ITINER ARIO. Hoyage ofte Schipbaert / van Jan hupgen van Linkchoten naer Dolt ofte poztugaels Ju-

Dien inhoudende een cozte belchzpungige der felver Landen ende Zee-enften inet aenwpfinge van alle de voomaende pimeipale Dabens. Rebieren, hoechen ende plaetfen tot noch toe vande portugelen ontdecht ende wefen. I Waer by ghevoecht zijn / met alleen die Conterfeptiels bande habpten/drachten ende wefen. fo vande Portugelen albaer reftderende/ als vanbeingeboomen Indianen/ende hurre Tempels/Afgoden. Pupfinge/met die voomaemite 2500men Druchten frieden Dolches fo in hunnen Godts- dienften / als in Politie en thuiff houdinghe: maer oor een corte verhalinge van de Coophaubeingen hoe en waer die ghedreven en ghevonden worden/ met die ghedenetwererdichte gelehedeniffen/ beingen hoe en waer die ghedreven en ghevonden worden/ met die ghedenetwererdichte gelehedeniffen/ voorgheballen den tijt zijnder reftdentie albaer,

Alles beschreven ende by een vergadert, door den selfden, seer nut, oorbaer, ende oockvermakelijcken voor alle curieuse ende Liefhebbers van vreemdigheden.



E'A MSTELREDAM. By Cornelis Claefz. op't VV ater, in't Schrijf-boeck, by de oude Brugghe. Anno CIO. IO. XCVI.

Sources and Organisation of the Botanical Section of the *Itinerario* (1596) by Jan Huygen van Linschoten

Arie Pos*



INTRODUCTION

While studying Linschoten's *Itinerario* (1596), one may wonder how and where he obtained all his information.¹ Although various literature exists as a result of him using different written sources, there is still a lot to be

done in this field. This article presents some notes on the use of sources in the botanical section of the book and their importance in relation to the intentions of the author and his learned friend Bernardus Paludanus, who wrote annotations for most chapters. Calling the section "botanical" is somewhat problematic, for although chapters 49 to 87 deal mainly with fruits, trees, plants and herbs, they also include medicinal stuffs of other origins and minerals. But within the structure of the book, they form a distinct part, more or less systematically divided into sections and subsections, as shall be seen later.

That Linschoten included this material in the

Itinerario is very understandable. It was one of the standard parts in the descriptions of foreign lands, it appealed to the reader's exotic taste and disclosed information from less well-known chapters from God's Book of Nature. Apart from that, the information could be useful and instructive and last but not least, commercially interesting. Linschoten seems to have been well aware of all the factors when he wrote his work. His purpose was to give adequate and above all, practical and useful information about a world largely unknown to his readers. The way he organised his information reveals his intention to serve both readers who stayed at home and readers about to travel to Asia. It also reveals his awareness of the commercial

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Jan Huygen van Linschoten

AROMATVM ET SIMPLICIVM MEDICAMENTORVM HISTORIÆ LIBER I.

De Ambaro. CAP. I.



M B A R V M Latinis, Ambar Ambar. Arabibus dicitur: quo nomine omnibus, quas sciam, nationibus notum eft, aut variato duntaxat paululum vocabulo.

VARIA aute circa huius generationem Scriptoru est opinio. Siquidem alij Sperma Balena effe afferunt : alij belua cuiufdam marina excrementum, aut maris spumam (qua sanè opiniones ratione carent, quod nullum Ambarum inuenia- lenarum fper tur vbi frequentisima funt Balena, & vbi fluctuum ma non effe. reciprocatione (puma plurima excitatur;) aly Bitu- Ambaru Biminis modo ex maris aluco emanare, que opinio me- tume videti. lior, & veritati magis confona plerifque vifa eft.

AVICENNA lib. 2. cap. 63. & Serapio lib. fimp. cap. 196. (criptum reliquerunt, fungorum in rupibus & arboribus more Ambarum in mari generari, & tempestatibus vna cum saxis interdum in littus eyci; qua sentetia verisimilior est reliquis ab Auicenna productis. Nam multum flantibus Euris, magna eius copia Sofalam, & in infulas Comaro, Demgoxa, Mofambicam, totumg, eum tractum encitur è Maldiuis infulis, que ad Orientem spectant. Flanti-Infulz de Na lediua. bus

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importance of various goods. His public ranges from common or more scientifically interested readers, curious to know about foreign lands and cultures, to merchants, shippers, ship-owners, sea captains and crew.

Both the author's and the publisher's intentions are greatly responsible for the eclectic format of the subject matter. Linschoten's eclecticism can be demonstrated by focusing on the written source he used for the botanical section, Garcia da Orta's *Colóquios dos simples e drogas da Índia* (Goa, 1563).

Linschoten did not mention his source, but there is no doubt that he translated from and rearranged large parts of Orta's book, which until now is the only identified source in his part of the botanical section. We know virtually nothing about his level of education, but judging from the Itinerario, it is extremely doubtful that Linschoten read Latin or Greek.² He was certainly no academic scientist and in this respect, the difference between him and the academic doctor Paludanus is quite clear. But Linschoten had a good command of Spanish and Portuguese and gathered information from various sources in both languages. The only written source he mentions directly in his Itinerario (by giving the name of the author) is the Historia de las cosas más notables, ritos e costumbres del gran Reyno de la China (Rome, 1585) by Juan González de Mendoza, which he used for chapters 23 and 24 about China and from which he took a Bengali legend about the river Ganges (at the beginning of chapter 16). Apart from González de Mendoza, only Camões (Os Lusíadas, Lisbon, 1572), Garcia da Orta and Cristóvão da Costa have more or less been clearly identified. The influence of the latter in Linschoten's text seems restricted to chapter 46 about the elephant, which is largely inspired by Costa's "Tratado do elefante e das suas qualidades" [Treatise on the elephant and its qualities], published as an appendix to his Tractado de las drogas y medicinas de las Indias Orientales (Burgos, 1578).³

ORTA'S COLÓQUIOS

The most frequently used source by far, was Orta's *Colóquios*, where Linschoten found material for chapters 50 to 87 of the botanical section of the Itinerario. We know that Linschoten (between c. 1585 and 1590) owned a copy of Orta's book, that nowadays is kept in the Library of the University of Leiden.⁴ He must have acquired the book in Goa, where he lived and worked as a secretary to Archbishop Vicente da Fonseca from September 1583 to November 1588. The fact that he seems to have sold it before he came back to Holland, suggests that he compiled his excerpts sometime between 1585 and 1590. He omitted the dialogue format of the original and copied what he thought was interesting in a sometimes unsystematic way. Although Linschoten does not mention his source at all, there is no doubt that he worked with the Portuguese original. Because he did not read Latin, he had no access to the Latin version of the work, Aromatum et simplicium, prepared by Carolus Clusius and published in Antwerp in 1567. It is therefore important to note that this Latin version of the text was available at the time and that it was reprinted in 1593 (shortly after Linschoten's arrival in Holland in September 1592) in one volume with Clusius' Latin versions of the treatise on medicinal plants of the New World by Nicolau Monardes and the treatise of Cristóvão da Costa, Aromatum et medicamentorum, which was first published in Antwerp in 1582. Another curious fact, is that Clusius was the director of the garden of medicinal herbs at Leiden University from 1593 until his death in 1609 and that he was appointed as such after Paludanus had refused to accept the post.⁵ One could say, that scientific information was very close to hand, but still Linschoten's Dutch renderings of the original Portuguese source were published in the Itinerario, in what seems like another clear example of the eclectic and popularising intentions of the edition, aimed at average readers who had no knowledge of Latin.

The same intentions are confirmed in the way he organised and presented his extensive borrowings from Orta. Linschoten did not follow the alphabetical order of the original, nor the modified order of Clusius. He neither translated the entire book, nor did he include all of the described materials. He made a selection and arranged everything into four themed sections, revealing a subdivision inspired by utility and commercial and practical importance. In order to convey an idea of Linschoten's reorganisation of the subject matter, in the following listings, the order of the four sections is compared to Orta and Clusius.

First page of Carolus Clusius' Aromatum et simplicium aliquot medicamentorum apud indos nascentium historia.

TABLE 1

Chapter in <i>Itinerario</i>	<i>Colóquio</i> Orta	BOOK/CAP. CLUSIUS
49. ananás/pineapple	_	note II/IX
50. jaca/jackfruit	28	II/IIII
51. manga/mango	34	II/IX
52. caju/cashew	_	note I/XXX
53. jambo/jamboo	28	II/XIII
54. jangoma/flacourtia	28	II/V
carambola/star fruit	12	II/XV
brindões/kokum	10	II/XIX
jambolões/jambolan	12	II/XVIII
papaia/pawpaw	_	_
pateca/watermelon	36	II/XX
55. figos-da-índia/bananas	22	II/X
56. cocos/coconut	16	I/XXVI
57. durião/durian	20	II/XI
58. árvore-de-raízes/banyan tre	e _	_
cana-de-açúcar/sugar-cane	_	_
bambu/bamboo	(51)	(I/XII)
tabaxir/tabashir	51	I/XII
59. árvore-triste/Arabian jasmi	ne 6	II/I
60. bétele/betel	22, 59	I/XVIII
areca/betel nut	22, 31	I/XXV
61. datura/thorn apple	20	II/XXIIII
erva-sentida/"feeling herb"	(27)	(II/XXVII)

FIRST SECTION

The first section covers chapters 49 to 61 (see Table 1). The title of the 49th chapter clearly states the theme: "Of all fruits, trees, plants and common herbs in India".

Chapters 49 to 57 deal with fruits and chapters 58 to 61 with trees, plants and herbs. The first section is dominated by the products of importance to visitors to India and also their interest to the curious reader. Although fruits, since they were perishable, had little or no commercial export value for the European ships (although Linschoten mentioned preserved fruits), they were however very important and useful to visitors to India. Linschoten states that the jackfruit, the pineapple, the mango, the cashew and the jamboo "are the fyve principallest & most esteemed fruites in all India" (Hakluyt II, 36-37), which explains their prominent position in the listing. The fact that the pineapple comes in first and the cashew in fourth place is of particular interest in the comparison with Orta. The Portuguese botanist only mentions the *ananas* briefly in *Colóquio* 58, remitting the reader to Oviedo's *Historia General y Natural de las Indias*. Clusius later described the fruit, in his version of Costa's *Tractado*. The pineapple existed in the West-Indies and the Portuguese took the fruit from Brazil to India. Linschoten says that the pineapple was an expensive novelty at first, but that in his time "there are so many growen in the Countrey, that they are very

good cheape" (Hakluyt II, 19) and that "*ananas* is one of the best fruites, and of best taste in all India" (*ib*.).

Orta does not describe the cashew, another fruit brought from Brazil to India by the Portuguese. Clusius describes the fruit in a note at the end of the chapter dedicated to the *anacardo* (I/XXX) and says that it is "a kind of nut that sometimes is brought from the land of the Brazilians to Lisbon" (Clusius, 141). Cristóvão da Costa however found cashew trees in many gardens of Cochin (*Tractado*, 324), whereas later on Linschoten states, "they are [...] in great numbers all over India" (Hakluyt II, 29).

Another fruit not mentioned by Orta and recently brought from the West Indies is the papaya (chapter 54). Linschoten seems to have been the first to refer to its existence in India. He tells that the fruit "came out of the Spanish Indies, brought from ye Philippinas or Lusons to Malacca, & from thence to India' (Hakluyt II, 35) and that it "at the first for the strangenes thereof was much esteemed, but now they account not of it." (*ib.*).

The trees, plants and herbs mentioned afterwards can be catalogued under oriental curiosities, with *tabaxir* as an exception because of its readily stated high commercial value in the Arab world. An interesting detail in the description of the *cana-da-india* (cane of India), is the fact that Linschoten uses the name *bambus*, still unknown to Orta, Clusius and Costa. Something similar occurs in the description of the "feeling herb", where Linschoten uses one of the Portuguese names of the plant (*herba sentida*), whereas Orta only gives a very short description (*Colóquio* 27), elaborated by Clusius

Jamboo, mango, cashew and jackfruit trees, in Linschoten's Itinerario.



TABLE 2

Chapter in <i>Itinerario</i>	Colóquio Orta	BOOK/CAP. CLUSIUS
62. pimenta/pepper	46	I/XXII
63. canela/cinnamon	15	I/XV
64. gengibre/ginger	26	I/XLI
65. cravo/cloves	25	I/XXI
66. maça/noz-moscada	32	I/XX
mace/nutmeg		
67. cardamomo/cardamom	13	I/XXIIII
68. laca/lacquer	29	I/VIII
69. anil/indigo	7	II/XXVI
70. âmbar/ambergris	3	I/I
almíscar/musk	_	_
algália/civet	_	_
71. benjoim/benzoin	9	I/V
72. incenso/incense	55	I/VI
mirra/myrrh	55	I/VII
73. maná/manna	33	I/IX
ruibarbo/rhubarb	48	I/XXXVII
74. sândalo/sandalwood	49	I/XVII
75. pau-de-cobra/snake root	42	I/XLIIII
76. calamba/linaloe	30	I/XVI
77. raiz-da-china/china root	47	I/XXXVIII
78. anfião/opium	41	I/IIII
79. bangue/bang	8	II/XXV
80. cânfora/camphor	12	I/IX
81. tamarindo/tamarind	53	I/XXVIII
canafístula/cassia fistula	14	I/XXIX
82. mirabólanos/myrobalans	37	I/XXVII

in chapter 27 of the second book under the title "De Anonymo". Costa gives a more detailed description, calling the plant *yerba Biva* and by its vulgar name *yerva Mimosa* (*Tractado*, 241).

The curiosities in this section, end in an apotheosis at the end of chapter 61 where Linschoten tells the most incredible fact in the whole book: in Goa, at a place called Mata-Vacas, where animals are slaughtered for meat, horns of killed animals lie scattered and thrown about on the ground and as Linschoten states, have grown roots "as if it were a tree, as I my selfe have seene and pulled forth many of them, that had rootes of two or three spannes in length, which was never seene in any part of the world." (Hakluyt II, 71). Significantly enough, Paludanus does not comment on the phenomenon nor on Linschoten's personal observation, whereas Clusius seems to have omitted the horns completely from his Latin version

- at least I was not able to find them. Linschoten tells that the horns with roots inspired a joke, saying that the men of Goa were the greatest hornbearers (*cornudos*) in the world, because in other places the horns could be definitively cut, whereas in Goa they started to grow again because they had roots. The joke is indeed very applicable to the stories about adultery in Goa Linschoten tells, but it remains very unlikely that the rooted horns really existed. But Linschoten is not the only one who mentions them. Garcia de Orta himself mentions them in his *Colóquio* 58, after having severely criticised Andreas de Laguna about the supposed existence of mineral ivory. I cite the clause of the lively debate between Ruano and Orta:

"Ruano: It seems to me that we can excuse Laguna for you yourself showed me here some days ago horns that grew roots in the ground and I myself have seen them with very big roots.

Orta: It is true that I showed them to you and there are lots of them in this region because it is humid; but ivory does not grow roots, that's completely impossible." (*Colóquio* 2, 380)

So ivory does not grow roots but horns do, at least in the humidity of Goa, as not only Linschoten but also Ruano and Orta can guarantee from personal observation. Although I have heard three possible explanations —a horn shaped *Lithops* variety, fossilised or petrified horn shaped (tree)roots or plants, weeds grown into the porous horn mass— there does not seem to be any definitive solution to the enigma. Nowadays, we would call it an urban legend.

SECOND SECTION

The title of chapter 62 formulates the theme of the second section and promises to deal with "spices, drugs, plants and the most commonly sold medicinal stuffs in India".

In this second section (see Table 2), the commercial interest is obvious and the products are subdivided into spices (62 to 67), useful drugs (68-69), aromatic drugs (70-72), purgatives (73), aromatic and medicinal woods (74-77), drugs in the modern sense of the word (78-79), an aromatic ingredient for medicaments (80) and more purgatives (81-82).

Due to their commercial value in the European market, the spices appear first and in an order which seems to follow their real value at the time, when compared to the statistics of the main products from Asia arriving in Lisbon during the years 1587-88:

1. pepper (68%)

2. cinnamon (6.3%)

3. ginger (3.7%)

4. others, including cloves, mace and nutmeg $(1.6\%)^6$

Cardamom had little commercial importance in Europe, but as Linschoten refers, was very much used and sold in the Indian market. The same is true for most of the other products and also here Linschoten emphasises their importance in the local market and as barter goods. Remarkably, lacquer and indigo are positioned immediately after the valuable spices, which seems to correspond with their importance at the time – lacquer above all in the Asian market (brought from Pegu to Sumatra where it was bartered for pepper!) and indigo in Portugal, where the King in 1588 leased contracts for the commercialisation of the product which amounted to 8.4 % of incoming Asian goods in Lisbon in 1587-88.⁷

THIRD SECTION

The third section (see Table 3) deals with "other Indian spices and herbs" as the title of chapter 83 states.

This chapter covers briefly, products for medicinal or culinary use which are commonly sold on the Asian market and shipped to Europe in small quantities.

FOURTH SECTION

The fourth and last section (see Table 4) deals with "all sorts of pearls and precious stones" as indicated in the title of chapter 84.

It is unnecessary to say that in these chapters the commercial value is most important, as is emphasised in the later chapters (88-91), in which Linschoten's authorship can be seriously doubted.⁸ They deal specifically with the recognition and evaluation of diamonds, rubies, emeralds and pearls. The chapters seem to be the work of a specialist and must have been added later.

We can conclude that in the chapters 49 to 87, Linschoten used Orta extensively, borrowing the facts he considered most useful, curious and above all most

TABLE 3

Chapter in <i>Itinerario</i>	Colóquio Orta	BOOK/CAP. CLUSIUS
83. espiquenardo/spikenard	50	I/XXXIII
aloés/aloe	2	I/II
anacardo/cashew	5	I/XXX
cálamo-aromático/sweet flag	11	I/XXXII
costus/costus root	17	I/XXXV
cubebas/cubeb	19	I/XXIII
fólio índio/malabathrum	23	I/XIX
galanga/galingale	24	I/XL

TABLE 4

Chapter in <i>Itinerario</i>	<i>Colóquio</i> Orta	BOOK/CAP. CLUSIUS
84. pérolas/pearls	35	I/LVII
85. diamantes/diamonds	43	I/XLVII
86. rubis/rubies	44	I/XLIX
balax/balais	44	I/XLIX
espinela/spinels	44	I/XLIX
safiras/sapphires	44	I/L
jacintos/jacinth	44	I/LI
granadas/garnet	44	I/LI
robazes/rubies	_	_
esmeraldas/emeralds	44	I/XLVIII
turquesas/turquoises	44	I/XLVIII
jaspe/jasper	44	I/LII
crisólito/chrysolite	44	_
ametistas/amethysts	44	– I/LIII
alaqueca/pedra-de-sangue/bloodstone	e 44	
pedra-de-leite/milkstone	_	_
alambre/amber	_	_
olhos-de-gato/agates	44	I/LIIII
pedra-de-cevar/lodestone	43	I/LVI
87. pedra-bezar/bezar stone	45	I/XLV
pedra-de-porco/hogg's stone	58	I/XLVI
pedra arménia/Armenia stone	43	I/LV

interesting from a commercial point of view. Instead of an overall translation, he presented summaries and dealing with oriental trade goods, he restricted himself generally to: where they were found, how they were called, what they were, which use they had and where they were sold. Orta's influence is restricted to a well defined part of the book. In the

Orta's influence is restricted to a well defined part of the book. In the rest of the book there are only very few borrowings from Orta to be found. The largest in chapter 27, which is an adaptation of *Colóquio* 10 about the history of Goa before the arrival of the Portuguese. The others are very small and have to do with religious matters in India.

PALUDANUS' ANNOTATIONS

Dr. Bernardus Paludanus, born as Berent ten Broecke (1550-1633), travelled widely through Europe and the Near East and graduated in Philosophy and Medicine at Padua University in 1580. At the time of Linschoten's return to Holland he was town physician of Enkhuizen, where he must have met the adventurer shortly after his arrival. Paludanus was a keen collector of exotic rarities which he studied, described and kept in a cabinet of naturalistic curiosities that gained him international fame. He exchanged letters and items with other collectors and scientists and received rare samples from all over the world. He must have been eager to know what new things Linschoten could show and tell him. It seems that the two rapidly became acquainted and subsequently became good friends. Linschoten even offered various items he had brought with him to Paludanus, such as two birds of paradise from the Moluccas, penis bells from Pegu, Chinese paper with written characters, Chinese chopsticks and seeds of the arbor tristis (Arabian jasmine).

As an experienced herbalist and botanist, a respected scholar and medical doctor and a *connoisseur* of exotic natural products, Paludanus contributed 57 learned notes to the botanical section of the *Itinerario*,

where they appear in a different letter type under the heading "Annotatio D. Palud." He did not add any annotations to the fourth section on pearls and precious stones. Unlike Garcia da Orta, Paludanus had not been to India to study the species *in loco*. He tried to

cultivate exotic plants in his garden from seeds and samples he received, but sometimes in vain, as was the case with pineapples (ch. 49) and the seeds of the arbor tristis (ch. 59). Quite often, he was unable to describe the plants and trees and their characteristics from personal observation, so he compiled most of his information from written sources, now and then adding personal notes, mostly based upon his observations during his travels in the Near East. In keeping with common practice amongst scholars in his days, he refers for further reading to the works of respected naturalists and physicians. A closer look at his references

to classical and contemporary sources reveals however, that most of them were taken straight from Clusius' rendering of Orta's *Colóquios*.

Many of the "Annotationes" give information of a more scientific nature which Linschoten excluded while adapting parts of Orta's original, but Paludanus' complementary notes were based on the same source, be it adapted from Clusius' Latin version. Clusius had carefully completed Orta's short references to earlier authors, which made his version extremely helpful to Paludanus. He simply copied the references, without having to consult the works of the authorities he mentions, such as Avicenna, Dioscorides, Galenus, Pliny the Elder, Rasis and Serapion. In fact the only references he did not take from Clusius are to "the learned Doctor Simon de Tovar", who from Seville sent him a sample of a variety of snake wood (ch. 75), "the learned Doctor Camerarius", who cultivated indigo in his garden (ch. 69), and the Italian physician F. A. Mattioli (ch. 81 and 82).

Bernardus Paludanus.

The fact that Paludanus relied so strongly on Clusius' writings makes it difficult to form an idea about his own knowledge of fruits, trees and plants from India. He certainly was no specialist on the subject and he gratefully acknowledged Clusius' authority by quoting from and referring to the "excellent commentaries of the experienced and very learned Dr. Clusius", his "singular master and friend".

It is interesting to see that Paludanus provided extensive annotations about what Linschoten considered to be the five most important Indian fruits (pineapple (ch. 49), jackfruit (50), mango (51), cashew (52) and jamboo (53)), which were placed before Linschoten's shorter texts. As we have seen the pineapple was only briefly mentioned by Orta, whereas Linschoten's description is mainly based on his personal experience in India. Paludanus offers more botanical information and tells that he had some plants in his garden, brought to him from Brazil, but that they did not survive because of the cold. For further reading he refers to "Costa in the proper Chapter of Ananas, and Oviedius in the eighth booke, and eighteenth Chapter: and Thevetius in his observations of America, in the six and fortieth Chapter" (Hakluyt II, 18-19). Until now these references seem to have led astray various editors of the *Itinerario*, including myself for the Portuguese version. With the English and Dutch editors, I believed that Paludanus was on his own account recommending sources for further

Coconut, banana and areca trees, in Linschoten's Itinerario.



reference and in notes I identified them as Clusius' Latin version of Costa, Oviedo's Historia General y Natural de las Indias (Vol I, Seville, 1535) and F. A. Thevet's Les Singularitéz de la France Antarctique (Paris, 1557-1558). Because both Linschoten and Paludanus were acquainted with the third volume of Ramusio's Delle Navigatione et Viaggi (Venice, 1556), which includes an Italian version of Oviedo's book, I supposed that Paludanus knew Oviedo from Ramusio's collection. But in fact the case is much more simple. Apart from two personal remarks, Paludanus compiled his annotation about the pineapple entirely from Clusius' versions of Costa and Orta. In the latter, at the end of the chapter about the mango (Book II, ch. 9), Clusius dedicates an extensive note to Oviedo's description of the jaiama (pineapple) from which Paludanus copied a large part. He also copied the references to the chapters in Oviedo and Thevet from Clusius.

The same thing happens in most of the other longer annotations Paludanus prepared. There can be no doubt that he used what was closest to hand and happened to be a relatively recent and carefully updated version by Clusius of two of the most important sources at the time: the treatises of Garcia da Orta and Cristóvão da Costa. Like Linschoten's descriptions, Paludanus' annotations served above all a practical purpose, which was to make solid and useful information about fruits, plants, trees, spices and medicinal stuffs from the East Indies accessible in Dutch to a general public that was unable to read Latin. The merit of his annotations does not lie in their contribution towards the progress of botany or medicine in his days (in fact they contributed very little in that field), but in the popularisation of scientific knowledge for the common reader, not only in Dutch, but through translations, also in English, German and French.

In general Paludanus added more specific botanical facts to Linschoten's summarized renderings of Orta's original text. Using the same source in Clusius' version, he sometimes repeats or even contradicts what Linschoten mentions, giving the impression that he prepared his notes in a hurry without paying much attention to what his friend wrote. But the fact is also that Linschoten didn't always present his descriptions in a systematic way, forcing Paludanus to give complementary information about



Bamboo, banyan and durian trees with fruits, in Linschoten's Itinerario.

the origin, localization, naming, shape, growth, uses and/or medicinal virtues of a plant. Actually it seems that the annotations by Paludanus were intended to update and fill gaps in Linschoten's information, raising it to more scientific standards and adding Paludanus' authority of a respected scholar. For that purpose, Clusius' Latin versions of Orta and Costa came in very handy indeed because they were close to the Portuguese source Linschoten used. The fact that Linschoten no longer owned Orta's *Colóquios* may have been an important reason to use the Latin version.

As has been said, apart from Orta, Paludanus used Clusius' adaptation of Costa's work. A listing of Paludanus' sources can give an impression of the importance of Clusius' Latin versions for the annotations (Table 5):

From the listing, it is quite easy to see that Clusius' version of Orta was his main source used for the description of 25 items. Costa provided information for 10 annotations. Paludanus got most of his information about exotic fruits and trees from Orta and Costa, subjects he was obviously less familiar with, but which he found interesting enough for extensive notes – especially the first five fruits (ch. 49-53) (the banana (ch. 55), the coconut (ch. 56), the durian (ch. 57), the banyan tree (ch. 58) and Arabian jasmine (ch. 59). Remarkably, he added a little about pepper and cinnamon (products Linschoten had dealt with quite extensively), because of their commercial importance.

TABLE 5

Сна	pter in <i>Itinerario</i>	Sources of annotation
49.	ananás/pineapple	Clusius: added note in Orta, Costa
50.	jaca/jackfruit	Clusius: Orta, Costa
51.	manga/mango	Clusius: Orta, Costa
52.	caju/cashew	Clusius: added note in Orta
53.	jambo/jamboo	Clusius: Costa
54.	jangoma/flacourtia	Clusius: Orta
	carambola/star fruit	Clusius: Orta, Costa
	brindões/kokum	Clusius: Orta
	jambolões/jambolan	Clusius: Orta, Costa
	papaia/pawpaw	no annotation
	pateca/watermelon	no annotation
55.	figos-da-índia/bananas	Clusius: Orta
	inhame/yam	Paludanus
56.	cocos/coconut	Clusius: Orta, Costa
57.	durião/durian	Clusius: Orta, Costa
58.	árvore-de-raízes/banyan tree	Clusius: separate publication
	cana-de-açúcar/sugar-cane	no annotation
	bambu/bamboo	Clusius: Costa
	tabaxir/tabashir	Clusius: Orta
59.	árvore-triste/Arabian jasmine	Clusius: Orta, Costa
60.	bétele/betel	Clusius: Orta
	areca/betel nut	no annotation
61.	datura/ thorn apple	Clusius: Orta
	erva-sentida/feeling herb	no annotation
62.	pimenta/pepper	Paludanus
63.	canela/cinnamon	Paludanus
64.	gengibre/ginger	Clusius: Orta
65.	cravo/cloves	Clusius: Orta
66.	maça/noz-moscada	Clusius: Orta + Paludanus
	mace/nutmeg	Clusius: Orta + Paludanus
67.	cardamomo/cardamom	Clusius: Orta + Paludanus
68.	laca/lacquer	Paludanus
69.	anil/indigo	Paludanus

Сна	pter in <i>Itinerario</i>	Sources of annotation
70.	âmbar/ambergris	Paludanus
	almíscar/musk	Paludanus
	algália/civet	Paludanus
71.	benjoim/benzoin	Paludanus
72.	incenso/incense	Paludanus
	mirra/myrrh	Paludanus
73.	maná/manna	Paludanus
	ruibarbo/rhubarb	no annotation
74.	sândalo/sandalwood	Paludanus
75.	pau-de-cobra/snake root	Paludanus
76.	calamba/linaloe	Clusius: Orta + Paludanus
77.	raiz-da-china/china root	Paludanus
78.	anfião/opium	Paludanus
79.	bangue/bang	Paludanus
80.	cânfora/camphor	no annotation
81.	tamarindo/tamarind	Paludanus
	canafístula/cassia fistula	Paludanus/Mattioli
82.	mirabólanos/myrobalans	Clusius: Orta + Paludanus/Mattioli
83.	espiquenardo/spikenard	Paludanus
	aloés/aloe	Paludanus
	anacardo/cashew	Paludanus
	cálamo-aromático/sweet flag	Clusius: Orta + Paludanus
	costus/ costus root	Clusius: Orta + Paludanus
	cubebas/cubeb	Paludanus
	fólio-índio/malabathrum	Clusius: Orta + Paludanus
	galanga/galingale	Paludanus

Paludanus' own annotations address mainly medicinal stuffs he already knew quite well and they are short when compared with the ones inspired by Orta and Costa. Mostly they consist of just a few lines, with remarks about medicinal virtues and/or a description of specimens that Paludanus had in his collection. His experiences and observations on his travels through the Near East, especially in Egypt and Turkey, are frequently used to complement the information centred on India. Thus, the reader learns for example that China-root, enthusiastically described by Orta as a relatively recent and miraculous medicine used in India against syphilis, is commonly used in Egypt for the same purpose and against many other diseases (ch. 77) and that tamarind also grows in Egypt and is widely used against fevers by Egyptians and Turks, and cured Paludanus of a "pestilent fever" when he was in Syria (ch. 81).

THE ILLUSTRATIONS

Linschoten and Paludanus seem to have agreed fairly well about which items were the most exotic and most important. Their choice is also reflected in the four illustrations related to the botanical section that were published in the *Itinerario*. The engravings were made after drawings Linschoten himself had made in India. The fact that he had actually seen the trees, plants and fruits in their natural state and drawn them "according to life" justified their inclusion in the book, for this kind of first hand material was still extremely rare at the time. Compared to a botanist's herbal drawing, the drawings may be lacking in detail but in order to get a general impression, seem quite accurate.

The first shows four trees: jamboo, mango, cashew and jackfruit with their fruits and also indicate the way pineapples and ginger grow. In the main text, Linschoten writes about the illustration:

> "By these pictures you may see the forme and fashions of the fruites called Iaacka, Ananas, Mangas, Caius, & Iambos, which are the fyve principallest & most esteemed fruites in all India, for others are but of small account: of Ginger also as it groweth, whereof in an other place I will say more [...]: all which are set down according to the life, although the leaves are not altogether so proportionable with their strings and veynes, as they should be, or as the Physitions and Doctors in their Herbals have described them, having onely shewed the forme and growth of the fruites, as I have seene and used them." (Hakluyt II, pp. 36-37)

The second engraving has three coconut trees, two banana trees and an areca tree with a climbing pepper plant and also shows the various fruits. They are placed in a setting full of human activity and with an elaborate natural background, giving a vivid impression of the exotic reality. Linschoten described the coconut tree and fruit with their many uses extensively, stressing their importance for the local economy. In the picture two men can be seen distilling palm wine over a fire while a third climbs a tree to collect fruit. In the second tree from the left, two round vessels collect palm liquid.

The third engraving shows bamboo, the banyan tree and a durian tree with fruits and the fourth picture is dedicated to the Arabian jasmine by day (left), with



Arabian jasmine by day (left) and by night (right), in Linschoten's Itinerario.

a man and a woman collecting its fallen blossoms, and by night (middle) when the blossoms open and spread a perfumed scent. On the right, a seated woman holds a tray with the ingredients for chewing betel.

CONCLUSION

From the special attention both Linschoten and Paludanus dedicated to the plants and trees and their fruits that we also see depicted in the engravings, we can conclude that these were the items considered to be the most exotic and interesting for the reader. Text and illustrations show that the botanical section of the Itinerario was not meant to be a scientific herbal, but a popularizing publication about Indian flora appealing to the curiosity of common readers who stayed at home and supplying useful and practical information for those about to travel to Asia. The circumstances at the time, with the first Dutch naval expedition to India being prepared to set sail on 1 April 1595, seem largely responsible for the eclectic formula defined by the urgent need for information and the possibilities of the available material. Linschoten organized his rearranged versions of Garcia da Orta's Colóquios according to commercial importance and practical use and Paludanus supplied complementary information based on Clusius' Latin renderings of Orta and Costa and his own experience in the Near East. Thus, the first book published in Dutch written by a Dutchman who had lived in India, made a wide variety of botanical information about India accessible to the common reader. RC

NOTES

- For the identification of sources, see especially the *Itinerario* editions in Dutch (Kern-Terpstra, Linschoten-Vereeniging 1955-1957), English (Burnell/Tiele, Hakluyt Society 1885 and Van den Boogaart 1999) and Portuguese (Pos/Loureiro 1997) and the extensive articles by H. Houwens Post ("A terminologia portuguesa", 1960, and "De lusitanismen in de Itinerario", 1962-1963).
- 2 McKew Parr (pp. 12-13) advances the possibility that he may have attended the "Enkhuizen Latin School" and borrowed books from the municipal library. But there is no evidence that the school or the library existed before Jan Huygen left Enkhuizen in 1579 (see also Van den Boogaart 1999, p. 3). In the entire *Itinerario* text by Linschoten I only found seven references to Latin: five words, three of which were copied from Orta (*'cinnamomun'*, *'opio* or *opium*' and *'margarita'*), the other two being *'paradiseas'* (birds of paradise) and *'rhinocerontes*', the reference that the book of González de Mendoza was translated from Spanish into Latin and an interesting remark in the last chapter (99), where it is stated that on Terceira Linschoten

BIBLIOGRAPHY

- Boogaart, Ernst van den, *Jan Huygen van Linschoten and the Moral Map of Asia*. London: Roxburghe Club, 1999.
- Clúsio, Carlos, Aromatum et simplicium aliquot medicamentorum apud indos nascentium historia. Versão portuguesa do epítome latino dos Colóquios dos Simples de Garcia da Orta. Introdução e versão portuguesa de Jaime Walter e Manuel Alves. Lisboa: Junta de Investigações do Ultramar, 1964. (Ed. bilingue).
- Costa, Cristóvão da, *Tractado de las drogas y medicinas de las Indias* Orientales. Burgos, 1578.
- Linschoten, Jan Huygen van, Itinerario, Voyage ofte Schipvaert van Jan Huygen van Linschoten naer Oost ofte Portugaels Indien, 1579-1592. Ed. H. Kern. 2nd. ed. revised by H. Terpstra. 3 Vols. The Hague, 1955-1957. (Linschoten-Vereeniging LVII, LVIII, LX).
- Linschoten, Jan Huygen van, *The Voyage of Jan Huyghen van Linschoten to the East Indies*. From the old English translation of 1598. Edited by A. C. Burnell and P. A. Tiele. London, 1885. 2 vols. (Hakluyt Society LXX-LXXI).
- Linschoten, Jan Huygen van, *Itinerário, Viagem ou Navegação para as Índias Orientais ou Portuguesas.* Edição preparada por Arie

and a friend visited a captured English captain but were unable to speak to him because he only spoke English and Latin (Hakluyt II, 312). Furthermore, the only reference to Greek or to any classical author in Linschoten's text is found in a description of Saint Elmo's fire, where it is said that "in Antiquity the Greeks used to call it, as Ovid mentions, Helle and Phryxus" (cf. Hakluyt II, p. 238).

- 3 The only other possible trace of Costa found in Linschoten's text is a remark in chapter 56 about the vessel (Port. "calão") used for the production of *sura* (palm-wine).
- 4 See "Introdução" in *Itinerário, Viagem ou Navegação de Jan Huygen* van Linschoten para as Índias Orientais ou Portuguesas, pp. 32-33.
- 5 See Florike Egmond, "Een mislukte benoeming. Paludanus en de Leidse universiteit", in *Souffrir pour parvenir*, pp. 51-64.
- Subrahmanyam, The Portuguese Empire in Asia 1500-1700, p. 166.
 Ibidem.
- 8 See "Introdução" in Itinerário, Viagem ou Navegação de Jan Huygen van Linschoten para as Índias Orientais ou Portuguesas, pp. 33-34.

Pos e Rui Manuel Loureiro. Lisboa: Comissão Nacional para as Comemorações dos Descobrimentos Portugueses, 1997.

- McKew Parr, Charles, *Jan van Linschoten: the Dutch Marco Polo*. New York: Crowell, 1964.
- Orta, Garcia da, *Colóquios dos Simples e Drogas da Índia*. Reprodução em fac-símile da edição de 1891 dirigida e anotada pelo Conde de Ficalho. 2 vols. Lisboa: IN-CM, 1987.
- Post, H. Houwens, "A terminologia portuguesa ou aportuguesada do 'Itinerário, Viagem ou Navegação à Índia Oriental ou Portuguesa de João Huyghen van Linschoten (1563-1611)", in *Revista de Portugal*, série A – Língua Portuguesa, vol. XXV (1960), pp. 349-361; 454-472.
- Post, H. Houwens, 'De lusitanismen in de Itinerario van Jan Huygen van Linschoten (1563-1611)', in *De nieuwe taalgids* 55 (1962), pp. 161-171; 327-334; 56 (1963), pp. 108-113; 169-172.
- Souffrir pour parvenir. De wereld van Jan Huygen van Linschoten. Onder redactie van Roelof van Gelder, Jan Parmentier en Vibeke Roeper. Haarlem: Arcadia, 1998.
- Subrahmanyam, S., The Portuguese Empire in Asia 1500-1700. A political and economic history. London/New York: Longman, 1993.