

Glimpsing Southeast Asian *Naturalia* in Global Trade, c. 300 BCE–1600 CE

Raquel A.G. Reyes

The Loris and the Lory in Renaissance Europe

Sometime in the sixteenth century two remarkable creatures from Southeast Asia arrived in Europe. The slow loris, *Nycticebus coucang*, is a small, densely furred, tree-dwelling primate. It is nocturnal, foraging in the darkness for food using its large round eyes. Unusually for a mammal it is venomous, repelling predators with a poisonous bite and protecting its young by licking it with its tongue, thus coating it in toxic saliva. The purple-naped lory, *Lorius domicella*, is a species of parrot from the forests of the Moluccas. It is 11 inches long and a carnival of colour and sound: emerald green wings are set against deep red plumage, blue feathers cover its thighs; it has a curved orange beak, a crown of black shading to purple at the nape, hence its name, and, unlike lesser birds that utter pitched shrieks, the lory whistles a melodious ‘weee ooo weee auuh’ as it flits through the forest. We know something of the European adventures of the loris and the lory. The loris was presented to the imperial court of Rudolf II in Prague and drawn by the court painter to the Habsburgs, Giuseppe Arcimboldo (1526–1593), an artist and naturalist renowned for his painterly invention of composite heads. The purple-naped lory appeared in the painting *The Baptism of Christ* by the Venetian painter Giovanni Bellini (1430–1516), an arresting little detail in which the divine and the worldly came together for visual contemplation.

How Arcimboldo used his drawing of the slow loris is uncertain. The extant drawing shown here (Fig. 7.1. Top animal) is likely to have been based on a prototype that in turn was copied.¹ Whether he intended to incorporate it in a portrait or as a nature study is open to speculation. Arcimboldo was a court

1 The miniatures of animals and birds found in folio Cod. Min. 129, fol. 38r in the Österreichische Nationalbibliothek, in which the drawing of the slow loris is to be found, are copies attributed to Dietrich de Quade van Ravesteyn, who was in Imperial Service 1587–1609 and so roughly contemporary with Arcimboldo. I am grateful to Thomas DaCosta Kaufmann for this point and to Mag Prokop, archivist at the Österreichische Nationalbibliothek. See also DaCosta Kaufmann (2010:138).



FIGURE 7.1 *Slow loris* (animal above).

REPRODUCED WITH KIND PERMISSION FROM ÖSTERREICHISCHE
NATIONALBIBLIOTHEK

painter but he was also a respected expert in the collection and depiction of *naturalia*. He was in direct contact with court physicians and naturalists throughout Europe, notably Franciscus de Paduanis and Ulisse Aldrovandi in Italy to whom he sent drawings of exotic flora and fauna. His nature paintings,



FIGURE 7.2 *Altarpiece, Church of Santa Corona, Vicenza, Italy.*

PHOTOGRAPH TAKEN BY THE AUTHOR



FIGURE 7.3 *Altarpiece detail.*

PHOTOGRAPH TAKEN BY THE AUTHOR

executed in gouache and watercolour, were probably drawn *ad vivir*, from life (Swan 1995:353–372). These works were not merely preparatory studies for his artworks. They played an important role in the dissemination of knowledge about natural history by complementing the prized imperial menageries of actual birds and animals, and serving as references for naturalists (DaCosta Kaufmann 2010:122–124). The range and extent of Arcimboldo's animal studies is only just being uncovered; among the many other exotic creatures he is known to have drawn was the purple-naped lory that also attracted Bellini (DaCosta Kaufmann 2010:132).

Bellini's painting is a startlingly exotic presence in a picture famous for its allegorical depiction of the history of Salvation (Fig. 7.2). According to Oskar Bätschmann, Bellini sought to illustrate the union of the Trinity and the Incarnation, and the earthly consequences of these events. The purple-naped lory is shown beside the standing Christ, positioned somewhat lower than knee level (Fig. 7.3); it is perched daintily upon a branch, a vivid flashpoint of red and green against a background of dark sandy rocks and shadowy crevices. Its presence in the picture can be variously interpreted. A parrot was thought to herald Caesar; or, in Christian symbolism, promulgated the arrival of God's Son or alluded to his earthly status. It is this latter meaning that most resounds. Captured from a distant land and brought to Europe via the Arabian import trade, the lory is directly tied to the world of trade and the collection of rare exotica. Placed in such close proximity to Christ, its presence is a reminder of

the artist's intention to depict the event of Christ's baptism as a revelation of His dual nature.²

In a book that honours the pioneering work of Peter Boomgaard in the fields of economic, demographic, and environmental histories of Southeast Asia, this contributory chapter engages with one pre-eminent concern of that scholarship, namely the historical relationship between humans and their natural environment in maritime Southeast Asia in the *longue durée*. Over the last two decades, Peter Boomgaard's many publications on this theme have focused on the long histories of exploitation and processes of extraction of natural resources from the region's forests, seas, lakes, and rivers, and the effects these have had on the economies and environments of local societies.³ Broadly and baldly stated, issues of depletion and sustainability have formed the underlying *raison d'être* in much of his work. The importance of this is undoubted – the region is today confronted with alarming levels of deforestation, the widespread destruction of marine ecosystems, and animals close to extinction. Southeast Asian rhinos, notably the two-horned *Dicerorhinus sumatrensis*, for instance, are today critically endangered and number fewer than 250.⁴ Given that their horn was sought out since at least the Qin Dynasty, the survival of the Sumatran rhino is rather an astounding feat. In speculating on the certainty of environmental loss, from forest cover to animal species, Boomgaard asks whether we are witness to 'the long goodbye?', the addition of the question mark striking perhaps a timid note of optimism (Boomgaard 2005b: 211–235).

In this chapter, I will examine one aspect of the relationship between humans and their environment – the human desire to collect things from the natural world. Humans have long viewed the natural realm as a source from which medicinals, precious rarities and marvellous curiosities could be obtained. Such things were not only treated as valuable trade commodities, but also collected and treasured for their intrinsic beauty and fascination. Since at least the High Middle Ages, exotic animals, plants, medicinals and unusual objects gathered from the natural world interested European elites. Strange natural phenomena – from the wondrous to the freakish and the monstrous – had

2 Bättschmann (2008:175). In a similar vein, the presence of a sulphur-crested cockatoo, thought to be either from Australia or Timor, in the *Madonna della Vittoria*, painted by Andrea Mantegna in 1496, has recently given rise to fresh speculation over early trade networks that may have spanned Australia or eastern Indonesia, China and Europe in the late fifteenth century. <http://www.theguardian.com/world/2014/mar/19/cockatoo-perched-in-renaissance-painting-forces-rethink-of-history>, accessed 3 April 2014.

3 See in particular Boomgaard (1998a:275–295, 1998b:21–35, 1999:45–78, 2005a:97–120, 2007c).

4 For data on the Sumatran rhino, see <http://www.iucnredlist.org/details/6553/0>.

been bound to religious discourses, to political debate, to science and medicine, and to alien lands. Often interpreted as portents for good or for ill, they were cherished as *mirabilia* and collected for the innate cosmic power they were believed to possess.⁵ Hoarded by church ecclesiastics and royal personages in treasuries or *Schatzkammern*, *naturalia* were prized for their novelty, rarity, and their putative medical properties. Natural objects that were incised and mounted, gilded or embellished – rhinoceros horns, coconuts and nautilus shells – joined the category of exquisitely crafted and equally prized *artificialia* (exceptional objects wrought by hand), which also included Chinese porcelain that had travelled the long cross-continental medieval trade routes connecting Asia with Europe and the Mediterranean. Alongside the trade in bezoar stones, the tusks of narwhals (believed to be unicorn horns), and ambergris from the near East, were rubies and camphor from Pegu, nutmeg from Banda, and cloves from the Moluccas. Over the centuries trade in Asian goods transformed European cities. With Vasco da Gama's discovery of a direct sea route to India in 1498, Venice was eclipsed by Lisbon that rose to become an important European entrepôt by the end of the sixteenth century, rivalling Seville, Antwerp, and Genoa (Gschwend 2004:16).

The sixteenth and seventeenth centuries were distinguished by voyages of discovery, European expansion, burgeoning global trade and new attitudes toward nature and the study of natural history. Gardens were created for botanicals brought from distant places via expanding networks of exchange; collections of *naturalia* proliferated and, with them, paintings and drawings were commissioned to celebrate the acquisition of exotica and to boast of the magnificence of royal cabinets of wonders. The enthusiasm of Renaissance royal collectors for rare and precious exotica was not merely to showcase riches. Possessing *naturalia* underscored as well as publicly exhibited a very personal expression of power and political pre-eminence. These incitements are nowhere made more apparent than the resplendent Habsburg collections amassed in Vienna, Prague, Madrid, and Lisbon. The *recámara* of Catherine of Austria (1507–1578), Queen of Portugal, Habsburg princess, and the greatest collector in Renaissance Portugal, held a vast and precious collection that reflected her personal passion for India and the Orient and declared her ruler-ship and status (Gschwend 1994:15).

Royal *Kunstkammer* or *Wunderkammer*, botanical gardens, imperial aviaries and menageries of rare and marvellous creatures made manifest a ruler's discerning taste and symbolically displayed an empire's dominion. Collecting *naturalia* catalogued nature's munificence and in some instances, came to be

5 Daston and Park (1998); Platt (1999); Campbell (2004).

related to humanist theories and the quest for universal and encyclopaedic knowledge, subjecting nature to close observation and interrogation. In Renaissance Europe, students of natural history moved beyond discussions of nature by the ancients – Pliny the Elder, Aristotle, Dioscorides and Theophrastus – and created dedicated museums transforming the study of nature into a modern discipline.⁶ The investigation of nature also found intimacy with artisanal practices of manipulating natural materials. Early modern artisanal recipes, for instance, called for quantities of vermilion, mercury, and lizards in the manufacture and purification of gold. Through such hoary sounding alchemical processes evolved modern empirical practices of natural science (Pamela Smith 2010). In all this, trade and commerce were never far from the scene. For some, commerce was at the core of collecting endeavours. Dutch engagement in trade and conquest in Asia and the Caribbean married new ways of knowing the world with turning a handsome profit from the trade in rare and exotic plants and medicinals, seeds, and animals. The study of natural history, medicine and science, even the philosophical concept of objectivity, owed their developments to the collecting of *naturalia* as a fundamental commercial activity and enterprise in the Dutch Republic.⁷

During the Renaissance, the study of natural history and the concomitant appetite for collecting exotic *naturalia* became integral to the production of art and culture, the emergence of new philosophies, and the development of science and medicine. In turn, collecting fostered cultural trends, even a mania fuelled by cross-cultural contact and processes of exchange.⁸ In this history, collecting practices of other times, other places and other peoples lie at the far margins. What would a history of collecting look like if it were to be broadened out and reframed to take into account the more extensive geographical scope and longer time span of collecting? This chapter proposes to widen the aperture. Long before the European contact, I shall show, Chinese and other Asians were taking an active interest in rarities and curiosities from Southeast Asia's forests and seas. Quantitatively, these exotica never figured large in inter-regional or global trade, but the processes of their collection, transmission and utilization had diverse cultural consequences both at their points of origin and at their destinations.

6 Ogilvie (2006); Pamela Smith (1996). On the representation of nature, see for instance Enenkel and Smith (2007); Jorink (2010); Barrera-Osorio (2006). On the role of *historia* or civil history in contextualizing natural history, see in particular Pomata and Siraisi (2005); and on the little studied animal menageries in Spain, see Gómez-Centurion Jimenez (2009).

7 Cook (2007). On commerce and the circulation of medicine, see Cook and Walker (2013).

8 Literature on this is extensive, but see in particular Jardine et al., (1996); and Smith and Findlen (2002).

Collecting *Naturalia* in Southeast Asian Historiography

Drug prospecting, botanizing, and collecting in the region's mountains and forests preoccupied European botanists, naturalists, missionary-priests, physicians and apothecaries throughout the early modern period. Some of the most eminent natural investigators of the age were active in the Dutch East Indies – Jacobus Bontius, Georgius Everhardus Rumphius, Hendrik Adriaan van Rheede, and Willem ten Rhijne.⁹ In the Philippines, Catholic priests compiled herbals, and wrote huge and sprawling works known as *historía* and *relación* that included long, detailed sections on plants and animals; the Jesuit lay brother Georg Josef Camel assiduously collected flora and fauna, sending specimens to the Royal Society in London and to the Dutch physician Willem Ten Rhijne in Batavia, amongst many others (Reyes 1999). The indefatigable Spanish and French naturalists, Antonio Pineda y Ramírez and Luis Neé, botanized all over Luzon and Mindanao in 1792 as part of the Malaspina expedition, one of the most fruitful circum-global voyages to have been sponsored by the Spanish Crown (Reyes 2013). Items of *naturalia* and curiosities regularly made the journey across to Europe as part of trans-oceanic shipments of commodities. Their presence can still be traced in such VOC records as the comprehensive listings provided by the *boekhoudergeneral* and from archaeological recoveries of sea-wrecks such as the Manila Galleon *Nuestra Señora de la Concepción*, that traversed the Manila-Acapulco route and carried, amongst other things of local origin, white and yellow beeswax and styrax benzoin, quantities of which were found still intact in their earthenware jars (Mathers et al., 1990:19, 434). During these long voyages, botanical exchanges are now known to have occurred. Ethno-botanists have shown how coconuts from the Philippines taken aboard Manila galleons were responsible for the introduction and spread of modern coconut populations in Mexico and southwards to Peru (Harris 2012). The return route introduced many New World plants to Southeast Asia including vanilla that reached the Philippines possibly from Guatemala or El Salvador (Lubinsky et al., 2008).

It is not then an easy matter to explain why collecting *naturalia* has been somewhat neglected in the histories of pre- and early modern Southeast Asia. Part of the answer perhaps lies in the way in which the field has remained relatively isolated from themes in European art history, science and medicine.¹⁰ There is also the tendency of economic historians of Southeast Asia to approach

⁹ See, for instance Cook (2001, 2005).

¹⁰ From somewhat different angles but nonetheless provocative for our current purpose, Victor Lieberman has proposed a rethinking of area studies divisions that seeks to identify trends that draw together 'Europe' and 'Asia'. See Lieberman (1999).

natural things from one analytical direction – as products and commodities that were exchanged for the manufactured articles sought by Southeast Asians, particularly Indian textiles, iron-ware, Chinese silks and porcelain. Of predominant concern has been the early modern Asian trade in spices – nutmeg and its derivative mace, cloves, cardamom, and long pepper from the Malay Peninsula and the Indonesian archipelago, and the region's interactions with Europeans, principally Spanish, Portuguese, and Dutch. A cursory glance at a summarized listing of luxury and market goods that constituted intra-Asian and inter-continental trade in the seventeenth century, however, provides an enlarged picture of the wide range and breadth of traffic in natural things. The principal 'export products' of mainland and island Southeast Asia in that period alone featured a variety of botanical, mineral, and animal items. The region's forests yielded benzoin, resins, camphor, honey, musk, elephant ivory and rhino horn, deer hides, lacquer, gharuwood (also known as eagle wood or aloeswood), sandalwood, and sappanwood. Precious gems, gold, silver, and other metals, were mined from the ground; and pearls, ray skins, and tortoise-shell obtained from the sea (Boomgaard 2007b:148–149). To these things could be added a trade in cowry shells, edible bird's nests, mother-of-pearl, *tripang* (a type of sea slug), red coral, and kingfishers' feathers.

Curiosity about unfamiliar peoples, objects and distant places, and a sense of acquisitiveness – the desire to possess remarkable goods – is a universal impulse. Although this is implicitly recognized in scholarship, it is only in recent years that the paradigmatic framework of European collecting has been questioned and new attention given to 'collectors outside Europe, [to] the circulation of goods across cultures and vast geographical spaces, [or to] the ways in which collecting and collections helped shape conceptions of other cultures in the first truly global era' (Bleichmar and Mancall 2011:4). As new research has now begun to highlight, the desire to collect European objects was felt across Asia. All manner of European astronomical devices, mechanical clocks, mirrors, double-barrelled guns and other firearms were of interest to Chinese, Japanese, and Indian elites.¹¹ Aristocratic Thais sought to acquire scientific and mathematical instruments; and paintings and other works of art in the European style were prized by Chinese and Muslim households in the Dutch colonial city of Batavia, in Java (Benson 2011; DaCosta Kaufmann and North 2014). Acquisition of these objects changed the world-view of Asians and how they viewed themselves. This chapter casts light on the value given to *naturalia* over two millennia. I will show what things were sought out, and what sorts of information or knowledge about Southeast Asia were produced as a consequence.

11 See for instance Chaiklin (2003); and Screech (2002).

In Search of the Strange and the Precious: Chinese Trade with the Southern Seas since the Third Century BCE

Chinese interest in natural things, deemed as luxuries and originating from foreign places, can be traced back to antiquity. Since at least the third century BCE aromatic clove from the Moluccas, brought by Nan Yüeh traders of the southern provinces of China (modern day Guangdong, Guangxi and Yunnan) and northern Vietnam (including Hanoi), were used by courtiers of the emperor, who demanded that all those in his presence should sweeten their breath (Wheatley 1959:45). China's belligerent southward expansion and conquest of the Yüeh lands after 221 BCE were chiefly economically driven. It was well known that the river deltas around Hanoi and Canton were agriculturally fertile. But the trade in rhinoceros horns, elephant tusks, kingfisher feathers, and pearls was lucrative enough to warrant the deployment of five armies constituting a total of 500,000 men (Wang Gungwu 1958:8). Subsequent conciliatory tribute missions to the Han emperor by the Yüeh proffered only the most luxurious and precious, which included quantities of rhino horn, one thousand kingfisher feathers and cones filled with honey-soaked 'cinnamon-insects' to be enjoyed as a gastronomic delicacy (Wang Gungwu 1958:13).

But it was the western regions – central and western Asia – to which China turned. The Roman Orient, known in Chinese sources by the term *Ta-ch'in*, an area encompassing Syria, Egypt and Asia Minor (Hirth 1885:vi) was thought to have the most precious, luxurious and rare treasures, a reputation that remained undiminished for many centuries. Chinese accounts from the third century CE spoke of the area as a source for tree resins, coral, pearls, amber, gemstones, as well as a variety of manufactured goods from textiles to ornamental coloured glassware. It was said that the region was defined by an 'abundance of precious things' and imperial envoys, eunuch servants to the Han emperors, were instructed to offer fine silks and gold in exchange for 'bright pearls, glass, rare stones, and strange things' (Hirth 1885:42). The *Sung shu*, written around 500 AD, detailed some of the marvels – 'gems made of rhinoceros' [horns], 'king-fishers' stones' (thought to be chrysoprase), 'serpent pearls', asbestos the 'wondrous fire cloth', and other 'innumerable varieties of these curiosities' (Hirth 1885:46). Not only were things from the western regions esteemed for their preciousness but also, as Taoists were inclined to believe, for their magical properties (Wolters 1967:40). Pearls, for instance, would be customarily placed in the mouths of the dead and specimens from India and the Persian Gulf were thought to have mysterious or magical qualities and considered particularly special. They entered China via Yüeh ports and were known as 'luminous-moon pearls' or 'night-shining pearls' that could be obtained, it was said, from a 'pearl tree' (Donkin 1998:68).

Naturalia from Southeast Asia may have been obtained during the early exploring missions undertaken during the reign of Emperor Wu (141–87 BCE), which ventured to lands known in the records as *Huang-chih*, presumed to be in various places – Kancipuram (Wade 2009a), the coastal areas of the Bay of Bengal, and sites in Indochina or Sumatra (Wheatley 1959:19; Wang Gungwu 1958:20). Described in the *Ch'ien Han Shu*, missions to and from *Huang-chi* took place during the first five years of the Christian era. One return mission offered as tribute a live rhinoceros but whether the beast originated from South India or Indochina is debated (Wang Gungwu 1958:24). The missions may have also intended to trade in the northern Moluccas and the Sulu Archipelago, the latter being the string of islands situated in present day southern Philippines (Wheatley 1959:19).

Collecting and the Nanhai Trade

Wang Gungwu has perceptively written that the China Seas became more like the Mediterranean after the tenth century.¹² Until about the third century CE, the Nanhai trade, which centred on the South China Sea, had largely been confined to South China and Indochina. However, in the period of the Three Kingdoms, a push was made toward the Nanhai countries and the Southern Seas. The establishment of a new court demanded luxuries and treasures while additional impetus came from the southern state of Wu, a kingdom in South China, which had been shut out from the Central and Western Asian trade routes and forced to seek new markets. The task was treated with urgency. Sailors were sent out to search for pearls, tortoise-shells and corals in neighbouring countries; more significantly, an embassy was despatched to Funan, then a kingdom that straddled the Gulf of Siam, southern Vietnam and the Malay Peninsula, where trade to India was forced to pass through the Straits of Malacca. Commercial expansion into the so-called 'southern barbarian kingdoms' produced important results. For the first time references were made to Java-Sumatra, Siam, Burma, the islands of Borneo, Banka and Billiton, and the Malay Peninsula (Wang Gungwu 1958:39). A book entitled *Record of Strange Things of the South* described the seasonal monsoons of the Indian Ocean, the lands where trading was established, and the appearance of local boats with sails made of leaves from trees (Wheatley 1959:20). An eye for the odd was not uncommon in Chinese literatures of the period. Animals and events in the

12 Wang Gungwu (2008:7). For discussions related to the Tonkin Gulf and the Braudelian comparison see Cooke et al., (2011).

order of the fantastical, the supernatural, and the strange, had become a vital feature in popular writings of the early third century BCE that linked such phenomena to cosmographical concepts.¹³ They also played a political role. Telling of ‘anomalies’ served to define and demarcate the known and the unknown lands that lay in the empire’s borderlands and beyond, ‘us’ and ‘them’ distinctions that were, as Jorge Flores has put it, ‘absolutely vital between...what is normal, and the unknown, which is always strange’.¹⁴

Trade in the luxury goods of the Nanhai was particularly enriching. Shih Ch’ung was the governor of the central and south-central provinces of Hubei and Hunan. He also controlled the trade that passed through Hanoi and Canton to the city of Luoyang in central China, and made a considerable fortune sending his own men out trading and levying heavy taxes on the merchants and envoys who used the routes. Stories about his extravagance abounded. It was reported that in his household were many beautiful women who held in their mouths exquisite perfumes whose sweet scent ‘was wafted by every breeze’ whenever they talked or laughed. He had fragrant gharuwoods ground into fine powder and scattered over an ivory bed upon which the most beloved of his maidens would be asked to step, rewarding those who left the dust undisturbed with a string of five hundred pearls while enforcing strict diets on those who left behind their footprints. These proclivities aside, Shi Ch’ung was an avid collector of *naturalia* and amassed a collection that impressed even imperial visitors. He reputedly owned an extraordinary assortment of pearls, perfumes and scented woods. The coral trees in his collection were known to be particularly fabulous and of a kind never before seen in China – specimens three to four feet tall with unusual stems and branches of vivid hues (Wang Gungwu 1958:35, ff. 20). Where this coral might have come from is difficult to ascertain. Red coral, *Corallium nobile*, had reached the Chinese from the Roman orient since the Han period but, by Sung times, a species of shallow water precious coral resembling *Corallium japonicum*, varying from the palest pink to deep red in colour, could have come from the Philippine archipelago, notably Mindanao (Wheatley 1959:80). Gharuwood was one of the most important aromatics imported by Southeast Asia and this ostentatious entrepreneur and collector would have sought out the best quality from Cambodia or the northern areas of the Malay Peninsula. By the Sung period, gharuwood was also coming from southeast Sumatra, Java and the eastern archipelago but the quality was poorer and, it was discerned, the ‘smell caught the breath and its taste was bitter and pungent’ (Wheatley 1959:70).

13 See, for instance, Strassberg (2002).

14 Campany (1996); Flores (2007:558).

The Nanhai trade in precious *naturalia*, driven largely by the demands of courts and elites, lasted for about five centuries to the end of the Qin Dynasty (221–206 BCE) (Wang Gungwu 1958:113). From 420 to 589 CE, attention had shifted to tribute and trade in religious and ritual paraphernalia or ‘holy things’¹⁵ as a result of China’s increased devotion to Buddhism. Chinese converts, such as the fifth century pilgrim Shih Fa-Hsien, and Hsüan–Tsang and I-Ching in the seventh century, sought to study the Sanskrit texts and made the long pilgrimage to India. Their return journeys took them by way of the Southern Seas and the Nanhai, sometimes stopping for long periods of time in Srivijaya, as I-Ching did. Records of their voyages provided valuable information on routes and navigation to the kingdoms of Southeast Asia (Wheatley 1961:108). Intensified communication with the Buddhist kingdoms of Southeast Asia brought luxuries for use in temples and ritual – Buddhist relics, painted stupas, perfumes and fragrant woods for incense in exchange for silks and brocades (Wang Gungwu 1958:54). But precious things that delighted the eye or provoked curiosity remained highly desired – diamond rings, red parrots, bezoar stones and turmeric, some of which originated from the Indian Ocean and were re-imports, were sent as tribute articles to the Liu Sung emperor by two western Indonesian kingdoms in 430 and 449 (Wolters 1967:78).

Southeast Asian Medicinals: Early Chinese Interest

Political stability and economic prosperity in China during the brief period of the Sui dynasty (589–618CE) led to a more systematic search for the strange and the precious in lands to the south. Imperial demands for natural things drove up the prices for animal skins, hides, bones, tusks, horns, and feathers – articles that were destined for the courts and palaces to be used for luxurious furnishings and embellishments. Pearls were even incorporated into the structures of palaces, and pearl-encrusted beams, columns and pillars were the height of luxurious ostentation and display (Donkin 1998:217). Aromatic tree resins from Southeast Asia were particularly prized as *materia medica*. Wolters has noted that camphor, known as ‘*P’o-lu* perfume’ from northern Sumatra first made its appearance in Chinese records at the beginning of the sixth century when physicians recommended it to aid women in difficult childbirth: ‘let them take a little camphor and grind it into a fine powder and swallow it down with newly drawn powder’ (Wolters 1967:122). By the seventh

15 The phrase is Wang Gungwu’s in Wang Gungwu (1958).

century benzoin and ‘unicorn desiccate’, or ‘dragon’s blood’, the scarlet coloured resin obtained from the *Daemonorops* species found in western Indonesia, had reached China and were regarded as prestigious medicines, valued for their cleansing and fumigatory qualities. Unicorn desiccate was thought to work on ‘the five viscera’, and ‘on evil air inside the body’. It was said to stop pain and break up ‘accumulations of blood’, and to heal ulcers by creating flesh (Wolters 1967:123).

Collecting Information during the T’ang

Despite growing demand and an increased range of Indonesian natural things reaching the Chinese market, it was not until the later T’ang period (618–907 CE) that the Chinese began methodically collecting information about the lands with which they had commercial dealings. Maps of the most important trade routes were drawn up and works such as a book titled *On the Esoteric Doctrine remitted from the South Seas* sketched out the chief routes to Southeast Asia (Wheatley 1959:21). T’ang histories containing descriptions of Malayan kingdoms written by Buddhist pilgrims en route to India, I-Ching being the most well-known, contributed valuable geographic and navigational knowledge of the South Seas and were also replete with descriptions of the local products and peoples, particularly the striking appearance of rulers. In the kingdom of *Tan-tan* (possibly Natuna Islands off the north-west coast of Borneo) for instance, we are told of a king whose body was perfumed with fragrant powder and whose country was abundant in sapanwood, betel-nut, hornbill, and peacock (Wheatley 1961:52). By the thirteenth century, trade between China and the Malay Peninsula concentrated on states that were rich sources of jungle products. The kingdom of *Tan-ma-ling*, thought to be a dependency of Srivijaya and a state in the Ligor district, offered beeswax, lakawood, gharuwood, ebony, camphor, ivory and rhinoceros horn for which foreign merchants exchanged pongee parasols and umbrellas, silk thread, rice, sugar, porcelain vessels and earthenware bowls (Wheatley 1961:67); and *Teng-liu-mei*, possibly far to the north of the Peninsula, was known to have had excellent gharuwood and lac (Wheatley 1961:74).

In 623 and 624 CE, tribute missions were sent to China from Siam, the Malay Peninsula, Java, and various parts of Sumatra including Palembang and Jambi (Wang Gungwu 1958:74). So considerable was the T’ang trade in Southeast Asian aromatics and spices that their use for culinary preparation and genteel purposes – scenting clothing and bath water – had become common (Wheatley 1959:32). Jan Wisseman Christie (1998) suggests that with the

expansion of Chinese trade in products from western maritime Southeast Asia and increased Southeast Asian interest in South Asian exports, the period from seventh to eight centuries marked the beginning of trade booms and depressions, a pattern of peaks and troughs that would last until the early fifteenth century.

Arabic Trade and Knowledge

Indian Ocean trade and commerce was significantly heightened by Arab merchants who sought out exotica from India, China, and the islands of the Malay archipelago, bartering Arabian gum resins, thorough-bred horses, cottons and other textiles, and metal objects for silk, sandalwood, porcelain, and black pepper (Islam n.d.; Tibbetts 2004). The increased presence of Arab merchants in Eastern markets is recorded in a diverse range of Arabic works, from travellers' accounts and geographical treatises to historical, medical and navigational works. Although some were derivative or plagiarized, the accounts amount to an Arabic conceptualization of Southeast Asia in an early period. The emphasis given to Southeast Asia's spices and drugs by Arab geographers reflected the interest in Southeast Asian products useful to Arabic medicine, but Arab writers also recounted the experiences of their voyages as well the routes that were taken, the local customs and the riches of the region. For the period between the start of the China trade and 851 AD, the most important were the travellers' accounts and navigational descriptions found in *Akhbār al-Šin wa'l-Hind* by Sulaymān Tājir and work by Abū Zaid that described places on the China route and trade expeditions to the Malay archipelago and the west coast of Sumatra. The popular collection of travellers' tales in *'Ajā'ib al-Hind*, dating from the end of the tenth century, were filled with fanciful stories of strange beasts and events of heroism, but also gave pragmatic details on trade voyages to the Malay Peninsula and west coast of Sumatra, as well as the activities of the Persian Gulf traders in the area (Tibbetts 1979:5–9). Few travellers passed up on the opportunity to collect exotic animals. One discerning Arab geographer and traveller, who made it a point to seek out creatures that possessed truly extraordinary qualities, was particularly impressed by the fabulously coloured feathered parrots found on 'Zabaj' or Aceh that could be taught, allegedly, to speak Arabic, Persian, Greek and Sanskrit.¹⁶

16 Abī Bakr Ahmad ibn Muhammad al-Hamādāni Ibn al-Faqīh (tenth century) writing in *Mukhtasar Kitāb al-Buldān* cited in Islam n.d.:17.

Naturalia of the Nam-Viet

Chinese information about Nam-Viet became more readily accessible in the latter half of the eighth century with the publication of numerous standard maps and gazetteers that Sung encyclopaedists came to depend upon. The landscapes, climate, natural history and ethnology of the region succeeded in capturing the imagination of administrators who, in the course of fulfilling a temporary posting in the south, produced more detailed observations and guide-books. Meng Kuan (writing in the ninth century) and Fang Ch'ien-li (who had an eye for the fantastic and liked to write love poetry to a pining concubine), were bureaucrats with a romantic bent. Their respective works *Study of the Strange Creatures of the Southern Quarter* and *Study of the Strange Creatures South of the Passes* focused on the natural world and recorded encounters with the fabulous inhabitants of the mountains, islands, and rivers (Schafer 1967:149). Demand for *naturalia* of the southern seas also resonated in T'ang literature, in which the exotic beauty, utility and alien charm of plants, animals and minerals of the southern seas came to be a distinctive feature. The shimmering plumage of kingfishers was described as 'halcyon' in romantic verse; feathers were woven into fabulous dresses to be worn by court beauties and placed on the same par as precious jewels. Bird collectors filled their gardens with specimens that were especially sought out not only for their chromatic splendour, but also for their purported ability to learn Chinese.

Rhinoceros did not have quite the same literary cachet, but the demand for their horn, as with pangolin scales, for medicinal purposes also remained high. Rhino horn proved a versatile remedy in Ming-era Chinese *materia medica*. It could act as

an antidote to poisons...to cure devil possession...to remove hallucinations and bewitching nightmares...for typhoid, headache, and feverish colds. For carbuncles and boils full of pus. For intermittent fevers with delirium. To expel fear and anxiety, to calm the liver and clear the vision... An antidote to the evil miasma of hill streams. For infantile convulsions and dysentery.

READ 1931.

Minerals and stones of fantastical shapes and hues had a place in both pharmacopeia and literature. Red sulphide mercury or the so-called 'cinnabar of Viet' was described in official T'ang *materia medica* as an authentic panacea for all manner of serious diseases (Read 1931:157). Stones were imagined to be

transformed animals or sacred relics and revered in poetry and collected by avant-garde connoisseurs. The young poet Chang Hu indulged his melancholic and solitary disposition by composing verses in a garden he constructed from his collection of strange stones and 'stone bamboo shoots' from Nam-Viet (Schafer 1967:155).

Edible plants of the tropics also caught the imagination and were appreciated for their beauty and symbolic worth. Coconut shells were polished, painted and fashioned into cups and pitchers and admired as objects 'precious and rare, worthy of admiration' (Schafer 1967:174). Southeast Asian palms were propagated in northern climes and *pinang*, the Malay word for the areca palm, crossed over into Chinese usage as *pinlang*, an adaptation indicative of the extent to which the Southeast Asian custom of giving and chewing betel was accorded attention, though the fashion for chewing betel in northern cities seems to have stemmed from a belief in its medicinal value. Banana leaves, used in the manufacture of cordage and cloth, also possessed sensory appeal. T'ang scholars delighted in the plant's inflorescence, the broad, green, frayed-edged leaves and the soft rustling sounds they made. Green gardens of banana were cultivated solely for aesthetic enjoyment. For Liu Ch'ang, a ruler with a penchant for Persian girls, banana forest gardens were the preferred setting to while away the time with a favourite concubine (Schafer 1967:187).

Sung Commerce

Much scholarly attention has been given to interactions between Ming China and Southeast Asia, particularly in relation to the formidable naval expeditions undertaken by the legendary Admiral Zheng He from 1405 to 1433, and to events in Malacca and Indonesia.¹⁷ However, it is to be recalled that the vitality of Chinese maritime trade with Southeast Asia and the Middle East reached unprecedented levels several centuries earlier, during the Sung period (960–1179 CE). Much is known of the sheer range and variety, value and volume of spices, aromatics and drugs, referred to in contemporary Chinese records as *hsiang yao*, that flowed into China from Tonkin, the Malay Peninsula, Siam, Java, Western Sumatra, Western Borneo and parts of the Philippine archipelago, via Arab and Hindu merchant networks in the Sung era.¹⁸ Clove imports

17 See, for instance, Salmon and Ptak (2005); Suryadinata (2005); Wade and Laichen (2010).

18 For details on the pattern of long distance trade and the routes taken during the Sung and later Yuan and early Ming periods with regard to China's trade in cloves, see Ptak (1992, 1993).

were of only slight importance in the Sung period and remained so through the Yuan and early Ming dynasties (Ptak 1999:149). Late tenth-century Sung dynasty annals list rhino horns, ivory, carnelians, pearls, turtle and tortoise shells, incense and scented woods amongst the principal articles of trade. The quantities were not insignificant – inventories and lists compiled in the tenth and twelfth centuries show the number of imports running into several hundred items. Between 1049 and 1059 China's annual imports of elephant tusks, rhinoceros horns, pearls, aromatics reached 53,000 units; by 1175 the count jumped to over 500,000 units (Wheatley 1961:60).

From the tenth to the thirteenth century, the Malay region's pre-eminent entrepôt was the thalassocracy of Srivijaya. At Srivijaya, goods from other parts of Southeast Asia, India and the Middle East were transhipped for the Chinese market and, in return, Indian Ocean states were supplied with Chinese and Southeast Asian goods. Srivijaya was recognized as China's major trading partner and the number of tribute missions despatched – fourteen over a thirty-year period beginning in 960 – attests to the aggressiveness with which that status had been pursued. Gifts of aromatics, ivory, rosewater, and rhinoceros horns, coral and other high-value items from the region, the Middle East, and India, was a calculated demonstration of Srivijaya's access to and relations with major Asian trade zones and its sensitivity to the needs of the Chinese market (Heng 2009:78–79). In return, Srivijaya's elite envoys were presented with gifts of white stoneware, lacquer ware, silks, gold and silverwares, copper cash, headdresses and harnesses that acknowledged the missions had preferable status (Heng 2009:79). Ultimately, Srivijaya's success depended upon the maintenance of good relations with regional trading partners. The faltering supply of cloves, black pepper, and sandalwood incense from Java and the Moluccas in the late tenth century came as a consequence of a conflict between Srivijaya and Java as the latter jostled to supplant the former's trade monopoly by throttling the flow of products within its sphere of control.¹⁹

Chu-fan-Chi: 'Foreign Geographies' in China's Age of Renaissance

Chinese demand for exotic aromatics and drugs fostered efforts to understand their properties through observation and description. Commercial knowledge was invaluable, and Chinese traders were quick to develop multiple and complex classifications for aromatics that drew subtle distinctions between freshness,

19 Heng (2009:80). See also Meilink-Roelofs (1962).

coloration, and smell, associating these qualities with place of origin, as in the case of gharuwood, camphor, and gum benjamin. But there also appeared erudite compendiums and treatises – Yeh T'ing-kuei's work on aromatics written in 1151 being a notable example – which described the appearance, sensory and medicinal properties, local uses, and vernacular names of objects and substances. A third source of information was what came to be known as 'foreign geography', which built on and contributed to commercial knowledge, in addition to providing a wealth of descriptive detail on foreign places, customs, and the natural things that had entered maritime trade. One of the most outstanding examples in this genre was the influential ten-volume work *Ling-wai Tai-ta*, compiled in 1178 by Chou Ch'u-fei, an assistant sub prefect, whose meticulous observations on the geography and commerce of Southeast Asia, India and the Middle East were plagiarized in subsequent works. The *Chu-fan-chi* by Chao Ju Kua, which appeared less than 50 years later, for instance, had been 'leavened with a sprinkling' of borrowings from its predecessor (Wheatley 1959:7–8). Such works, although poorly regarded by Confucian scholars as an obscure field, was part of a fecund era of intellectual, philosophical, and artistic endeavour that has been called China's 'Age of Renaissance' (Hirth 1896: 61).

The most valuable source for Sung traders was the *Chu-fan-chi* or 'Record of Foreign Countries' written by Chao Ju Kua and published as a handbook in 1226. But the work was more than a standard purveyor of information on foreign trade in Sung times. The first section is suffused with lively descriptions and observations of people and cultures of lands encountered by traders who operated along the sea-routes of Asia, coastal Africa and the Mediterranean. Indeed, the author seemed to delight in imparting details that would strike his reader as being unusual or provocative, even entertaining. It was reported, for instance, that the devout Buddhist king of Malabar employed a fellow to supervise and regulate everything he ate and, should the royal personage fall sick, the officer would be obliged to taste his faeces and 'treat him according as he finds them sweet or bitter' (Chao Ju Kua 1911:88). Though possessed of intimate information, Chao Ju Kua was no eyewitness. Rather, as Inspector or Commissioner of Foreign Trade in Fukien, Chao Ju Kua enjoyed privileged access to information on countries in South and East Asia through his personal association with foreign merchants and sailors, principally Arab, Persian and Indian traders who passed through Fukien.²⁰ He attended to reports of how, at Srivijaya, merchants from the Middle East gathered to barter with luxuries that

20 For a detailed assessment of the inspectorate office Chao Ju Kua occupied and his family lineage see Hirth (1896).

included rose-water, ambergris, aloes, myrrh, coral, cat's-eyes and camel's hair cloth (Chao Ju Kua 1911:116). He was alert to a host of curious *naturalia* and registered his interest in the strange. Bottled gardenia flowers brought by camel caravans exuded a scent that was appreciated by the Chinese for its exoticism (Chao Ju Kua 1911:134). He marvelled at reports of civet, red or brown coloured specimens possessed of long dog-like legs that 'moved as if it were flying' (Chao Ju Kua 1911:234); and made a note of *mo-so* stones or bezoar stones from Nan-p'i, a region that ostensibly extended from Cambay to Ceylon which served as an efficacious antidote for poison from reptiles. 'Worn in a finger ring', Chao Ju-Kua observed, 'if one is poisoned and licks it, one is at once cured, so it may well be considered a life preserver'. (Chao Ju Kua 1911:90.)

The second section of the *Chu-fan-chi* was a methodical account of the principal items to enter maritime trade with the most original descriptions relating to Southeast Asia. Spices, aromatics, and valuable woods are treated as staples from the Moluccas, the Lesser Sunda Islands, and Java, but the Indonesian archipelago and the Malay Peninsula also provided a range of rarities for which there was a ready market. As Chao Ju Kua recounted, rhinoceros horn was obtained from the northern part of the Malay Peninsula and Java, ostensibly from creatures with fierce and violent tempers that 'ran so fast one might imagine them to be flying' (Chao Ju Kua 1911:233). High quality beeswax, areca palm, abaca and pandanus fibres were supplied by Srivijaya, Borneo and the Philippines, and from central Java came unusual or strange edible fruits – bananas that grew monstrously long, and jack fruit, which Chao Ju Kua treated as a hybrid confusion of pumpkin, chestnut, and mandarin orange (Chao Ju Kua 1911:83). Interest in medicinals figured prominently and Chao Ju Kua was careful to note the places of origin and the healthful benefits of a host of natural substances that were known to locals. Styrax benzoin from Siam, Malacca, Sumatra, and Java was valued for its powerful scent (Chao Ju Kua 1911:202); sundried lychee from central Java was a cure for bowel complaints (Chao Ju Kua 1911:83); camphor, particularly Barus camphor obtained from Sumatra, Ligor and Patani, was esteemed for its superior quality, pungent aroma and medicinal properties by Malays who applied the substance on aching teeth, running or inflamed eyes and open sores (Chao Ju Kua 1911:194). Ginger from Cambodia was valued by the Chinese as a luxurious addition to the table, and the peel was sought after by Chinese apothecaries who used it for medicinal purposes (Chao Ju Kua 1911:53). The fauna of Southeast Asia did not escape Chao Ju Kua's notice and he reported how in Borneo, the Philippines, Java and islands of the eastern archipelago, tortoise-shell was obtained from tortoises 'caught on moonlight nights during the autumn' (Chao Ju Kua 1911:238). Birds with

rainbow plumage or in dazzling white, of exceptional intelligence, were treated as novelties in China and Chao Ju Kua recalled choice specimens of parrots from Tonkin and lorries from the southern Moluccas, some of which, so it was said, complained of being cold to the Emperor, who ordered them to be sent home (Chao Ju Kua 1911:236).

Southeast Asia's Ages of Commerce

Thus far we have seen some of the sorts of natural things from Southeast Asia that, for centuries, were sought out and valued by Chinese and Arab merchants and collectors as exotic rarities or luxuries, or appreciated for their intrinsic qualities, be they strange, novel, or medicinal. Southeast Asians, in return, developed an insatiable appetite for the things foreigners brought, which were largely manufactured objects. Chao Ju Kua related how Chinese traders attempted to satisfy local demands for ornamental glass and porcelain throughout the region. In Borneo and the Philippines, for instance, coloured glass beads and bottles were popular. While exports of trade porcelain were in demand from Annam to Malabar, specific areas demanded specific types. Blue and white porcelain were traded in Java, white in the eastern archipelago, and celadon in Borneo. Aside from porcelain, a brisk trade for cinnabar could be had in Java, where the women used the substance for dyeing silk clothing and as a cosmetic, specifically nail polish 'for dyeing the fingernails'. The demand for cinnabar was evidently high enough for it have been considered a trade staple (Chao Ju Kua 1911:83).

Archaeological evidence has shown that long preceding Chao Ju Kua's medieval reports, foreign objects had already begun to exert a profound impact on Southeast Asian lives, connecting their cultures, economies, and social structures with the wider world. Throughout mainland Southeast Asia, archaeological excavations of prehistoric villages along river valleys have unearthed copper and tin artefacts, and marine shell ornaments. Roman coins and seals, evidence of glass-making, iron-smelting and forging techniques that originated from India, all indicating the far-reaching extent of trade networks, the movement of ideas as well as goods, and the changing nature of contact, connection, and exchange that occurred since the fourth century BCE.²¹

As David Henley and Kwee Hui Kian in this volume (see Chapters 8 and 10 respectively) also discuss, historians understand Southeast Asia's 'ages of

21 See Glover and Bellwood (2004); Bellina et al., (2010); Manguin et al., (2011); Kulke et al., (2009).

commerce' as periods of major social and economic transformation.²² These periods witnessed a host of revolutionary developments – from the emergence and cosmopolitanization of port cities as hubs of commerce to new forms of consumption and increased monetization. Trade formed the backbone to these changes. Commerce with Srivijaya introduced local societies to a diverse range of material objects, demand for which demonstrated growing cosmopolitan tastes and an appreciation for objects both natural and made by human hands. A tenth-century Indonesian-made vessel (known today as the Intan shipwreck) is understood to have been trading between Srivijaya and the Javanese state of Mataram, carrying Chinese and Indonesian bronze-ware including highly embellished mirrors and sculpture for religious and domestic use; thousands of pieces of ceramic ware manufactured at Yue, Guangdong and Fujian kilns; fine paste ware from southern Thailand; glass-ware and beads in an array of hues from the Middle East; tin from the Malay Peninsula; and gold jewellery wrought in Sumatra and set with rock crystals, amethysts, rubies and sapphires. Interest in organic material was not inconsiderable, and amongst the recovered artefacts were tiger teeth and bones, ivory, deer antlers, aromatic resins, and candlenuts (*Aleurites moluccana*), the latter probably intended for culinary and medicinal use.²³

Throughout the late first millennium, the Philippine archipelago was linked to an international trading system that involved Borneo, Java, the Moluccas, Champa, and China. It supplied gold ore, forest and marine products in exchange for ceramics and silk, principally Chinese, and base and precious metals. From the tenth century to the fourteenth century, recently described by Geoff Wade as an 'Early Age of Commerce', Butuan in northern Mindanao boasted local specialized craft production that included weaving, boat-building, and metal-working, most notably gold-smithing. Appearing in the *Song Hui-yao Ji-gao*, Chinese sources of the Song dynasty (eleventh – mid-thirteenth centuries), Butuan seemed to have been a dependency of Cambodia (Wade 2009a:221–265). The source identifies an envoy from Butuan who had travelled to the Imperial Court in the year 1003, the first of several recorded tribute missions. Along with gifts of cloves from the Moluccas, white camphor from Borneo, pearls from Sulu, sandalwood possibly from Timor, tortoise shell, and red parrots from New Guinea, the envoy presented a memorial inscription

22 Reid (1988), I, (2000c); Wade (2009a). Victor Lieberman (1995), however, has contended that these 'Ages of Commerce' models are not applicable to the histories of mainland Southeast Asia.

23 Flecker (2004–2005:2). For an excellent overview of commodities and cultural exchange, see Scott and Guy (1995).

engraved on a tablet of gold (Wade 1993:84–85; Guy 2011a:167). Recovery of a diverse and plentiful range of high-fired ceramic tradewares indicated the participation of northeast Mindanao within a Philippine-Borneo-Celebes network and, more broadly, its place in Song era Chinese, Southeast Asian, and Middle Eastern trade patterns.²⁴

Conclusion

In this chapter we have noted the great range of Southeast Asian *naturalia* that was traded from the third century BCE onwards: pearls, coral, tortoise-shell, civet, kingfishers' feathers, live birds with brilliant plumage and the ability to talk; aromatic woods, resins, ivory and rhino horn. Such things have been treated here not merely as valuable mercantile commodities sought out by the wealthy and powerful, but also as objects of intrinsic interest to the romantic, to the aficionado, to the avaricious, and the medically minded. In the European Renaissance, early globalization, commerce, and imperial ambition produced very extensive shopping lists of *naturalia* and also stimulated the activity of collecting, the artistic depiction of the world's natural diversity and the invention of natural history as a discipline (Ogilvie 2006). Trade and commerce were at the heart of collecting activities. In our period of study, the demand for natural objects emerged out of certain conditions – economic exchanges, networked land and sea routes, cultural interactions and the movement of peoples over the *longue durée*.

Knowledge about Southeast Asia, as we have seen, was constructed through the production of maps and books that devised meticulous classificatory systems which were useful for trade, but which also assembled medical, scientific, geographic, and ethnographic information. Some travellers' told tales of strange creatures and fantastical places. Southeast Asian lands and peoples came to be regarded as distinctive, even alien, with an eminently commercial and exploitable natural environment. Finally, it is clear that the desire to acquire *naturalia* transcends time and place. Many reasons have driven the search for, and possession of, the rare, the strange, the exotic, the precious, and the sensual. The impetus could come from lofty aims – the desire to discover medical panaceas, the spirit of scientific inquiry, and the reverence for objects

24 Most abundant were Chinese trade ceramics, the oldest being Yue and Yue-type wares dating from the Five Dynasties period (907–960), but also included were Thai, Vietnamese and ninth-century Middle Eastern objects. Brown (1989:79).

regarded as sacral and ritualistic. Humans have been moved by the whims of cultural taste, aestheticism, curiosity, fascination, ambition and vanity. These impulses long preceded the European Renaissance, and their history informs our understanding of humankind's interactions with nature as we continue to confront environmental destruction and disappearing bio-diversity on a global scale.