

Excavation at Fort Canning, Singapore

by John N. Miksic

A short program of archaeological research was conducted by a team organized by the Singapore National Museum for 10 days in January 1984. Financial assistance was received from the Shell Oil Corporation; my travel to and from Singapore from Indonesia was paid by funds from the Ford Foundation and Asian Cultural Council.

Research Goals

The Parks and Recreation Department of Singapore had undertaken a project to plan to landscape the area called Fort Canning Hill, a park in the center of downtown Singapore. Historical and recent documents suggested that archaeological sites might exist on the hill. Thus the Singapore National Museum felt an urgent need to conduct preliminary excavations before the landscaping work was carried out, in order to determine whether any artifacts or structures from any periods earlier than the nineteenth century existed there.

A related goal was to discover whether any archaeological information could be recovered to compliment the sketchy historical records concerning the island's past. As part of the government's efforts to reinforce a sense of the national identity, the National Museum has been closed for most of 1984; it reopens in early 1985 with a completely remodeled set of exhibits designed to emphasize the historical and cultural evolutionary sequence of the country. Thus any artifacts illustrating facets of life during the pre-British period would

be a useful adjunct to the existing museum collections.

A short-term program was designed to attempt to maximize the chances of finding any pre-nineteenth century artifacts which might still be *in situ*, no easy task in the conditions existing in the island. Indeed I personally estimated chances of finding such remains *in situ* as fifty-fifty. No attempt was made to ensure that the sample excavated would be representative of the past, either statistically or in terms of artifact distributions in space or time.

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Fort Canning as it looks today.

Research Design

Thus a search was made to determine the most likely spot within the park which might have lain relatively undisturbed since 1819. Once this site was selected, squares for excavation (which reached a total of 8, covering 50 square meters of ground surface) were laid out. In two areas, intact deposits of material dating from the fourteenth century were discovered.

Excavations were performed in natural layers rather than artificial levels. No charcoal or other organic matter was found, but three absolute dates have been obtained on ceramic material using the thermoluminescence technique. Typological studies have been conducted on the ceramic materials recovered. A final report should be published in monograph form by the Singapore National Museum in 1985.

Early Singaporean History

After Claudius Ptolemy, who may have included on his map a place name representing an entrepot near Singapore in about A.D. 150, there is no known reference regarding any place near Singapore until the Tang dynasty, wherein appear references to Lo-yueh. The place seems to have possessed no large city nor did it send missions to China.

Two inscriptions have been found which might mark the site of Lo-yueh. One is the Karimun inscription, 30 kilometers west of Singapore, in Nagari script of about A.D. 800-1000, using Sanskrit. It states, "The illustrious feet of the illustrious Gautama, the Mahayanist, who did possess an armillary sphere." (J. Brandes 1932: 21-22).

One might theorize that this armillary sphere was the gift of a sovereign, such as the ruler of



Excavation site

Srivijaya, to his *orang laut* follower as a form of *anugerah* (royal bounty.)

Karimun occupies a doubly strategic location; in addition to commanding the southern entrance to the Straits (it is 9 kms. from the southwest tip of Johor and 20 kms. from Pulau Rangsang just off the shore of Sumatra), Karimun lies directly north of the Kampar River mouth which provides access to the Minangkabau heartland, and along which lie such sites as Muara Takus. According to Tome Pires' *Suma Oriental*, in the early sixteenth century, Karimun was inhabited by Celates. In the late nineteenth century, Karimun's population had

only recently become semi-sedentary but were not yet Muslim (D. Sopher, 1977: 93-94)

In 1846, Karimun was still notorious as a base for pirates of the *suku* Galang. Even after World War II, some *orang laut* from Karimun still lived on boats (Sopher 1977: 403). No archaeological research has been conducted on Karimun, and now it is being quarried for stone to use in building the port of Pulau Baai in Bengkulu, southwest Sumatra. It would be a very good thing if some reconnaissance could be carried out in order to determine whether any archaeological remains still exist there.

The second candidate for Lo-yueh's location is Singapore island. The sole evidence for the existence of a civilized society in Singapore at this date is the Singapore Stone. This was a large inscription consisting of about 50 lines which was blown up in 1843. It lay on a point of rocky land on the south side of the Singapore River mouth, which was being levelled to construct a fortification. A few fragments were however saved. Some were sent to the Asiatic Society in Calcutta, where drawings of them were published. Based on these drawings, Dr. de Casparis of the Kern Institute, Leiden, in a personal communication, has judged that the script "clearly suggests 10th-11th century." Drs. Boechari of the University of Indonesia believes it is no later than 12th century. H. Kern himself however dated the script much later, around 1230 (G.P. Rouffaer, 1920, p. 55,58).

Dr. De Casparis and Kern suggested that the language might have been Old Javanese. Drs. Boechari, while venturing no opinion on the language, discerns a closer relationship to letter forms from Sumatra. The latter finding, if borne out by direct observation

of the fragments, would be more congenial with other sources of evidence regarding the extent of Javanese political and cultural evidence at that time.

The question of the ethnic identity of Singapore's inhabitants at the time forms a separate though related question. Evidence from later periods suggests once again that during most of its history Singapore was inhabited by *orang laut*. These sources include Pires; Leonard Andaya (1975: 41-49); Sopher, and others.

Lo-yueh seems to have been important as a rendezvous and orientation point for ships. In 1225, another toponym appears in the Singapore area which played a similar role: *Ling-ya-mon* (Dragon Tooth Strait). Chao Ju-kua commented in his description of San-fo-ts'i (Malayu-Jambi) that

"In the winter, with the monsoon, you sail a little more than a month and then come to Ling-ya-mon, where one-third of the passing merchants (put in) before entering this country (of San-fo-ts'i)"

Hirth and Rockhill surmise that the term referred to Berhala Strait, south of Lingga Island in the Lingga Archipelago.

About 100 years later, a toponym with a slightly different transcription, Lung-ya-men, was applied to a passage closer to Singapore. Dr Gibson-Hill concluded that this term now meant Keppel Harbor, just off the Singapore River mouth. (Gibson-Hill 1956: 30) P. Wheatley, 1961 82).

This reference appears in the *Tao i chih lia*, dated 1349 but perhaps referring to knowledge collected about 1330, by Wang Ta-yuan. J.V. Mills in his discussion of Lung-ya-men disagrees, preferring to assign the term to Singapore Main Strait south of Pulau Satumu, about 16 kilometers from Keppel Harbor (Mills, 1970: 328) Gibson-Hill was aware of Mills' objections but chose to disagree

Lung-ya-men would have referred to the body of water off the shore of Singapore island.

with them. In either case, the main route for navigation between the Indian Ocean and South China Sea seems to have moved very close to Singapore between 1225 and 1349.

In 1320, a Yuan mission was sent to Lung-ya-men to procure tame elephants. Perhaps as a direct result of this contact, Lung-ya-men sent a mission to China in 1325.

Temasik

In Wang's account, the people of Lung-ya-men lived at a place called Tan-ma-hsi, which corresponds to Temasik. This is the oldest known use of this term. Wang calls its inhabitants pirates who bartered what they managed to steal from Fukien traders. According to Mills' interpretation, 300 pirate ships were based in Keppel Harbour, perhaps preying on ships heading for Singapore Main Strait. Lung-ya-men would have referred to the body of water off the shore of Singapore island, or perhaps the complex of water and islands around Singapore's Southern coast.

Temasik is also mentioned in a Vietnamese annal of 1330, which commemorates the death of a Vietnamese prince who could serve as an interpreter for envoys from there (O.W. Wolters 1982: 48n. 45). A third citation occurs in the Javanese poem Pararatom, which includes Temasik among a list of places to be conquered.

Temasik was a place of sufficient importance that it appeared simultaneously in widely separated documents. According to Wang, it had recently managed to defend itself against an attack from the Thais which included a one-month siege. The Thai invaders were made to withdraw only by the approach of a Javanese mission (Wang does not say so specifically, but one concludes on its way to China). Thus the Javanese route to China brought their ships quite close to Temasik, perhaps closer than Pulau Satumu; certainly close enough that the men aboard ship would be able to observe events occurring there. Wang does not mention that the Javanese ships actually intended to *call* at Temasik.

By 1365, Temasik was claimed as a dependency by Majapahit, according to the *Nagarakrtagama*. In the late 14th century, however, Malay rulers in Sumatra may have perceived Majapahit as a weakening kingdom. A mission was sent to China's new Ming court seeking investiture and commercial ties in 1371. In 1377, a Ming mission to Jambi was however arrested by a Javanese force and the envoys killed. This halted Malayu's attempt to win Chinese protection against Java. In 1389, a prince of Palembang, Parameswara, seems to have conducted a ceremony which signified rejection of Javanese suzerainty. A Javanese fleet was then sent which laid waste the settlements on Bangka, off the mouth of the Musi River leading to Palembang. This probably eliminated the *orang laut* base forming Palembang's main line of defense.

Parameswara then fled to Temasik, which was at that time a tributary to Ayudhya, either directly or via a relationship to Patani. He killed the local chief and installed himself as ruler. In about 1397, however, Parameswara was expelled again, probably

by an attack or threat from Ayudhya or its Patani vassal. After spending two years in the interior of the Malay Peninsula, his *orang laut* followers suggested he try again to reform a Malay *nagara*, this time at the mouth of a river called Bertam. The new entrepot was named Melaka, and in its early years it, too, requested Chinese protection against Ayudhya's requests for tribute.

The chronology of Temasik in the late 14th century was reconstructed by Prof. O.W. Wolters in *The Fall of Srivijaya in Malay History*. Temasik was still mentioned in the Wu-peh-chin charts in the early 15th century, which were copied from Arab originals (Wheatley 1961: 96, Pelliot, cited in Gibson-Hill 1956, p. 42, note 79). Thus the Arab chart makers were also familiar with Temasik. Shun-Feng, ca. 1430, mentioned Tan-ma-hsi Strait as a place where passengers could change ship (Mills 1970: 325). The term Gate of Tan-ma-hsi survived as late as 1618 in a Chinese pilot's directory (Gibson-Hill 1956: 59). In 1436, Singapore was a Thai vassal (Wolters 1971: 161).

Singapura

However, in 1462 another Arabic source referred to Singapura. This is the oldest documented reference to the use of this name instead of Temasik. It is likely, however, that the renaming was performed when Parameswara usurped control over the island. Our only source for the history of Singapore during the brief period when it formed the major Malay *nagara* is the literary work *Sejarah Melayu*, originally a genealogy of the Melaka rulers compiled when the third ruler converted to Islam

in 1436. Although the roots of the dynasty are traced back to Palembang, little of the story of the line takes place there. Singapore on the other hand forms a major scene for the first episodes. Prof. Wolters is of the opinion that much of the Singapore sections actually is a symbolic manner of referring to Palembang before its eclipse by Malayu-Jambi. The other sources listed above however suggest that such a use of Singapore as a literary motif may have been backed up by the memory of a period when Singapore actually functioned as a port of trade.

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When Pires arrived on the scene, he referred to it as a "kingdom" which however possessed little territory (Pires, 1944: volume II: 262).

It did however attract Chinese traders, who sought "infinite quantities of the black wood that grows in Singapore" (Pires I: 123). Even in 1604, a map of Eredia showed a *shabhandar's* office near the Singapore River mouth. The Portuguese burned the place in 1613 as part of their continuing campaign against the descendants of the Melaka sultans. It is likely that Melaka's foundation resulted in a gradual siphoning of trade away from Singapore after Parameswara's flight, rather than forming the sequel to its destruction by Thai forces.

Pre-19th-Century Physical Remains

When Raffles et al. arrived in Singapore in 1819, a number of antiquities still existed there. These included the Singapore Stone; a mud wall 16 feet (5 meters) wide and 8 or 9 feet (2.5 meter) high, with a moat on the outer side; and a number of brick foundation terraces on the hill later known as Fort Canning. Among the foundations were fragments of Chinese and local pottery "in great abundance," and also Chinese copper coins with dates such as 967, 1067, and 1085.

The Malay inhabitants of the island refused to set foot on the hill, calling it Bukit Larangan (Forbidden Hill). According to the *Sejarah Melayu*, both Sri Tri Buana, the founder of the Malay *nagara*, and his chief, Demang Lebar Daun, were buried there, also added the Thufat al-Nafis, Sri Tri Buana's adopted mother.

According to the 1819 inhabitants, one terrace about 40 feet square formed the grave of "a ruler." Regrettably, no source provides a detailed description of its appearance when the forest was cleared from around it, for very shortly after, it was altered. A rude structure was built over it, and it became known as the *Keramat Iskandar Syah*. According to Prof. Wolters' interpretation, Iskandar Syah was the name adopted by Parameswara in about 1414 when he converted to Islam.

The cone-shaped summit of the hill was removed in 1856, when a fort was constructed on it. In 1926, a reservoir was dug into it, and in the soil just beneath the original ground surface, a cache of gold ornaments was found, including armlets, belt fasteners, and other objects with designs of distinct classical-period affinity. P.V. van Stein Callenfels said that the *kala*-heads on the designs reminded him of the best 14th-century

Majapahit work. Another ring bore an incised goose design. These objects were found slightly uphill from the *Keramat's* location.

In summary, the classical-period history of Temasik-Singapore is vague and more poorly known than that of other Malay *nagaras*, none of which have been extensively excavated. All available evidence seems to support the supposition that after a century or more of modest but increasing prosperity as a vassal just of Majapahit and then of Ayudhya with the name Temasik, Singapore was founded by an ambitious and perhaps ruthless descendants of the rulers of Srivijaya. His act in occupying this site was too provocative to the Thai who expelled him, after which a settlement with some foreign trade including export of jungle products maintained itself rather quietly until destroyed by the Portuguese.

Progress and Results of Excavation

Superficial inspection of Fort Canning Hill in January 1984 showed that terraces still existed on the east and south slopes of the hill. At the northeast corner of the hill, the remains of the parit Singa-

pura are still visible. The northern slope around the Keramat Iskandar Syah most likely to have remained undisturbed by recent activity was selected for excavation.

Two squares west of the Keramat yielded intact fourteenth-century deposits. One seems to have formed fill or frequently-smoothed terrace surface layers; the other formed accumulation at the bottom of a slope, with the ancient stratum sealed by an overlying layer of boulders which formed the base for a cement drain.

Earthenwares: The types found at Fort Canning are not unusual for sites of this period in the Malay Peninsula and Sumatra. No clear conclusions can be drawn regarding the overall form or function of most of the earthenware objects found; the remains were too fragmentary. Many seem to have been storage vessels of moderate size. None gave indications of belonging to the class of domestic cooking ware. This circumstance, combined with the lack of charcoal or bone, supports the conclusion that this was not an ordinary residential area.

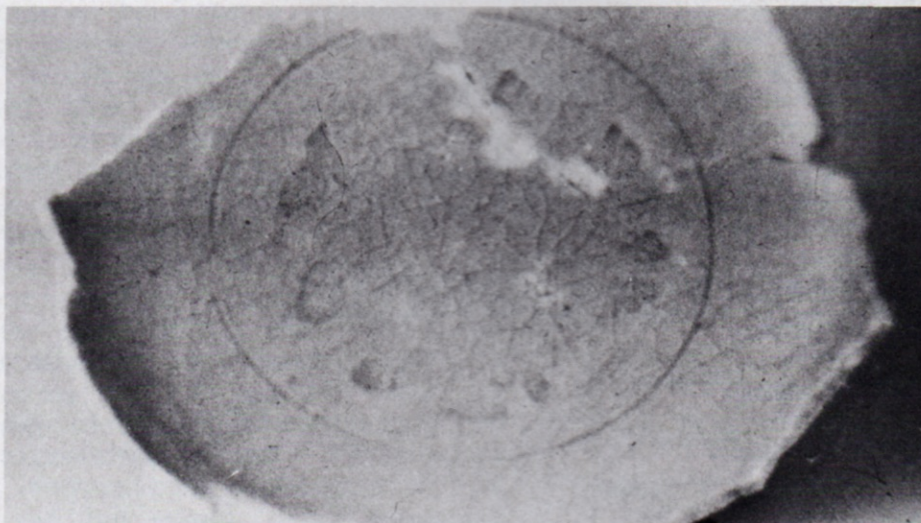
A total of 229 sherds with a gross weight of 3,675 grams was recovered, which could be divided into four main types. The small size of the sample and the lack of comparative material from other nearby contemporary sites make these typological conclusions very tentative. No sherds of the fine-bodied reddish, probably wheel-made, burnished earthenware common at 14th-century east Java-nese sites was discovered. There were however nine sherds of fine paste wares, similar to sherds found from Satingphra to Butuan to east Java from the 9th to 14th centuries. A total of 44 sherds belonged to roof tiles, one of which could be partially reconstructed. This type of artifact has not been reported from other sites of this period in Sumatra or Malaysia; although tiles were in use in east Java at this time.

Stonewares: These sherds fall into two major classes which have been conventionally designated "Brittle Ware" and "Kwantung Ware" (E. Moore, 1970). Of these, 182 sherds came from bowls, basins, jars, and vases; 253 sherds formed parts of the so-called mercury vessels which may have been used for the transport of liquid mercury. Documentary sources attest to the existence of trade in this commodity from the T'ang Dynasty. A place called *Lang-plo-lu-ssu* in North Sumatra formed one source (O.W. Wolters, 1967: 192-193); cinnabar sources in western Jambi were mined in pre-colonial times (Ryan Bemmelen, 1944: II, 221). China imported mercury from Persia and Vietnam (where these brittle ware jars have been made), and obtained it from its provinces of Hunan and Shansi. In turn, it was exported to Java, Kedah, and Cambodia.

Mercury's uses included playing part in religious rituals as medicine, and in extracting gold from its



A sample of jars unearthed



A plate found in the excavation site

ore. Any or all of these explanations could account for the relatively large proportion of these vessels at Fort Canning. On the other hand, as Pak Abu Ridho has suggested, the vessels themselves may also have been used as containers for some commodity during ceremonies.

Among the Kwantung wares are found large storage jars, with a few basins. Some monster mask handles were found; one vessel had a stamped design of indistinct Chinese characters repeated between each of the four loop handles.

Porcelains. The porcelain sherds can be divided into green glazed wares (celadons), the plain white wares, and the white wares with underglaze blue decoration. A number of the sherds seem to have originated from the Longquan kiln area. Two sherds may be Sung in date, but the rest are of 14th-century types. The green-glazed wares totalled 153 sherds.

Plain white wares included qingbai (33 sherds); Shu-fu (a specialized type of Qingbai), 10 sherds; Duhua or Ding-type ware 26 sherds; and 5 sherds which could not be assigned to any specific white ware.

It is now generally accepted that cobalt blue design was used on porcelain exported from China during the late Yuan Dynasty. Wang-Ta-yuan again forms our earliest documentary source on this matter, when he reported that such porcelain was exported to Java. Fourteen sherds of early blue and white ware were discovered at the Keramat site. None seems to belong to types produced later than A.D. 1400.

Summary

The artifacts from the Keramat site can be dated to a rather narrow time span, the fourteenth century. Three ceramic samples were submitted to the Oxford University laboratory for thermoluminescence analysis. These yielded dates of 550 ± 110 years B.P. (1320-1540); 440 ± 90 (1450-1630), and less than 100 years.

No Thai ceramics were discovered in the undisturbed strata. However fragments of a Sawankhalok covered box were found in the surface layer. Given the degree of interest shown in Temasik/Singapura by the Thai, it would seem that this forms supporting evidence for the hypothesis that Thai porcelain was not exported until around 1474 (H. Woodward, 1978).

It would seem that the Keramat site was abandoned after the founding of Melaka. Perhaps some

settlement area still remained on the plain between the hill and the shore, near the river mouth. We are left with the impression that Singapura was intended by Parameswara to become the successor of Palembang but that he was thwarted in his design, to the eventual benefit of Melaka.

The remains at Singapore have some bearing on the interpretation of documents concerning the use of Keppel Harbor as a shipping thoroughfare. They do not indicate any use of the waterway before the 14th century; such negative evidence in this case is however not really useful nor conclusive. The final conclusion which can be drawn from this small research project is that further archaeological research, including submarine archaeology, can be expected to find much more useful information on these topics.

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continued on page 49