

DENIS TWITCHETT AND JANICE STARGARDT

Chinese Silver Bullion in a Tenth-Century Indonesian Wreck

INTRODUCTION

While many scholars recognize the contribution of the Southeast Asian incense and spice trade to the Chinese economy in the Song-Yuan period, it is not commonly appreciated how shadowy the information is on where in Southeast Asia the actual sites engaged in that trade were located, what other commodities were involved, and what values can be attached to the trade. Site names appear in sinicized forms in Chinese texts over long periods. We know that in some cases the same name was applied to several sites and suspect that the same site might have been recorded under several different names or transcriptions. The considerable and erudite body of work devoted to locating such Southeast Asian sites on the basis of textual evidence necessarily remains speculative, however, unless confirmed by material evidence *in situ*. Likewise the data on China's trade with Southeast Asia are general rather than specific unless they are corroborated by datable and identifiable trade debris discovered *in situ* – most especially if some values can be attached to them.

This paper discusses a ship wrecked in Indonesian waters named the Intan Wreck, which carried a large range of trade goods. The goods provide exceptionally valuable insights into the above problems: it is

DENIS TWITCHETT is responsible for all the textual data relating to the silver ingots and lead coins, their places of origin and use inside China, the discussion of their historical context, of the routes they followed to the coast where they became part of a cargo destined for the Nanhai trade, and for the map data illustrating these points.

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a time capsule of the trade that was being carried on between particular places, in particular goods at a particular time, to some of which values can be attached. The wreck also permits a degree of certainty about the commodities being traded that no written source equals. Its cargo was apparently large and strikingly heterogenous in the type of goods as well as in their commercial value. There were four distinct elements of the cargo with datable associations which agree in pointing to a date of about 920–960 AD, or slightly later, for the wreck and most of its contents. These elements were: Javanese bronze fittings with grotesque animal mask motifs, Chinese glazed porcelain ceramics, Chinese lead coins, and a treasure of Chinese silver ingots, some of them inscribed. The coins and ingots form the main subject of this paper, while the first two groups will be discussed in terms of their chronological associations and, together with the other components, they will be examined briefly for the light they throw on the diversity of sources supplying the goods that were assembled into a single cargo destined for the Southeast Asian maritime trade.

The ninety-seven silver ingots were cast, and some bear Chinese characters incuse (that is, sunk into the surface), identifying the mint from which they originated. In addition most of them are enclosed in a wrapping of thin silver sheet. Where this sheet is in legible condition, it bears a cold chiseled inscription giving the weight and quality of the silver, the purpose for which the ingot was originally used – the salt tax – and the officials responsible for completing that transaction. The wrapping is then a kind of receipt. Then there is a set of at least 145 lead coins, which are thin and brittle, with many fused together, but all the coin inscriptions that can be read are uniform and datable. The coins were issued in Guangzhou by the local state of Southern Han from 917. These Chinese ingots and coins possess exceptional interest because: first of all, this is, so far, a unique treasure of silver ingots of this date, number, area of origin and place of discovery; second, they provide material evidence that adds significantly to the textual data on the domestic economy of South China in the later years of the Five Dynasties and very early Northern Song, also implying much about the routes inside China used to bring goods to the deep sea port, probably in this case Guangzhou; and, finally, they and the rest of the goods on board provide precise insights into the way cargoes were assembled for overseas trade and into the astonishing values involved in the tenth-century maritime trade connections between South China and specific areas of Southeast Asia.

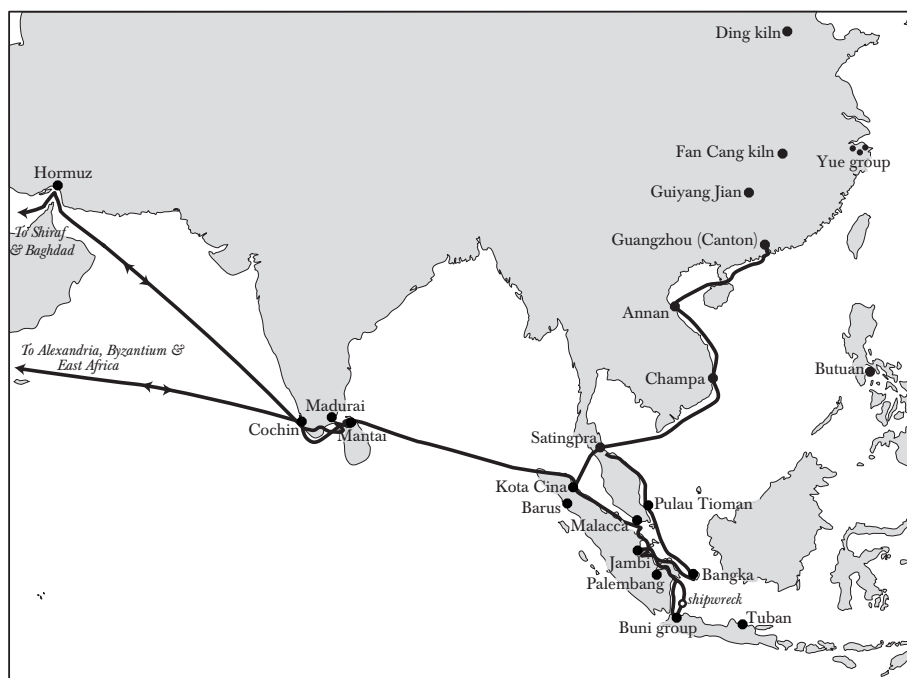
CHINA'S TENTH-CENTURY MARITIME
CONNECTIONS IN SOUTHEAST ASIA: HYPOTHESES AND FACTS

In her pioneering study of the world's economic system in the thirteenth and fourteenth centuries, Janet Abu-Lughod drew attention to the surprising lack of evidence of trade sites and trade goods around the Malay Peninsula that could have documented the high-value, high-volume nature of the maritime trade that must have passed between the Indian Ocean and the South China Sea.¹ The Satingpra excavations and a handful of other sites are beginning to fill that evidential gap, and the Intan Wreck supplements those finds and indicates that very high values were indeed involved.² Map 1 (following page) depicts the main Southeast Asian sites known to have been involved in maritime trade with China in the Five Dynasties and Song-Yuan periods.

In this paper the focus of discussion is the ninety-seven Chinese silver ingots, which originated as high-value payments for the salt tax but, having discharged that function, subsequently entered the bullion trade between China and Southeast Asia. They provide the precise point of entry into the values attached to this trade that eluded Abu-Lughod. The weight of the silver ingots recovered from this single wreck (as distinct from the total number that may have been on board) amounted to roughly 5,000 *liang*. Data from my co-author show that they had a value equal to approximately two-thirds of the whole annual mining taxes collected by the Tang government in the early-ninth century from the valuable Leping silver mines in Raozhou (in Jiangxi). They were also worth more than two months of the total mining levy paid to the Song government by the miners of the Guiyang Special Industrial Prefecture (where they were cast) in the 980s – a date closer to that of the Intan Wreck, and 1.15 percent of the Song government's total receipts in silver for 996, when their empire had been reunified for almost twenty years. This evidence, which is further explored later in this paper, is mentioned here to signal from the outset the immense values contained in the cargo of a single ship trading between China and Southeast Asia in the mid-tenth century. Through the Intan Wreck one may also perceive the risks inherent in the trade and the immense

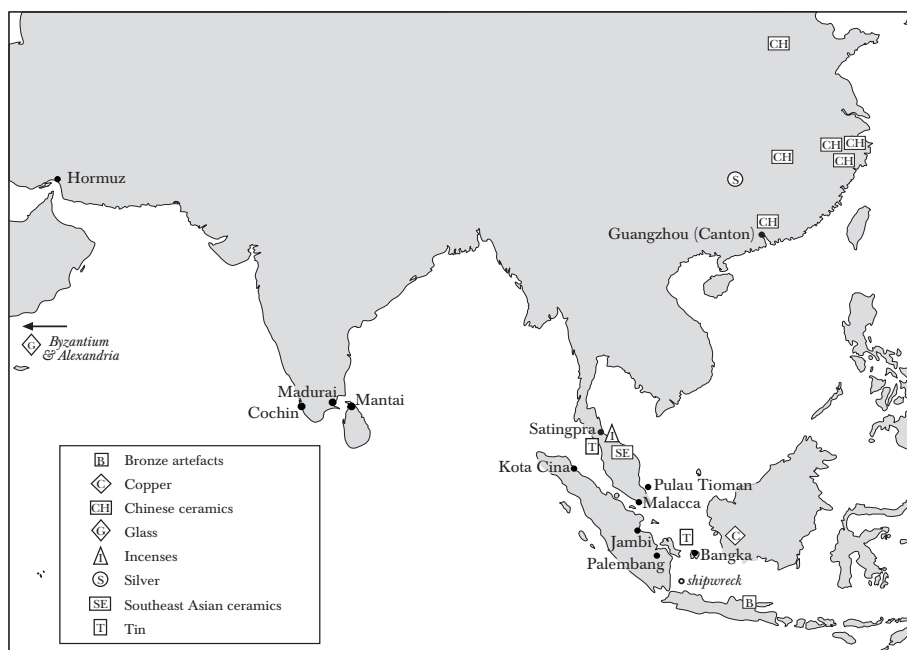
¹ See Janet Abu-Lughod, *Before European Hegemony: The World System in AD 1250* (New York: Oxford U.P., 1989).

² See Janice Stargardt, "Behind the Shadows: Archaeological Data on Two-way Sea-trade between Quanzhou and Satingpra, South Thailand, 10–14th Century," in Angela Schottenhammer, ed., *The Emporium of the World: Maritime Quanzhou, 1000–1400* (Leiden: Brill, 2001), pp. 309–93. This also includes an up-to-date discussion of the Chinese primary sources on this trade during the Song-Yuan period and some of the secondary literature based on them.



Map 1. Main Southeast Asian Sites Engaged in Maritime Trade with China, 10th-14th Centuries

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Map 2. Places of Origin in China and Southeast Asia of the Intan Cargo

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losses involved when such a ship was wrecked. Nor were the silver ingots the only items of great value on board this ship. Map 2 provides locational data on the places of origin of the main elements of the cargo of the Intan wreck.

BACKGROUND DATA ON THE INTAN WRECK

The Intan Wreck (named after the nearby Intan Oil Field) lay approximately 150 kilometers north of Jakarta half way to Bangka Island, in water twenty-five meters deep, about 5°30" South Latitude by 107° East Longitude. It was salvaged by a joint German-Indonesian undertaking (Seabed Explorations and P. T. Sulung Segarajaya) in 1997.³

Little remained of the ship itself when the salvage took place, but that little has enabled me to identify it as a Southeast Asian vessel. Its size, estimated by the distribution of the cargo on the seabed, was about 30 meters long by 10 meters wide, thus comparable in size to another wreck, the Quanzhou Wreck, which is firmly dated from its contents to 1277.⁴ These measurements are only approximate, as currents on the seabed are strong and some objects will have rolled back and forth. The few surviving Intan timbers revealed that they were pegged together by wooden dowels – a technique well attested in Southeast Asia and parts of South Asia, but unknown in China. Chinese ships of about 700 to 1300 AD were constructed using many hundreds of iron nails to attach the planks to the hull. The Quanzhou ship was constructed in this way, but subsequently its hull had been partly encased with pegged timbers, revealing that it was a Chinese ship in origin that had spent extensive periods in Southeast Asian waters and had been repaired there. If the Intan Wreck had been a Chinese ship a large number of iron nails would have remained on the seabed even after the hull had rotted or been fragmented by storm action. No iron nails were found on the seabed at the Intan site. Thus the evidence – both positive and negative in kind – excludes the possibility that this was a Chinese ship, though much of its cargo was of Chinese origin.

The ship itself must have been an elegant craft because numerous small, decorative bronze plaques were recovered from the seabed, shaped like open lotus or sandalwood flowers or decorative mango sprouts. Many were still attached to bronze bolts and must have been

³ See Michael Flecker, *The Archaeological Excavation of the Tenth Century Intan Shipwreck, Java Sea, Indonesia*, BAR International Series S1047 (Oxford: Archaeopress, 2002). This report appeared when our study was already completed. We have only added some short comments based upon information it contains where this seemed necessary.

⁴ The remains are housed in the Kaiyuan Temple in Quanzhou.

inserted into prepared holes to decorate the hull, perhaps especially the strakes at the prow and stern. The length of the bolts – from ten to twelve centimeters – reflects the thickness of the strakes of the hull. In



*Figure 1a. Bronze Animal Mask
from the Intan Cargo*

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addition there was a small number of elaborately molded bronze Kala head or animal masks, some with ring handles (figure 1a) still in place, which were one of the four categories of datable evidence in the cargo. It might be thought that they were cabin fittings on board this ship, but are more likely to have belonged to chests on board, or to have been trade objects themselves because surviving sculptures of Southeast Asian ships of this period – notably the famous stone reliefs of Borobodur – show elaborate hull structures (some with outriggers) but do not depict solid ship's cabins. The hulls were decked, but passengers must have protected themselves during voyages under light-weight shelters of thatch, rattan, bamboo, or cloth. The animal masks show strong

stylistic relation to the animal masks on golden bracelets for the upper arm, found in the Wonoboyo treasure of central Java (figure 1b) now housed in the Gold Room of the National Museum, Jakarta, which is dated by associated inscriptions to the period 901–927 AD.⁵

The Cargo: Gold, Copper, Tin, and Bronze

The cargo also included a small collection of gold jewelry including some finely worked rings, earrings, and clothing or belt hooks – all probably Javanese – and a few small gold Javanese coins with the sandalwood flower motif. There were hundreds of standard-sized ingots of copper and tin on board. It has been estimated that the cargo included up to two tons of each metal.⁶ The copper ingots were molded into a domed upper surface with a flat bottom about eight centime-

⁵ See Wahyono Martowikrido, "The Short Inscriptions of the Wonoboyo Hoard," in Marijke Klokke and Thomas de Bruijn, eds., *Southeast Asian Archaeology 1996* (Hull: Center for South-East Asian Studies, 1998), pp. 135–45.

⁶ See Flecker, *Intan Wreck*, pp. 80, 82.

ters in diameter. The metal may have come from the copper deposits of southwest Borneo, upriver from Pontianak. The tin ingots had the shape of a small truncated pyramid whose flat top was decorated with a motif similar to that on the sandalwood flower gold coins and bronze plaques just mentioned. The source of the tin was almost certainly Bangka or Belitung Island, since the ship appears to have been traveling from it to a port in northwest Java, in the vicinity of the much later city of Batavia/Jakarta, when it was sunk. Bangka and Be-

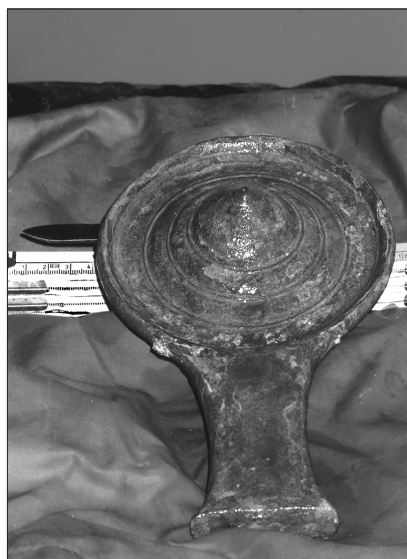


Figure 2. Javanese Bronze Mirrors and Handles from the Intan Cargo

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and weights – a local contribution of obvious significance to the seaborne trading network.

There were also strikingly heterogeneous bronze objects on board: sets of large bronze bowls, trays, and tripod supports; a small number of fine Chinese bronze mirrors in classical Tang-type designs; and a larger



Figure 1b. Gold Animal Mask from the Wonoboyo Treasure

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litun Islands are well known as the southwestern limit of the tin deposits of peninsular Thailand and Malaysia: these islands consist entirely of accessible deposits of tin. Important new insights afforded by this wreck are that these tin ores were not only being extracted – which had long been assumed – but also being refined and molded somewhere in Southeast Asia, probably on Bangka or Belitung themselves,

into ingots of standardized sizes

number of bronze mirrors of Southeast Asian (Javanese?) origin about which little was previously known (figure 2, above). They are circular and flat on the reflecting surface with a shallow conical relief structure on the other, with plain or decorated handles.⁷ In addition there were Southeast Asian Hindu and Buddhist bronze statues, mostly fragmented but identifiable, as well as a ceramic mould for making a small Buddhist votive image. Oral salvage reports mention an additional large metal object, approximately a one-meter cube, which could not be raised from the seabed. It might have been a large, bronze seated image.

Lead Ingots

According to Michael Flecker's report on the wreck there was also a considerable quantity of lead on board.⁸ Most of this was in the form of large lead ingots, rectangular slabs weighing about twenty kilograms, with a hole through one end for handling. These were probably ballast. As we have not seen these objects we cannot comment further on them.

Ceramics

The ceramics on board included both Chinese and Southeast Asian wares. The former covered the widest possible spectrum of quality and, presumably market value, ranging all the way from large, elaborately potted and beautifully glazed stoneware and porcelain jars and bowls – for which Southeast Asian courts and great temples would have been the consumers – to numerous roughly potted and fired earthenware bowls that could only have functioned as the “small change” of trade transactions.

Local coinage had become rare in Southeast Asia by the tenth century, with the notable exception of Java,⁹ although the Pyu coinage of Central Burma had been in use across a wide area of mainland Southeast Asia from the sixth to ninth centuries, as will be discussed below. The small number of Javanese and Chinese coins on board would not

⁷ The few specimens on sale in “antique” stalls in Jakarta are usually dated several centuries later.

⁸ See Flecker, *Intan Wreck*, p. 83.

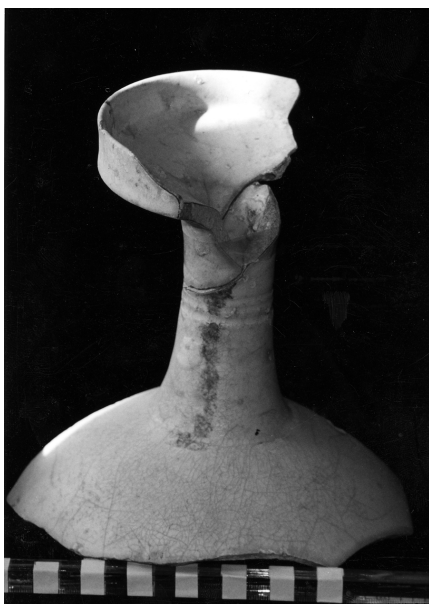
⁹ In the Wonoboyo treasure alone, 6,387 Javanese gold coins and some 600 silver coins were found. See Martowikrido, “Short Inscriptions,” p. 135; also Jan Wisseman Christie, “Money and Its Uses in the Javanese States of the Ninth to Fifteenth Centuries A.D.,” *Journal of the Economic and Social History of the Orient* 39.3 (1996), pp. 243–86, and idem, “Weights and Measures in Early Javanese States,” in Klokke and de Bruijn, *Southeast Asian Archaeology 1996*, pp. 147–62; Robert S. Wicks, *Money, Markets and Trade in Early Southeast Asia: The Development of Indigenous Monetary Systems to AD 1400* (Ithaca, New York: Cornell University, Southeast Asia Program, 1992).

have sufficed to service many trading transactions and may have been merely the personal savings of crew members. But the silver ingots, the many small tin and copper ingots, and the huge spectrum of ceramics of various qualities from the highest to the most basic lent themselves to exchanges of goods involving an equally wide range of values.

The Intan ceramics also represent a broad geographical spectrum of manufacturing centers in China, and provide invaluable insights into the complex internal economic processes of marketing and transport that were involved, *inside China*, in assembling the cargo of one ship going on a long-distance voyage into the Southern Sea. The main kilns represented by high quality stone wares and porcelains were:

1. The Ding (?) kilns of North China provided large, trumpet-mouthed jars with cream/white glaze. Rarely found hitherto, one intact specimen is known from the Philippines; none was recovered intact from the Intan wreck, but shards of forty specimens reported on the sea bed (figures 3a and 3b).
2. The recently discovered Fan Chang 繁昌 kilns of southern Anhui (currently dated by the ceramic experts of Anhui and Jingdezhen to 930-40) provided numerous shallow porcelain bowls, varying between 95 and 225 millimeters in diameter, with thickened rims and small foot-rings, also small lidded boxes. All these wares had a white paste and translucent or white glazes with a blueish tinge (figure 4).
3. The Yue kilns of eastern Zhejiang from which came a range of stoneware pots in highly varied shapes and sizes, including spouted flagons (some with phoenix-headed spouts), large and small jars, covered boxes and pillows. Some of the finest styles of Yue wares were represented in this cargo (figure 5). All were originally covered with green glazes, most of which had been destroyed by a millennium of immersion in salt water, to which the white and translucent glazes resisted much better.
4. Simple earthenware bowls with rudimentary brown glazes on the inner surface. Not surprisingly, these have not so far attracted the attention of archeologists in China or elsewhere. Only the presence of simple Chinese "potters' marks" (figure 6) identifies these crude bowls as Chinese at all.¹⁰ It seems reasonable to suppose that they were made in the vicinity of the Chinese port where the cargo was assembled for its deep-sea voyage. In view of the Southern Han affinities of the silver ingots and lead coins discussed in detail below by my co-author, this is likely to have been the great port of Guangzhou.

¹⁰ These were kindly read for me by Mr. Peter Lam, Director of the Museum of Art, Chinese University of Hong Kong.



Figures 3a-b. A Large Chinese Jar with Trumpet Mouth
White paste and transparent glaze. Ding? kiln. Figure 3b, below, is a detail of base of 3a. Both © Stargardt 2003.



Figure 3b.

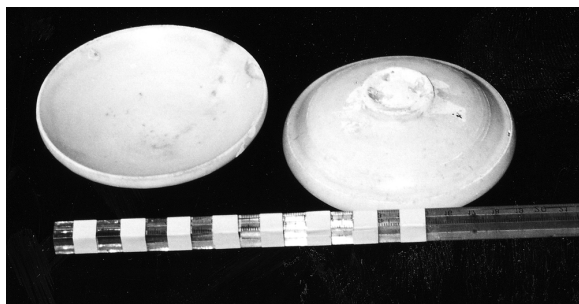


Figure 4. Fan Chang Porcelain Bowls: Intan Cargo
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Glass

The glass objects on board the Intan Wreck were not numerous, and all were recovered in a fragmented condition. However the fragments are large enough to allow the vessel types to be identified. Their presence in this cargo is of great interest since they are of Middle Eastern origin, and of very high quality. They show how, in precisely these waters near to the Straits of Malacca and on the Isthmus of the Malay Peninsula (for example in the Satingpra complex of sites), the trade of the South China Sea intersected with the trade of the Indian Ocean,



Figure 5. A Yue Ceramic Pillow of High Quality from the Intan Cargo

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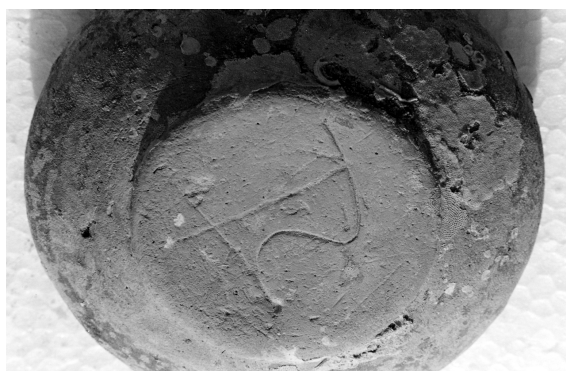


Figure 6. Potter's Mark on Simple Terra Cotta Bowl from the Intan Cargo

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permitting the exchange of the most fragile as well as of the most robust of goods; the most valuable and the cheapest. The glass objects were mainly unspouted flagons ranging in (estimated) original height from 23 to 35 centimeters. Most had tall narrow necks with flat neck rings. The colors were dark blue, dark, medium and pale green, turquoise, yellow and dark red, as well as almost clear glass. Some fragments of two-color glass were found, combining dark red with pale yellow, and three small clear-glass spoons. These precious wares had presumably been acquired in preparation for the next voyage to China.

Southeast Asian Goods

The Southeast Asian ceramics on board were finely potted but unglazed earthenwares with attractive incised decorations, mainly of open lotus petals, and straight, curved and zigzag lines. Originally these pots were probably burnished and, even after prolonged immersion and incrustation, they still had very smooth surfaces on the brown terracotta paste. Most were narrow necked jars of medium size, some with spouts. In fact both neck and spout could function as pourers and all these wares may be regarded as belonging to the *kundika* tradition (Sanskrit; Malay/Javanese: *kendi*) of vessels used in ritual ablutions, royal and religious. Their exact place of manufacture is unknown but I tentatively suggest Southeast Thailand because they are stylistically and technically related to the somewhat later eleventh- to twelfth-century ceramics of the Kok Moh kiln at Ban Pah O in the Satingpra complex, which I excavated in 1972–1973, and have subsequently traced in trade to Java, Sumatra, and the Philippines.¹¹

There are also a few specimens of organic trade goods recovered from the Intan Wreck. These included incenses, for which Southeast Asia was famous on the Chinese market.¹² The specimens recovered included both aromatic resins and woods, and were found inside small lidded boxes from the Yue kilns mentioned above, thus establishing one of the main functions of these boxes in the Nanhai trade. Since the Intan ship was on its return voyage from China, one would not expect a large cargo of incense logs to remain on board. For insights into the kinds of cargo that a ship coming from Southeast Asia carried to China, I shall look briefly at the Quanzhou Wreck in the concluding section of this paper. The final point to be made here is that conditions on the sea bed would have dispersed and destroyed most organic evidence such as the ship itself, food, and textiles. There may well have been Chinese silks, major export items in the South Sea trade, on the Intan ship, but nothing remains. However, small imprints in the patina of the finest Chinese bronze mirrors show that they were originally wrapped in silk. Only those fragments of organic matter that were lodged in

¹¹ See Janice Stargardt, "Kendi Production at Kok Moh, Songkhla Province (Thailand) and Srivijayan Trade in the 11th Century," *Final Report of the SPAFA Workshop on Archaeological and Environmental Studies on Srivijaya* (Bangkok: 1983), Appendix 5b.

¹² See, e.g., copious material in Zhao Rugua 趙汝适, *Zhufanzhi jiaozhu* 諸蕃志校注, ed. Feng Chengjun 馮承鈞 (Shanghai: Shangwu yinshuguan, 1940; rpt. Taipei, 1970); translated in Friedrich Hirth and W. W. Rockhill, *Chao Ju-kua and His Work on the Chinese and Arab Trade in the Twelfth and Thirteenth Centuries* (St. Petersburg: Imperial Academy of Sciences, 1911; rpt. Taipei: Literature House, 1965).

airtight conditions on the seabed survived, and these included a small number of animal and human bones, some nuts, and tusks.

CHINESE SILVER INGOTS AND LEAD COINS

Lastly there were two categories of the cargo which form the main subject of this paper. The first is a set of ninety-seven silver ingots, together with a quantity of associated thin sheets of silver. These cast ingots bear a mark cast incuse, identifying the mint from which they originated (figure 7). Most ingots in addition are enclosed in a folded



Figure 7. Silver Ingot with Incuse Inscription from the Intan Cargo

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Figure 8. Silver Ingot with Legible Inscription on Wrapper

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wrapping of thin silver sheet, eighteen of which bear a roughly incised inscription that is still legible (figure 8). These inscriptions and their implications are discussed in detail below. They had all been manufactured in a government mint and used in the collection and transfer of revenue from the government salt monopoly. They had subsequently been used in trade. One can be reasonably sure that by the time they reached Indonesian waters they were being traded for their bullion value alone, which was high. These ingots have been assayed at between 93 and 96 per cent purity – that is, even higher than sterling silver. The wreck provides other evidence of the use of bullion in ex-

change, in the shape of a gold merchant's set of weights, scales, and touchstones.¹³

Even if their inscriptions were intelligible to a tiny minority in Southeast Asia, the ingots had lost all their original significance in that context. For us, however, the inscriptions provide important insights into the long, complex processes of trade: from their creation in South China by a government agency and use for specific purposes in the domestic revenue system, to their completion of that purpose and their entry into a new function as bullion, a valuable commodity used in exchange in long-distance trade at the cross-roads of the South China Sea and the Indian Ocean.

The second datable category is the approximately 145 Chinese lead coins. They have deteriorated underwater, and thus all of them are thin and brittle, with many fused together. Those that can still be read (figure 10) have identical inscriptions, which can be identified and ap-

proximately dated; and the inscriptions help connect the cargo with Guangzhou.

To sum up, the Chinese ingots and coins possess exceptional interest because of the general rarity of finds of silver ingots of comparable date, size, shape, and area of origin. But also interest stems from the unique silver wrappers. The information provided by them comple-



Figure 9. Backs of Silver Ingots

Fig. 7 ingot on right; fig. 8 on left (see n. 15, below). © Stargardt 2003.

ments the textual sources on China's economic development and state finances. They provide the precise material evidence on the values involved in the maritime trade connections between South China and Southeast Asia in the period and on the broader context of the Sanfoqi-Guangzhou trade. The ingots and coins will now be described in detail.

Chinese Silver Ingots

I have not had the opportunity to examine the ninety-seven ingots themselves. The following list of a sample of the ingots discovered in the wreck, and the transcription of the inscriptions upon them, is based on photographs and oral descriptions of a sample of eighteen wrapped

¹³ See Flecker, *Intan Wreck*, pp. 60, 67–71. The weights do not represent Chinese units.

and unwrapped ingots provided by my coauthor Dr. Stargardt, who also supplied data on their weights and sizes. The numbering of the ingots given here follows the numbering of those photographs. These do not correspond with the numbers used in an incomplete listing of seventy-two of the ingots, giving their weight and dimensions, made by Michael Flecker.¹⁴

Most of the ingots are approximately 50 *liang* (approximately 1.85 kilograms; one *liang* was about 37 grams) in weight. A few are roughly half this weight; some of these are broken halves of 50 *liang* ingots, some cast to that smaller size. The cast ingots bear a mark cast incuse identifying the mint from which they originated (figure 7, above). Almost all of the ingots are in addition enclosed in a folded wrapping of thin silver sheet; on eighteen a roughly incised inscription (figure 8, above) is still legible. Only those ingots where this wrapping has partly or completely come away reveal the incuse inscription on the ingot.¹⁵



Figure 10. Southern Han Lead Coins

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¹⁴ Ibid., pp. 85, 163.

¹⁵ We differ significantly from Flecker in his understanding of the silver ingots. In *Intan Wreck*, pp. 84–85, he suggests that the “wrapper” is not a separate sheet, but excess metal left on the edge of the mold during manufacture of the ingot that has been folded over. This seems unlikely, first because of the considerable size of the wrapped-over metal that would have been needed, secondly because cast metal would be too brittle to fold in this way, and most importantly because the partially unwrapped ingots show a distinct difference between the surfaces of the cast ingot, and those of the sheet wrapping, which was sufficiently flexible to be folded over the back of the ingots (fig. 9, above). The cast mint mark is misread by Flecker’s informant as “Huai-yang office.” The inscriptions, apart from the mint marks, were clearly made by a chisel or scribe on the cold metal, not cast as stated by Flecker. Also the government bureau (*yanwu*) mentioned in them is also incorrectly translated by Flecker’s informant as the “Sword Office” rather than Salt Office. Such an organization never existed.

Three of the ingots were partially unwrapped, in one case fully, allowing the cast inscription on the ingot itself to be read. All read “Guiyang jian 桂陽監” (the identity of which is discussed, below). The state of the surface of those ingots still wrapped in silver sheet is highly variable. The examples discussed in detail, below, have inscriptions – roughly made with a cold chisel into the silver – that can still be wholly or partially read. But occlusions from other metals, shellfish, breaks, and abrasions affect the surfaces of the remaining seventy-nine ingots so that at present it is unknown how many in total originally carried inscriptions. When legible, these inscriptions are found to give the weight and quality of the silver, the purpose for which the ingot was used, and the officials responsible for that transaction. A few of the ingots also have smaller inscriptions on the side. None of these is legible. Among the other items recovered from the wreck is a pile of blank thin silver sheets similar to the wrappers. The table, below, contains transcriptions and translations of the selected silver-wrapper inscriptions.

All these ingots were derived from the revenue collected from the sale of salt. The monopoly on salt was developed as a major form of indirect taxation under the Tang during the eighth and ninth centuries,¹⁶ and remained a major revenue source until the twentieth century. All the ingots probably originated from a common source, a local Salt Office (Yanwu 鹽務), but there is no means of identifying where this local office was.

Those ingots whose texts are legible fall into two distinct groups. The first, numbers 3, 6, 8, 9, are all around 50 *liang* in weight. Numbers 3, 8, and 9 are inscribed “Silver for the Salt Tax 鹽稅銀” and are certified for purity and weight by the same “solely responsible officer 專知官,” Chen Xun 陳訓, who is unidentifiable but was most likely a low-ranking local employee. Number 6 is also certified for purity and weight without the name of the certifying officer. It also includes a place name, but this is not clearly legible. I very tentatively read the first two characters as Hunan 湖南.

The second group, numbers 10, 11, 12, 13, are inscribed “Salt Office silver 鹽務銀.” The certifying officers are all adjuncts (副, 別副, 副知) and identified by their surname alone. These ingots are approximately half the size of the first group, certified as weighing 32.8, 23.4, 24.0, 20+ (the last digit is illegible) *liang*. They too, like the first group, specify that the silver is of superior purity.

¹⁶ See Denis Twitchett, *Financial Administration under the T'ang Dynasty*, 2d edn. (Cambridge: Cambridge U.P., 1970), pp. 51–58.

Selected Ingot Wrappers, with Transcriptions and Translations

In Transcription, words enclosed in [] indicate slight doubt as to accuracy; those enclosed in {} indicate strong doubt resulting in a guess at the transcription. For clarity, the Translation passages will not repeat these conventions, using only question marks.

An unknown number of missing or efaced graphs is indicated by <>. For known numbers of missing or efaced graphs, we indicate with two dots per graph; e.g. <.. ..> would mean that 3 graphs could not be read.

WRAPPER NUMBER (per Stargardt photos)	TRANSCRIPTION OF WRAPPER TEXT	TRANSLATION OF WRAPPER TEXT
3 (see fig. 8)	<i>yan shui shangse yin</i> 鹽稅上色 銀 [<i>sishijiu liang</i> 肆拾玖兩] [<i>zhuan</i>] <i>zhi guan</i> Chen Xun <i>deng</i> [專] 知官陳訓等	“Superior quality silver for the salt tax: 49 <i>liang</i> . Responsible officers Chen Xun and others.”
6	{Hunan 湖南} <> <i>shangse yin</i> 上色銀 <..> <i>shi liu liang</i> 拾陸兩 <>	“Superior quality silver for <> of Hunan?: <..>-ty-six <i>liang</i> <> [rest illegible].”
8	<i>yan shui shangse yin</i> 鹽稅上 色銀 <i>wushi</i> -[<i>yi</i>] <i>liang</i> 伍拾 [壹] 兩 [<i>zhuan zhi</i> 專知] <i>guan</i> 官 Chen Xun 陳訓	“Superior quality silver for the salt tax: 51? <i>liang</i> . Responsible officer? Chen Xun.”
9	<i>yan shui shangse yin</i> 鹽稅上色 銀 <i>wushi liang</i> 伍拾兩. <i>Zhuan zhi guan</i> Chen Xun 專知官	“Superior quality silver for the salt tax: 50 <i>liang</i> . Responsible officer Chen Xun.”
10	<i>yanwu yin sanshier liang pa qian</i> 鹽務銀參拾貳兩捌錢 <i>Biefu Wang</i> [Tu] 別副王 [土] [<i>zheng</i> 證] <i>shangse</i> 上色	“Silver from the Salt office (Yanwu), thirty- two <i>liang</i> and eight <i>qian</i> (tenths of a <i>liang</i>). The adjunct officer Wang Tu? certifies? it is of superior quality.”
11	<i>yan</i> [wu] <i>yin ershisan liang si</i> 鹽務銀貳拾參兩肆 <> <i>shang</i> 上	“Silver from the Salt office?: 23 <i>liang</i> and four <i>qian</i> ? <> superior.”
12	<i>yan</i> [wu] <i>yin erhshi</i> [<i>si</i>] <i>liang</i> 鹽[務] 銀貳拾 [肆] 兩 <i>fu</i> Fan 副范 <i>shang</i> 上	“Silver from the Salt office?: 24? <i>liang</i> . Adjunct officer Fan. Superior [quality].”
13	<i>yanwu yin ershi</i> 鹽務銀貳拾 <> <i>fu zhi</i> 副知 <>	“Silver from the Salt office: 20? <> Deputy official in charge<>”
14	Totally illegible	
15	Totally illegible	
16	Inscription appears to be the same as that on wrapper no. 10, above.	
17	No inscription	

These groups of ingots clearly represent two different types of revenue from the government monopoly on salt. The term “Salt Office (Yanwu)” does not appear in any of the formal descriptions of local government, either under the Tang or under the Song, but the salt administration system was continued by each of the Five Dynasties in North China until the founding of the Song,¹⁷ and the term does appear in documents dating from the 940s and 950s relating to the salt monopoly under the northern dynasties of Later Jin 後晉 (936–947) and Later Zhou 後周 (951–960).¹⁸ The same term also appears on tax ingots dating from the Song (see below), although there is no textual evidence for the existence of *Yanwu* during that period either. They were most probably minor local branch offices of the salt administration, independent of but loosely linked to the local county and prefectural governments, perhaps lesser versions of the Rural Tax Stations, *chang* 場, described by Hugh Clark, that collected a variety of taxes on salt. Under the Tang from the latter half of the eighth century onwards salt taxation had become a major source of revenue, and branch offices under various names were widespread.¹⁹ In 942, under the Later Jin regime in northern China, the government attempted to bring its local branch offices *yanwu* under stricter control and to limit the transit tax, *guoshui* 過稅, the graduated residents’ tax, *zhushui* 住稅, or salt consumption tax *shiyangqian*, 食鹽錢 and other charges they could legitimately levy on merchants and on the local population.²⁰

We know very little about the salt monopoly system as it was operated under the independent southern kingdoms, but it seems reasonable to assume that they, like their northern counterparts had such local branch salt offices. Chinese scholars who have studied Song examples of ingots inscribed “*yanwu yin*” have linked them with the payments made to the local branches of the salt monopoly by merchants who had provisioned frontier garrisons and received in return either salt or more usually vouchers (*yanchao* 鹽鈔), which they could use else-

¹⁷ See *Cefu yuangui* 冊府元龜 (Beijing: Zhonghua shuju, 1960; hereafter, *CFYG*) 494, pp. 10b–25a.

¹⁸ See Wang Pu 王溥, *Wudai huiyao* 五代會要 (Shanghai: Shangwu guji chubanshe, 1978; hereafter, *WDHY*) 26, pp. 418–19. The terms Salt Office (*yanwu*) and also Salt Monopoly Office (*queyanwu* 榷鹽務) appear to be used interchangeably for such offices in these documents.

¹⁹ See Hugh Clark, “Rural Tax Stations of the Late Tang and Ten Kingdoms,” *AM* 3d ser. 5.1 (1992), pp. 57–83. These developed from the late-Tang branch offices of the Salt and Iron Commission, on which see Twitchett, *Financial Administration*, pp. 52–54.

²⁰ See *Jiu Wudai shi* 舊五代史 (Beijing: Zhonghua shuju, 1976) 81, p. 1073; *WDHY* 26, pp. 418–19; *CFYG* 494, pp. 19a–b.

where to acquire salt from government establishments for resale. This system, however, was first introduced in 985 only in the northwestern frontier regions, and was not extended to Guangnan 廣南 (the Song province equivalent to Southern Han) until more than a century later. The ingots from the wreck thus can have had no connection with the voucher system. However, as we know so little detail about the workings of the salt monopoly under the independent southern states, the precise identity of these taxes must remain a matter for speculation. The Southern Tang dynasty collected a salt consumption tax (*shiyán qián* 食鹽錢) on a *per capita* basis as a supplementary levy collected with the general household taxes (*liangshui* 兩稅), as did the minor state of Nanping 南平 in Hubei. But there is no evidence whatever about salt taxes in Southern Han or in Chu.

I would suggest that the “silver for the Salt Tax” and the “Salt Office silver” were, respectively, a tax levied either on salt producers or perhaps on local consumers, and the money received from merchants who purchased salt from the branch office and transported it for resale. In either case these taxes were probably not originally paid in silver. The silver was more likely used for convenience in transportation by the local governments where the tax was collected to consolidate tax payments made in other media.

While this is, I stress, pure speculation, what is certain is that the silver was paid into the Southern Han treasury as a category of revenue and was then at the government’s disposal to use as a convenient medium for payment of large sums which was widely acceptable both in China and abroad. In this case the government had disbursed this silver to purchase from merchants (or possibly foreign envoys) some extremely valuable Southeast Asian commodities which it required, such as incense. These were acquired not only for their own consumption, but also as a fund of valuable state gifts to exchange with other countries in the course of diplomatic contacts. The traders (or envoys) who received this payment would subsequently use not only the ingots themselves but also the additional pile of blank wrapping sheets for their bullion value in trade transactions.²¹

²¹ Like some other details supplied by my coauthor in the outline above, these blank wrapping sheets are not mentioned in Michael Flecker’s report on the wreck.

SILVER INGOTS USED IN CHINESE SALT TAX
TRANSACTIONS: IMPLICATIONS FOR INTERNAL
TRADE IN SALT BETWEEN HUNAN AND LINGNAN

On each of the ingots is a notation of its weight in *liang* (a Song *liang* weighed 37 grams, approximately 1.3 ounces) and *qian* (tenths of a *liang*), and the name and position of the officer responsible (*zhi guan*, *biefu*, *fuzhi*, or *zhuan zhi*) for overseeing the transaction and for guaranteeing the ingot's weight and purity. These inscriptions are similar to those on Tang and Song ingots described in historical records and on those discovered in China by archeologists.²² None of the personal names is traceable. The descriptions of the individuals' positions are not strictly speaking their offices but indicate the degrees of legal responsibility assigned to each officer involved in an official transaction.²³ This follows the normal format of low-grade bureaucratic documentation.

None of the ingots bears a date, and only one of those I have examined, number 6, mentions a place name. This is not clearly legible, but I tentatively read the first two characters as Hunan 湖南, which would suggest a link with the silver produced in the Chenzhou, Guiyang jian area. We know that the state of Chu 楚, which ruled Hunan from 907 to 963 and which changed its formal name to Hunan from 956 to 963, had strong links to the Southern Han 南漢 state based at Guangzhou: the first Southern Han "emperor" was married to the daughter of Chu's ruler. Hunan was moreover a region that had to import salt; and possibly these ingots represented the price paid to the Southern Han by the Chu authorities to procure some of the salt they required. The coastal areas around Guangzhou produced a good deal of salt and would have been the most likely and convenient source. We know that when the Song imposed their salt monopoly in Guangdong after its conquest of Southern Han in 971, Guangdong salt was sometimes permitted to be sold in southern Hunan and also in Jiangxi where there were no local salt supplies.²⁴ Also when the Song government was discussing the relaxation of the salt monopoly in Fujian in 983 merchants were specifically permitted to participate and to purchase official salt at a set price, using gold, silver or cash in the transaction.²⁵

²² See Zhu Jieyuan 朱捷元 and Hei Guang 黑光, "Xi'an nanjiao chutu yipi yinding" 西安南郊出土一批銀錠, *WW* 1966.1, pp. 51-52.

²³ See Wan Sinian 萬斯年, "Guanyu Xi'an shi chutu Tang Tianbao jian yinding" 關於西安市出土唐天寶間銀錠, *WW* 1958.5, pp. 32-36.

²⁴ See Wang Shengduo 汪聖鐸, *Liang Song caizheng shi* 兩宋財政史 (Beijing: Zhonghua shuju, 1995), vol. 1, pp. 261-62.

²⁵ See Hugh R. Clark, *Community, Trade and Networks: Southern Fujian Province from the Third to the Thirteenth Century* (Cambridge: Cambridge U.P., 1991), pp. 164-65.

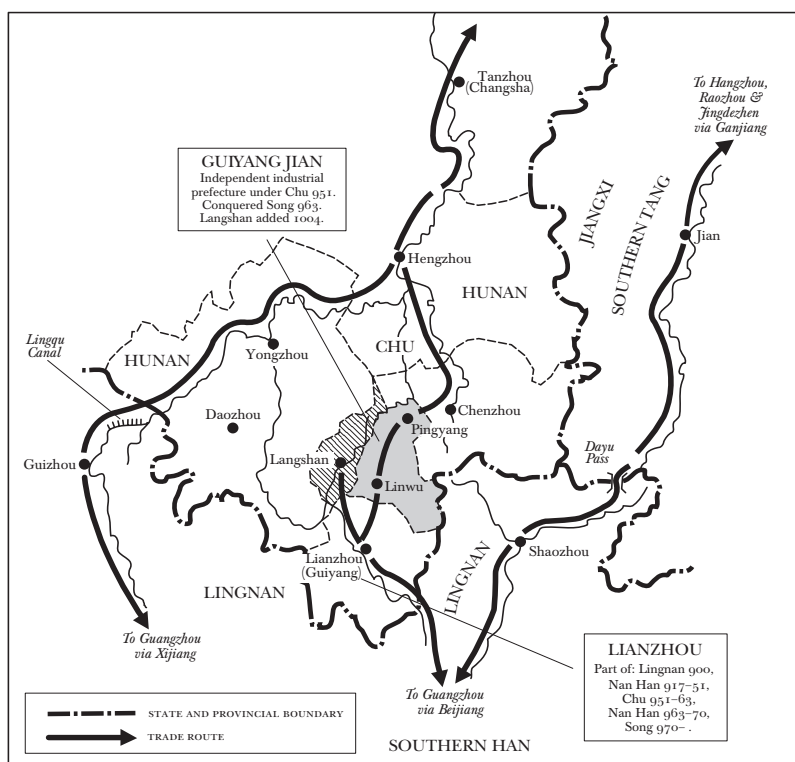
The Place of Manufacture: Guiyang jian

The only other place name mentioned is the name of the mint of origin, cast into an ingot (figure 7) that has lost the wrapper (thus not included in the above table). It consists of three characters, “Guiyang jian 桂陽監.” On two others, the wrapper has come loose revealing readable parts of an identical mint mark.

In the tenth century there were two different places called Guiyang, confusingly both associated with the production of silver and other metals.

1. *Guiyang County: Guiyang xian 桂陽縣*

In Tang, Wudai, and Song times this was the county serving as the administrative seat of Lianzhou 連州 prefecture, modern Lian xian 連縣 county in northwestern Guangdong province. Guiyang county occupied the upper basin of the Lianjiang 連江, a tributary of the Beijiang, which flowed into the Pearl River system just west of Guangzhou (Canton). It was situated near the main crossing points over the Wuling ranges between southern Hunan and the Guangdong area (maps 3 and 4, below).



Map 3. Guiyang jian

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The area was rich in metals. Guiyang county produced silver and iron; other counties in Lianzhou also produced iron, copper, and gold, while the prefecture's annual tribute included mercury, cinnabar, and *baila* 白鐵, which is either tin or a mixture of tin and lead used as solder. Later, in the fifteenth century, Lianzhou became the center of a major iron smelting industry.²⁶ But in Tang and Song neither Lianzhou prefecture nor Guiyang county had a special directorate 監 or office controlling mining or smelting.²⁷

In the Tang and Song periods Lianzhou was administratively sometimes part of the province of Jiangnan Xi dao ("West Jiangnan province 嶺南西"; roughly modern Hunan and Jiangxi), sometimes part of Lingnan Dong dao ("East Lingnan province 嶺南東"; roughly modern Guangdong). It was part of Jiangnan province in Tang Taizong's reign (626–649), but was transferred to Lingnan under Xuanzong (712–755). After the An Lushan rebellion (755–763), in the ninth and tenth centuries Lianzhou was administratively part of Jiangnan Xi dao and more specifically of the province of the Civil Governor of Hunan (*Hunan guanchashi* 湖南觀察使) based in Tanzhou 潭州 (modern Changsha).²⁸ At some date at the very end of Tang it seems to have been transferred once again to the province of Lingnan east. It appears thus in the *Xin Tang shu* "Geographical Monograph," which describes the empire toward the end of the tenth century.²⁹

As the Tang central authority collapsed after the Huang Chao 黃巢 rebellion (873–884), the already volatile political situation in what had been Lingnan was seriously destabilized. In 879 the rebels had swept through southern China and sacked Guangzhou, killing huge numbers of foreign merchants and residents. The port and its trade took many years to recover. By the fall of the dynasty in 907, the late-Tang provincial governors of Lingnan had long been semi-independent, but remained nominally loyal to the throne. After 907 their successors at first continued to give their allegiance to the new Liang regime in Kaifeng. However, eventually in 917 they proclaimed themselves rulers of an independent "empire" of Southern Han, with their capital at

²⁶ See Robert B. Marks, *Tigers, Rice, Silk, and Silt: Environment and Economy in Late Imperial South China* (Cambridge U.P., 1998), pp. 102–3. It already had a branch office controlling iron production in 1021. See Li Tao 李燾, *Xu Zizhi tongjian changbian* 續資治通鑑長編 (Beijing: Zhonghua shuju, 1979–; hereafter *XCB*) 97, p. 2262.

²⁷ See *Xin Tang shu* 新唐書 (Beijing: Zhonghua shuju, 1974; hereafter *XTS*) 43A, p. 1107; *Yuanhe junxian tuzhi* 元和郡縣圖誌 (Beijing: Zhonghua shuju, 1983; hereafter *YHJXTZ*) 29, pp. 711–12; *Taiping huanyu ji* 太平寰宇記 (Taipei: Wenhai, 1961; hereafter *TPHYJ*) 117, pp. 8a–11b; *TPHYJ bujue* 補闕 (Song edn.) (Taipei: Wenhai, 1963) 117, pp. 6a–10a.

²⁸ See *YHJXTZ* 29, pp. 702, 711–12.

²⁹ See *XTS* 43A, p. 1107.

Guangzhou.³⁰ The governors of Lingnan had nominally controlled all of modern Guangzhou and most of Guangxi province, some border areas of Guizhou, Hainan Island, and Annan, the Tongking region of modern Vietnam. But in these outer areas, even during the periods of strong Tang power, their authority was very unstable, constantly challenged by local military leaders, and by indigenous non-Han peoples who far outnumbered the Han settlers.³¹

During the Five Dynasties period (907–960), the area around Guiyang was sometimes under the direct control of the Southern Han court; sometimes under occupation by the regional state of Chu, which ruled Hunan; sometimes ruled by one or the other of the local warlords controlling parts of the unstable tribal territories in modern Guangxi that lay between Southern Han, the semi-independent area of Annan, once part of Lingnan, that was breaking away from Chinese domination and would later become the Vietnamese state, and the successor regimes to the independent kingdom of Nanzhao in Yunnan. In 951, Southern Han conquered a large swathe of southern Hunan prefectures from Chu, including Lianzhou's northern neighbor Chenzhou, which they occupied from 951 until 963 when the Song finally destroyed Chu and annexed its "old territories." Lianzhou and other border areas were left under Southern Han control until they in turn were taken by the Song army in 970.³² When the Song took Lianzhou in 970 it was

³⁰ See Edward H. Schafer, "The History of the Empire of Southern Han according to Chapter 65 of the *Wu tai shih* of Ou-yang Hsiu," *Silver Jubilee Volume of the Zinbun-Kagaku Kenkyusyo* (Kyoto, 1954). The founder (Liu Yin 劉隱; d. 910 or 911) was a grandson of Liu Anren 劉安仁, a native of Shangcai 上蔡 in the upper Huai valley who had migrated with his family to Minzhong 閩中 (Fujian) and later engaged in trade in Nanhai 南海 (that is Guangzhou) and settled there. His son, Liu Yin's father Liu Qian 劉謙, became a military officer in Lingnan, and, following Huang Chao's attack on Guangzhou, became defense commissioner of what is now Guangxi, controlling a large army and a navy of more than 100 warships (see *XWDS* 645, p. 809). Some later historians erroneously read Nanhai in this passage not as the commandery name of late-Tang Guangzhou, but as meaning that Liu Anren traded with the South Seas. See discussion in Clark, *Community Trade and Networks*, pp. 34 and 208 (n. 36), and the different interpretation in Billy K. L. So, *Prosperity, Region, and Institutions in Maritime China: The Southern Fukien Pattern, 946–1368* (Cambridge, Mass.: Harvard U.P., 2000), p. 22. This false interpretation reveals the close association in the minds of later scholars between the Southern Han royal house and commerce, and their obsessive acquisition of luxuries and exotic goods from the South Seas.

³¹ See Edward H. Schafer, *The Vermilion Bird: Tang Images of the South* (Berkeley and Los Angeles: U. of California P., 1967), pp. 18–47, and 61–68, which lists over 80 insurrections during the Tang, several of them serious and lasting several years. These were mostly in what is now Guangxi and Vietnam. The areas in the east and north – modern Guangdong – were comparatively peaceful.

³² See *XCB* 11, pp. 252–53. When this invasion occurred, the Southern Han "Emperor" declined to attempt the recovery of the northern frontier prefectures it had lost in 951, saying that they were all originally parts of Chu. This underlines the anomalous administrative position of the Lianzhou area.

found that in Lianzhou and also in nearby Guizhou 桂州 the Southern Han occupying forces (presumably resuming control after the Song had annexed Chu) had uprooted and displaced the population of the prefectural cities, and the incoming Song authorities had to build villages and housing to accommodate them.³³

2. *Guiyang Directorate: Guiyang jian* 桂陽監

This Guiyang jian was not in Guiyang county. During Tang times it was the name of a very important mint (*jian* 監) sited within the county city of Chenxian 郴縣, the administrative seat of Chenzhou 郴州 prefecture in southern Hunan, which was producing fifty million copper cash annually in 812. Chenzhou was a major center of mining, producing silver, copper, and lead. The mint was in the prefectural city, but the main source of metals, especially copper and silver, was Pingyang county 平陽縣. According to the early-ninth-century *Yuanhe junxian tuzhi* 元和郡縣圖誌, the silver produced in Pingyang county was of exceptional purity.³⁴ (This information agrees with the fact that the ingots recovered from the wreck are of unusually pure silver; one sample analyzed was 93.9 percent silver, better than the standard for sterling silver; another was even purer at 98.1 percent.) Beside silver, Pingyang county also supplied copper ore that was smelted and cast into coin at the Guiyang mint in Chenzhou. The discovery and exploitation of silver deposits in this area was one of the factors that led to a boom in the use of silver bullion at the beginning of the ninth century.

During the Five Dynasties period the area was part of the state of Chu 楚, as mentioned above. In 939 the two counties of Pingyang 平陽縣 and Linwu 臨武縣 were separated from Chenzhou, and their populations placed under the separate jurisdiction of the Guiyang jian directorate 桂陽監.³⁵ It is unclear whether under the Chu state *jian* still meant an official industrial installation, as under the Tang. More probably, since it had jurisdiction over two counties, it already designated a Special Industrial Prefecture, as it did under the Song. The area was invaded and occupied by Southern Han in 951. The Song annexed Chu, including the area of the Guiyang directorate, in 963. The territory conquered by Song was “all the old territory of Hunan, and included one industrial prefecture” – which certainly refers to Guiyang

³³ See *XCB* 11, p. 253.

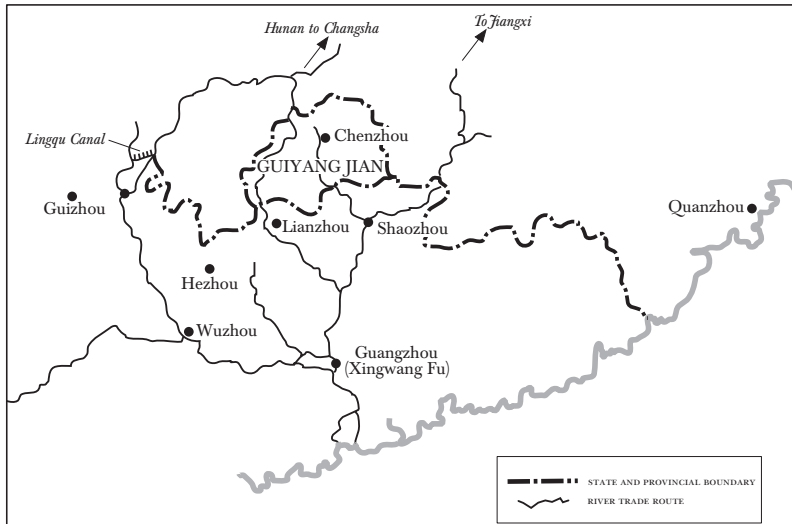
³⁴ See *YHJXTZ* 29, p. 708. The local silver was known as *kuazi yin* 偶子銀. A somewhat unusual term, *kuazi* means “heroic”; the implication is “peerless” or “incomparable.”

³⁵ See *Yudi jisheng* 輿地紀勝 (Taipei: Wenhai, 1962) 61, p. 1b. I owe this reference to *Asia Major*'s anonymous reader.

jian.³⁶ In 970 the Song emperor Taizong read the figures for the silver revenue levied from this industrial prefecture, and, astonished at their size, asked why they had never been reduced. The quota was subsequently reduced by a third.³⁷

Certainly after 970, and probably since 939, Guiyang was a Special Industrial Prefecture (*jian*) with territorial jurisdiction over two and later three counties. In 1004 Lanshan 藍山縣 (written Jianshan 監山 in some sources) county was also detached from Chenzhou and attached to the industrial prefecture. Later, in 1133, at the very beginning of the Southern Song, its status was changed into a Military Prefecture, Guiyang jun 桂陽軍, with territorial jurisdiction over the same three counties, Pingyang, Linwu, and Jian-shan (or Lanshan).³⁸

This area (map 3) lay just across the watershed north of Guiyang county in Lianzhou, which was 230 *li* (about 70 miles) to the south. It had good communications by the Xiang River to Changsha, the main city of Hunan 710 *li* away to the north, and thence to the Yangtze, and short portages southwards over the low saddles in the mountains to river routes via tributaries of the Beijiang to Lianzhou and also to Shaozhou 韶州, 320 *li* to the southeast, and thence via the Beijiang to Guangzhou. There was also an ancient canal route, the Lingqu 靈渠, which provided an all-water route to Guangzhou by linking an upper tributary of the Xiang River with a tributary of the Guijiang, part of the West River system in Guangdong-Guangxi. (On this, see below and maps 3 and 4.)



Map 4. Major River Trade Routes in Southern China

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³⁶ See *XCB* 4, p. 85.

³⁷ See *XCB* 11, p. 253.

³⁸ See *TPHY* *bujue* 117, p. 11b.

The single *raison d'être* of the Guiyang Special Industrial Prefecture was mining and the smelting of metals. Its registered population in the 980s was 4,047 households, with 9,260 adult male taxpayers who paid no regular autumn or summer taxes, but contributed silver instead. Of these the 1,005 resident households (*zhuhu* 主戶) comprising 3,340 male taxpayers, contributed 902+ *liang* per month, the 2,780 guest households (*kehu* 客戶), with 5,488 male taxpayers, contributed 1,042+ *liang* per month. There were also 262 special households called *shanhe hu* 山河戶, including 430 male taxpayers, contributing 54+ *liang* per month. In 1037 it was suggested that the head tax, which had been levied on all male adults in the industrial prefecture since the time of the Chu state and which now amounted to 28,000 *liang* per annum, should be remitted to relieve hardship on the local families, who had been driven to conceal the existence of their sons to evade paying the head tax on them. The suggestion was rejected.³⁹ In the Tang period the area had formerly paid its annual tribute (*gong* 貢) in copper and lead, but by the 980s was contributing silver instead. The *Taiping Huanyu ji* lists thirteen centers of silver smelting and mines producing silver, or silver and lead ores.⁴⁰

There can be no doubt that the Guiyang *jian* that produced the ingots discovered in the wreck was not Guiyang county in Lianzhou but this mining and minting center in Hunan, already well established in the Tang period, which under the Chu and subsequently under the Song became the special industrial prefecture Guiyang *jian*. In any case, Guiyang county in Lianzhou, Guiyang *jian*, and Chenzhou were all parts of a single, rich metal-producing area, straddling the watershed between Hunan and northwest Guangdong. By the late-tenth century it was one of the principal sources of silver in Song China.⁴¹

My hypothesis about the derivation of the silver from the wreck is as follows. If the wreck dates from before 939, I suggest that the Chu government collected at least two forms of salt tax from their general population or from merchants through its local salt offices. These tax payments were consolidated into silver ingots produced in the Guiyang Special Industrial Prefecture, and used to purchase the salt their population required from the neighboring state of Southern Han. The Southern Han ruler or his procurement agency, needing to purchase exotic spices or aromatics, used this silver from their treasury to pay the merchants or envoys who had brought the goods to Guangzhou.

³⁹ See *XCB* 120, p. 2835.

⁴⁰ See *TPHYJ bujue* 117, pp. 111b–12a.

⁴¹ See *XCB* 97, p. 2258. I owe this reference to *Asia Major*'s anonymous reader.

The silver then remained in the hands of the merchants, who would use it as bullion in their trading operations in Southeast Asia. If, however, the cargo dates from after 951 and before 963, when Southern Han had itself occupied the Guiyang Industrial Prefecture, it seems likely that the taxes they represent were either consumption taxes or a levy on merchants collected in an unidentified prefecture and consolidated into silver produced in the Guiyang industrial complex for forwarding to their treasury in Guangzhou.

Some idea of the huge value of the Intan ship's cargo can be gained from the sheer quantity of silver it included. As mentioned earlier, the total weight of the 97 ingots recovered is almost 5,000 *liang*, roughly two-thirds of the entire annual mining tax collected from the rich Le-ping silver mines in Raozhou, Jiangxi, early in the ninth century under the Tang (see below), or more than two months' revenue from the levy the Song government collected from the mines of the Guiyang Special Industrial Prefecture in the 980s, shortly after the date of the wreck. It is also equivalent to more than 1.15 percent of the Song government's entire annual revenue in silver, 376,000 *liang*, in 996.⁴² This sum represents the revenue from the whole of China, in a period of prosperity after enjoying nearly twenty years of reunification. The silver in the wreck must have represented a far greater percentage of the annual revenues of Southern Han, which was by comparison a miniscule state recovering from decades of instability and upheaval. Perhaps even more telling a comparison is that it is equal to five percent of the annual silver subsidy paid by the Northern Song to the Qidan Liao 契丹遼 under the Treaty of Shanyuan in 1004, which totaled 100,000 *liang*.⁴³ This subsidy was considered a massive national burden, although most of the silver returned to China through inter-state commerce .

PAYMENT AND TRANSFER OF TAXES AND OTHER OFFICIAL TRANSACTIONS IN SILVER UNDER THE TANG

The role played by silver in government transactions in Tang China has not received the attention it deserves. Silver was never coined during the Tang, Wudai, and Song periods, but there is a good deal of textual evidence that silver bullion was increasingly used in official transactions, particularly in southern China. This evidence was

⁴² See *XCB* 97, p. 2258.

⁴³ See Herbert Franke and Denis Twitchett, eds., *The Cambridge History of China, Volume 6, Alien Regimes and Border States, 907–1368* (Cambridge: Cambridge U.P., 1994), pp. 109–10.

gathered together by Katō Shigeshi 加藤繁 almost eighty years ago.⁴⁴ In recent times archeological discoveries in China have begun to reveal hard physical evidence that such uses were indeed widespread and the whole question needs reassessment. Payment of taxes in silver, and the conversion and consolidation of taxes paid in other commodities into silver was already common enough, even during the early Tang, for there to have been special storehouses within the Court of Treasury (Taifu si 太府寺) at the capital, the Storehouses of the Left (Zuozang shu 左藏署, or Zuozang ku 左藏庫), reserved for storing taxes paid in silver. That these actually functioned has been clearly shown by the discovery in 1970 at Hejia cun 何家村, in the southern suburbs of Xi'an (the Tang capital Chang'an), of a Tang-period storage vault containing a large cache of silver ingots connected with these treasuries.⁴⁵

Tang Tax Payments Using Silver Ingots

The yongdiao taxes

Although the standard *yongdiao* 庸調 taxes early in the Tang were specified in standard lengths of silk or hempen fabrics, they were often commuted into payments in other commodities, especially in districts that did not practice sericulture. Among these commodities was silver, which is said by a passage in *Xin Tang shu* to have been paid in Lingnan province at 14 ounces (*liang*) for a locality (*xiang* 鄉; notionally a unit of 500 households) that did not produce silk. By a lucky chance, the archeological investigation of the above-mentioned Tang-era storage vault revealed among many other objects four silver ingots which had been used in paying in the *yongdiao* taxes from two counties subordinate to far distant Guangzhou, the administrative center of Lingnan, during the reign of Xuanzong, in 722 and in 731.⁴⁶ These were inscribed as follows:

⁴⁴ See Katō Shigeshi 加藤繁, *Tō Sō jidai ni okeru kingin no kenkyū* 唐宋時代に於ける金銀の研究 (Tokyo: Tōyō bunko, 1924; rpt. 1965).

⁴⁵ See Qin Bo 秦波, "Xi'an jinnianlai chutu de Tangdai yinding, yinban, yinbing de chubu yanjiu" 西安近年來出土唐代銀錠銀板銀餅的初步研究, *WW* 1972, pp. 54–58. These ingots vary both in size and shape. They include 53 small rectangular silver strips inscribed "Wuliang Chao 五兩朝"; two similar strips inscribed "Wuliang Tai bei 五兩太北"; and a larger one inscribed "Shiliang Tai bei 拾兩太北." *Chao* is an abbreviation of Chaotang ku 朝堂庫, one of the storehouses listed under the Zuozang ku in contemporary sources. *Tai* is an abbreviation of Taifu si, and *bei* was presumably its "northern storehouse," which is otherwise unknown. There are also twelve large silver discs weighing 50 *liang*, inscribed in ink as from the Offices of the Eastern Market 東市署 of Chang'an, which was subordinate to the Taifu si. On the Hejia cun discovery, the site of which was in the Xinghua ward of the Tang capital, see Victor Cunjui Xiong, *Sui-Tang Chang'an: A Study in the Urban History of Medieval China*, (Ann Arbor: Center for Chinese Studies, University of Michigan, 2000), pp. 230–31.

⁴⁶ See Li Jinxiu 李錦綉, *Tangdai caizheng shi gao* 唐代財政史稿 (Beijing: Beijing Daxue chubanshe, 1995) 1.2, p. 435.

Tsun'an county; silver in payment of the *yongdiao* taxes for 731: 10 ounces (*liang*). Solely responsible officer, the magistrate (*ling*) Peng Chongsi, the clerical supervisor (*dian*) Liang Hai, and the artisan [making the ingot] Wang Ding.

Huaiji county; Silver in payment of the *yongdiao* taxes for 722: 10 *liang*. Solely responsible officer, Wang Wenling, the clerical supervisor (*dian*) Chen You, and the artisan [making the ingot] Gao Tong.

These ingots are smaller and quite different in shape both from those discovered in the Intan Wreck and those of Song date discovered at various sites, which share with those from the wreck the same Chinese pillow shape – waisted in the middle (a shape described in Chinese as “boat shaped 船形” or “raft shaped 筏形”). These particular Tang examples are small, roughly circular, convex disks, described as silver cakes 銀餅, as may be seen in the excellent photographs included in the history of silver bullion in China edited by Tang Guoyan.⁴⁷

Other Taxes Paid in Silver

Tang silver ingots used for the payment of other taxes have also been discovered by archeologists, and silver payments of tax and in official transactions are well attested in historical literature. These ingots were employed in transferring the proceeds from a tax levy between government authorities. Once they had been received in a central treasury, they were available as a convenient medium for the payment of large sums in government disbursements, and could then be passed on by their recipients for more widespread use in trade as “commodity money,” as were the millions of lengths of tax silk, some examples of which have been discovered in the dry deserts of Xinjiang.

Merchant taxes

Among the storage-vault finds at Hejia cun was a group of twelve large, circular silver discs weighing around 50 *liang*, each inscribed in ink as representing the market tax collected by the Office of the Eastern Market 東市署 of Chang'an.⁴⁸ In addition to these, two 50-*liang* ingots of a different shape that had been used to pay the merchant levy *shuishang* 稅商, once more in Lingnan province, were also discovered elsewhere in the suburbs of Xi'an, in an area where there had been a number of finds of silver hoards

⁴⁷ See Tang Guoyan 湯國彥 and Hong Tianfu 洪天福, *Zhongguo lishi yinding* 中國歷史銀錠 (Kunming: Yunnan renming chubanshe, 1993), p. 7.

⁴⁸ See n. 45, above.

from Tang times. They were acquired in 1977 by the Shaanxi Provincial Museum.⁴⁹ Each is inscribed: “Silver for the merchant levy *shuishang yin* 稅商銀 for Lingnan; official weight 官秤 50 *liang*” and is also inscribed on the side with the name of the artisan Huang Tai 黃泰.

Taxes on mining

Silver ingots were also used to pay the taxes levied on the production of silver mines. Such a tax was apparently first imposed in the case of the rich silver mines discovered in Leping county 樂平縣 in Raozhou 饒州, Jiangxi, by a local man called Deng Yuan 鄧遠 in 669. This site became a very important source both of silver and copper, and in 675 the government set up a tax station and a directorate there to control the mines, the authorities levying a twenty percent tax on the silver produced. Later, after the 760s, the directorate was placed under the general office of the Salt and Iron Commission in Jiangxi. By early in the ninth century it was producing more than 100,000 *liang* of silver each year, of which 7,000 *liang* were paid as mine tax (*shui-shan yin* 稅山銀), considerably less than the twenty percent mentioned earlier.⁵⁰ Similar taxes, under various titles, were later levied on mines elsewhere.

One surviving ingot used to pay this tax, from an unknown mine, is dated the tenth lunar month of 750, and is inscribed: “Silver for the mine tax *shuishan yin* 稅山銀. Tenth month 9th year Tianbao; 50 *liang* precisely.” Another, dated 753, is inscribed: “Silver from the mineshaft levy *kukeyin* 窟課銀 from Yiyang county 伊陽縣 in Henan fu 河南府 for 12th year Tianbao; 50 *liang* precisely.”

Yiyang county was in the mountains, 260 *li* south of Luoyang, and was an important center of mining, producing not only silver but also copper and tin. Local rivers also produced alluvial gold. The mineshafts (“silver caves”; *yingong ku* 銀礦窟) were five *li* south of the prefectural seat in the Taihe Mountains 太和山, and around 810 were paying a thousand *liang* annually in tax.⁵¹

Apart from the circular discs used for the market tax, all these ingots for payment of merchant and mine taxes were in the form of flat rectangular metal strips varying from roughly 25 to 32 centimeters long, by 7 centimeters wide; all are inscribed as weighing a standard 50 *liang*. Their actual weight is, in fact, very nearly equal, varying between 2,071 and 2,115 grams.

⁴⁹ See Liu Xiangqun 劉向群 and Li Guozhen 李國珍, “Xi’an faxian Tangdai shuishang yinding” 西安發現唐代稅商銀錠, *Kaogu yu wenwu* 1981.1, pp. 127–28.

⁵⁰ See *TPHJ* 107, pp. 9a–b; *YHJXTZ* 28, p. 672.

⁵¹ See *YHJXTZ* 5, p. 136; *XIS* 38, p. 984. These mines and their silver production are not mentioned in the *TPHJ* 5, pp. 1a–b, entry on Yiyang county, and they may perhaps have been worked out or ceased production in the late-10th c. However a century later, in 1080, *Yuanfeng jiuyu zhi* 元豐九域志 (Beijing: Zhonghua shuju, 1984) 1, p. 5, records a single surviving silver mine in the county in the late Northern Song.

Prefectural tribute payments in silver

In addition to the regular taxes levied on each individual household, every prefecture was expected to pay an annual tribute (*gong* 貢), specified in the form of some product special to the prefecture. These tribute payments took very varied forms. In the case of some prefectures, mostly in the south, they were paid in precious metals, either gold or silver. The *Tang liu dian* 唐六典, describing the situation before 737, lists two prefectures in Jiangnan, Ezhou 鄂州 and Jiangzhou 江州, and no less than 55 prefectures in Lingnan (modern Guangdong and Guangxi) that paid silver as tribute.⁵² It also mentions silver contributed to the Treasury of the Right (Youzang shu 右藏署) under the Court of Treasury (*Taifu si* 太府寺) from the prefectures of Raozhou 饒州, Xuanzhou 宣州, Daozhou 道州, and Yungzhou 永州 in western Jiangnan (modern Jiangxi and Hunan), and from Yongzhou 邕州 (in modern Guangxi) and Annan 安南 (modern northern Vietnam) in Lingnan.⁵³ The *Tong dian* 通典, also describing the early-Tang situation, lists two prefectures from Jiangnan west, Ezhou and Shaozhou 邵州, and no less than thirty prefectures from Lingnan as paying tribute in silver, and gives the amount paid by each prefecture. These tribute payments were very small amounts, a standard 20 *liang*, less than half the individual ingots that were used to deliver taxes, but the prefectures in Lingnan had very sparse populations. The only exceptions were Guizhou 桂州 in Lingnan, which paid 100 *liang*, Xinzhou 新州, also in Lingnan, and Ezhou in Jiangnan, which each paid 50, and Hezhou 賀州 in Lingnan which paid 30 *liang*. The *Yuanhe junxian tuzhi*, recording the situation in the first years of Xianzong's reign 805-810, gives a similar picture.

Finally, the "Geographical Monograph" of *Xin Tangshu*, which describes the situation for an unspecified date in the last years of the dynasty, contains a great deal of information about which prefectures paid tribute in silver (although no figures are given for the amount of tribute from individual prefectures) and also information on which counties had silver deposits. Once more there is a preponderance of places in Lingnan.⁵⁴ No surviving examples of ingots used in the payment of tribute have yet been discovered.

Payment of provincial governors' personal tribute gifts in silver

Silver ingots were also used in the payment of "tribute gifts" *jinfeng* 進奉 to the throne from high ranking provincial officials seeking

⁵² See *Da Tang liudian* 大唐六典 (Taipei: Wenhai, 1962) 3.

⁵³ *Ibid.*, 20, pp. 8b ff.

⁵⁴ See the tables in Katō, *Tō Sō jidai ni okeru kingin no kenkyū*, pp. 506-8.

to secure royal favor. Although the donors declared them as “surplus” funds, they were in fact barely concealed bribes, provided by misappropriating regular tax revenues that were paid into the emperor’s privy treasury controlled by the eunuchs, rather than into the public treasury. Some provincial governors sent in such contributions regularly, but they were quite different from tax payments, being often made on ceremonial occasions and paid in gold or silver for reasons of prestige and ostentation. They were personal gifts, not state revenue, and they often took the form of very large silver vessels rather than bullion.⁵⁵

The sums involved were sometimes very large. For instance, in 815 Yu Di 于頔, then the figurehead president of the Board of Finance and an extortionate former provincial magnate, offered 7,000 *liang* of silver and 500 *liang* of gold, which he had personally accumulated, to help defray the expenses arising from the expedition against the rebel governor Wu Yuanji 吳元濟. The emperor declined to accept his gift.⁵⁶

A surviving example of such an ingot dating from the mid-ninth century is described by Yang Lien-sheng.⁵⁷ This was sent as a tribute offering on the *duan-wu* festival – the fifth of the fifth lunar month – by the governor of Runzhou 潤州, seat of the provincial governor of Zhexi 浙西, Cui Shenyou 崔慎由, who briefly held this post in 855–856.

To sum up, there is ample physical evidence from archeology that silver bullion was used as a medium for tax transfers at least from the eighth century, and like the textual material on such uses of silver bullion, these discoveries are mostly connected with southern China, especially with Lingnan but also with Hunan and Jiangxi. This confirms the comments of several early-ninth century authors, such as Han Yu, Bai Juyi, Yuan Zhen, and Liu Yuxi that in Lingnan the use of silver bullion, both in large official transactions and in private commerce, was commonplace.⁵⁸

⁵⁵ See Chen Mingguang 陳明光, *Tangdai caizhengshi xinbian* 唐代財政史新編 (Peking: Xinhua shudian, 1991), pp. 334–48.

⁵⁶ See Denis Twitchett “The Seamy Side of Late T’ang Political Life: Yü Ti and His Family,” *AM* 3d ser. 1.2 (1988), pp. 154–89.

⁵⁷ See Yang Lien-sheng, *Money and Credit in China* (Cambridge, Mass.: Harvard U.P., 1954), pp. 42–43. The ingot is published in Okutaira Masahiro 奥平昌洪, *Tōa senshi* 東亞錢志 (Tokyo, 1938) 9, pp. 34a–36b.

⁵⁸ There is a curious anomaly in the history of the use of foreign silver coin in Tang China. Early in the Tang, Sasanian and Arab-Sasanian silver coins from Iran were widely used in international trade in the capitals Chang’an and Luoyang and in northwestern China and in the Tang dominions in what is now Xinjiang. Jonathan Karam Skaff has dealt with this in great detail in his magisterial “Sasanian and Arab-Sasanian Silver Coins from Turfan: Their Relationship to International Trade and the Local Economy,” *AM* 3d ser. 11.2 (1998), pp. 67–115. However, although we know of a large Arab and Persian participation in Chinese overseas trade from early-Tang times and of the existence of very large Arab and Middle-Eastern mer-

Song-period salt tax ingots

There is also a great deal of historical evidence that the use of silver continued to grow during the Five Dynasties, and that it was especially widespread in the southern kingdoms including Southern Han. Similar Song-period ingots have been discovered in widely scattered sites in China, although none of these seems to have had the outer silver wrapping, and the inscriptions describing their use are engraved directly on the body of the ingot. A selection of these is illustrated in Tang Guoyan's history of Chinese silver bullion.⁵⁹ There are several reports of discoveries of ingots and molds dated to the Song scattered through *Wenwu* and other archeological journals in the last twenty-five years.⁶⁰ These bear incised inscriptions linking them with various forms of taxation. An article by Zhu Jieyuan and Hei Guang describes one ingot, among others, which is inscribed with similar particulars to those from the wreck, and described as "Silver for the Salt Office" (*yanwu yin* 鹽務銀).⁶¹ There is also material included in various Chinese and Japanese numismatic works, and a great deal of information from con-

chant communities settled in the great port cities of Guangzhou and Yangzhou, even when the international trade of China gradually became a largely sea-borne commerce after the mid-8th c., silver coinage from the Islamic world never seems to have entered southern Chinese trade. There have been only three recorded finds of Sasanian coins in Guangdong, totaling 31 coins. By comparison, almost 2,000 such coins have been found in the empire as a whole. Of these 31 the largest find was a cache of some 20 Sasanian coins, found together with a collection of small ornamental gold and silverware, bracelets, etc. discovered in Suixi county 遂溪縣 at the neck of the Leizhou Peninsula in Guangdong. It seems likely to have been buried for safety following a shipwreck or a travel incident. See Chen Xue'ai 陳學愛, "Guangdong Suixi xian faxian Nanchao jiaozang jinyinqi" 廣東 遂溪縣發現南朝窖藏金銀器, *KG* 1986.3, pp. 243-46. However, these finds long predate the Tang; they are provisionally dated to the end of the 5th c., as are three similar Sasanian silver coins found in a Southern Qi grave from Yingde county 英德縣 north of Guangzhou in Guangdong, dating from 497 (published in *KG* 1961.3, pp. 139-41), and a single coin and seven fragments found still farther north in Qujiang county 曲江縣 (*KG* 1983.7). See also Xia Nai 夏鼐, "Zongshu Zhongguo chutu di Sashanchao yinbi 綜述中國出土的薩珊朝銀幣, *Kaogu xuebao* 1974.1, p. 94. These finds are discussed in a Beijing Daxue 2001 doctoral thesis by Sun Li 孫莉, "Zhongguo chutu di Sashan yinbi yanjiu" 中國出土的薩珊銀幣研究, pp. 43-44. I owe these references to Professor Skaff, and to the kindness of Dr. Sun, who subsequently sent me a copy of his work.

⁵⁹ See Tang, *Zhongguo lishi yinding*, pp. 10-13.

⁶⁰ See, e.g.: "Hubei Huangshi shi Xisaishan faxian yinding" 湖北黃石市西塞山發現銀錠, *Wenwu cankao ziliao* 文物參考資料 1955.9, p. 159; "Jingzhou chengwai faxian Songdai yinding" 荊州城外發現宋代銀錠, *WW* 1960.4, p. 90; "Henan Fangcheng xian chu tu Nan Song yinding" 河南方城縣出土南宋銀錠, *WW* 1977.3, p. 79; "Hubei Xiangfan Yangyoushan chutu Songdai yinding" 湖北襄羊祐山出土宋代銀錠, *WW* 1984.4, p. 96; "Sichuan Shuangliu xian chu tu de Songdai yinding" 四川雙流縣出土的宋代銀錠, *WW* 1984.7, p. 95; "Nei Menggu Chifeng faxian de wujian Songdai yinding" 內蒙古赤峰發現的五件宋代銀錠, *WW* 1986.9, p. 86; "Anhui Liuan chu tu Nan Song yinding" 安徽六安出土南宋銀錠, *WW* 1986.10, p. 92.

⁶¹ See Zhu and Hei, "Xi'an nanjiao chu tu yibi yinding," pp. 51-52. The same ingot is illustrated in Tang, *Zhongguo lishi yinding*, p. 13. See also Yang, *Money and Credit*, pp. 43-45; Chang Nai Chi, "An Inscribed Chinese Ingots of the 12th Century AD," *Numismatic Notes and Monographs* 103 (New York: American Numismatic Society, 1944), pp. 1-3.

temporary historical texts is assembled in the classic book on the use of gold and silver in Tang and Song times by Katō Shigeshi.⁶²

THE LEAD COINS: PROBLEMS OF GOVERNMENT-ISSUED BASE-METAL COINAGE

One of the problems facing all Chinese governments in the Middle Ages was that of preserving an adequate supply of their standard bronze or copper coin in circulation. This problem had already arisen during the Tang period, when the intrinsic value of the metal in coinage frequently exceeded its face value as currency. This led to widespread melting down of good cash to provide the metal needed to manufacture copper utensils and ornaments, and for the counterfeiting of undersized and debased coin using the metal mixed with base metals such as tin and lead. There were constant complaints about such counterfeit coin from the seventh century onward; from the 780s there were complaints about the widespread use of counterfeit lead and tin coins in the south and in the Huai-Yangzi region, which later spread as far as Hedong (modern Shanxi). The government retaliated by various measures: increasing drastically the penalties for counterfeiting and for the use of debased coin; banning the use of copper to manufacture utensils; prohibiting the hoarding of copper cash; and banning the trading of metals with foreigners and the export of metals either beyond the frontiers, or out of particularly vulnerable regions within China. For instance, in 785 travelers leaving the capital Chang'an were forbidden to take a single copper coin over the passes to the south; and in 805 the transport of cash from the Yangzi provinces into Lingnan was banned,⁶³ in attempts to prevent copper coin flowing out from the capital and the highly commercialized regions of the lower and middle Yangzi valley where there was the most desperate need for currency. But these measures failed to solve the problem, and although production of coin under the Song increased many fold, China suffered a deficiency of copper for coinage throughout the Five Dynasties and the Song period.⁶⁴

This problem was exacerbated by the fact that copper was also in great demand in other countries both for use as coin and as metal.

⁶² See Katō, *Tō Sō jidai ni okeru kingin no kenkyū*.

⁶³ See CFYG 501, p. 12b; THY 89, p. 1628; Liu Xu 劉洵, *Jiu Tang shu* 舊唐書 (Beijing: Zhonghua shuju, 1974) 48, p. 2102.

⁶⁴ See Jerome Ch'en, "Sung Bronzes: An Economic Analysis," *BSOAS* 28 (1965), pp. 613-26.

Tang and Song coins in enormous quantities found their way to Japan,⁶⁵ to Korea,⁶⁶ and later, as maritime trade burgeoned, to Southeast Asia, India, the Persian Gulf and even to East Africa.

During the Five Dynasties, the southern kingdoms adopted an ingenious countermeasure to solve this problem: the circulation in areas much frequented by foreign traders of official coin made of base metals which were not in such high demand for the intrinsic value of their metal content and which would thus be less profitable to export. In 916 the Prince of Min in Fujian issued both iron and lead coinage that was put into circulation together with copper coin;⁶⁷ the Chu state in Hunan quickly followed their example,⁶⁸ and the Southern Han in Guangdong also introduced lead coins in 917.⁶⁹ These lead coins were manufactured specifically for use in the major cities where foreigners traded, while copper cash continued to be used in the hinterland.⁷⁰ Nevertheless these lead coins quickly passed into general circulation not only within Chu and Southern Han but also across the inland borders between them and the other independent states. In 924 the Later Tang 後唐 government in the north first imposed a ban on their use after reports that they were rife in Tangzhou 唐州 (in modern Hubei), having been imported from the region south of the Yangzi. A strict watch was to be kept on all boats arriving at ports on the Yangzi to see if their merchants were carrying lead or tin coins, which were to be

⁶⁵ Very great numbers of copper coins were already being exported to Japan in the eighth century. The monk Ganjin 鑑真 sailed from Yangzhou with 25 million cash on his second attempt to reach Japan in 743. See Jian-zhen (Ganjin) 鑑真, *Tō Daiwajō tōseiden* 唐大和上東征傳, in *Dai Nihon Bukkyō zensho* (Tokyo: Bussho kankō kai, 1915) 113, p. 111; also Andō Kōsei 安藤更生, *Ganjin Daiwajō den no kenkyū* 鑑真大和上傳の研究 (Tokyo: Heibonsha, 1960), p. 125. On hoards of Song coins found in Japan, see Kozo Yamamura, ed., *Cambridge History of Japan, Volume 3, Medieval Japan* (Cambridge: Cambridge U.P., 1990), p. 366; Yamamura Kozo and Kamiki Tetsuo, "Silver Mines and Sung Coins: A Monetary History of Medieval and Modern Japan in International Perspective," in J. F. Richards, ed., *Precious Metals in the Later Medieval and Early Modern Worlds* (Durham, N.C.: Carolina Academic Press, 1983), pp. 329–62. There are over twenty excavated Japanese sites that have revealed hoards of upwards of 10,000 Chinese coins; the largest contained 450,000.

⁶⁶ The Sinan 新安 wreck dating to around 1311 discovered off the Korean coast contained more than 28 tons (eight million coins) of copper and iron coins. See Carla M. Zainie, "The Sinan Shipwreck," *Oriental Art* 25.1 (1979), pp. 103–14. Shiba Yoshinobu considers that "This cargo equaled a year's supply of copper coinage in Japan at the time"; personal communication to Stargardt, May, 1999.

⁶⁷ See Sima Guang 司馬光, *Zizhi tongjian* 資治通鑑 (Beijing: Guji chubanshe, 1956) 269, p. 8808. On the various iron coinages issued under Min, see Edward H. Schafer, *The Empire of Min* (Rutland, Vt., and Tokyo: Tuttle, 1954), pp. 74–75 and 79, n. 452a. See also Wang Qingzheng 汪慶正, ed. *Zhongguo lidai huobi daxi* 中國歷代貨幣大系 (Shanghai: Shanghai renmin chubanshe, 1988–, ongoing), vol. 3, pp. 394–411.

⁶⁸ *Ibid.*, pp. 372–94, 423–32.

⁶⁹ *Ibid.*, pp. 412–20.

⁷⁰ See Miyazaki Ichisada 宮崎市定, *Godai Sōsho no tsūka mondai* 五代宋初の通貨問題 (Kyoto: Hoshino shoten, 1940), p. 93.

confiscated.⁷¹ In 929 another order was issued prohibiting the use of iron and pewter (*la* 鐵, an alloy of lead and tin) coin, which drew specific attention to their use in Hunan.⁷² Yet another prohibition order directed against lead coin was issued in 935.⁷³

The economically advanced Shu state in Sichuan introduced an iron coinage in 955, for the same reasons, and finally the most powerful of all the southern kingdoms, the “Empire” of Southern Tang, which included most of Jiangsu, southern Anhui and Jiangxi, and northern Fujian produced iron coins in 960, and kept these in use until its conquest by Song in 975.⁷⁴ The Song continued such policies, attempting to inhibit the export of copper coins, by retaining Sichuan as an iron-currency zone after their conquest of Shu in 964–65, and extended a similar policy in the eleventh century to the northern frontier circuits to prevent the export of coins to the Qidan Liao, and the Tangut Xixia.⁷⁵ This policy was intended to provide a sort of monetary cordon sanitaire to protect the copper currency.

The lead coins discovered in the Intan Wreck are examples of the Southern Han coinage known as *Qianheng Chongbao* 乾亨重寶, first cast in 917 (figure 10). Examples of similar coins are illustrated in Ding Fubao’s history of Chinese coinage, and in the monumental collection of Chinese coins currently in the course of publication under the editorship of Wang Qingzheng.⁷⁶ Others have come to light recently in Guangdong, as have stone molds for their manufacture.⁷⁷ The coins from the wreck are in very poor condition. Stargardt noted the presence

⁷¹ See *CFYG* 501, p. 23b.

⁷² *CFYG* 501, p. 25a.

⁷³ *CFYG* 501, p. 26a; *WDHY* 27, p. 435.

⁷⁴ See Yang, *Money and Credit*, p. 28. Miyazaki, *Godai Sōsho no tsūka mondai*, pp. 93–96.

⁷⁵ See Richard von Glahn, *Fountain of Fortune: Money and Monetary Policy in China 1000–1700* (Berkeley: University of California Press, 1996), p. 49; Miyazaki, *Godai Sōsho tsūka mondai*; Robert M. Hartwell, “The Evolution of the Early Northern Sung Monetary System, A.D. 960–1025,” *JAOS* 87.3 (1967), pp. 280–89.

⁷⁶ See Ding Fubao 丁福保, *Lidai guqian tushuo* 歷代古錢圖說 (Shanghai: Yixue shuju, 1940) p. 81; Much fuller details on Southern Han coins are to be found in Wang, *Zhongguo lidai huobi daxi* 3, pp. 412–32. The latter work also illustrates other lead coins attributed to either Southern Han or Chu, which are imitations in lead of the Tang *Kaiyuan tongbao* 開元通寶 coinage, in some cases with mint marks on the reverse either in the shape of a crescent moon, or reading Nan 南 followed by a numeral one to four, Bao 寶 also followed by a numeral one to four, Jin 金 or Xing 興. These cannot be identified. The few examples with a known archaeological provenance come from the Guilin 桂林 area, fairly close to Guiyang.

⁷⁷ See *Archaeological Finds from the Five Dynasties to the Qing Periods in Guangdong*, Exhibit in the Art Gallery of the Chinese University of Hong Kong, March 18 to May 14, 1989, p. 55. This illustrates 7 coins, and also 8 stone molds. For another report on similar molds discovered at the site of a medieval foundry in Yangchuen xian, Guangdong, see Ruan Yingqi 阮應棋 and Liu Hongjian 劉鴻健, “Guangdong Yangchun xian faxian Nan Han Qianheng Chongbao qian fan” 廣東陽春縣發現南漢乾亨重寶錢范, *WW* 1984.12, p. 67. See also Ding, *Lidai guqian tushuo*, p. 81, and Wang, *Zhongguo lidai huobi daxi* 3, pp. 412–32.

of chemical reactions with other metals in sea water. This has resulted in a copper-like deposit on the exterior, which led earlier examiners of the wreck and its artifacts to conclude that they were indeed copper coins. The inscriptions are difficult to read. I have not seen the originals, only photographs. Enough remains to make a positive identification. All the coins appear to be identical, which is very unusual in such a find, as most coin assemblages are heterogeneous, particularly when they come from a period such as this when several local kingdoms had been issuing their own coinages for some time. This suggests that they were acquired at one time, probably in Southern Han itself.

Clearly lead coins had some value to the owners of the ship and its cargo. They had an intrinsic value for their metal,⁷⁸ though this was far less than for copper or bronze. We know from the much later *Zhu fan zhi* 諸蕃志 of Zhao Rugua 趙汝适, written in the thirteenth century, that lead was then exported to Champa 占城, Borneo 渤尼 and the Philippines 三嶼.⁷⁹ But the coins may, since the value of such lead coins was so trivial – one tenth of that of copper cash – equally well represent “small change” left after trading was concluded, perhaps kept for use on a future voyage to Guangzhou.

Dr. Stargardt reports the curious, and for this study highly significant, fact that many parts of Southeast Asia were not monetized in the tenth century. From the sixth to the ninth centuries, for example, all the Pyu sites of Central Burma are characterized by several types of distinctive silver coinage, at least one of which was also used in the Mon areas of southern Burma and Thailand, and extended right across mainland Southeast Asia to southern Vietnamese sites in trading contact with them.⁸⁰ But in the mid-tenth century this was no longer the case: only the cities of Central and East Java were still monetized. Both epigraphical references and the abundant finds of gold coins in Java concur on this point.

As noted earlier, the small number of such Javanese gold coins and the Chinese coins found on board the Intan Wreck would not have sufficed to service many trading transactions. They may have been what remained from previous trading transactions or even the personal sav-

⁷⁸ Flecker, *Intan Wreck*, p. 83, reports the discovery in the wreck of twenty large lead ingots – rectangular slabs with a hole at the end for handling – averaging 20 kilos in weight. These may have been ballast; possibly weights on the sails.

⁷⁹ See Hirth and Rockhill, *Chao Ju-kua*, pp. 49, 156, 160.

⁸⁰ See Dietrich Mahlo, “Frühe Münzen aus Birma,” *Indoasiatische Zeitschrift* 1998, pp. 88–94; Louis Malleret, *L'archéologie du delta du Mékong* (Paris: École Française d'Extrême-Orient, 1962) 3 (Planches), plates xlv–xlv; on Java see Christie, “Money and Its Uses,” pp. 243–86, and Wicks, *Money, Markets and Trade*.

ings of crew members. But the silver ingots, the many small tin and copper ingots, and the immense spectrum of quality and value of the ceramics on board this ship provided the commercial flexibility to facilitate trade transactions of an equally large range of values.

THE TRADE CONTEXT OF THE INTAN WRECK

China and Southeast Asia

The *Qianheng chongbao* lead coins provide us only with a *terminus a quo*, for the earliest possible date for the wreck; they were first manufactured in Southern Han in 917. But there is no conclusive evidence that the wreck could not date from the very early Song period. There was a constant shortage of coin in medieval China, and all coinages continued in use indefinitely under later regimes, and in other regional states, although constantly depleted by wear and their being melted down for other uses. In the case of lead coins their metal was so soft that they cannot have lasted long in active circulation.⁸¹ The Guiyangjian silver mining complex which produced the ingots also continued in existence throughout the Song period, as it had done during the late Tang, and under Chu and Southern Han control. However, the combination of the two sets of evidence, both establishing certain links to the Southern Han kingdom, coupled with the clear historical evidence that Southern Han occupied an area with a long history of the use of silver both in commerce and in tax payments, that its rulers were famous for their luxurious lifestyle and love for exotic products, and that its capital Guangzhou had been the primary Chinese port trading with the South Seas – Southeast Asia and the Indian Ocean – since the earliest records, strongly suggest that the wreck was a ship returning from a trading voyage to Guangzhou in the Southern Han period. It may even have been carrying an official embassy to the Southern Han court. Embassies were always an opportunity for trading, both by the personnel of the embassy and by the crew of the ship, and were very often accompanied by merchants, as we can see from the records of Sanfoqi embassies (see below).

The great value of the silver ingots and the fact that all those among them whose inscriptions are legible originate from revenue from one single branch of the salt monopoly system are very significant. They

⁸¹ See Wang, *Zhongguo lidai huobi daxi* 3, p. 434, for examples of such lead coins which have worn until all but the outer rims have been lost and they are little more than lead rings. Copper cash also wore badly in circulation. In Tang times such badly worn coins were described as “ring cash” (*yanhuan* 絢環), or “goose eye coins” (*eyan* 鵝眼).

suggest that the ingots were the payment (or part of a payment) from the Southern Han treasury, officially requisitioned by the authorities responsible for overseas trade, for very valuable Southeast Asian commodities desired by the government or by the ruler. If their cargo had been sold on the open market to local merchants it would be very surprising if all the silver involved had come from such a single source.

The evidence from the ceramics recovered from the wreck also strongly suggests that the whole assemblage dates from the latter years of the Five Dynasties period, or possibly from the first decade or so of Song (that is, 930–970). Although some ceramic items come from various areas in southern Anhui and Jiangxi (see above) that had more direct trade links with Fujian and its burgeoning port of Quanzhou than with Guangzhou, these areas also had equally well-established inland trade routes to Guangzhou (maps 3 and 4). That via the Gan River valley in Jiangxi had become a major route from the lower Yangzi to Guangzhou in 716, when Zhang Jiuling 張九齡 constructed a new road over the difficult Dayu ling 大庾嶺 Pass.⁸² In Hunan there were easy portages from the tributaries of the Xiangjiang in the Guiyang area to water routes leading to the Pearl River delta, and there was another less direct but well-established trade route from the middle Yangzi to Guangzhou, using the Xiang valley in Hunan and crossing the mountains some 120 kilometers west of Guiyang jian, near the modern town of Xing'an 興安.

This watershed was the site of a remarkable contour canal, the Lingqu, first built in 215 BC in Qin times, linking the headwaters of the Xiangjiang with a canalized tributary of the Guijiang leading to Guizhou (modern Guilin) and thence to Guangzhou. This canal had later been abandoned and was impassable early in the ninth century, but was restored in 825, and further improved in 868, when a “stair-case” of pound locks was constructed to enable the passage of barges with a capacity of 1,000 bushels (*hu* 斛). This had provided an important military supply route from the north to modern Guangxi during the late-Tang wars with Nanzhao. It is likely that it was still navigable in the Five Dynasties period, and an all-water route such as this would have had obvious advantages for shipping heavy and fragile cargo like ceramics.⁸³

⁸² See Penelope Ann Herbert, “The Life and Times of Chang Chiu-ling” (unpub. Ph.D., U. of Cambridge, 1973), pp. 57–63.

⁸³ See Joseph Needham, *Science and Civilisation in China* (Cambridge: Cambridge U.P., 1967) 4.3, pp. 299–306, with a good map on p. 301.

In combination, the silver ingots, the coins, and the ceramics are strong evidence that the Intan ship was returning from a voyage to Guangzhou, most probably during the Southern Han period, but possibly during the first years of the Song dynasty. In this respect we should remember that the Song did not gain control of south and southeastern coastal China in 960, when the dynasty was founded in the north. They only extended their power over the southern coastal areas by stages in the 970s: Southern Han fell in 971; Southern Tang based in Jiangxi, the most powerful southern kingdom, which had controlled inland Fujian since the fall of the Min kingdom in 946, was conquered by the Song in 974–975; while the regime of the last independent warlord in southern Fujian, Chen Hongjin, and the rich and important state of Wu-Yue in northern coastal Fujian, Zhejiang and Jiangsu submitted to the Song only in 978. All these states had engaged independently in international diplomacy and long-distance sea-borne trade, as well as routine coastal shipping.

It is of course also possible that the ship had called at more than one Chinese port city. Quanzhou 泉州 in southern Fujian, which was rapidly growing as an entrepot for overseas trade with Southeast Asia and would later outstrip Guangzhou in the eleventh century, would be the most likely other port of call.⁸⁴ But there was a long-established and intensive coastal shipping trade from Guangzhou to the various ports of Fujian, Zhejiang,⁸⁵ and the lower Yangzi, as well as a complex network of well-organized inland trading routes both waterborne and by road, serving south and southeastern China, by which the different items of the cargo could easily have been assembled and made available on the market in Guangzhou.

The Intan cargo clearly demonstrates the importance of metals in the Chinese overseas trade of this period.⁸⁶ Beside the silver ingots and lead coins there were various manufactured items of copper or bronze including some Southeast Asian Buddhist and Hindu statuary. There were many good quality bronze mirrors, some Chinese and

⁸⁴ On the growth of Quanzhou as the major entrepot of Chinese maritime trade, see Clark, *Community, Trade, and Networks*; So, *Prosperity, Region, and Institutions*; Schottenhammer, ed., *Emporium of the World*; and idem, *Das songzeitliche Quanzhou im Spannungsfeld zwischen Zentralregierung und maritimem Handel* (Stuttgart: Franz Steiner, 2002).

⁸⁵ Such as Mingzhou 明州 (Ningbo), Wenzhou 温州, Fuzhou 福州, Zhangzhou 漳州, and Chaozhou 潮州. Foreign vessels aiming for Guangzhou were often forced by contrary winds to enter other ports, though their trading was supposed to be suspended until they could reach Guangzhou, where the tax authorities could take charge.

⁸⁶ See Angela Schottenhammer, "The Role of Metals and the Impact of the Introduction of Huizi Paper Notes in Quanzhou on the Development of Maritime Trade in the Song Period," in Schottenhammer, ed., *Emporium of the World*, pp. 316–59.

others Javanese, of quite a different type with handles. The Chinese mirrors are mostly of well-known Tang designs (lion and grapes; animals; and sprays of flowers) which continued to be made throughout the tenth century, with a few rather crude derivatives of Han types. Significantly for the dating of the Intan Wreck, none of the Chinese mirrors is of a Song type.

Many of the bronze dishes, trays and tripods were broken and may have been at the time the ship sank – in other words, they had been acquired as scrap metal. There were also a large number of crude, circular dome-shaped ingots of copper (figure 11), possibly illicitly acquired and exported from China, but far more likely picked up from



Figure 11. Copper Ingots from the Intan Cargo

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another Southeast Asian source, such as the copper deposits of Western Borneo (map 2 and figure 11). There were also a considerable number of ingots of tin. These almost certainly came from Bangka or Belitung (Billiton) Islands, rich and well-known sources of tin, which were to the north of the wreck site and may have been the last port of call. This part of the assemblage of metal objects would suggest that the destination, or more likely one of the destinations of the cargo was a place with a bronze founding industry where there was a demand for supplies of metal.

The presence on board of some Buddhist religious objects may also indicate that its ultimate destination was an important place in the region with Buddhist connections. The two most obvious possibilities are a port such as Tuban on the northern coast of Java, serving the emergent kingdoms of East Java (after the great cultural shift away from the Borobodur-Prambanan region of Central Java in the tenth century), or Jambi in the estuary of the Batang-Hari or Malayu River in Southeast Sumatra. The Javanese bronze mirrors on board show us that the ship had already called at a Javanese port. Thus it may well be that this ship was ultimately heading for Jambi, which is believed to have replaced Palembang as a great center of maritime trade, political power, and Buddhist culture in the tenth or eleventh century, attain-

ing its apogee from the eleventh to the thirteenth centuries.⁸⁷ Although much further archeological research is needed before the many Sanfoqi controversies are clarified, there are indications that Jambi became the chief center of the maritime trade network grouped under the Chinese name Sanfoqi.

The Sanfoqi Trade

Many sinologists are familiar with the name of Sanfoqi 三佛齊, mentioned in the key Chinese texts as the main supplier of high-quality incenses to China in the Song-Yuan period.⁸⁸ The first mission from Sanfoqi recorded under that name known to us arrived at the very end of the reign of Tang Zhaozong (r. 888–904, then a powerless puppet under the “protection” of Zhu Quanzhong 朱全忠) in 904.⁸⁹ However this reference is suspect, since the same event is recorded in other sources using “Foqi guo” (without “san”), a normal Tang-period usage as the name of the country.⁹⁰ Sanfoqi also frequently sent embassies from the very beginning of the Song. Robert Hartwell mentions no fewer than twenty-three or twenty-four missions in the course of 124 years, making Sanfoqi one of the most frequent (after Vietnam) as well as the most sustained diplomatic contacts in Southeast Asia during the Northern Song.⁹¹ Official missions from other Southeast Asian states to China also frequently traveled in Sanfoqi ships. Many of the Sanfoqi master mariners mentioned in connection with these missions have Muslim names. Possibly these reflect the early phase of conversions to Islam among Indonesian merchants-navigators, but it is also likely that there was a multi-racial (Islamic Arab and South Indian) diaspora of maritime

⁸⁷ See O. W. Wolters, “Restudying Some Chinese Writings on Srivijaya,” *Indonesia* 42 (Oct., 1986), pp. 1–41; Boechari, “Ritual Deposits of Chandi Gumpung (Muara Jambi),” *SPAFA Final Report on Archaeological and Environmental Studies of Srivijaya*, Bangkok, 1985, pp. 237–38; Stargardt, “Behind the Shadows” pp. 314–20, 375–78.

⁸⁸ See Zhao, *Zhufanzhi*, passim. The name Sanfoqi is assumed to relate to Srivijaya, the same place known in Tang texts as Shilifoshi 室利佛逝, or 尸利佛誓 (see *XTS* 220C, p. 6305) and in other variant orthographies. No convincing explanation has been made of the new Chinese name (including “San 三”) as a transcription. It has been suggested by O. W. Wolters, “Studying Srivijaya,” *Journal of the Malayan Branch of the Royal Asiatic Society* 57.2 (1979), p. 23, that it means the “The Three Vijayas (Foqi).”

⁸⁹ *Jiu Tang shu* 20A, p. 781.

⁹⁰ See *CFYG* 976, p. 15a, which gives the name of the country as Foqi guo 佛齊國, omitting “San.” *THY* 100, p. 1799, does the same in recording the bestowal of a special honorary title, Ningyuan Jiangjun 寧遠將軍 on the delegate from Fujian province who had presented this mission from Foqi guo to the court 福建道佛齊國入朝進奉使, the local Headman of Foreign Residents Puhō 潘長蒲訶. The seat of the provincial governor at that time was Fuzhou 福州.

⁹¹ See Robert M. Hartwell, *Tribute Missions to China 960–1126* (Philadelphia: privately printed, 1983), pp. 172–81.

merchants and seafarers in Sanfoqi, as there was elsewhere in South and Southeast Asia and in coastal Chinese ports.⁹²

The incenses and other exotica that these Sanfoqi missions presented as tribute to the Northern Song, and which they were also permitted to trade during their time in China, were not simply acquired for consumption. They also went on to play an important role as rare and valuable imperial gifts used in Song official intercourse with quite separate regions, such as Tibet. For instance the emperor decided on June 25, 1006, to present a mission from the Xiliangzhou 西涼州吐蕃 Tibetan tribes with rhinoceros horn and benzoin (Southeast Asian frankincense).⁹³ Part of the incenses in the original Intan cargo, purchased by the Southern Han authorities, was probably passed on in much the same way in a wider circulation to other regional states in China and perhaps to Nanzhao and other states that exchanged missions with Southern Han.⁹⁴

Few sinologists, however, will be aware that, to the present, no single site or site group in Southeast Asia has been identified that satisfactorily corresponds to Sanfoqi. It is likely that its center was situated in Southeast Sumatra; it is also certain that the Satingpra site complex on the southeast coast of Thailand (which had separate Mon origins in the sixth to eighth centuries) passed under Javanese influence from the late-eighth or -ninth to the early-tenth century, and later came into the Sanfoqi orbit from the tenth or eleventh to the thirteenth century.⁹⁵ It has been suggested that the main Sanfoqi center was at Palembang on the Musi River of Southeast Sumatra,⁹⁶ which had clearly been the great center of the Srivijayan kingdom from the late seventh to the ninth century.⁹⁷ However, Palembang does not possess the density of ceramic trade debris from the tenth to the thirteenth century that one would expect to find at a major center of trade with Song China.⁹⁸ A detailed analysis of the Chinese ceramic types and densities has shown

⁹² See for a good and up-to-date summary of this question, Claudine Salmon, "Srivijaya, la Chine et les marchands chinois (x^e-xii^e s.): Quelques réflexions sur la société de l'empire sumatranais," *Archipel* 63 (2002), pp. 37-78.

⁹³ See Hartwell, *Tribute Missions*, p. 78.

⁹⁴ When the Song finally invaded the Southern Han and took the capital, its ruler deliberately destroyed his accumulated rare goods and treasures by fire, to prevent the conquerors profiting from them. Exotic woods and incense logs would have added to the flames.

⁹⁵ See Stargardt, "Behind the Shadows," pp. 317-18.

⁹⁶ See Pierre-Yves Manguin, "Palembang and Sriwijaya: An Early Malay Harbour City Rediscovered," *Journal of the Malay Branch of the Royal Asiatic Society* 66.1 (1993), pp. 23-46.

⁹⁷ See the voluminous secondary literature cited in Stargardt, "Behind the Shadows," p. 314, n. 3.

⁹⁸ *Ibid.*, pp. 315-17.

that the Satingpra citadel does.⁹⁹ Preliminary indications are that the Jambi site does as well.¹⁰⁰ Jambi is the biggest ancient urban site in Sumatra, with many brick fortifications and monuments as well as abundant debris of ancient trade in ceramics from China and Satingpra. A major power shift clearly took place from the Palembang area to the Jambi area, but it is still unclear whether this happened in the tenth or the eleventh century. A few benchmarks have been securely established by the type of *in situ* archeological evidence – mainly ceramic – mentioned at the beginning of this article.¹⁰¹ They point to a triangular relationship in maritime trade, linking sites on the east and west coasts of the Isthmus of the Malay Peninsula with sites on the east coast of Sumatra: notably Satingpra on the east coast and the Penkalang Bujang sites of Kedah on the west coast of the isthmus with Jambi and Kota Cina on the east coast of Sumatra.¹⁰² If the first character in Sanfoqi is to be understood as “the Three Foqi”s (Vijayas),¹⁰³ then the triangular links revealed by archeological evidence would support that reading. However, the total picture of Sanfoqi remains unclear, perhaps because its power and activities were dispersed over still more sites in Sumatra, the Malay Peninsula and South Thailand. But the evidence now emerging both confirms and makes more concrete previous ideas that Sanfoqi was located where the South China Sea meets the Indian Ocean; its merchant-navigators operated in the trade of both.

Though the Intan Wreck itself does not help us to identify the site of Sanfoqi, it does reveal a great deal about the nature of maritime trade between Southeast Asia and China in the mid-tenth century, a trade that at this time was carried in Southeast Asian ships, no doubt commanded by Southeast Asian, Indian, or Muslim-Arab navigators. Much of this trade probably took place under the protection of Sanfoqi, since that was clearly the major Southeast Asian maritime power, sufficiently aware of its own significance and of diplomatic usages to reestablish and sustain diplomatic links with Song China that it had apparently forged with the Tang and cultivated with Southern Han during

⁹⁹ Ibid., pp. 316–17; table on 345, and comparison of sherd density with Old Fukuoka, pp. 370–71.

¹⁰⁰ Ibid., pp. 317–18; idem, “Kendi Production,” appendix 5B.

¹⁰¹ They are set out in Stargardt, “Behind the Shadows,” pp. 317–18, which summarizes her field research in the 1980s and 1990s in Satingpra and both Jambi and Kota Cina in Sumatra. Further detail is in Stargardt, “Kendi Production.” See also Boechari, “Ritual Deposits,” pp. 237–38.

¹⁰² See Jane Allen, “Trade, Transportation and Tributaries: Exchange Agriculture and Settlement in Early Historic Period Kedah, Malaysia” (unpublished Ph.D., U. of Hawaii, Dept. of Anthropology, 1985).

¹⁰³ As suggested by Wolters, “Studying Srivijaya,” and Salmon, “Srivijaya,” p. 57, footnote.

the period of the Five Dynasties. It is possible that the wreck is that of a Sanfoqi ship, but there is no concrete evidence of this.

The Intan ship had traveled from Southeast Asia to Guangzhou. It had probably carried there a cargo of incense.¹⁰⁴ If we turn to the Quanzhou Wreck of 1277 for comparison, that ship, a Chinese vessel returning from Southeast Asian waters, carried at least 2,400 kilograms of incense logs with a minimum estimated value of 800,000 strings of (copper) cash.¹⁰⁵ It is impossible to make a direct comparison between the values of these two cargoes because the scarcity of silver, the value of silver relative to copper cash, and the value and content of a string of cash changed greatly and repeatedly over the intervening three centuries. But if our earlier comments about the value of the ninety-seven silver ingots on board the Intan ship are correct, then the cargo of exotic rarities for which about 5,000 *liang* of silver were paid must have been precious indeed. All these estimates, though approximate, concur in pointing to the huge value that Southeast Asian incenses possessed in the Chinese economy. Nor was that value static: as the products circulated through channels of trade and imperial gifts to other parts of China and to the peripheral areas of China's economic sphere – Korea, Japan, Tibet – they acted as an economic multiplier on the dramatic economic expansion of the tenth and eleventh centuries, stimulating the development of various specialist skills and having secondary effects on the general level of economic activity.

The impact of the trades in incenses and exotic woods was not confined to princes and governments, and their high-level gift exchanges. It also involved and helped maintain a great chain of merchants, navigators, and intermediaries: once ashore, the cargo required the services of a secure transportation network to handle its distribution. The exotic woods would pass through the hands of skilled craftsmen, adding further value to an already precious commodity. A glimpse of the part these rare goods played at a slightly lower level can be seen in the manifest of the goods shipped by the monk Ganjin (Jianzhen) when he set sail for Japan from Yangzhou in 743. Together with the twenty-five million copper cash collected by his religious sponsors, luxurious textiles, and sophisticated handicrafts of all kinds this also lists more than 600 *jin* of incenses and fragrant woods, mostly from Southeast Asia, among them camphor, pepper, benzoin, putchuk, gharu wood, frankincense, and asa

¹⁰⁴ See Stargardt, "Behind the Shadows," pp. 316–17, 345, 357–66, and 370–71, for information on the types and values of various incense woods and other economic plants involved in the China trade.

¹⁰⁵ *Ibid.*, pp. 371–75.

foetida.¹⁰⁶ This shows what a variety of exotic goods was available on the market, and the comparative ease with which they were shipped on, for further profit, to other destinations in East Asia. The demand for such rare luxuries was truly international.

In China the Intan ship had collected a large and heterogeneous cargo of Chinese goods. One may deduce that at the time it sank the merchants on board (and this includes members of the crew trading on their own account) had already sold a considerable weight of their Chinese goods, because the ship contained a large amount of stone ballast.

Traveling on the Intan ship, there may well have been both Chinese and Southeast Asian merchants trading jointly or separately. By joining such voyages, Chinese merchants had an invaluable opportunity to learn the shipping routes, sailing conditions, and durations of voyages from locally experienced navigators, to develop their knowledge of the location and relative importance of Southeast Asian markets, and note both their local products of interest in China and the Chinese products in demand there. This apprenticeship of Chinese traders to Southeastern Asian and Muslim Arab traders and navigators in the tenth to twelfth centuries was the indispensable training ground for the wholly Chinese trading voyages of the thirteenth to early-fifteenth centuries in Chinese built ships, manned by Chinese crews, and with Chinese traders on board.¹⁰⁷

Whatever the truth of these conjectures, the Intan cargo was large, very varied and extremely valuable, including some gold artifacts and Middle Eastern glassware, then a luxury item throughout East Asia. It is most likely that there were also many perishable items, including silk textiles, staples in Chinese overseas trade in this period, and spices, of which no traces remain. Of course, the ship would have called at several Southeast Asian ports on both the outward and return legs of its voyage to China. Not only the tin and copper ingots, but also the non-Chinese ceramics and bronzes included in the cargo were presumably acquired on the return journey at Southeast Asian ports, whereas the precious Arab glass objects on board had presumably been bought in preparation for the next journey to China. Overall the cargo is vivid evidence of a large-scale network of international trade, with producers in many parts of China manufacturing goods destined for export and designed to meet the specific demands of a range of markets – from royal courts and temples to much lower ranks of society in the Southern Sea.

¹⁰⁶ See Andō, *Ganjin*, pp. 124–25.

¹⁰⁷ For a different view of this issue, see Salmon, “Srivijaya, la Chine.”

CONCLUSION: THE SOUTH SEAS TRADE FROM TANG TO SONG

There is a great deal of textual evidence testifying to the existence of large-scale sea-borne commerce in the Tang period, when many foreign ships from the Persian Gulf, South Asia, and Southeast Asia congregated in the major seaports such as Guangzhou and Yangzhou, which had large resident communities of foreign merchants. Foreign merchants had also penetrated along inland trade routes and settled in such regional commercial centers as Raozhou in northern Jiangxi. When in 750 the monk Jianzhen 鑑真 (Ganjin) set off from Yangzhou on his fourth unsuccessful attempt to reach Japan, he was driven south by contrary winds to Hainan island and thence eventually reached Guangzhou, where he found in the harbor countless numbers of South Asian (Puluomen 波羅門), Mon-Khmer (Kunlun 昆侖) and “Persian” (Posi 波斯, most likely Muslim-Arab) ocean-going ships, some of great size. The drugs, spices, and precious goods that they had carried were “piled mountains high.” Men from Ceylon, the Islamic world, Southeast Asia, and of many different races either visited or resided in the city.¹⁰⁸

In 772 it is said that about forty of these great foreign ships arrived in Guangzhou each year.¹⁰⁹ Writing half a century later, around 825, Li Zhao 李肇 described the foreign vessels arriving in Guangzhou and in Annan 安南, that is Jiaozhou 交州 (modern Hanoi or an outpost) in similar terms, again singling out the ships from Ceylon 師子國 for their great size. He described how the local authorities, working through the recognized local headmen of foreign merchants, made manifests of the cargoes and levied duty on them. He also says that any foreign merchant who tried to defraud buyers would be imprisoned.¹¹⁰ The surviving Chinese sources tell us a good deal about government measures to control and tax this trade, giving them a first option to requisition and purchase rare exotic goods at advantageous prices before they were sold on the open market,¹¹¹ but it is impossible from such textual evidence to measure either the volume or the value of the trade, or to describe in detail its organization and the commodities involved.

We know that when in 879 Guangzhou was sacked by Huang Chao's rebels, the community of resident foreigners was massacred. Arabic sources number the dead at 120,000 (or in another account

¹⁰⁸ See Andō, *Ganjin*, pp. 238–39. ¹⁰⁹ See *Jiu Tang shu* 131, p. 3635; *XTS* 131, p. 4508.

¹¹⁰ See Li Zhao 李肇, *Tang Guoshi bu* 唐國史補 (Shanghai: Gudian wenxue chubanshe, 1957) *hsia*, p. 63.

¹¹¹ See the excellent account by Wang Zhenping, “Tang Maritime Trade Administration,” *AM* 3d ser. 4.1 (1991), pp. 7–38.

200,000) Muslims, Jews, Christians, and Mazdeans (Manicheans),¹¹² and although these figures are certainly a gross exaggeration, the city was obviously a populous major center of overseas trade, which was severely disrupted as a consequence. Both Abū Zaid and Mas'ūdī specifically mention the ruin of the local silk industry and the subsequent decline in the Arab silk trade.¹¹³ What happened during the first seventy years of the tenth century is obscure, since textual evidence is so scanty. The material evidence from the Intan Wreck is thus doubly precious. From it we can infer that the Southern Han state, whose center of administration was in Guangzhou, and whose founder had first moved to Guangzhou to engage in trade, both revived the maritime trade with the South Sea countries and continued the Tang government's system of controlled trade in exotic products, as did the Song when they in their turn gained control of Guangzhou in 971.¹¹⁴ The Intan Wreck gives us an invaluable insight into the nature of this trade at this point.

It is clear that a well-organized network of maritime commerce existed on a still larger scale in mid- to late-Song and in Yuan times, and sustained what must have been a substantial sector of the South Chinese economy producing commodities for export. This new archeological evidence enables us confidently to push back the beginning of these developments to the second quarter of the tenth century, a period when we have had until now only vague and impressionistic textual evidence that such a trade was still much diminished half a century after Huang Chao's sack of Guangzhou and the subsequent fall of the Tang. It also gives us a foretaste of what maritime archeology, still in its infancy in this region, may yet have to reveal for the historian.

¹¹² See Howard S. Levy, *Biography of Huang Ch'ao*, Chinese Dynastic Histories Translations 5 (Berkeley: U. California P., 1955), which provides translations of the accounts by Abū Zaid and Mas'ūdī; pp. 110–29.

¹¹³ See Levy, *Biography of Huang Ch'ao*, pp. 118–22.

¹¹⁴ See *Song huiyao jigao* 宋會要輯稿 (Beijing: Zhonghua shuju, 1957), sect. "Zhiguan," j. 44, p. 1a, for a description of the system as it was originally imposed under the Song.

LIST OF ABBREVIATIONS

CFYG	<i>Cefu yuangui</i> 冊府元龜
TPHYJ	<i>Taiping huanyu ji</i> 太平寰宇記
WDHY	Wang Pu 王溥, <i>Wudai huiyao</i> 五代會要
XCB	Li Tao 李燾, <i>Xu Zizhi tongjian changbian</i> 續資治通鑑長編
XTS	<i>Xin Tang shu</i> 新唐書
YHJXTZ	<i>Yuanhe junxian tuzhi</i> 元和郡縣圖誌

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