and Marvels: Hans Jacob Fugger and the origins of the Wunderkammer” in: Pamela Smith and Paula Findlen (eds.) *Merchants and Marvels. Commerce, Science and Art in Early Modern Europe*, Routledge, New York, 2002, pp.182–200. On the relevance of the search for medical and botanical knowledge in the Iberian empires, see among others: Daniela Bleichmar, “Books, bodies and fields - Sixteenth-century transatlantic encounters with New World *materia medica*” in: Londa Schiebinger and Claudia Swan (eds.) *Colonial Botany - Science, commerce, and politics in the Early Modern World*, Pennsylvania, University of Pennsylvania Press, 2007, pp.83–99.

<sup>29</sup> Teresa Nobre de Carvalho, “Colóquios dos Simples de Garcia de Orta: Conversas no interior da Índia”, *Actas do Colóquio Internacional e Interdisciplinar Garcia de Orta e Alexander von Humboldt*, Lisbon, 2008, p.165–174 and Rui Manuel Loureiro, “Garcia de Orta Garcia de Orta e os Colóquios dos simples: Observações de um viajante sedentário”, *Actas do Colóquios Internacional e Interdisciplinar Garcia de Orta e Alexander von Humboldt*, Lisbon, 2008, pp.135–145.

<sup>30</sup> Orta, *Colloquies on the Simples and Drugs of India*, translated by Sir Clements Markham, Dehli, Sri Satguru Publications, 1987, p.205.

<sup>31</sup> Orta, *Colloquies on the Simples*, pp.310–312 and p.350.

<sup>32</sup> Orta, *Colloquies on the Simples*, pp.106–107 and p.365.

<sup>33</sup> Orta, *Colloquies on the Simples*, pp.373–374.

<sup>34</sup> Orta, *Colloquies on the Simples*, pp.432–433.

<sup>35</sup> Orta, *Colloquies on the Simples*, pp.345–347.

Every reader of the *Colloquies* had thus access to a wide range of data, which under the scrutiny of Garcia de Orta combined bookish knowledge, personal experiences and local traditions. Throughout the book's fifty-nine chapters, people from many different backgrounds and traditions interrupted the quiet conversations between the two physicians, filling the text with their knowledge and testimonies.

The information brought to him by “a factor of Ormuz” on the bezoar stone<sup>36</sup> or those “a factor from Maluco”<sup>37</sup> told him about cloves reveal his interaction with royal officials.

Information about the root of China provided by “a very honourable and rich man was cured who, being in Diu, told my master Martim Afonso de Sousa, [...] how he had been cured by the root of China, which restored him to complete health, not requiring any special diet” reflects his straightforward relationship with Portuguese noblemen.<sup>38</sup>

In the presence of a viceroy, his discussion on cardamoms with a druggist, who “was an old man who had been a long time in India” attests to his familiarity with the political power.<sup>39</sup>

The secrets entrusted to his readers about the falsification of camphor, “the Banians of Cambay confirm this; for they say in secret that when the camphor of Borneo falls short, they mix a little of it with a quantity from China, and call it all falsely camphor of Borneo”, show his ease with merchants and traders.<sup>40</sup>

The descriptions of the peculiar plants sent by Franciscan Friars, “they have a strange property, showing that they do not like to be touched”, demonstrate his close collaboration with clerics in exploring wonders.<sup>41</sup>

His judgment about East and West medical practices reveals a remarkable open-mindedness. By stating “when we find that our patients do not appreciate our gentle medicines, we deliver them over to Malabars”, Orta proved a rather unusual ability to recognise the limits of his knowledge while revealing a remarkable capacity for dialogue with local physicians.<sup>42</sup>

Finally, the new Asian fruits and herbs he described illustrate the thirst for knowledge of the simple people who worked in his house. Slaves, servants, boys, gardeners and his cook were invited to participate in the discourse bringing their knowledge into the *Colloquies*. When

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<sup>36</sup> Orta, *Colloquies on the Simples*, p.365.

<sup>37</sup> Orta, *Colloquies on the Simples*, p.217.

<sup>38</sup> Orta, *Colloquies on the Simples*, pp.380–381.

<sup>39</sup> Orta, *Colloquies on the Simples*, pp.109.

<sup>40</sup> Orta, *Colloquies on the Simples*, pp.92–93.

<sup>41</sup> Orta, *Colloquies on the Simples*, p.234.

<sup>42</sup> Orta, *Colloquies on the Simples*, pp.231–232.

he questions his maidservant about the ‘negundo’, “which is the tree you have been praising so much?” Orta allows for local traditions to enter his treatise.<sup>43</sup>

Garcia de Orta did not identify many of his sources of information, but it seems clear today that among them were the authors of the testimonies gathered in the *Elvas Codex*. Indeed, the coincidence between the reports of those officials and the information described in the *Colloquies on the Simple* leads us to assume that Orta knew the collection. Therefore, it may not be too risky to assume that some of this information had circulated in the East, albeit in a somewhat restricted way, among representatives of the local elites.<sup>44</sup>

We have selected two illustrative examples. When in this collection of data we pick information about the ‘lacre of Pegu’ provided by Alvaro de Sousa, we realise that Orta used his text.<sup>45</sup> He wrote:<sup>46</sup>

“I was deceived for a long time. [...] Afterwards I conversed with a respectable man with an enquiring mind, who told me that it was a large tree with leaves like those of a plum tree, and that the large ants deposit the lacre on the small branches. [...] They deposit the gum on the tree, as a material thing, washing the branch as the bee makes honey; and that is the truth.”

Also when referring to pepper, Orta reported a discussion he had with an apothecary he does not identify. The disagreement between the physician and the anonymous pharmacist resulted from the fact that the latter, wintering in Mozambique, challenged tradition when he realised that white pepper and black pepper came from the same plant, varying only in the degree of maturation. Orta, oddly enough, rejected the true evidence, by introducing some ambiguity in his text. He wrote: “I will tell you a story about what happened to a druggist in the time of a Governor who was very curious about medicines, to whom I spoke of the three kinds of pepper [black, white and long pepper].” On this he related to the Governor that “when he

<sup>43</sup> Orta, *Colloquies on the Simples*, p.323.

<sup>44</sup> Rui Manuel Loureiro, *Fidalgos, missionários e mandarins - Portugal e a China no século XVI*, Lisboa, Fundação Oriente, 2000, pp.396–419; Teresa Nobre de Carvalho, *O mundo natural da Ásia aos olhos do Ocidente*, Ph.D. Thesis, pp.303–313.

<sup>45</sup> As Schurhammer wrote: “Alvaro de Sousa arrived to India in 1538. He sailed in 1545 from Goa to Pegu, where, at the request of the king there, he accompanied him on his campaign against Arakan. He was, however, driven west by a storm so that he returned to India by sailing around Ceylon. In 1546 he was again in Pegu as a *capitão de carreira* with his own newly built ship. [...] It seems that he sailed back to Portugal in the beginning of 1548, where he married Francisca de Távora [...] and left behind numerous progeny.” Georg Schurhammer S.J. *Francis Xavier – His life, his times*, vol. II: India (1541–1545), p.551.

<sup>46</sup> Orta, *Colloquies on the Simples*, p.241. Alvaro de Sousa’s report reads: “Em hũu certo tempo do ano vem hũuas formyguas voando [...] comer as folhas da hũuas arvores do tamanho de nogueyras, e a folha à maneyra de era, as quoaes arvores, se lhe dão hũu golpe, deytão aguoa como sangue e em saymdo coalha-se loguo...” [“At a certain time of the year, ants flying [...] eat the leaves of trees the size of walnut trees, and those leaves as they are cut leak blood-like water that as it comes out immediately curdles.”] “Emformação d’Allvaro Souza de como se faz o lacre em Pegu” in Adelino Almeida Calado, *Livro que trata das cousas da Índia e do Japão*, p.73.

[the apothecary] was wintering in Mozambique [...] he examined the pepper and found amongst it some white from having cast off the outer rind”.<sup>47</sup>

Therefore, apparently the information collected by these men trusted by the Portuguese elite living in Goa was passed on to Orta so he could test it. In the *Colloquies on the Simples*, the physician refuted or validated the set of knowledge locally collected and tested by seconded royal officials. This multiple authorship was characteristic of the networks for collection and dissemination of information required to make novelties move from the region where they were collected to the central point where they were treated, validated and later disseminated.<sup>48</sup>

In addition to this informative role, the *Colloquies* were also important in standardising sanitary practices. The “hybrid” nature of overseas medicine and pharmacopeia, of which Garcia de Orta was a pioneer, resulted from an appropriate dialogue between knowledge acquired in European universities and the medical traditions of hakims and local physicians. This ability to criticise his own tradition, while demonstrating a remarkable open-mindedness, revealed one of the most innovative aspects of Orta’s work, which, although studied by many, still awaits a more in-depth and detailed analysis.<sup>49</sup>

## Final remarks

The reconfiguration of knowledge on botanical–medical matters as proposed by Garcia de Orta was far more complex than it might at first seem. Although observation and experience were crucial allies of textual commentary, they were not sufficient for establishing a novelty.

<sup>47</sup> Orta, *Colloquies on the Simples*, pp.373–374. In the *Elvas Codex*, the apothecary Simao Alvares reported in detail the moment when he observed this new evidence and informed his superiors: “eu, por mynha própria mão, me pus a escolher grão e grão e tirey obra de dous outros arrates de pimentta branca muyto grossa e muyto alva e pomderosa, [...] e depois a trouxe a esta cydade e a mostrey aos botycayros e fisyquos que emtão residiam nela, e, comsulttando todos juntos, asentamos em huu mesmo parecer com os escrivães malavares del Rey de Cochym, a saber, que a pimentta branca era a mesma que a preta e da mesma arvore.” [“I, with my own hand, started separating the grains one by one and did so with two pounds of very coarse and very heavy white pepper [...] Then I brought it to this city and showed it to druggists and physycists who lived here, and consulting together, we all came to the same conclusion as the Malabar scriveners of the King of Cochin that white pepper is the same as black pepper and comes from the same tree.”]

<sup>48</sup> Identical mechanisms for gathering and processing information have been described for the New World. See Antonio Barrera-Osorio, *Experiencing Nature*, pp.128–134.

<sup>49</sup> For more information on the innovative nature of the medical practices described by Garcia de Orta, see among others: Charles R. Boxer, *Two pioneers of tropical medicine: Garcia d’Orta and Nicolas Monardes*, London, The Hispanic and Luso-Brasilian Councils, 1963; P. D. Gaitonde, *Portuguese pioneers in India - Spotlight on medicine*, Bombay, Popular Prakasham, 1983; Richard Grove, “The transfer of botanical knowledge between Asia and Europe 1489-1800,” *Journal of the Japan-Netherlands Institute*, vol. 3, 1991, pp.160-176; Michael Pearson, “Hindu medical practices in Sixteenth-Century Western India: Evidence from Portuguese sources,” *Portuguese Studies*, vol. 17, 2001, pp.100-113, Kapil Raj, *Relocating Modern Science - Circulation and the construction of knowledge in South Asia and Europe, 1650-1900*. New York, Palgrave, 2007 or Teresa Nobre de Carvalho, *O mundo natural da Ásia aos olhos do Ocidente*, Ph.D. Thesis, pp.257–270.

It seems clear that it was not enough to be a keen, well-meaning observer for instantly becoming a reliable disseminator of novelties. Apparently, only someone aware of the subtle tactics of the Portuguese presence in the East would be able to propose a reconfiguration of knowledge on Asia's natural resources and elucidate readers on new truths. The absence in India, during the first decades of the century, of such a versatile and qualified person who could fulfil this daunting task seems to have justified the prudent silence of the Portuguese about the natural world they were exploiting. Garcia de Orta ultimately filled this gap, which in Europe troubled scholars and in the Portuguese kingdom worried sovereigns.<sup>50</sup>

Recognition of the value of his work was, as we know, immediate. The rapid appropriation of the book by Carolus Clusius,<sup>51</sup> Juan Fragoso<sup>52</sup> and Cristovao da Costa<sup>53</sup> disseminated throughout Europe and the Iberian empires not only the novelty of its contents but also a new method of collection, validation, transmission and dissemination of knowledge about the natural world.<sup>54</sup>

## Acknowledgments

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<sup>50</sup> We refer to the words that Pier Andrea Mathioli, in his comment to Dioscorides, addressed to Portuguese physicians: "Et vous Messieurs les Medecins du Portugal, si la Medecine vous est en recommandation, si voulez enrichir notre profession, exalter & faire grand votre nom, si charité a lieu en votre endroit, si vous avez ce naturel instinct & désir d'aider le genre humain, prenez cette charge: car si le Prince est par vous averti que ce luy sera un grand moyen d'immortalizer son nom, & qu'il sera cause d'un grandissime bien à tout le monde, luy estant, comme l'enten, Prince debonnaire & magnanime, je ne doute point qu'il n'employe tout soin & pouvoir, à remettre en lumiere non seulement le cinamome, mais aussi plusieurs autres drogues, par lesquelles les anciens Médecins ont rendu leurs Antidotes tant exquis & estimez". P. A. Mathioli, *Commentaires à Dioscoride*, Lyon, G. Rouille, 1572, pp.39-40 [1544].

<sup>51</sup> Clusius, *Aromatum et Simplicium aliquot medicamentorum apud Indus nascentium historia*, Antwerp, C. Plantin, 1567.

<sup>52</sup> Fragoso, *Discurso de las Cosas Aromaticas, arboles y frutales, y muchas otras medicinas simples que se traen de la India Oriental...*, Madrid, Francisco Sanchez, 1572.

<sup>53</sup> Costa, *Tractado de las Drogas y medicinas de las Indias Orientales*, Burgos, Martin de Victoria, 1578.

<sup>54</sup> There is now an extensive bibliography on the dissemination of the new knowledge contained in the *Colloquies on the Simple*. As an example, we mention the recent work of Francine Nave and D. Imhof (eds.), *Botany in the Low Countries (end of 15th–ca 1650)*, Plantin-Moretus Museum Exhibition, Gent, Snoeck-Ducaju & Zoon, 1993; Florike Egmond, Paul Hoftijzer and Robert Visser, *Carolus Clusius: Towards a cultural history of a Renaissance naturalist*, Amsterdam, Edita-KNAW, 2007; Florike Egmond, *The World of Carolus Clusius: Natural history in the making: 1550-1610*, London, Pickering & Chatto, 2010; Teresa Nobre de Carvalho, "A apropriação de Colóquios dos Simples por dois médicos ibéricos de Quinhentos" in Palmira Fontes da Costa and Adelino Cardoso (org.) *Percursos na História do Livro Médico (1450-1800)*, Lisbon, Colibri, 2011, pp. 59-72.