UNIVERSITY OF SOUTHAMPTON

THE EVIDENCE OF ORIENTAL CERAMIC AND EARTHENWARE DISTRIBUTIONS IN BRUNEI DARUSSALAM AS AN AID IN UNDERSTANDING PROTOHISTORIC BRUNEI

By

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ABSTRACT

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The main purpose of this thesis is to analyse the Oriental trade ceramics and earthenwares recovered from three sites in Brunei: Terusan Kupang, Kota Batu and Pulau Chermin. The study analyses the various Oriental ceramics. These include the Chinese ceramics of the late T'ang, Sung, Yuan, Ming and early Ch'ing periods of the tenth to seventeenth centuries A.D. and the Southeast Asian ceramics of Khmer, Thai and Vietnamese wares of the fourteenth to the seventeenth centuries A.D. The study also analyses earthenwares found associated with imported Oriental ceramics,focusing on their fabrics, decoration, forms and vessel types. This includes a petrological analysis of selected shards. The Oriental ceramics and earthenware finds from the three Bruneian sites are compared with the other Southeast Asian sites are of the same general cultural context. The study aims to further our understanding of the local cultural assemblage in Southeast Asian context.

The presence of Oriental trade ceramics and some earthenwares in Brunei is an indication this areas participation in trade networks. These involve not only the local merchants, but also a wide range of nationalities including Chinese, Thais, Vietnamese and Malays of the Archipelago. These ceramics indicate Brunei's active involvement in the international trade network, beginning as early as the tenth century. Historically, these events are poorly documented, especially the early period from the tenth to fifteenth centuries A.D. This period in Brunei's history is still fragmentary. Apart from ceramics, there are very few other archaeological materials that could help in the reconstruction of the country's historical past; there are for example no monumental structures, nor are their organic materials due to the humid tropical climate.

The study also uses ceramics to relocate P'o-ni, Brunei's predecessor. The study concentrates on the three above sites, but places emphasis upon Terusan Kupang and Kota Batu. In addition, the study also uses the fragmentary written sources by Chinese, Arabs and Europeans as a further evidence.

In short, this study attempts to use ceramic data to illuminate events in Brunei's historical past, at the same time, it stresses the value of ceramics as an invaluable source of historical evidence when other kinds of cultural materials have perished in the country's humid, tropical climate.

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ABBREVIATIONS

BMJ - Brunei Museum Journal

FMJ - Federation Museums Journal

JMBRAS - Journal of the Malayan (later Malaysian) *Branch of the Royal Asiatic Society*

SMJ - Sarawak Museum Journal

JSEAS - Journal of Southeast Asian Studies

SSJ - Sabah Society Journal

RIMA - Review of Indonesian and Malayan Affairs

JSS - Journal of the Siam Society

JSAS -Journal of Sophia Asian Studies

CHAPTER 1

INTRODUCTION

1.1 General introduction

This thesis presents a study of the evidence of Oriental ceramic and earthenware distributions in Brunei Darussalam as an aid in understanding protohistoric Brunei. I chose this subject because there has been very little research in this field in Brunei. The minimal existing research has lacked depth and detail, and has been non-scientific. No previous research has focussed on both the Oriental ceramic and the earthenware finds. Most studies have focussed on Chinese ceramics, ignoring the existence of other Southeast Asian ceramics such as the Thai wares of Sawankhalok and Sukothai, the Vietnamese wares and the Khmer wares. This study is the first attempt to examine both the Oriental ceramic and earthenware finds in Brunei. It is hoped that this study not only provides an up-to-date survey of the ceramic finds in Brunei but also a reference work for their typological study. This study will also serve as a guide for future research into the history of export ceramics and local earthenware found in this region, particularly in Brunei Darussalam.

In comparison with other Southeast Asian countries, Brunei was and is still not a prominent region of Oriental archaeology. Archaeology is a new discipline to the country being introduced about 35 years ago in association with the development of the Brunei Museum [Omar, 1981]. There have been no major archaeological discoveries mainly because of the absence of monumental architectural remains like Borbodur in Central Java, Angkor Wat in Kampuchea or Lembah Bujang in Peninsular Malaysia. No traces of prehistoric culture have been found, largely due to the absence of limestone caves essential for prehistoric dwellings. This may explain the lack of early archaeological

activity in Brunei, in contrast with her counterparts in Peninsular Malaysia, Indonesia, Thailand, the Philippines or Vietnam [see chapter 3 and 7]. However, despite these limitations, it does not necessarily mean that Brunei has nothing to offer to archaeologists and art historians. Brunei, like neighbouring countries in Southeast Asia, has a unique history of its own. The country has played a significant role in the history of Southeast Asia from ancient times as attested by the archaeological finds. Here I do not refer to the grand monumental architecture or large artifacts, statues or metal objects of art found in other Southeast Asian countries, but to the smaller and less fancy materials, in particular that of ceramic shards. They form the majority of single artifacts to be found in Brunei and yet, they are among the least to be studied.

The wide distribution of large amounts of ceramic shards throughout Brunei's main archaeological sites make them the most valuable evidence and information on many aspects of the past, including chronology, contacts and trading activities. They represent about 90% of the total archaeological materials so far collected, while other material culture includes coins, beads, wooden and stone objects, bricks and so on. There are three main types of pottery shards common in Brunei, porcelain, stoneware and earthenware. The porcelain and stoneware originate from China, Thailand, Vietnam, Kampuchea and Japan [see chapter 5 and 6]. Earthenware, on the other hand, is usually locally made, although some wares are thought to have foreign origins [see chapter 7].

The objective of this thesis is to study a new dimension of Brunei's proto-history, in particular before the advent of local written sources. The contribution of Oriental ceramics and earthenwares is considered important in providing a vital clue to the understanding and reconstruction of Brunei's social and economic history. Unlike other material culture such as silk or wood fragments, ceramics are able to survive even in the

country's harsh, humid tropical climate. Their contributions are further strengthened since Brunei lacks indigenous written records prior to the sixteenth century. Moreover, because of the absence of monumental architecture, statuary and urban centers local scholars have had to rely heavily on archaeological finds, particularly ceramics. It is no wonder that ceramic studies are now becoming important and have developed into a specialized aspect of the discipline of Brunei's archaeology.

For this study, I will make use of ceramics as valuable evidence of contacts and trade networks [see chapter 2]. For the past few years, the study of exchange and trade in past societies has been one of the growth areas of archaeology. It has been realized that the materials of which artifacts are made can be a far better guide than their style to the place of origin of such artifacts. By thorough use of a wide range of scientific techniques, a lot, if not all the exchange systems can be reconstructed. The movements of the goods can be investigated, if the materials in question are sufficiently distinctive for their source to be identified. This enables archaeologists to tackle the whole question of the production and distribution of traded goods.

Apart from the exchange of goods and raw materials, trade networks also contribute to the wide dispersal of information. Ideas are exchanged, inventions are transmitted, and so are ambitions and aspirations. Archaeologically, some of these changes can be identified, such as the shifting of local traditions into a new element, which is alien to the local culture; or with the additional of new elements into the existing traditions. Some of these changes, however, cannot be traced archaeologically. Nevertheless, they can be reconstructed by other approaches, such as through linguistics. I will discuss some of these matters in chapter 4 to 7 respectively.

The study also uses ceramics as a means to reconstruct pieces of Brunei's history, in particular to relocate P'o-ni, Brunei's predecessor. Many scholars agree that the location is somewhere in the northwest or west of Borneo, based on the apparent and approximate location of P'o-ni in relation to other places in the Chinese sources, and also the descriptions of P'o-ni's customs, history, production, the climate and so on. However, no attempt so far has been made to use archaeological approaches, in particular the study of ceramics. I intend to make use of ceramic evidence to relocate P'o-ni, in addition to the existing fragmentary historical records. This thesis is a foundation for future research into this field of study.

The study contributes to a new understanding of Brunei's early history. As this study is going to demonstrate, ceramics are an invaluable form of evidence. They provide a wide-range of information and evidence including the dating of archaeological sites, the study of the nature of habitation and trading centres. Through the volume of finds and their distribution, we can analyse the intensity and the dispersal of trade activities and contacts. From ceramic evidence, we can surmise the extent and direction of trade patterns and the cross-culture influences that existed between the countries involved. The material might also indicate the pattern of social and cultural life of those days. The study will therefore stress the value of ceramics as a historical source while other materials have perished due to the country's humid tropical climate.

The format of this thesis is as follows:

Chapter 1: Introduction - The remainder of this introductory chapter discusses briefly the geographical background of Brunei, and of archaeological development in Brunei. It also provides a literature review.

Chapter 2 discusses the development of early trade and the rise of Maritime kingdoms in Southeast Asia, with a special reference to Brunei. The earliest contacts were with Indian merchants. They were followed by Arab, Chinese and European merchants. The respective successes and failures in controlling and manipulating these trades have resulted in the rise and fall of city-states and kingdoms throughout Southeast Asia.

Chapter 3 deals with Oriental ceramic finds in Southeast Asia. The objective of the study is to give a brief idea of major sites within Southeast Asia and then relate these findings to Brunei. It is extremely difficult to study Brunei's cultural history on its own or in isolation, since all of these neighbouring countries are belonging to the same general cultural context.

Chapter 4 discusses the Oriental ceramic finds in Borneo, with a special reference to Brunei. Three major archaeological sites will be discussed, namely Kota Batu, Terusan Kupang and Pulau Chermin. Background research at each individual site will be discussed, and will be presented the latest data.

Chapter 5 discusses the various types of Chinese ceramics of the late T'ang, Sung, Yuan, Ming and early Ch'ing Dynasties from the tenth to seventeenth centuries A.D. Among the ceramics are Yueh wares, Celadons, Lung- Chuan wares, Black-and-Brown wares, White wares, and Blue-and-White wares. A brief background history of each Chinese dynasty is also to be discussed, in particular the role of the government in influencing the growth of ceramic industries.

Chapter 6 deals with the Southeast Asian ceramics of Khmer wares, Thai ceramics of Sukothai and Sawankhalok and Vietnamese wares of the fourteenth to sixteenth centuries

A.D. Among the wares discussed are Sawankhalok celadons, Iron glaze wares, Brown wares, Blue-and-White wares, and Sukothai wares. A background history of each kingdom is also discussed and their influence in the growth of their respective ceramic industries.

Chapter 7 discusses earthenware finds in Borneo, with a special reference to Brunei. The chapter is both descriptive and comparative in content. Pottery from the three Bruneian sites is compared with other assemblages from the neighbouring regions. Scientific analysis employed includes the use of petrological microscopy.

Chapter 8: Summary and Conclusions present some final conclusions about the importance of Oriental ceramics and earthenwares in providing a vital clue to the understanding of Brunei's early history and of the Southeast Asian region as a whole.

1.2 Brunei Darussalam: The geographical setting

Brunei, properly known as Brunei Darussalam (The Abode of Peace), is a small Malay sultanate in the northwestern coastal fringe of the island of Borneo, the third largest island in the world. To the southwest of Brunei is Sarawak, to the northeast is Sabah, while to the south lies Kalimantan. Both Sarawak and Sabah belong to the Federation of Malaysia and Kalimantan is part of Indonesia [see fig. 1].

Brunei is situated between the longitudes 114° 0' - 115° 30' east of the Greenwich and the latitudes 4° 0' - 5° 30' north of the Equator. The country has a total area of 5,765 square kilometers (2,226 square miles). It is divided into two parts, the western and the eastern parts [see fig. 2]. The eastern part comprises the Temburong District of 1,304 square kilometers (504 square miles). The larger western part covers an area of 4,461 square kilometers (1,722 square miles). The smallest district is Brunei/Muara with an area

of 571 square kilometers (220 square miles) and the largest district is Belait with an area of 2,724 square kilometers (1,052 square miles). The other district is Tutong with an area of 1,666 square kilometers (450 square miles) [Steward, 1986].

1.2.1 Topography

The population distribution very much influenced by the soil topography and drainage. The most densely populated parts of Brunei are the lowlands, the coastal plains and river system. The highest population density is in the Brunei/Muara District, followed by the Belait, Tutong and Temburong Districts.

The topography of Brunei can be divided into four main types, the highlands, the lowlands, the valley and the coastline. Most of the country is below 152 meters (500 feet). The higher areas are found along parts of its border with Sarawak in western Brunei and in southern Temburong. There are five highland regions namely, the Temburong Highlands, the Brunei/Muara Highlands, the Tutong Highlands, the Liang Highlands and the Teraja Highlands. The highest mountain is Gunong Pagon in the Temburong District with a height of 1,850 meters. The mountain is made of hard resistant sandstone and shale.

The lowlands are found along the coast and extend along the valleys. The largest area of lowland in Brunei is the coastal plain of the Belait River. A large part of the area is still covered by jungles and swamps. The population is mostly concentrated in Seria and Belait Towns, where exploitation of the petroleum and natural gas deposits took place. The northern part of the Temburong District bordering Brunei Bay is also a broad coastal plain. A large part of the region is still covered by mangrove swamps. In the Brunei/Muara District the largest area of lowland is a plain in the southern part of the district drained by the Brunei River and its tributaries. Important economic activities here

include fishing, light industries and farming. These areas have attracted the largest concentration of population since the earliest times.

Another topographic feature is the coastline. Brunei has a total of 161 kilometers of coastline, with smooth sandy beaches facing the South China Sea. Bays, capes and islands are the main features of the coastal regions. Headlands and cliffs appear along the coast between Muara and Tutong Town. Sandy beaches stretch along the whole coast from the Baram estuary in Sarawak to Muara. At the northeastern end of the country is Brunei Bay, the only large bay on the coast of north Borneo. It is about 48 kilometers wide from east to west and 23 kilometers from north to south. There are several islands in this bay, which include Pulau Chermin, one of the three sites to be included in this study [see chapter 4 and 8].

1.2.2 Geology

The geology of Brunei is complex due to rapid lateral and vertical changes in rock type and fairly complicated geological structures in some folded areas compounded by a scarcity of fossils [Halim, 1992: 38]. There are seven known pre-Quaternary Formations in Brunei, namely, the Liang Formation, the Seria Formation, the Miri Formation, the Lambir Formation, the Belait Formation, the Meligan Formation and the Setap Formation [Halim, 1992: 39; Tate, 1974: 289]. The main rock types are mostly composed of sandstone, sand, shale and clay, gravel and some limestone [see fig. 3].

The oldest rocks form the Setap Shale Formation, mostly occur in the Temburong and the Jerudong areas of Brunei/Muara District. It comprises laminated clayey silts with very thin, fined-grained sands [Tate, 1974: 291]. The Belait Formation crops out widely throughout the country with its feature forming sandstones being responsible for most

of the upland areas, including the Biang Ridge, Kota Batu and the Belait Rim [Halim, 1992: 38]. It comprises sandstone, sand, shale and clay, with coal and lignite.

The geological study in Brunei has been connected with the exploration of hydrocarbon, particularly oil and natural gas. For this study, it will assist me in the analysis of earthenware shards, which will be discussed in chapter 8. Of the seven rock Formations, the Belait Formation is vital to my research because of its association with Kota Batu, one of the three archaeological sites included in my study. The sandstone composition of Kota Batu consists of coarse grained, hard sandstone with well developed lamination and cross bedding [Brunei Museum, 1989: 15]. The erosions of bed rock consist of colluvium and sand. The former range from gravel to boulders, normally they are sandstone. The latter are sand which is slightly clayey and well sorted. It is characterised by an oxidizing environment which has caused it to be orange and red in colour and mottling [ibid: 17].

The other rock formation, although less significant, is the Setap Formation, which is located in the Limbang District of Sarawak. The formation is located very near to Terusan Kupang, another site which is included in my study. The rocks of this Formation consist of shale and clay, with sandstone and siltstone. Other rock Formations located near to my research sites are the Miri and Liang Formations. The former consists of sandstone and mudstone and the latter are of sand, clay, lignite, gravel and tuffaceous beds [Halim, 1992: 39; see fig. 3].

1.2.3 Drainage

The heavy rainfall of Brunei gives rise to a large number of rivers and streams. The four main rivers all rise within the country and generally flow northwards either into the South

China Sea or Brunei Bay [Stewart, 1986]. The longest river in Brunei is the Belait at 143 kilometers long. The source of the river is near Bukit Ulu Tutong about 376 meters high. The other main rivers are the Tutong River, the Temburong River and the Brunei River. The Brunei River is the shortest in Brunei and is about 35 kilometers long. However, unlike other rivers, it has a deep wide estuary in Brunei Bay.

In Brunei, as in their neighbouring states, rivers play an important role as they form a communication system. In spite of their shortcomings for bigger ships, the Borneon rivers are usually quite suitable for small boats, and are sometimes thus navigable for long distances [Brown, D.E., 1970: 2]. Rivers also contribute to the growth of settlements, feeder points or even small towns. The Brunei River and its hinterland, for example, is densely populated mainly because of its strategic location very near to the South China Sea. The area thus became a very early focal centre, i.e., during the Golden Age of Terusan Kupang (ninth to thirteenth centuries A.D.), Kota Batu (fourteenth to seventeenth centuries) and up to the present day Bandar Seri Begawan [see chapter 4 and 7]. Populations in remote areas tend to be very small and settlements are usually widely dispersed. As Brown [1970: 2] states, " to the northwest coast of Borneo it means that the peoples with access to the South China Sea were 'closer' to Brunei than the peoples of inland Borneo." In another statement he said that, "to the coastal peoples of northwest Borneo the far side of the island was remote; the interior was exceedingly remote."

1.2.4 Climate

Brunei, like most of the Southeast Asian regions has an Equatorial climate with slight diurnal variation in temperature and high rainfall. Its weather is always hot and humid. Midday temperatures rarely rise above 35 degree Celsius and temperatures during the night only occasionally fall below 21 degree Celsius. The average daily minimum

temperature for coastal areas is about 23 degree Celsius and the average daily maximum temperature is about 32 degree Celsius. The average temperature for each month throughout the year varies little between 26 degree Celsius and 27.8 degree Celsius. Temperatures are always hot between each day, and night is approximately 12 hours in length and every day gets an equal share of the sun's isolation which heats the surface of the earth [Stewart, 1986].

Rainfall is more variable both in amount and distribution. The western coastal areas between Kuala Belait and Muara receive between 2,540 mm. and 3,302 mm. of rain a year. The rainfall totals in the northern part of the Temburong District are higher ranging from 3,302 mm. to 4,064 mm. per annum. The heaviest rainfall is experienced on the hills and mountains in the southern interior with more than 4,064 mm. a year [ibid].

In a similar way to other Southeast Asian countries, Brunei is influenced by the monsoon winds. There are two wind monsoon seasons during the year. The northeast monsoon generally blows from the beginning of November to the beginning of April. The southwest monsoon occurs from mid-May to the end of September [Cooper, 1992: 89]. There is a distinct transition period between monsoons during April and May, and a much less marked but more abrupt transition during October. These monsoons play a vital role in influencing the rainfall patterns in Brunei. The season of less rainfall occurs between of February and August. A season of more rainfall occurs in the second part of the year between September and January. The northeast monsoon brings very heavy rainfall in December and January but also blows during the relatively dry months of February and March [Steward, 1986].

Monsoon winds play a decisive role in the daily life of the local populations, especially those who are engaged in farming and fishing industries. In the past, monsoon

winds played a vital role in sea navigation, particularly for ocean-borne traders. When sailors and mariners began to master the rhythm of wind circles, there was a growth of sea navigation and international trade networks [see chapter 2].

1.2.5 Vegetation

The country is mainly jungle with tropical or equatorial rain forests covering about 70% of the area. These forests consist of big and tall trees with thick creeping undergrowth. The ground under the forest canopy is muddy and moist because of insufficient sunshine. Varieties of high quality timber such as *Kapor, Meranti, Kerwing, Rampin* and *Selangan Batu* are found in these forests [Hassan, 1988: 24]. The exploitation of these valuable timbers is very well-controlled by the government. Only a small amount is exploited mainly for building purposes and furniture industries.

Swamps are another vegetation type and they are usually located in the lowlands and valleys. The coastal alluvium has a specialized type of peat-swamp forest, while mangrove and *nipah*- palms predominate in tidal swamps.

The forest has traditionally been exploited by indigenous people for various products, such as *damar* (resin), scented woods, rattan, medicinal herbs, fruits and for food gathering and hunting. In the past Brunei was famous for the best quality camphor in the world [Nicholl, 1979; Toon, 1985]. Together with the country's other exotic items such as tortoise-shell and yellow wax, they had attracted foreign merchants to Brunei and consequently opened the country up to foreign trade [see chapter 2].

1.3 Background of Archaeology development in Brunei Darussalam

The responsibility of carrying out archaeological research in Brunei is borne by the Brunei Museum Department. It is the only institution in the country to have the power to conduct such activities. Its authorization in this field was further enhanced by the introduction of the Antiquities and Treasure Trove Act in 1967, with further amendments in 1984.

The first archaeological excavation ever conducted in Brunei was in 1952/53 at Kota Batu by the late Tom Harrisson. The report of the excavation [Harrisson & Harrisson, 1956] encouraged the Government of Brunei to set-up its own museum. However, it was not until 1965 that the Museum had its own temporary building and became responsible for its own administration [Omar, 1981: 5; Brunei Museum Report 1965-1970, 1971: 36]. In 1970 the Museum moved to its present permanent building on the historic site of Kota Batu, about 5 kilometers from Bandar Seri Begawan [Omar, 1981: 5; Shariffudin, 1973].

Archaeology is considered to be an important subject in Brunei Darussalam despite its being a new discipline and its limited qualified staff and work force. Their task is enormous and challenging. It involves not only the study of the prehistoric period, but also up to the protohistoric and historic periods. Unlike most of her counterparts in Southeast Asia, Brunei is very unfortunate because of her lack of written records, particularly for the period before European contacts in the sixteenth century when there is hardly any proper documentation about the country. The available Chinese accounts were mostly written in fragments, while the others (such as Arab, Indian and Javanese sources) present further problems, such as in the identification of place names. Meanwhile, there are barely any stone inscriptions or local written sources available

which could support this early documentation[1]. The two available local written sources, *Shaer Awang Semaun* and *Batu Tersilah* (The Royal Genealogical Tablet), were written, either based on myths and legends, or written at a later date to describe this earlier period [*Shaer Awang Semaun,* no: 000056; Low, 1880; Sweeney, 1968; Sharifuddin & Abdul Latif, 1974; Damit, 1989]. Scholars, in particular historians and art historians have therefore faced considerable difficulties in dealing with such fragmentary, scattered and unreliable evidence. They have therefore had to rely on archaeological evidence as a further means to reconstruct the history of Brunei.

The past and present status of archaeology in Brunei has been well described by Wilhelm G. Solheim II [1973], V.H. Sutlive, L. Chin and D. McCredie [1987] and B.A. Hussainmiya [1993]. They all agreed to classify Brunei's archaeology into phases, based on their observations from their periods. Solheim [1973: 30] has classified Brunei archaeology in the period from 1950's until 1976 as Harrisson's period. Vinson, Lucas and McCreire [1987: 198], on the other hand, have divided Brunei archaeology into two periods, the Harrisson's (as above) and the Matussin Omar's period from 1976 to 1987. Meanwhile, B.A. Hussainmiya [1993: 146-7] has divided Brunei archaeology into three

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1 Most of Brunei's early documentations are destroyed probably due to unproper storage on the one hand, and unfavourable climatic conditions on the other. In the past, Brunei have its own style of paper, as documented by the Chinese. For instance when P'o-ni (Brunei) sent a tribute to China in 977 A.D., it was said that the offical document was covered by a number of wrappers, the paper was like tree-bark, but thin, smooth and glossy, and of a greenish tint, several feet long and cover an inch in thickness; when rolled up, it was just as much as one could hold in the hand. The characters written upon it were fine and small; and were to be read horizontally [Chau Ju-Kua, 1264 (Trn.) Hirth & Rockhill, 1970: 157]. The commoners also have an almost similar type of paper, as been told in the Chinese sources of the 14th century. It was said that the country of P'o-ni have no pens or paper, and write by engraving with knives on pei-to leaves [Brown, C.C., 1972: 221].

periods, namely, the Harrisson's period from the 1950's to 1970's, the Matussin Omar's period 1976 to 1988, and the Pengiran Karim Pengiran Osman's period from 1988 to the present.

The Harrisson period marks the beginning of actual and serious archaeological activity in Brunei. Before this period, there was very little archaeological work, except for one rare random discovery of two early Muslim tombs in Brunei [Carey, 1933: 183]. In his long career, Harrisson was always assisted by his wife, Barbara. They were both actively involved in the archaeological research in Brunei and two of their famous archaeological sites are Kota Batu and Sungai Lumut. Their works were published in the local and international journals and generally became the foundation in the study of Borneo and Brunei archaeology [see literature review and bibliography].

The second period of Brunei archaeology has witnessed the beginning of systematic archaeological research [Sutlive, Chin & McCredie, 1987: 198; Hussainmiya, 1993: 146]. This research has been undertaken by Awang Matussin bin Omar[2], formerly Curator of Archaeology and now the Director of the Brunei Museum. His excavations at Terusan Kupang and Sungai Lumut in 1977 and 1978 were the first well-controlled excavations made in Brunei. The excavations were part of his master thesis and later published in the form of a monograph [1981]. He also did a number of archaeological researches throughout the country and published some of these in the Brunei Museum Journal [see literature review and bibliography].

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2 Now known as Dato Paduka Awang Haji Matussin bin Omar. In 1995 he was promoted to Special Officers to the Ministry of Culture, Youth and Sports.

When Matussin was promoted to Director of the Museum in the early 1980's, there seems to have been a lull in archaeological activities in Brunei. The third and the last phase began in 1988, when Pengiran Karim bin Pengiran Osman became the new Curator of Archaeology and further excavations were conducted [Hussainmiya, 1993: 147]. The present era in the archaeology of Brunei is continuing to develop with the latest research presented in this thesis.

1.4 Relevant literature review (Archaeology, Art History and History)

There are quite a number of relevant published materials available, which include archaeology, art history (the study of Oriental ceramics and earthenware) and history. I include history as my reference source because of its close relation to the two other disciplines. I also include personal interviews as another means of information. Some of the important materials are briefly presented here, while the others are included in my bibliography.

Before the establishment of the University of Brunei Darussalam in 1985, the Brunei Museum was the only higher institution in Brunei which was actively involved in the study of Brunei history and culture. The Department plays an important role in the publication of articles and monographs under the *Brunei Museum Journal*. The first publication began in 1969 and continues to the present day. Apart from that, the Department also funded special publications, such as monographs, and compilations of papers from seminars and workshops.

One such publication was written by Matussin Omar, *Archaeological Excavations in Protohistoric Brunei* [1981]. The book reviews two archaeological sites in Brunei, Terusan Kupang and Sungai Lumut, and includes the study of Oriental

ceramics and local earthenware. However, only limited ceramic samples were analyzed, due to the wide range of material culture being studied. Nevertheless, the studies of local earthenware are important and they have greatly helped me in this present study. Apart from using conventional methodology, the author also used scientific methods of petrological microscopy and x-ray diffraction in his study. However, only small percentage of the large amount of recovered shards were analyzed.

Another interesting special publication by the Museum is *The Ceramic Gallery of the Brunei Museum at Kota Batu: an introduction to the history of trade ceramics in Borneo* by Barbara Harrisson [1972]. This book reviews in brief the various types of Oriental ceramics displayed at the Brunei Museum. A good book, yet written in a simple form aimed to reach the wide audience of people who visit to the Museum. It explains the various types of Oriental ceramics found in Brunei, and their histories.

There are a number of relevant publications of seminar and workshop reports, which are important in the preparation of this study. Among them is the *Report of the SPAFA Workshop on the Identification and Classification of Trade Ceramics,* 4-18 December, 1994. The report reviews the importance of Oriental ceramics within the Southeast Asian regions, with a special reference to Brunei. The book discusses the various aspect of ceramics, such as the identification of various types Oriental ceramics through their glazes, colours, fabrics, and design patterns.

Other publications include, *Report on Archaeological excavation, Conservation and Survey Workshop, Kota Batu*, June, 1988 and *Report on the 6th. Intra-ASEAN Archaeological Excavation and Conservation Workshop, Kota Batu*, October-November, 1989. These two reports review archaeological excavations at Kota Batu. Among the topics studied are Oriental ceramics and earthenware. Although the studies

on both topics are limited, nevertheless, it gave me an up-to-date account of ceramic collections obtained during those periods.

The Brunei Museum has published a large number of relevant articles since its first publication in 1969. The main contributors to the Journal were Tom Harrisson, the pioneer of Brunei archaeology, and his wife, Barbara. Apart from the *Brunei Museum Journal*, their articles were also published in the *Sarawak Museum Journal*, the *Sabah Society Journal, Borneo Research Bulletin, Journal of the Malayan Branch Royal Asiatic Society, Asian Perspectives* and *Oriental Art*. Their dates span the years 1950's to 1970's [see the bibliography]. Most subjects of discussions touch on archaeology, they include the study of export ceramics, earthenware and other archaeological issues. Their articles provide a very useful reference source to this day.

Barbara Harrisson is still contributing her knowledge in the field of Oriental ceramics. Her most recent book was published in 1995, *Later Ceramics in Southeast Asia: 16th to 20th Centuries*. The book is presented both in descriptive and pictorial forms. Among the wares discussed is the Swatow type, which is common in Southeast Asia, including Brunei. Another important book by Barbara was published in 1986, *Pusaka: Heirloom of Borneo*. This book is also both descriptive and pictorial in nature. It discusses ancient and contemporary jars found in Borneo. *Swatow* is another interesting book published by her in 1979. This book is also both descriptive and pictorial in form, and reviews Swatow wares of the sixteenth to seventeenth centuries A.D. The book discusses the background history of the wares, and their distributions.

Apart from the above journals and monographs, a number of books are also relevant to my study. Among these is a book by Aurora Roxas Lim, *The evidence of ceramics as an understanding the pattern of trade in the Philippines and Southeast*

Asia [1987]. The book discusses the Oriental ceramics distribution in the Philippines and its association with other Southeast Asian countries, notability, Brunei, Malaysia, Thailand and Indonesia. The book has provided useful guidance and up-to-date information about the various types of Oriental ceramic and their distributions in Southeast Asia.

There are also a number of books on Oriental ceramics written by renown scholars on this subject. Among these scholars are by Roxanna M. Brown, *The Ceramics of Southeast Asia: their dating and identification* [1988]. The book reviews Southeast Asian ceramics of the Thai wares of Sukothai and Sawankhalok, the Vietnamese wares, the Khmer wares and the Burmese wares of the thirteenth to the seventeenth centuries A.D. This is a very important book and brilliantly written about the history of these Southeast Asian ceramics, and their technological developments.

Another important book is by John S. Guy, *Oriental Trade Ceramics in Southeast Asia 9th to 16th. Centuries* [1986]. The book discusses the distributions of Oriental trade ceramics in Southeast Asia from the T'ang to Ming Dynasties. The author discusses the development of Chinese and other Southeast Asian ceramics, their histories, technological development and the kilns. In another book, *Ceramic Traditions of Southeast Asia* [1989], he reviews the various types of Southeast Asian ceramics, which includes Burmese, Khmer, Thai and Vietnamese wares. This is a very interesting and useful book, especially in providing me with good references and new information.

On kiln sites, a number of important books are available, including, *Minnan Blue-and-White: an archaeological survey of kiln sites of the 16th-19th centuries in Southern Fujian, China* by Chuimei Ho [1988]. This book studies major kiln sites which produced Blue-and-White ceramics in the southern Chinese Provinces. A very useful

book for the identification of Chinese export Blue-and-White wares which are very common throughout the Southeast Asian countries, including Brunei. Another important book on Chinese kiln sites is by Penelope Hughes-Stanton and Rose Kerr [compiled], *Kiln Sites of Ancient China* [1981]. The book discusses major Chinese kiln sites from the period of the Eastern Han (A.D. 25-220) to Sung Dynasties (A.D. 960-1279). It is both descriptive and pictorial in nature and provided me with new information about Chinese export ceramics which were previously unfamiliar and unknown to me.

There are a number of historical books which are relevant to my study. Among the important ones are Robert Nicholl, *European Sources for the history of the Sultanate of Brunei in the 16th century* [1975]. This is a translated account of Brunei by the Spaniards and the Portuguese in the sixteenth century A.D. A well-written book about Brunei in the sixteenth century, about its kings, the city, customs, and religion.

Another important book is D.E. Brown, *Brunei: the structure and the history of a Bornean Malay Sultanate* [1970]. The book studies the history of socio-political change in Brunei from the beginning of last century to the present (1967-68). A very interesting book about Brunei, its kings, the administrative system, and the social structures which provided me with an idea of Brunei's ancient socio-political system based on the history of Brunei's socio-political system of the last century.

Other books that are useful to my study include, Friedrich Hirth and W.W. Rockhill, (translated) *Chau Ju-Kua: His Work on the Chinese and Arab Trade in the 12th and 13th centuries, entitled Chu-fan-chi* [1970], about the old Chinese account about the South Seas, their locations, products, and customs. The account includes the description of P'o-ni, Brunei's predecessor. W.P. Groeneveldt, *Historical Notes on Indonesia and Malaya compiled from Chinese Sources* [1960] is similar to the *Chu-fan-*

chi, but the account is from different Chinese sources. Paul Wheatley, *Geographical Notes on some Commodities involved in Sung Maritime Trade*, *JMBRAS* [1959], describes the countries that were involved in trade activities with China, their main products and the main Chinese products exported to these countries.

Other useful references for my study include Wang Gung-wu in his illuminating study of the early history of Chinese trade with the South China Sea, *The Nahai Trade: A study of the Early History of Chinese Trade in the South China Sea*, *JMBRAS* [1958], and G. Coedes in his studies of the Indian influence in Southeast Asia from the first century A.D. onwards, *The Indianized States of Southeast Asia* [1968]. Also, very important is Wilhelm Solheim in his tireless studies of the Southeast Asian earthenware Traditions from the 1940's up to the present. Finally Dr. Peter Bellwood's in his study of the Southeast Asian pre and proto-histories, such as *The prehistory of Indo-Malayasian Archipelago* [1985] and *Southeast Asia before history* [1992]. He is also actively involved in Borneo and wrote a number of books and articles, such as 'The Prehistory of Borneo' [1992] and *Archaeological Research in Southeast Sabah* [1988]. He also published a number of papers with local scholars, such as with Matussin Omar in 'Trade patterns and political developments in Brunei and adjacent areas', *BMJ* [1980], with Ipoi Datan in 'Recent research at Gua Sireh and Lubang Angin, Sarawak', *SMJ* [1993], and with Peter Koon in 'Lapita colonists leave boats unburned [1989].

Apart from the above references, I have also used a large number of books and articles and a few interviews as a further supporting evidence to my study. All these references and the interviewees are included in the bibliography.

Figure 1: Map of Borneo showing the four territories of Brunei Darussalam, Sabah and Sarawak (Malaysia) and Kalimantan (Indonesia).

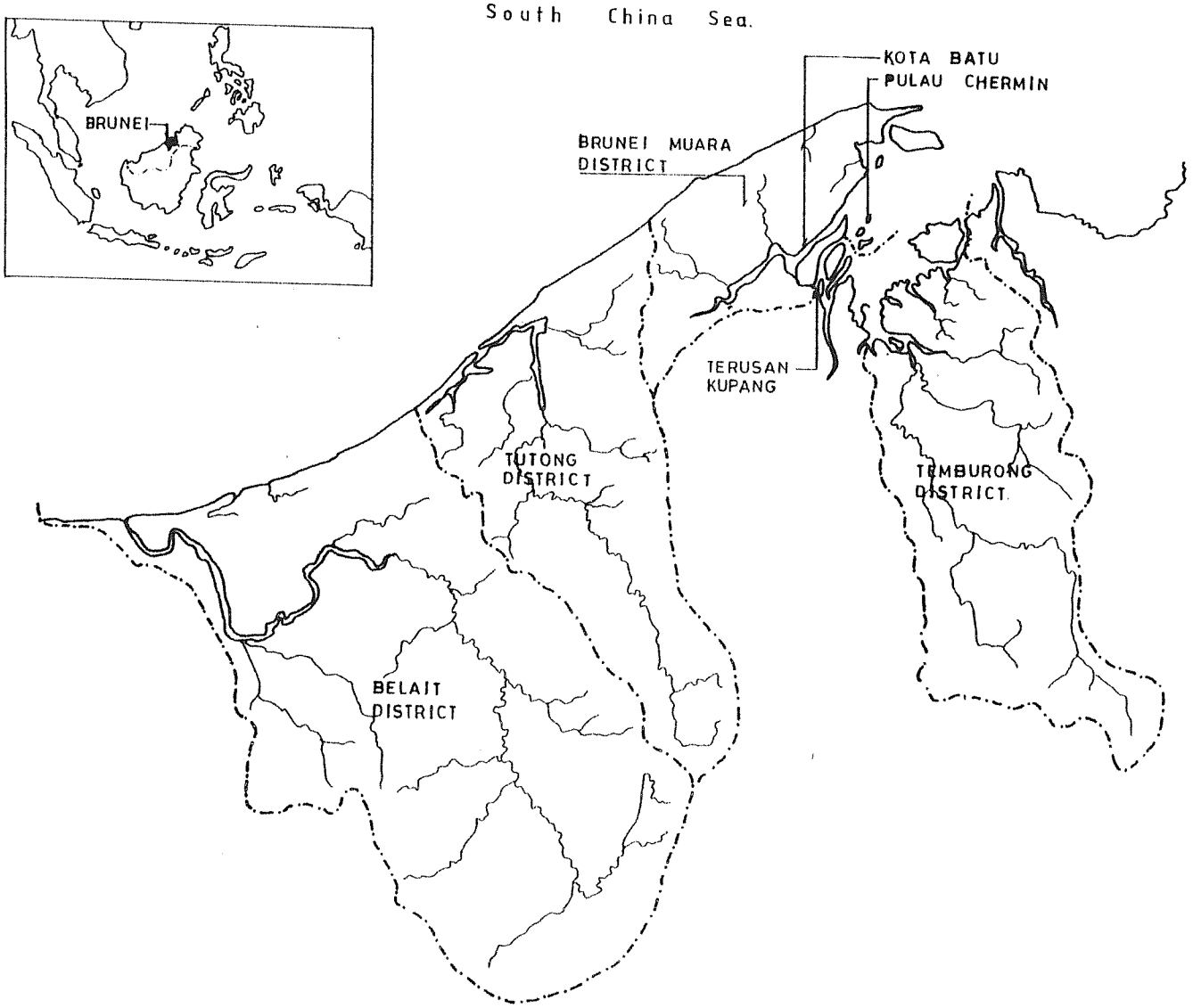
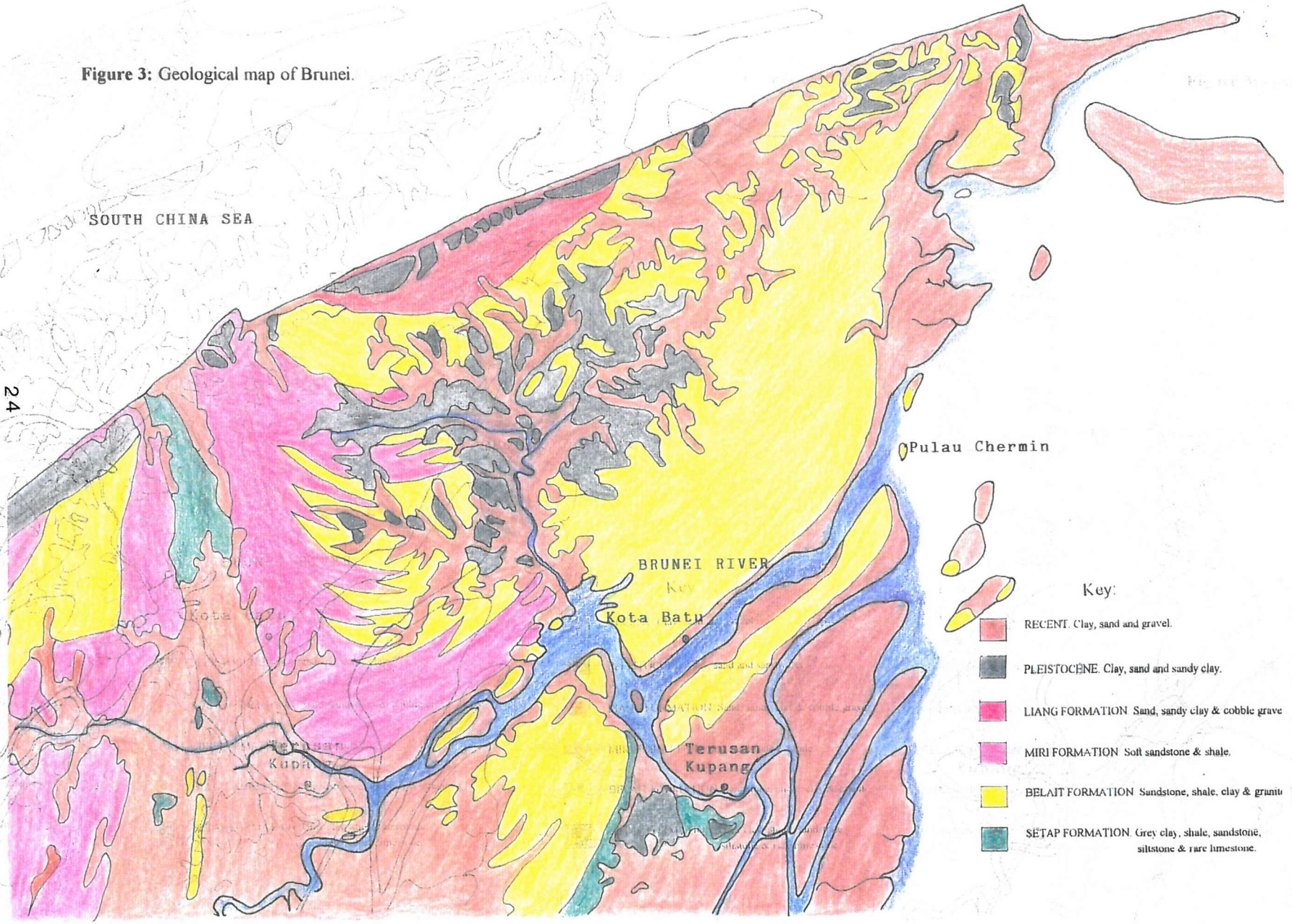


Figure 2: Map of Brunei Darussalam showing the four districts and three main archaeological sites mentioned in this study.

Figure 3: Geological map of Brunei.



CHAPTER 2

EARLY TRADE AND THE RISE OF MARITIME KINGDOMS IN SOUTHEAST ASIA WITH A SPECIAL REFERENCE TO BRUNEI

2.1 Introduction

Southeast Asia has no rigid geographical boundaries and may therefore be defined in more than one way. From a political perspective, it could be defined as the territory lying between the subcontinent of India to the west and China to the north. The term Southeast Asia came into general use during the Second World War. It describes the territories of the eastern Asiatic mainland which forms the Indo-Chinese peninsular and the immense archipelago which include Indonesia and the Philippines [Hall, 1994:3]. Mainland Southeast Asia comprising China south of the Yangtze, Burma (Myanmar), Thailand, Indochina and Peninsular Malaysia. Also included is Maritime or Island Southeast Asia comprising Indonesia, East Malaysia, Brunei Darussalam, the Philippines and Taiwan [see fig. 4].

Southeast Asia has a long standing of history of human settlement extending back in time for about one million years [Bellwood, 1992 a: 61]. Remains of the species *Homo* have been recovered extensively in Java and China, and to a lesser extent in northern Vietnam [ibid: 65]. Early *sapiens* 100,000 years old have been found at Ngandong, in the Solo Valley, central Java. The stone tools are based on coarse, large pebble and flake tools which have become popularly known as 'chopper/chopping-tools' [ibid: 71]. The earliest examples of *Homo sapiens* are found in Java and are believed to belong to the late Pleistocene or post-Pleistocene period [Harrison, 1954: 3], that is from 40,000 years ago. This period was the turning point in the study of Southeast Asian prehistory as stratified cave deposits gave ample opportunity for radiocarbon dating. Dr. Peter Bellwood, a renowned scholar on Southeast Asian prehistory stated:

> "Figuratively at least we enter a world of light, inhabited by tool-making and ocean-crossing members of our species, *Homo sapiens*. The record

takes on recognizable and meaningful links with the present, and begins to relate sensibly to the origins of living peoples" [Bellwood, 1992 a: 73].

The history of Southeast Asia has therefore evolved from the earliest *Homo,* early *Sapiens* to *Homo sapiens.* The region became the focal center of movement, succession after succession of human migrations moved from continental Asia through mainland Southeast Asia and the islands. The first settlers were the Australoid, followed by the Negrito, Melanesoid and Austronesian [Harrison, 1954: 4]. The 'drive to the south' is therefore a recurrent theme in Southeast Asian history and has continued to the present day. Here I refer to the movement of peoples from the heavily populated, poorer countries to the less heavily settled regions to the south and east. This is the situation faced by some countries in Southeast Asia today, especially Malaysia, Singapore and Brunei. In these countries there was an influx of both legal and illegal foreign workers from Thailand, the Philippines, Indonesia, and as far afield as India and Bangladesh seeking employment and business opportunities.

Southeast Asia has held an attraction for foreign merchants and traders since early in the first millennium A.D. The region was rich in natural resources and geographically well located. Its strategic position in the major pre-modern international maritime route connecting East and West brought inevitable interaction between Southeast Asian peoples and foreign merchants [Hall, 1982: 81]. It was ideally located to function both as an entrepot, facilitating the movement and exchange of commodities between East and West. As an active contributor to this trade, the region was able to introduce rare and highly prized items into the international trade network. The region was also very rich in natural resources, such as gold and tin, exotic jungle and sea products such as spices, camphor, *lakawood, sandalwood,* and pearls. It is no wonder that the region was renowned from the earliest references as a land of fabled riches and wealth, a source of gold and exotic products. Around the beginning of the Christian Era, the region was known as the "land of gold" [Codes, 1968: XV]. In the early Sanskrit epic literature, the *Ramayana*, the region was known as *Suvanadvipa* or the "Golden Island", is a source

of many riches [Hall, 1994: 13]. The Roman geographer, Ptolemy, writing in the mid-second century, uses *Yavadvipa*, "the Golden Peninsular", in describing the lands beyond India [Hall, 1981: 123].

Each country within Southeast Asia had their own speciality of products which were very much in demand both in the Western and Eastern world [see, Wheatley, 1959; Gungwu, 1959; Hirth & Rockhill, 1970; Groenveldt, 1960]. Brunei, for example, was famous for its high quality camphor [Nicholl, 1979; Toon, 1985]. Brunei's other products were included *lakawood*, bees' wax, tortoise shells, and a variety of spices and jungle produce. These products were in high demand and valued in the international markets. The success in manipulating these items resulted in the growth of Brunei as an important trading kingdom in Southeast Asia from the fourteenth to seventeenth centuries A.D.

Similar circumstances can also be seen in other trading kingdoms of Southeast Asia, such as Funan, Khmer, Srivijaya, Samudara-Pasai, Melaka, Majapahit, Batuan and many other smaller states. Their success in controlling trade networks played a vital role in their growth as a strong and powerful force in the region. However, once they lost this domination, the state began to disintegrate and eventually this led to their downfall. New states began to emerge and new competition began to develop with other existing states.

In the early phase of maritime trade, foreign merchants (the Indians and the Arabs) were using Southeast Asia as a route between China and India. Southeast Asian coastal centers (entrepots) facilitated this trade by providing suitable accommodation for sailors and traders: food, water, and shelters as well as storage facilities and market places for exchange [Hall, 1981: 108]. Southeast Asian natives or the Malay peoples also took up this opportunity by supplying ships and manpower needed to carry the commerce between India and China [Hall & Whitmore, 1976: 303]. It was known that the Malay peoples of Insular Southeast Asia had developed, overtime, excellent navigational techniques and had gradually become familiar with the peoples and cultures lying on both near and distant coasts [Wolters, 1967; Manguin, 1980, 1993]. At least 2,500 years

ago, they had established a network of long-distant voyages which bound mainland and insular Southeast Asia and southern China into a remarkably complex trading world. The evidence of this is seen in the diffusion of rice cultivation, the presence of Moluccan cloves in China by the third century B.C., the distribution of the bronzeware of the *Dong Son Culture* of Vietnam [McPherson, 1993: 57], and the Southeast Asian earthenware traditions.

Apart from the abundance of natural resources, Southeast Asia was also very fortunate in having its own natural rhythm which dictated the patterns of human activity, such as in the agricultural and maritime spheres. The major consequence of this particular geographic configuration is its system of seasonal monsoons which determine patterns of rainfall, winds and ocean currents. In the age before steamships, the monsoon winds facilitated a seasonal movement of sailing ships across the Arabian Sea, the Bay of Bengal and the South China Sea. Winds were moderate and predictable, with the monsoon winds blowing from the west or south in May to August and from the Northwest or Northeast in December to March. Ships from China sailed during the winter months with the north wind behind them and returned during the summer with the Southwest monsoon behind them. Similarly, ships from India or the Mediterranean world sailed during the Southwest monsoon and returned during the Northeasterly monsoon toward the end of the year [see fig. 5; for Brunei wind system, see chapter 1: 10-12].

In between the monsoons, there was a period of climatic stability. It was during this lull that foreign merchants were required to discharge their cargoes, refit vessels, replace masts and purchase enough to make a profitable sale on their return. Many Malay harbour chiefs in the vicinity of the Straits of Melaka and beyond would have been ready to fulfill the requirements of a restapling port in the hopes of reaping the benefits of a growing ocean-borne trade [Andaya & Andaya, 1982]. Among these early ports were Takuapa, northeastern Thailand and Pengkalan Bujang, on the Merbok Estuary in Kedah, Malaysia [Abd. Rahman, 1991: 9-10]. Both sites played an important role as an entrepot

for merchants ships from India, the Middle East, China and even from the Southeast Asian Archipelago itself. An Arab geographer, Mas'ui, writing in the tenth century A.D., referred to the trading centre on the west coast of the Malay peninsula as Kalah (Kedah) as "the terminus for Muslim ships from Siraf and Oman, where they meet the ships which come down from China. The Arab traders then embark at the city of Kalah on a Chinese ship in order to go to Canton" [Tibbetts, 1957: 19]. Archaeological excavations have shown a mixture of trade ceramics from the Western Asia and China, glass beads from India and Western Asia and earthenware shards which presumably originated from India [Abd. Rahman, 1991: 10].

Other important entrepots facilitating these early trade activities were Chaiya, Nakon Si Thammarat and Sattingphra in Peninsular Thailand [ibid: 32; Heng, 1991: 5]. These ports might have been commercial centres functioning as the eastern terminus of the trans-peninsula routes. Similarly, entrepots grew on the other side of the Melaka Straits, especially in the island of Sumatra, such as in the Palembang area, Jambi, the Lampong area, and Kota Cina [Abd. Rahman, 1991: 32; Ambary, 1991]. Archaeological materials discovered at these sites included T'ang ceramics, very similar to those discovered at the Takuapa and Lembah Bujang sites. Similar kinds of assemblage were also found in the Batuan site of Mindano in the Southern Philippines, which include T'ang wares, glass beads and a Middle Eastern polychrome [Lim, 1987: 57-58]. This shows that trade activities not only operated along the Melaka Straits, but also to other places of importance, including Borneo and Brunei [see chapter 4].

International trade has therefore always been a major factor in the history of Southeast Asia. Apart from its good geographical location, the physical environment of the region has also drawn them towards the sea. Whereas their counterparts in the Mediterranean and the Red Sea suffered from a lack of suitable boat-building timbers around their shores and poor fisheries to provide a training-ground for mariners, the region was well provided in both respects. The region was rich in valuable timber. The

teak forests of Burma and Java, and the dipterocarps of Sumatra, Sulawesi, and the Philippines, provided timber frequently close to a river or shoreline [Reid, 1980: 235]. In Brunei, most of the region was covered by forests with a variety of high quality timber growing close to a river and shoreline[1] [see chapter 1: 12-13]. An account by the Portuguese who came to Brunei in 1520 states that,

> "The Chinese swarmed so densely that native power was eclipsed. They spread along the borders of rivers, selected fine timber trees, felled them, built large and solid junks, steered to China, sold their cargoes for enormous sums... and for a considerable period this continued" [John, 1969: 199].

Similarly, an account by Thomas Forrest in the eighteenth century said that:

> "At Borneo (Brunei) town, the Chinese sometimes build junks, which they load with the rough produce of the island of Borneo, and send thence to China. I have seen a dock close to the town, in which a China junk of 500 tons had lately been built, worth 2,500 taels, and 8,000 in China" [Forrest, 1780; (reprint): 1978: 96].

In other parts of Southeast Asia, ship industries were flourishing [See: Manguin, 1980, 1993]. In the 15th century, many Chinese took up residence in the ports of Southeast Asia and built their ships there, and even traders based in South China sometimes had ships built in Southeast Asia because of the availability of better and cheap woods [Reid, 1992: 477].

The South China Sea has an abundance of marine life. The warm sea has enabled the growth of plankton which attracts fish and other marine life to the region. The shallow waters of the Sunda shelf are therefore among the world's richest fishing grounds. The variety and abundance of the fish harvests of the region were a marvel to foreign visitors.

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1 In the past history of Brunei, houses were built on stilts over the shallow waters. This was recorded by Pigafette in 1521, who mentioned that "it contains 25,000 hearts. The land was inhabited only by certain peoples, such as the kings and their chieftans" [see, Pigafetta, 1874; Nicholl,1990: 11]. Perhaps most of the forests were undisturbed and relatively very near to a river or a shoreline.

Marco Polo said that "The fish here are the best in the world" [Reid, 1988: 29]. Fishing became an important source of living and was certainly the second industry of Southeast Asia. As the region became seriously involved in trade activities, they began to employ these skilled mariners to venture to foreign countries. Fishermen are undoubtedly among the earliest mariners to be employed, drawn from their coastal or riverine fishing communities. Their roles in this field cannot be denied, although not many written accounts of them exist. As Kenneth McPherson wrote that:

> "Fisherfolk, like their peasant counterparts, are the lost people of history: its silent actors. Although they provide a vital pool of labour and maritime skills, fisherfolk were dominated, politically and economically, by more articulate groups such as merchants and ruling elites..... They were control by political elites which provided tax revenue and marketable commodities" [McPherson, 1993: 64,65].

In the heyday of Srivijaya, for example, its rulers established a close relationship with the *orang laut*, the sea and riverine people of the Straits of Melaka. These societies were a formidable fighting force, and their paddling skills made them the obvious choice as crews for Srivijaya's fleets and thus the backbone of its navy. Wolters believes that this is one of the crucial factors for Srivijaya's success and strength from the seventh century onwards [Andaya & Andaya, 1982: 25]. Similar relations were also established in P'o-ni (ancient Brunei) between the kings and the *orang luat* in controlling the sea lanes and channeling trade into Brunei's ports [Saunders, 1994: 22]. The *orang laut* such as the *Suluks* or Sulu (former Brunei's territory) played an important part in patrolling Brunei's thalassocracy or sea empire and therefore maintaining peace and stability. As a result more traders to come to Brunei to trade in her port. According to Chau Ju-Kua in 1226, P'o-ni had a defense force including more than one hundred fighting boats [Hirth and Rockhill, 1970: 155]. However, this prosperity came to an end when in the 1300's P'o-ni came under the Majapahit rule. Among the reasons for Brunei's downfall, according to Saunders [1994: 28], was the mass defection of the *orang laut* because of

dissatisfaction with their treatment by the ruling class and overextension of the empire's resources.

The immediate effect of the international trade network was the growth of ports and city states. Throughout the entire history of Southeast Asia, cities and kingdoms continued to emerge from time to time. Competitions among states were common phenomena, with each state trying to monopolise and control the trade networks. The ability to achieve this would give them political power, dominance and richness. The first state to emerge was the kingdom of Funan, in the present day Kampuchea and southern Vietnam. According to Chinese sources, the kingdom was founded in the first century A.D. and lasted until the sixth century A.D. It came under Indian influence and became the dominant power of the Indo-Chinese Peninsular and by far the most important Indianized state in Southeast Asia [Harrison, 1954: 21]. The kingdom became an important entrepot by providing port facilities and controlling a large part of the East-West trade, thus providing the trading link between the world of the Indian Ocean and China. In the sixth century, however, the kingdom began to decline due to stiff competition from the newly emerging power of Khmer in Kampuchea and Srivijaya in Sumatra. Both kingdoms played an active role in controlling the international trade networks, which continued to grow due to high demand for the eastern products in South Asia, the Middle East, the Mediterranean world and Europe. The Khmer controlled access to the Indian Ocean shore via the Kra Isthmus, while Srivijaya controlled the Straits of Melaka. This was a decisive factor in their growth and survival for hundreds of years to come.

The three early kingdoms of Funan, Khmer and Srivijaya were very influenced by the Indians, both culturally and religiously. This was due to early Indian involvement in Southeast Asia beginning from the first century A.D. According to Coedes [1968: 20], there were three main factors for their involvement beyond the Bay of Bengal. The first, in search of gold; the second, a revolution in boat construction and navigation technique;

and the third, Buddhism. The Indians were introducing new ideas and practices which were readily adopted and adapted by local rulers, who were eager to consolidate their power and wealth. As a result, various South Asian written scripts were adapted for use in royal courts. Hindu and Buddhist religious symbolism was used to surround local rulers with more ritual and sanctity. South Asian architectural, technological and artistic traditions also influenced the development of monumental architecture, agriculture and the decorative arts [McPherson, 1993: 73].

In the twelfth century A.D., Southeast Asia enjoyed a marked revival of commerce. There was a rapid change in trade activities and the international economic climate was favourable. The period was marked by the unification of China under the Southern Sung Dynasty (1128-1279). Unlike previous dynasties, the new dynasty was more oriented toward its southern, commercial coast. Trade was encouraged and the Chinese themselves were taking an active part in overseas trade. The Chinese were beginning to be aware of the importance of the *Nanhai* region (the Chinese term for the Southern Ocean) as the place of origin of many desired luxury commodities which had previously been attributed to the world of the *Po'ssi* (Persians). By the middle of the thirteenth century, southern trade was flourishing and well established, and was completely dominated by the Chinese [Locsin & Locsin, 1967: 5]. The Sung policy of encouraging Southeast Asian trade was later adopted by the Yuan (Mongol) and Ming Dynasties [Gungwu, 1959: 3,5; Omar, 1981: 75]. During the Ming Dynasty, trade activities reached their peak after the voyages of General Cheng Ho to several countries in Southeast Asia between 1405 and 1435 [ibid]. The evidence of these Chinese dominations can be seen in an influx of Chinese ceramics in Southeast Asia, such as the celadons of Yueh and Lung-Chuan types of the twelfth and fifteenth centuries and Blue-and-White wares of the fourteenth and seventeenth centuries A.D. [see chapter 5]. Porcelains were mass-produced as a substitute for cash and used in exchange for foreign goods. They were also used as gifts, bribes and tax payments to harbour officials and rulers of the countries they traded with [Hirth & Rockhill, 1970].

The Chinese participation of the *Nanhai* trade did not affect the growth of city-states and ports throughout the Southeast Asian regions. The increased demands of the region's luxury and exotic items required a large scale of transhipments of these materials both to the Eastern and Western world. Furthermore, the period was marked by the decline of Srivijaya power in the manipulation and control of the region's trade network. Its position was further threatened when the Chinese began to change its policy from tributary trade missions in favour of private trade. As a result, Chinese traders began to venture to the sources supply, rather than go to the central entrepot. This fostered the development of the many small but attractive ports within the Malay world which were now more profitable as they could buy and sell without reference to Srivijaya. New ports began to grow, such as Perlak, Pasai and Singhasari in Sumatra, Kedah of the Malay Peninsula and many other smaller ports throughout the Maritime Southeast Asia. In the fifteenth century, Srivijaya crumbled and was replaced by Melaka (1400-1511), the great entrepot on the Malay coast of the Straits of Melaka. Various independent ports on either side of the Strait of Melaka also rose to prominence such as at Acheh and Pasai in Sumatra [McPherson, 1993: 113], P'o-ni in Borneo and Batuan in the southern Philippines.

The prosperity of Southeast Asia has continued to attract foreign merchants and travellers of a great variety of ethnic, cultural and religious groups. At the beginning of the sixteenth century, the trade of Southeast Asia was more attuned than ever before to the demands of world markets. The Indians and Chinese merchants continued to come but in far larger numbers than previously. However, this period was marked by the newest and most formidable of the foreigners, the Europeans.

Why, one might ask, can we single out the sixteenth to seventeenth centuries as particularly dominated by commerce? According to Anthony Reid [1993: 1,2], the period was marked by the sustained boom of the "long sixteenth century", which affected not only Europe and the eastern Mediterranean but also China, Japan, and perhaps India. The

period was one in which Southeast Asia played a particularly critical role. The most important items of that long-distance trade essential to the creation of merchant capitalism - pepper, cloves, nutmeg, camphor - all originated in Southeast Asia. Similarly, during this period Southeast Asian merchants, rulers, cities, and states had a central part in the trade that flowed from and through their region. Among the important cities were Pegu, Ayutthaya, Pnompenh, Melaka, Patani, Brunei, Pasai, Aceh, Banten, Japara, Gresik, and Makassar [ibid: 1].

From this period onwards the history of the region is dominated by commercial competition and strife. The Portuguese, Dutch, Spaniards and English were all competing with each other for control of markets, routes and sources of supply. In 1511 A.D., the Portuguese captured Melaka and immediately introduced exclusive trade monopoly. They also introduced a high duty levy for foreign merchants, a policy which discouraged foreign merchants to trade in Melaka. The immediate affect of this was the growth of Brunei as an important kingdom in Southeast Asia. It became a new centre of trade and one of the main centres of Islamic activity in Southeast Asia [Hall, 1994: 265; Andaya, 1992: 411; Majul, 1973]. Bernard H.M. Vlekke [1945: 79-80] wrote:

> "Ten years after the conquest of Melaka the Portuguese were still in a precarious situation. To the south, they had to take into consideration the enmity of the Sultan of Johore. To the west, Acheh grew more threatening every year. Nor were their relations with Java encouraging. Many Muslim traders, wishing to avoid the contact with the Portuguese-controlled emporium of Melaka, transferred their headquarters to the small port of Brunei on the north coast of Borneo. A king-merchant had ruled there since the days of Majapahit, but now the place suddenly gained importance. Traders from China also flocked there. The raja became acquainted with Islam, accepted it, and started immediately a furious campaign to spread his belief. He subdued the northwest coast of Borneo and the Sulu islands to the northeast which form a natural bridge between Borneo and the Philippines....."

The Europeans' contacts have played an important role in the changing of Southeast Asian history. Unlike their counterparts, their arrival to the region means

"business". They came with three main objectives or better known as the three "G's", namely, gold, glory and gospel. To gain these, they had to control the region under their dominations. In 1511, for example, Melaka came under the Portuguese rule. However, within 130 years, in 1641, it came under Dutch domination. Later on, in 1824, it came under the English hand. All countries within the region had therefore come under the sway of European powers. The British East India Company made a serious attempt in Borneo and the Malay Peninsular, the Dutch V.O.C. in Indonesia, the Portuguese in the Moluccas, the Spaniards in the Philippines and the French in Indo-China.

The advantage of the European contacts, however, is the presence of a large amount of written sources, which play a crucial role in the reconstructions of the region's history, especially after the sixteenth century A.D. Equally important was the development of new changes in innovations and adaptations in local society. The establishment of the European-controlled city, which created a unique mixture of foreign and indigenous elements in its physical structure, government, economic affairs, and inhabitants, was one such innovation in Southeast Asia [Andaya, 1992: 345]. Another important factor was the transmission of new ideas and technologies to the local society such as in shipbuilding and firearms technology.

In conclusion, Southeast Asia has seen many events and affairs throughout her long standing history, brought about by merchants and travellers from a variety of ethnic, cultural and religious backgrounds. These contacts might not have happened if the region had nothing to offer and share with these international communities. The region's immense wealth, both in natural and jungle products are considered vital for her growth and success. Coastal ports, city-states and kingdoms emerged, ready to grab the benefits of a growing ocean-borne trade. The intensity of these trade networks has brought prosperity and therefore political power and dominance to the ruling elites. Competition among states then began to take place. During this time the strong and powerful kingdoms always won while the losers were most likely to be incorporated or placed

under the domination of the powerful kingdom. This pattern is common throughout the history of Southeast Asia, from the first century A.D. to the period of European contacts from the sixteenth century onwards.

2.2 Southeast Asia prior to the emergence of Brunei

Before going into the details of the emergence of Brunei in the fourteenth century A.D., I would like to discuss briefly the historical development in Southeast Asia, especially in dealing with Srivijaya, Majapahit and Melaka Kingdoms [see fig. 5]. At their height of power, these kingdoms played an important role in shaping Southeast Asian history, both politically and economically. Their dominance was felt throughout the regions, including Brunei, which during that time was only a small entrepot.

2.2.1 Period of Srivijaya: 700 - 1400 A.D.

According to Professor Wolters [1967], the emergence of Srivijaya took place at the end of the seventh century A.D., with its river-port capital at Palembang in Southern Sumatra. The kingdom was the real successor to Funan as the predominant political and commercial power in Southeast Asia. Its success was mainly due to its commanding position on the sea-route between India and China which gave it greater advantage than Funan had possessed. Also, its ability to consolidate its own Sumatran hinterland gave them easy access to the agricultural and jungle products of the Indonesian archipelago into its own port. As Srivijaya became stronger, it began to expand its dominance abroad, the prime targets being the Melaka Straits, the hundreds of islands which dot the approaches, and the shores on either side. To control these large territories and monopolise their trade networks, Srivijaya introduced a system of alliance and protection, and to a large extent succeeded in its mission. Harbour chiefs along the coast of Sumatra and the Malay Peninsula were willing to accept Srivijaya's overlordship so that they could share in its prosperity and take part in its thriving trade. The kingdom developed

into a mighty emporium, which served as a distribution centre for products from India, western Asia and China and those from its own empire.

Another factor in Srivjaya's success was the development of a special relationship with successive Chinese emperors. The Maharajahs of Srivijaya fully understood the value of the tribute system which involved a recognition of China as overlord. The success in manipulating this system by its willingness to acknowledge China's suzerainty brought profitable returns. China began to recognize Srivijaya as the regional overlord and the rightful bearer of tribute to China. Several missions were sent to China and between 960 and 983 no fewer than eight missions were presented at the imperial court in China. This signified Srivijaya's success both economically and politically.

The future of the Srivijaya Kingdom was therefore very much dependent on the survival of the ancient trade route from the Straits of Melaka to the southeastern Sumatra and to China. In order to remain the sole dominant power in the region, for seven hundred years, Srivijaya had to fight with various rival ports and states. Almost every port along the Melaka Straits, the Malay peninsula and the Sumatran hinterlands came under its domination. The kingdom also expanded its influence and dominance to its neighbouring islands, such as Java and Borneo. The primary aim of this expansion was to gain control of the islands rich natural and jungle resources, such as gold, spices, camphor and so on. The domination would undoubtedly give the kingdom a variety of material supplies essential for her survival as the main distribution centre of Southeast Asian rare and exotic goods.

Among the states which engaged with Srivijaya was Vijayapura, which according to some scholars was located in western or northwestern Borneo [for eg., Brown, D.E., 1970:132; Wolters, 1967; Nicholl, 1975, 1980, 1982; Ongkili, 1972]. The name Vijayapura originated from the Chinese words *Chin-li-pi-shih*, as been quoted by Wolters from the *Tai p'ing huan yu chi* (compile 976-983),

> "*Chin-li-pi-shih* is more than 40,000 li southwest of the capital (of China).....To its east is *Chih-wu*, 2,000 li away. To its north is *Liu-chu*. In this country *(Chin-li-pi-shih)* there are cities and houses. The clothes worn (?) on top of their white linen cloth are of the colour of the morning clouds. For every meal they just lay down a mat on the ground, and they sit down. The name of the ruler is *Pen-to-yang-ya*. Soldiers march in front of him. They have weapons, armour and helmets. The utensils (of the people of the country) are mostly made of tree bark. Their customs and products are similar to those of *Chen-la* (Kampuchea)" [Wolters, 1967:174].

Wolters believes this passage came from Ch'ang Chun, who travelled in the western part of the Archipelago between 607-610. He demonstrates convincingly *Chin-li-pi-shih* as an area somewhere in western or northwestern Borneo. From the reference, Wolter believed that some considerable political, economic and cultural developments had taken place in Borneo by the seventh century. James Ongkili, on the other hand, believes that Vijayapura was in fact in Brunei and the polity would have been a part or tributary of Srivijaya; but there is little evidence to confirm any direct overlordship of Vijayapura by Palembang [Ongkili, 1972: 3,5]. These assumptions, however, need further studies in order to draw a final conclusion.

Apart from the above documentation, there are no other Chinese written materials available to support the present arguments. From the fragmentary Arab sources, Robert Nicholl [1982] tries to reconstruct pieces of accounts given by Arab travellers and sailors such as Captain Buzurg Ibn Sahriyar of Ramhormoz in his *Ajaib al-Hind*. The author made a comparative study between the Arab accounts and the Chinese written sources based on Srivijaya. From these studies, Nicholl has made his conclusion that Sribuza, which is the Arabic rendering of Srivijaya, was actually located in northwest of Borneo [ibid: 8]. His argument is based on the study of distance from the continent, geographical location, the tides, the animals and shapes of the houses described by the Captain. All these fit well to the northwestern Borneo rather than Srivijaya. The most impressive description by Captain Buzurg was that: "Some of the houses are built on land, but the greater part float on the water." This description fit well to Brunei or certain parts of

Borneo where their houses were built on the river [see above, footnote 1]. In his final conclusion, Nicholl said: "....ancient Brunei had its first toponym Srivijaya, or perhaps Vijayapura, or maybe simply Vijaya. His charming picture of this small community floating on the edge of the great bay close to the mountains is an invaluable contribution to the history of Brunei" [ibid: 8].

However, more research on this topic is required as there is little archaeological evidence to support any conclusion, either in Brunei, Sabah or Sarawak. In Sarawak, at a place called Bongkisam in Santubong, excavations have revealed Hinduism objects: a *genesa* elephant, a *nandi* bull and a fine *yoni*, all in stone; a hoard of rings, a miniature lion, nose and ear-clips in gold, several figurines in stone and terracotta; and beads which may date as early as the eighth or ninth century A.D. [Harrisson, T, 1955 c: 512; Harrisson, T. & O'Connor, 1967; 1969; Te-k'un, 1969: 9]. In Limbang, not far from Bandar Seri Begawan, the capital of Brunei, a hoard of gold "Indian" ornaments [Harrisson, T., 1969 a; 1976] and a stone figure of a Hindu deity has been found. The date of the latter is estimated to range between the thirteenth and fifteenth centuries [Harrisson, T., 1949; 1955 c; 1976]. These discoveries, however, are very small compared to what was believed to be the size of western or northwestern Borneo during Srivijaya's era in the seventh century. Therefore, from archaeological points of view, no clear conclusion could be drawn and nothing very definitive so far has emerged. The nearest that one could say is that the Hindu influences in Borneo, and Brunei in particular, did not reach the island "directly from India, but probably came through Hindus or Hinduized Malays already long resident in Sumatra and Java" [Beyer, "The Philippines Before Magellan", *Asia Magazine*, Oct. 1921: 890-2. (Quoted): Ongkili, 1972: 5]. Similarly, Matussin Omar [1981: 1] believes that Brunei was perhaps also affected by influences from the Indianized states of western Indonesia and Malaya.

2.2.2 Period of Majapahit: 1293 - 1520 A.D.

During the twelfth and thirteenth centuries Srivijaya faced a progressively greater challenge from other neighbouring ports and dependencies. In 1275 the ruler of the Javanese kingdom of Majapahit, Kertanegara (1268-92), launched an attack against Srivijaya's capital in Jambi, laid claim to Pahang, a dependency of Srivijaya's on the Malay peninsula and regarded itself as the rightful overlord in southeast Sumatra. By the end of the thirteenth century Srivijaya was no longer an extensive maritime trade power. The centre of the trade of the region now centered in Java, and Majapahit became the powerful kingdom in the region.

Majapahit, like its predecessor, owed its success to controlling trade networks between the East and the West. After its victory against the Mongol in 1293, the kingdom began to reestablish commercial relations with China and acquired trade relations with Western Europe. To establish its position in the region, a series of 'Majapahit wars' were launched. As a result, the kingdom expanded over a wide area, from the coast of southwest Borneo to Malayu in Sumatra, and from 1365, under Rajasanagara rule (1350-1389), it claimed domination over most of Sumatra and the Malay peninsula as far north as Kedah, Langkasuka and Patani, south of Borneo, and over southern Celebes and the Moluccas. The kingdom also even claimed a protectorate over the countries of the Indo-Chinese peninsula, including Siam, Kampuchea, Laos and Vietnam [Harrison, 1954: 48-9].

Majapahit influence therefore reached a very wide area, covering both the Island and Mainland Southeast Asia. Its sway also reached south and southwest of Borneo, including P'o-ni, Brunei's predecessor. This account is based on the Javanese chronicle the *Nagarakertagama* of 1365, which refers to the dependencies of the Javanese Majapahit empire. Among the Javanese vassals was a state named "Buruneng", which according to some scholars was certainly Brunei [for eg., Brown, D.E., 1970: 132; Brown, C.C., 1972, 1978; Mohammad, 1992: 5; Saunders, 1994]. The arguments were based on

a comparative study of the *Nagarakertagama* and the Chinese historical sources written by Sung Lien (1301-81) and the *Yung-lo ta-tien* of 1407 [Brown, C.C, 1972, 1978]. Both documentations fitted well to Brunei, in the date and geographical position. On this basis it could be said that "Buruneng" as mentioned in the *Nagarakertagama* and "P'o-ni" in the Chinese sources are most probably referring to the same place, Brunei. The Brunei Chronicles or the Royal Genealogical Tablet also attests to the fact that Brunei was a vassal of Majapahit [Low, 1880; Sweeney, 1968]. It may, therefore, be assumed that Brunei must have developed into a polity of some significance for Majapahit to bring it under its domination [Singh, 1991: 13].

Under the Majapahit rule, Brunei was dominated both politically and economically. According to the *Nagarakertagama*, Brunei had to pay an annual tribute of 40 *kati* (1 kati is equivalent to 605 grams) of camphor to its Javanese overlord [Saunders, 1994: 28; Nicholl, 1989: 18; Groeneveldt, 1960: 112]. When Ming envoys, Ch'en Chih and Chang Ching-chih visited Brunei in 1370 to deliver their Emperor's edict bidding for tribute, Brunei could not afford to meet the demand. This was clearly stated by the envoys and later recorded in the imperial archives which subsequently found its way into the *Ming shih-lu, Ming-shih* and *Ming T'ai-tsu shih-lu*. The king said that ".....Of late, Sulu (in the southern Philippines) invaded us, and its army looted our treasures and people. Let us postpone the mission for three years. When our country is in better order, we will build boats to go to your country with tribute" [Brown, C.C., 1972: 219]. The statement clearly shows Majapahit's greedy attitude in manipulating the country's resources, without caring much about Brunei's welfare and interest. According to Nicholl and quoted by Graham Saunders [1994: 28], a Majapahit fleet did eventually come to rescue Brunei, but it was too late. In 1371, P'o-ni eventually sent a tribute to China after being reminded by the Chinese that Majapahit itself was a tributary to China. However, it was the last of Brunei's mission until 1405, when Majapahit apparently tightened its control over the country. Brunei was warned that they were too close to China, and as one of the Javanese envoys to Brunei said "if you give your allegiance to

China, you will be without us. When Sulu attacks again, you will have to seek help from China" [Gungwu, 1968: 51].

Archaeologically, however, nothing impressive has so far been found to support the Majapahit rule or presence in the country. Maybe their presence was small or on a temporary basis. Maybe the rule was more by indirect means, through alliances with local kings who swore allegiance to the kings at the Majapahit core. The relationship between the two parties based on what was in reality a mutual self-interest. Culturally, on the other hand, some Indianized/Hindu tradition elements can be seen in the local culture, such as among Brunei's Royal court protocol and titles [Yahya, 1969; Jamil, 1982, 1990 a: 5; Leaker, 1990] and local wedding ceremonies. Similarly, the distinctive 'Majapahit kris', a symbol of allegiance to the kingdom, still survives as a ritual object in parts of Borneo, including Brunei [Ave & King, 1986: 19].

The Majapahit rule was not very popular among to its dependencies. Throughout its 227 years in power, the kingdom faces a series of wars and uprisings, which to a large extent affected its power. Towards the end of its rule, the kingdom began to disintegrate and supremacy over the various islands, including Sumatra and some states on the Malay peninsula, gradually fell to Melaka, a newly-risen maritime kingdom. About the middle of the fifteenth century Islam had begun to penetrate to Java, which eventually brought the downfall of the last great Indianized kingdoms in Java. It was not until the reign of the Yung-lo emperor (1403-1424) that P'o-ni finally asserted Chinese fullest protection and agreed to a form of provincial status [Gungwu, 1968: 51; Brown, C.C., 1972: 226; Nicholl, 1989: 18].

2.2.3 Period of the Melaka Sultanate: 1400-1511 A.D.

Melaka is located on the western coast of the Malay peninsula, on what we now call the Straits of Melaka. It rose into supremacy in the fifteenth century to become, in the words

of Tom Pires, "of such importance and profit that it seems to me it has no equal in the world" [Andaya, & Andaya, 1982: 37].

The success of Melaka as one of an important trading emporium of the east owes much to its geographical position on the Straits of Melaka. It is one of the busiest passage ways in the world, connecting East and West. Whereas the other ports on the Sumatran and Peninsula coasts depended on the export of products from their hinterlands, Melaka had to depend for its prosperity on the volume of trade passing through the Straits. To be successful, Melaka had to establish a close relationship with its neighbouring states as well as with commercial communities of the region. As a result, traders from all over the Malay Archipelago and other Southeast Asian regions came to Melaka for business transaction. Melaka became a redistributive centre of Southeast Asian goods to be exported to China, India, the Middle East and Europe. The port also became the main inlet for Indian, Chinese and Mediterranean goods to be exchanged and transhipped.

As a collection and redistributive centre, Melaka played an important role in the growth of ports or secondary focal points in the Island of Southeast Asia. These ports were used as a collection centre for local products from their hinterlands, before they were sent to Melaka for collection, sorting, storage and redistribution. Ports began to develop throughout the Island of Southeast Asia to meet Melaka's demand. Further to the east there was a secondary focal point in the spice trade system, in the Banda Islands. Other ports included Macassar in the Celebes, Bantam in the Sundanese country of Java, Acheh, Pedir and Pasai in Sumatra and Kedah in the Malay Peninsula [Harrison, 1954: 62]. Brunei or P'o-ni, which around 1459 was said to be one of the vassal states of Melaka [Ibrahim, 1993: 128], was functioning as a supplier of Borneon jungle and other exotic products. The products were collected from her rich hinterlands, then channelled to her port before being transported to Melaka for final processing.

Another factor in Melaka's success was its efficient laws which were codified as part of an efficient legal and administrative machinery providing a predictability essential

for the long-term plans of foreign traders [Andaya & Andaya, 1982: 42]. This played a crucial role in Melaka's success and attracted further foreign merchants to her port. Later, the port became a natural magnet for the Muslim influences that had already been installed in the ports of northeast Sumatra. Melaka became a center of Islamic learning and propagation in Southeast Asia. The widening trade relations carried the influence of Islam outward into the Island of Southeast Asia and further eastward as far as the Moluccas. Through the trade contact with the Empire, Brunei became the first Muslim state in Borneo [Hall, 1994: 229].

Melaka's success in dealing with the trade network attracted foreign merchants of all nationalities to its thriving port. It is not surprising that Melaka created a deep impression on the minds of the Europeans who first sailed into her harbour in the early years of the sixteenth century. In 1511, Melaka fell under Portuguese rule and began to introduce trade monopoly control. This policy is to a large extend affected Melaka's reputation and eventually discouraged traders to use her port. This resulted in the growth of Brunei as the next successor of Melaka and as the main trading and Islamic centre in Southeast Asia.

2.3 The emergence of Brunei: 1300 - 1600 A.D.

The kingdom of Brunei is undoubtedly one of the most ancient in the Malay Archipelago, perhaps dating from the seventh century A.D. onwards. Vijayapura was among the first polity to be mentioned and was believed to be located in northwestern Borneo or in the Brunei proper itself [see above]. A reference to *Buruneng* which occurs in a Javanese source, the *Nagarakertagama* of 1365 may also refer to Brunei [see above]. From the Arabs sources, Brunei was known as *Barni* or *Burnai* and in one case as *Barani* [Tibbetts: 255]. In Sanskrit, Brunei was called *Bhurni*, meaning land or country [Gould & Bampfylde, 1989]. From the Chinese accounts, Brunei was possibly referred to as P'o-lo, Poli and P'o-ni which paid tribute to the Chinese emperors at various intervals from the sixth to ninth centuries [Singh, 1991: 13]. In the fifteenth century, P'o-ni was also

known as Wen-lai [Mills, 1974: 9]. The names remained in used by the Chinese until the seventeenth century, when it changed to Bun-lai [Saunders, 1994: 25; Brown, D.E., 1970]. This name remained in use in China up until the present day to refer to Brunei.

For the record, when I went to China in 1991 to participate in the UNESCO International Seminar of the Silk Route, most of the Chinese people that I met did not know about the existence of Brunei. However, they knew the names Wan-lai or Bun-lai. Some even told me about the tomb of King Maharaja Kana, the King of Brunei who died in 1408 during his visit to the Chinese Court. He was buried in Nanking, the old capital of China [Nicholl, 1984; People's Daily Beijing, China, 1983]. Similarly, when I went to a Chinese restaurant in Southampton City in June 1996, the Manager asked me which country I came from. He also did not know about Brunei but knew about Wan-lai or Bun-lai. However, he pronounced it differently, instead he called it P'o-lo-nai [per. Comm: To, K.K]. From these two experiences, I began to think that the Chinese might have their own pronunciation of Brunei, such as P'o-li, Po-lo, P'o-ni, Wan-lai, Bun-lai and P'o-lo-nai. All of them most probably referring to the same place, Brunei.

To support my assumption, I will use a Chinese historical account which mentions about the various name of Brunei. The Chinese navigational directions of the Mao K'un map of the sixteenth century recorded that: " ...make Li yu island (Pulau Muara Besar); reach Mao-hua-la (Muara); this is P'o-ni (Brunei), that is, Wen-lai (Brunei). Similarly, in another direction from Lu-peng (Lubang) to Wen-lai (Brunei) it recorded that: ".....make Mao-hua-la (Muara); that is, Wen-lai (Brunei) harbour. The country of Wen-lai (Brunei). That is, the country of P'o-lo (Brunei); this is the very end of the Eastern Ocean, and is the place where the western Ocean begins; therefore P'o-lo (Brunei) is the terminus." J.V. Mills who studied these Chinese navigations believed they fitted well to Brunei. He wrote that:

> "The enquirer is confronted with a formidable array of names, mostly of Chinese origin and at first sight inexplicable. However, they yield to

> treatment; the figures given for bearings and times in the texts, coupled with incidental pieces of information, make it possible to identify all the places, with one exception, beyond reasonable doubt" [ibid: 47].

When the Europeans came to Southeast Asia in the sixteenth century, they called Brunei 'Borne' in referring to the whole island. Early writers also spell the name in various ways, Bruni, Brunai, Brune, Borneo, Borney, Bornei, Borne and Burni [Crawfurd, 1820: 34]. From these variations, two words eventually crystallised - 'Brunei' and 'Borneo'. As recently as 100 years ago, Brunei territory was always referred to as 'Borneo Proper' [Hughes-Hallett, 1981: 1].

The location of P'o-lo, Poli and P'o-ni is unclear. Some scholars believed that P'o-ni was located in the Brunei proper [Ongkili, 1972; Groeneveldt, 1886], while others believed it was located at the Lawas Delta near to Brunei [Nicholl, 1980 b: 28-31; 1984] or at Santubong in the Sarawak River Delta [Christie, 1985: 77-89]. Christie made his interpretations based on the large scale of Sung wares found at the site dated from the twelfth to thirteenth centuries; while Nicholl made his assumption based on the written sources. Archaeologically, however, nothing impressive so far has been recovered at the Lawas Delta, not even remains of Chinese or other Oriental ceramic shards. The site is also strategically not well located and has not even been mentioned in any of Sarawak archaeological reports [see, Te-k'un, 1969; Solheim, 1973; Chin, 1977; Sutlive, Chin, & McCredie, 1987].

The questions of P'o-lo, Poli and P'o-ni, therefore, remain unsolved and will continue to be debated for a long time to come. Meanwhile, there is a general consensus among scholars that all these names referred to a Kingdom located in the northwest coast of Borneo [Brown, D.E, 1970; Braddell, 1949; Andaya and Andaya, 1982: 30]. However, since these names are interchangeable, their locations are perhaps not the same. This is a common phenomenon in our history and continues in the present day. Movements usually depend upon a lot of factors such as the shifting of political and economic fortunes of the hinterlands they served, geographical and strategic reasons and so on.

Moreover, movement seemed to be very easy, since most of these early ports were constructed from readily degradable materials such as bamboo, wood and *nipah* leaves which were easily accessible and very easy to build. However, once they moved out, few remains were left to enable us to reconstruct a picture of port life, experienced in many Southeast Asian countries, including Brunei.

Since northwestern Borneo is so huge, stretching from Sarawak, Brunei and Sabah [see fig. 1], it cannot be ruled out that these ports were probably located in any of these states. They might have been located at Santubong in Sarawak, before moving to other places of strategic importance. Apart from Santubong, the importance of Terusan Kupang in Brunei is also worth mentioning and needs a further thorough archaeological investigation. The presence of a large amount of Chinese and other ceramic remains dated as early as the tenth century may suggest its early existence at least from the tenth century or earlier. It is one of the earliest archaeological sites in Brunei and is very much related to the Santubong assemblage. Kota Batu, on the other hand, was without doubt whatsoever one of the most important centre in Borneo, especially in the period from the fourteenth to seventeenth centuries A.D. Large quantities of Chinese Blue-and-White as well as other Oriental ceramics have been found and dated from the fourteenth and seventeenth centuries A.D. Both Kota Batu and Terusan Kupang are included in my study, which I will discuss in great detail in chapter 4, 5, 6 and 7 respectively.

After the Srivijaya, Majapahit and Melaka kingdoms came to an end, Southeast Asia experience yet another emergence of a new state, namely Brunei. The beginning of the Brunei kingdom, as most scholars agree, is from the tenth to the seventeenth centuries A.D. This was the period when the name of P'o-ni began to be used extensively in the Chinese written sources to refer collectively to Borneo's northwest coast[2]. Throughout

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2 Most of the descriptions of P'o-ni are based on a description written by Chau Ju-kua, an inspector of Maritime Trade at the port of Quanzhou, Fujian Province, in the thirteenth century. Then the *Nan-hai chih* of 1304, Sung Dynasty. The *Sung Shih* of 1343-1345. An account by Sung Lien (1301-81), a prominent court

this period, Brunei experienced the taste of three great kingdoms, namely, Srivijaya (670-1400), Majapahit (1293-1520) and Melaka (1400-1511). On all occasions, Brunei came under their influence, both economically and politically. Being only a small country, Brunei had to be flexible in her policy, in order to maintain her survival against these foreign aggressions. This 'look and wait' strategy seemed to be successful and enabled Brunei to survive and maintain her identity as the forerunner of modern Brunei. Finally, after a long period of foreign dominations and aggression, she managed to emerge as the region's new powerful kingdom.

The Chinese accounts show that close relations between P'o-ni and China had been established since the tenth century. These accounts mention that in 977 the king of P'o-ni sent envoys with tribute to the Court of China [Omar, 1981: 1; Groeneveldt, 1960: 109]. Similar missions were also sent subsequently in 1082, 1370, 1405, 1408, 1410, 1412, 1415 and 1425 of the Sung and Ming Dynasties [Omar, 1981: 1; Groeneveldt, 1960: 110-14; Gungwu, 1968; Mills, 1974: 9]. Apart from Brunei's mission, the Chinese also sent its own missions to Brunei from 1370, 1405, 1408 and 1411 [Mills, 1974: 9; Gungwu, 1968]. All these symbolized their close relationships and at the same time showed Brunei's importance both politically and economically.

Archaeologically, these intimate relations were shown by the discovery of large quantities of Chinese ceramics of the Sung and Ming types dated from the twelfth to seventeenth centuries found at several sites in Brunei, such as at Terusan Kupang, Pulau Chermin and Kota Batu [see chapter 4 & 5]. Apart from that, the discovery of a Chinese tombstone of 1264 in Brunei further proves this close relationship [Franke & Ch'en, 1973; Osman, 1993]. The tomb was owned by a Chinese Muslim official named Mr. Pu, from Quanzhou. Recent study in China has shown that he was Pu Zongmin, a well-

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scholar of Ming's emperor, Hung-wu (1368-98). And by Chang Shieh writing in the *Tung Hsi Yang-k'au* in 1617.

respected scholar during the Southern Sung period. According to the *Xi Shan za zhi* and studied by Professor Zhuang wei Ji and quoted by Professor Liu Yingsheng and Pengiran Karim [1991], Mr. Pu was sent to P'o-ni in 1247 for official missions and died there in 1264. This mission symbolized the existence of strong diplomatic relations between P'o-ni and China, and also was a sign of Chinese acceptance of the country's power and sovereignty. As Chau Ju-Kua mentioned in 1266 A.D. 'P'o-ni was an important trading polity; the ruler controlled fourteen districts and the town contained 10,000 inhabitants. Camphor was an important product. The country had a defence force including more than one hundred fighting boats' [Chau Ju-Kua, 1264 (trn) Hirth & Rockhill, 1970: 156, 158; Groeneveldth, 1960: 108-115; Mills, 1974: 9, 65n].

The glory of Brunei, unfortunately, was short-lived when sometime in the 1300's it lost its possessions to the Java-based Majapahit Empire [see above: 42-43]. From this time onwards, there are no written Chinese records on Brunei until the first half of the fourteenth century. For more than 100 years, Brunei was dominated by Majapahit rule, both politically and economically. The country was faced by a severe economic crisis as documented by Sung Lien in the fourteenth century. "....in the country of P'o-ni, there is less than three thousand households in the town, and the people are mostly fishermen" [Brown, C.C., 1972: 221]. This statement is contrary to the statement made by Chu-Ju-Kua mentioned earlier. The final blow came in 1369, when the Suluks, Brunei's former subjects, attacked and ransacked Brunei's city [see above]. Trade was greatly affected and may have been one of the crucial factors for the lack of early Ming Blue-and-White wares found in Brunei compared to the large amount of middle and late Ming wares of the fifteenth and sixteenth centuries. As Graham Saunders [1994: 29] said : " the absence of pottery and Chinaware is significant for these were among the principal items of Chinese trade with Southeast Asia. One gains an impression of the completeness of the Suluk sack."

In 1371, Brunei sent a tributary mission to China, which gave her temporary Chinese protection and at the same time gained some lucrative trading links with which to rebuild its wealth and, consequently, its military might. Although this was the last mission under the Majapahit rule, it provided Brunei with some inside information of the advantage of China's diplomatic relationship. As Majapahit power began to decline towards the end of the late fourteenth century, Brunei was able to take full control of its own affairs and turn to empire-building. I would consider this period to be the beginning of Brunei's golden age, which was in full swing by the late fifteenth to early sixteenth centuries. Trade began to flourish, especially with China and the northern part of the country, reaching as far as the north of Luzon.

When Emperor Yung-lo ascended to the Chinese throne in 1403, he immediately dispatched envoys to various countries to invite them to pay tribute to China. In 1405, Brunei sent a tribute bearing mission to the Chinese capital, Nanjing [Groeneveldt, 1960: 111]. It was well received, and the emperor sent officials to invest him, together with a golden seal and various gifts. In 1408 the King himself went to China with his entire family and officials. He was received with great honour but, tragically, died at Nanjing at the age of twenty-eight. He was buried with full ceremonies in a tomb outside Nanjing, about 120 miles from present-day Shanghai. He was succeeded by his son, Hsia-wang (Sura Wangsa). In honour to the young king, Yung-lo gave him a stone tablet to be placed on Brunei's state mountain. The mountain was to be known as the Mountain of Lasting Tranquility Preserving the State [Saunders, 1994: 30]. P'o-ni was thus known to the Chinese as the country of Lasting Tranquility, which was translated in Arabic as Darussalam (Abode of Peace) - and this name remains as part of Brunei's official title. Although the tablet has never been found, it is believed that it was placed on the hill of Kota Batu [Yu, 1995], although some other scholars believe it was located in the Lawas River Delta [Nicholl, 1984; Saunders, 1994].

In the fifteenth century, Brunei trade with China increased tremendously. Several missions were sent to China between 1407 to 1425, while the Ming emperor sent three envoys to Brunei between 1405 and 1425 [Brown, D.E., 1970: 133; Mills, 1974: 9; Gungwu, 1968]. When Melaka fell into the hands of the Portuguese in the early sixteenth century, Brunei once again became an important centre and experienced something of a Golden Age. Traders from the Malay Archipelago, the Southeast Asian regions and China came to Brunei to trade in her bustling port. Brunei also became a new centre of Islamic propagation in Southeast Asia[3] [see above; Hall, 1994: 265; Majul, 1973; Latif, 1993: 128]. Sultan Bolkiah (1485-1524), the fifth Sultan of Brunei, who was in power at this time, built up a large empire for Brunei embracing the present-day Sarawak and Sabah, the Sultanate of Pontianak in the present-day of Indonesian Borneo and some parts of the Philippines [Omar, 1981: 2]. The splendour of Brunei was recorded by Pigafetta, the Italian who accompanied Magellan in his voyage around the world, when he visited Brunei in the sixteenth century. According to him in 1521 there were some 25,000 families in Brunei Town. Brunei Town here is thought to be Kota Batu [Omar, 1981: 2].

The rise of Brunei owes very much to the control of a trade network between her port and foreign merchants. Although Brunei was located away from the bustling Melaka Straits, the country was very fortunate to have very large territories, rich in natural and

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3 There is still controversy among scholars about when Islam first arrived in Brunei. Western historians belived that Islam spread to Brunei from Melaka in the 16th. century. Some local historians, however, believed it was in the 15th. century, based on the Genealogy of the Sultans of Brunei. Some other scholars believed it was much earlier at around the 13th. century, based on a Chinese tomb stonestone of 1264. In my opinion, it was much earlier, perhaps around the 10th. century. This assumption is based on the Chinese sources of 977 mentioned that the king of P'o-ni (Xiang Da) sent envoys to China named Shi Nu (Sheikh Noh), Pu Yu Li (Abu Ali) and Ge Sin (Qadi Kasim). These envoys were probably Arab merchants. I am in the opinion that there must already be Islamic influence in Brunei, although the king was still non-Muslim.

jungle resources. Brunei was famous for the variety of jungle and exotic products, such as pepper, camphor, rattan, sago, *lakawood, gaharuwood*, yellow bee's wax, eatable birds nest and tortoise shells. Among these products, however, camphor, was the country's main products and very much demanded in foreign markets, especially in China. Its value in the international market place had been widely described as "worth its weight in silver," "the best which comes from Borneo," and "brought by the Chinese for as much as fifty times the price of ordinary camphor" [Nicholl, 1980: 27]. According to Chau Ju-kua (1226) and quoted by Hirth and Rockhill foreign merchants barter these products with gold, silver, silks, glass bottles, beads, tin, lead, leaden sinkers for nets, ivory armlets, lacquered bowls and plates and green porcelain (celadon wares) [Hirth & Rockhill, 1970: 156].

To control these large territories, Brunei had to introduce a system of alliances between the local chiefs and the central rulers. Through these alliances, the local chiefs would provide a continuous supply of jungle products, which were then channelled to the station located at or near the mouth of a river of his territory. This station was usually controlled by a Brunei *Pengiran* or noble (*Datu*) employed by the central kings [Saunders, 1994: 22]. This *Pengiran* or *Datu* not only had general rights over land and people in his river district or station, he was also able to levy taxes or impose a form of 'forced trade' [Krausee, 1995: 365]. To ensure this feudal system worked, this *Pengiran* or *Datu* also employed village leaders or chiefs, who paid tribute to the riverine chief who, in turn, owed his allegiance to the Sultan [Crisswell, 1972: 52]. To strengthened and symbolize these mutual alliances, the Sultans sometimes bestowed a title to the chief by making him the ruler or chieftain of his region [Latif, 1993: 128; Carroll, 1982: 15; Krausee, 1995: 365]. This was to ensure that the local chiefs stayed loyal to the central government, and at the same time it guaranteed a continuous supply of jungle products, essential for the state's success and survival.

Through the alliances, Brunei's sovereignty embraced many river systems on the northern and southwestern coasts of North Borneo. The alliances also enabled the central government to make use of their services by employing them for the benefit of the state as well as during emergencies. This cooperation continued to be practised as recently as the nineteenth century, as witnessed by Frank S. Marryat of the *Muruts*[4] warriors at the Sultan's palace. He wrote:

> ".....the audience chamber was filled with hundreds of armed men, in the midst of whom were five Europeans dictating to their Sultan. The platform outside was crowded with the wild and fearless Maruts (Muruts), not a native in the city but was armed to the teeth. ...these were the Maruts, a tribe of Dyaks who live in the mountains. They are very partial to the Sultan, had come down from the mountains to render assistance in case of hostility on our part" [Marryat, 1848: 111, 114].

Apart from the above factors, Brunei also owed to her success to an efficient centralized form of government. Law and order were established which created political stability. The sultanate adapted the system of government already in force in much the same way as had Melaka a century or so earlier. The Sultan was the head of the state. The ranking immediately beneath him was the viziers, who composed the *Pengiran Bendahara*, *DiGadong*, *Pemancha* and *Temmangong* [Brown, D.E., 1970; Horton, 1995]. Beneath the viziers were the Cheteria, which were divided into four-sub orders. The highest of the Cheteria is *Pengiran Shahbandar* or 'ruler of the port'. He is in charge of the port and foreign traders [Saunders, 1994: 47; Brown, D.E., 1970: 112; Carroll, 1982: 6].

This well organized and established government gave rise to political stability and law and order within the country. This encouraged the growth of trade activities, and the volume of trade between Brunei and the outside world increased markedly. The country also attracted more travellers and preachers who come to visit. When the Spanish

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4 Murut is a native of Brunei and Broneo.

captured Brunei in 1578, it had a cosmopolitan population of a port city, with people from China, Cochin-China, Cambodia, Siam, Patani, Pahang, Java, Sumatra, Acheh, the Moluccas, Celebes, and Mindanao [Saunders, 1994: 46].

Another factor for Brunei's growth as one of the important commercial centres in Southeast Asia was its ideal geographical position on the northwest of Borneo. During the early stages of the Southeast Asian trade network, Borneo was not ideally located on the passage way between India and China. Some of the early Borneon ports grew due to their rich hinterlands rather than to provide port facilities (entrepots) as like its early counterparts did in the Melaka Straits or the Malay Peninsula. However, this pattern began to change when the Chinese began to make a serious commitment in the *Nanhai* trade beginning from the Southern Sung period in the twelfth century A.D. They began to name the maritime countries according to their locations. In the twelfth century P'o-ni was known the Small Eastern Ocean. During the Ming times, the Chinese became increasingly aware of the potential richness of Borneo and the Philippines. The Chinese called this part of the world the Eastern Ocean. According to the *Tung hsi yang k'oa*, written in 1618 said that the kingdom of Brunei was the "terminal point of the Eastern Ocean and beginning the Western Ocean" [Brown, C.C., 1972: 223]. The sailing directions for this route were from China to the Bashee Strait and arrive at Luzon (Manila). From thence there were routes going to the Sulu Islands, northern Borneo, the Moluccas, and southward to Java [see fig. 5].

The glory of Brunei, unfortunately, was short-lived, until a time when the Europeans became involved in the country's internal affairs from the sixteenth century onwards. In spite of its friendly relations with the Portuguese, Brunei was attacked twice by the Spaniards from the Philippines. As a result, Brunei began to face a state of chaos bringing political instability. The situation became worse when civil wars and the growth of piracy along the Brunei coasts caused a state of disorder. The Royal Genealogical

Tablet said that "The rivalry had caused famine in Brunei. All trade was prevented coming up the river" [Low, 1880: 16].

To make matters worse, Brunei was no longer part of China's tributaries system, which she had enjoyed during the early and middle Ming Dynasty. The country's commercial prosperity therefore began to decline. Trade between China and Brunei began to decline drastically. As Dr. D. E. Brown said that,

> 'O.W. Wolter's accounts of Srivijaya and Melaka suggest that the key element in attracting and controlling the sea nomads was wealth or treasure, in addition of course to divine kingship. In the case of Srvijaya and Melaka, an important source of this treasure was a secure trade arrangment with China. Brunei had itself once enjoyed these arrangements, the fruit of the international diplomacy of the Ming emperors. But the arrangements fell into some disuse in the later Ming period. What of the Ch'ing period? In apparent confirmation of Wolter's thesis, the Bruneis are not mentioned as 'tributaries of China.' [Brown, D.E., 1971: 57].

Archaeologically, this can be surmised from the rarity of the late Ming and early Ch'ing wares recovered at the archeological sites in Brunei, especially at Kota Batu [Osman, 1992; see also chapter 5]. In the late seventeenth century Kota Batu, the ancient capital of Brunei was abandoned for a new place up the Brunei River, the present capital Bandar Seri Begawan. Trade continued to take place, but only on a limited scale. Some Chinese merchants continued to trade in the local products of black wood, camphor, rattan, resin, a kind of resin, clove bark, tortoise shell and birds nests [Forrest, 1780; (reprint): 1978: 95-96].

As Brunei entered the eighteenth century, her power continued to weaken. By the end of the eighteenth century, the Brunei empire had been reduced to an area comprising the present-day Sarawak, Brunei and the western part of Sabah. By the nineteenth century many more states were taken which eventually reduced the territories of Brunei to the present circumscribed limits. European and Chinese vessels no longer called at

Brunei, mainly because of an increase in the anarchic conditions in the country. By then the trade of Brunei was confined to Pontianak (Kalimantan Borneo), Trengganu, Lingga and Melaka. With the establishment of Singapore, most of the external trade of Brunei was transferred to the new emporium, the remainder of its trade being with the Sulu Islands, the Philippines, the west coast of Borneo, and the east coast of the Malay Peninsula. Chinese junks had ceased to visit Brunei [Ken, 1960: 88]. The era of the Brunei Empire virtually came to an end, and the final blow came in 1888 when the British Government declared a British Protectorate over Brunei [Omar, 1981: 4; Hall, 1994: 612; Saunders, 1994: 92].

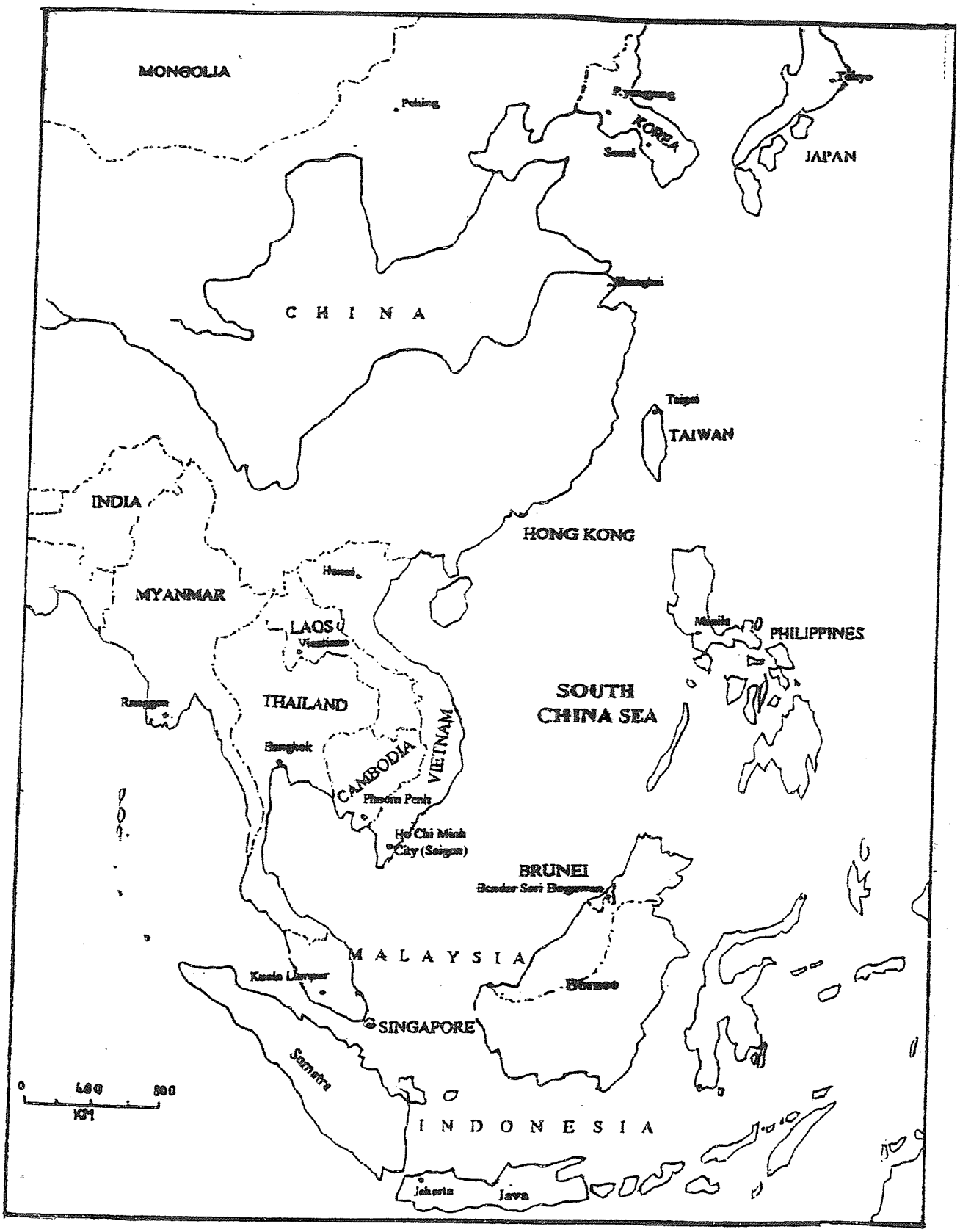

Figure 4: Map of Southeast Asia showing the Mainland and Island of Southeast Asia.

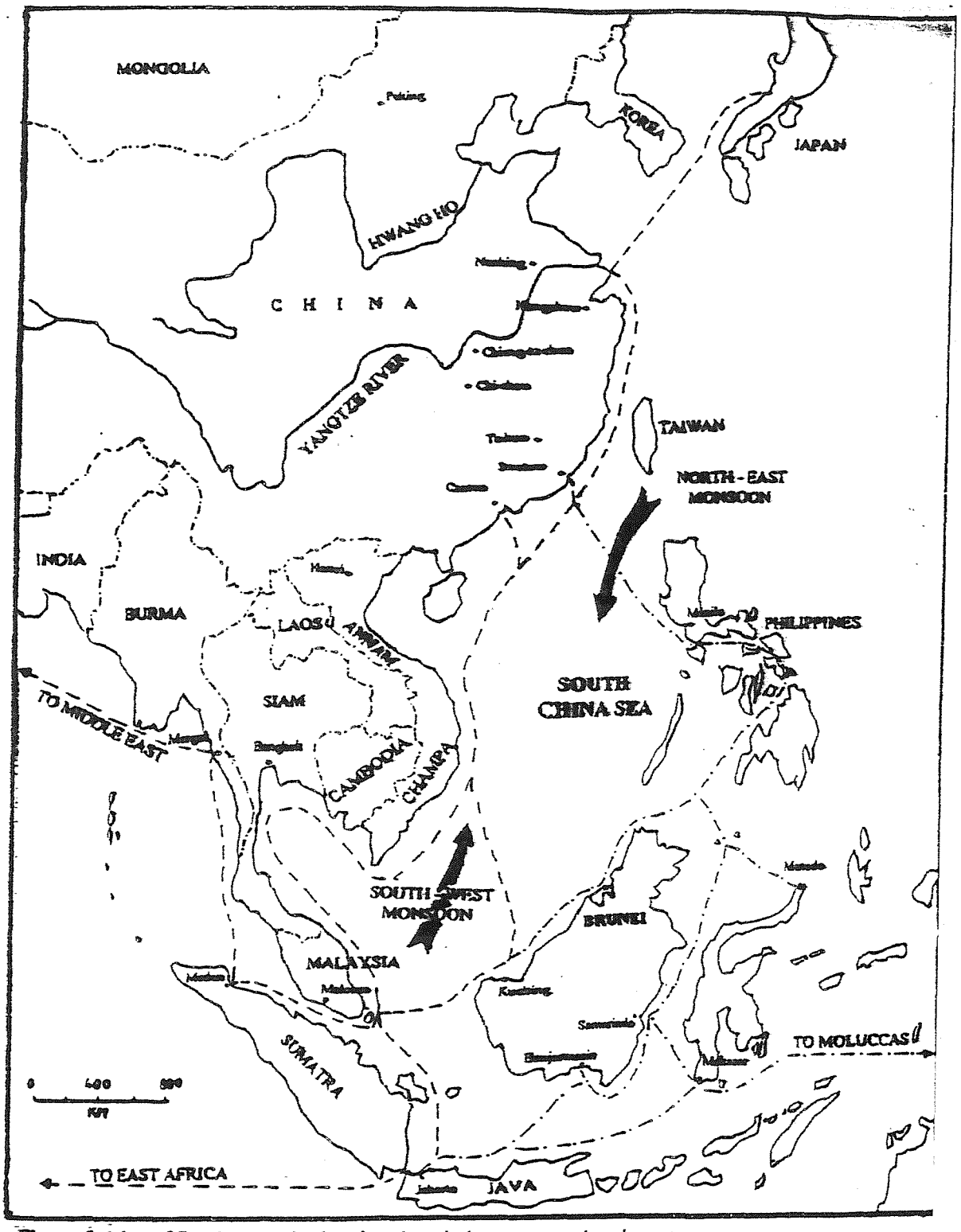

Figure 5: Map of Southeast Asia showing the wind systems and trade routes.

Western route : — — — — —
Eastern route : —·—·—·—·—

CHAPTER 3

ORIENTAL TRADE CERAMIC FINDS IN SOUTHEAST ASIA: ITS BACKGROUND STUDIES AND DISTRIBUTIONS

3.1 Introduction

Geographically, Southeast Asia is a vast area comprising an environmental patchwork of highlands, lowlands and intervening seas extending across tropical latitudes for about 5,000 kilometres southeastwards from Burma to eastern Indonesia [see chapter 2]. There was a considerable variation in language and human biology, all reflecting many millennia of adaption, innovation, colonization and contact between populations [Bellwood, 1992 a: 55]. Despite these variations, however, Southeast Asia has many common elements. As Anthony Reid [1988: 3] said "if we shift our attention from court political politics and religious 'great traditions' to the popular beliefs and social practises of ordinary Southeast Asians, the common ground becomes increasingly apparent." Two factors have given this region a common character. The first is adaption to a common physical environment; the second, a high degree of commercial intercourse within the region [ibid: 5]. In this chapter, I will focus on the evidence left by commercial contacts between the Southeast Asian regions. However, since the evidence from this trade network is extensive, I will only deal with ceramic shards evidence which is common in this region.

The study of ceramics in archaeology has become increasingly important over the last century. In spite of their apparent fragility, they are the greatest survivors of any known archaeological materials. They were the first entirely manmade objects and almost every primitive society produced them from readily available materials. They could be used for food storage, cooking and for transporting water. Ceramic shards have given archaeologists varied and plentiful information on many aspects of the past, including chronology, trade and technology. They enable archaeologists to date precisely when a site was occupied. They also can tell about the intensity and the dispersal of trade

activities and contacts in ancient times. All in all, ceramics represent an almost immutable testimony to life.

The study of Oriental trade ceramics is a comparatively recent field of oriental art studies both in the West and Southeast Asia. Most of these early studies were concentrated on large objects, such as statues and those made of stone and bronze. Even though ceramics are found at the majority of archaeological excavations in the region, they are frequently cast aside in favour these large objects which vary more in style, are more appealing, have more aesthetic value and provide an easier standard for dating. However, this trend began to change at the beginning of mid century, when more and more ceramic studies appeared, first by some colonial officers and later by trained local and foreign scholars. Among the prominent scholars were Tom and Barbara Harrisson in Borneo, G. de G. Sieveking, A. Lamb and B. Peacock in the Malay Peninsula; Fay-Cooper Cole, H. Otley Beyer, R. Fox and J.M. Addis in the Philippines; Dr. E.E. Van Orsoy de Flines and Nankai Koto Kame in Indonesia and M. Peralle and V. Goloubew in Indo-China [Te-k'un, 1972: 3-11; see, chapter 1: 1.4; Bibliography]. Later these were followed by more renowned scholars, such as C.Y. Locsin, W.G. Solheim, R.M. Brown, A.R. Lim, Y. Aoyagi, J. Guy, Charles Nelson Spinks, J.C. Shaw and Dawn F. Rooney. From the beginning of the 1970's, Southeast Asian archaeology enters into a further transformation, when underwater archaeology began to be introduced, first in Thailand and later by the other members countries. Since then, a number of important shipwrecks have been recovered, given further information on the study of Oriental ceramics, their dating, topologies, distributions, and the information of the quantity and variety of traded goods.

Due to the intensity of trade networks and the rapid decay of materials such as woods, silk and foodstuffs, Southeast Asia possesses more Oriental ceramic remains than any other materials culture. There are a variety of Oriental trade ceramics common in Southeast Asia, such as Chinese, Thai, Vietnamese, Khmer, and Japanese wares. There

are also a variety of types, such as Yueh wares, celadon wares, Lung-Chuan wares, Blue-and-White wares, White wares, Black-and-Brown wares, Sawankhalok and Sukothai wares [see chapter 5 & 6]. Their dates span from the ninth to the eighteenth centuries A.D. Other common export wares are stoneware and they mostly consist of jars and vases. They originate from China, Thailand and Vietnam and are dated as early as the eighth to the nineteenth centuries A.D.

The importance of ceramics in Southeast Asia can be seen in the 1940's, when Professor Beyer, the Dean of the Philippine Prehistory and Anthropology, gave a unique name to the latest age of the Philippines as the "Porcelain Age" [Aoyagi, 1991; Lim, 1987: 2]. The terminology was based on the fact that there are large numbers of Chinese, Thai and Vietnamese ceramics found all over the Philippines dated from the ninth to the sixteenth centuries A.D. Later scholars, however, have rejected this terminology and substituted "The Age of Contacts with the Great Traditions of Asia" [Lim, 1987: 2]. Whatever the arguments, it has shown the importance of ceramics in helping archaeologists reconstruct the past history of the region. This is especially true in countries which have very few historical and archaeological records, such as in the Philippines, Brunei, Peninsular Malaysia and Singapore. Ceramics became important evidence when reconstructing the past, apart from using fragmentary and unreliable written sources.

The emphasis on and value of the ceramics in Southeast Asia can be classified on three different levels. Firstly, was its function to their users, i.e., the physical functions of the pottery. This can be either a 'utilitarian' or 'ceremonial' function. Secondly, was its function to the manufacturer, i.e., economic and psychological. Only certain societies in Southeast Asia were affected on this level, in particular the two major Southeast Asian production centres of Thailand and Vietnam [see chapter 6]. The third and last level was its function to the community, both within the community and outside it. The most

significant at this level is the economic function, which involves small and large scale organisation levels. I will discuss this later in the chapter below.

The wide distributions of Oriental ceramics in the countries of Southeast Asia have always been attributed to direct trade with China and other the production centres of Thailand and Vietnam. The first ceramics to dominate the region were Chinese ceramics, beginning from the late T'ang Dynasty in the tenth century and were increasingly marked after the Sung Dynasty in the twelfth century. A further increase can be seen during the Yuan Dynasty in the late thirteenth century and another in the mid-Ming period of the fifteenth century [see chapter 5]. Other Oriental ceramics from Thailand and Vietnam only appeared in the late thirteenth century A.D. [Lim, 1987: 6; Brown, R., 1977; Guy, 1989; Nobuo, Gakuji, Aoyagi & Hidefumi, 1993]. However, it was only after the late fourteenth century that Oriental ceramics began to penetrate the Southeast Asian trade by supplying a substantial proportion of the market with good-quality imported wares [Aoyagi, 1992; see chapter 6]. Their involvement in this Chinese traditional dominated trade began in the early Ming Dynasty from the mid-fourteenth to early fifteenth centuries, when no official encouragement of overseas trade took place in China [Lim, 1987: 6; Brown, R., 1977; Guy, 1986; Sakuma, 1989]. This "Ming Ban" was having serious effects on overseas trade, the so-called Interregnum, which resulted in the closure of the Imperial kilns at Jingdezhen and caused a drastic reduction of ceramic material[1]. The vacuum created by these events may have stimulated the export of Thai and Vietnamese ceramics to the Southeast Asian markets from the late fourteenth century onwards. Some Chinese ceramics, however, managed to enter into the Southeast Asian countries, mainly through illegal markets. In the seventeenth century, Japan began

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1 The closure of the Imperial kilns have influenced the growth of private kilns, in particular in the southern Chinese provinces of Fujian, Guangdong and Zhejiang. Most of the products were exported to foreign markets, especially in Southeast Asia [see chapter 5].

to export her own ceramics, but mainly aimed at European markets. Only some of the wares were found in Southeast Asia, including Brunei.

Before the introduction of export ceramics, silk thread and silk cloth were among the most important trade commodities. Chinese silk was very well known and highly demanded in the overseas markets. It is only since the ninth century of the T'ang Dynasty that ceramics became an important trade good [Aoyagi, 1991; Zhiyan, 1993: 147]. However the number of ceramics were still limited and the kilns were also sparsely distributed. Archaeologically, only a small number of these early ceramics have been found in Southeast Asia. Their distribution was also limited to certain localities, in particular along the Melaka Straits and at important production centres, such as in the western coastal ports of the Malay Peninsula of Sungai Mas and Lembah Bujang in Kedah, in the Palembang area of Sumatra, Laem Pho-Payang and Ko Kho Khao of southern Thailand, Takuapa and the Isthmus of Kra of Thailand Peninsula, and at Bongkisam and Santubong in Sarawak [Abd. Rahman, 1991; Heng, 1991; Srisuchat, T; Bronson; Srisuchat, A. & Chuimei, 1989; O' Connor & Harrisson, T., 1964; Te-kun, 1969]. Nevertheless, their introductions into the overseas markets marked a new era in the ceramic industries, and from this period on ceramics began to be used extensively as an export commodity. Within a short period of time, they began to dominate the overseas markets and this can be seen in their wide distribution in Southeast Asia, which I will discuss later in this chapter.

Why, one might ask, were porcelains used as an exchange material? The answer may be due to their cheap cost of production compared to other products such as silk and lacquered wares. They were also mass produced rather than individually produced. Why then, were porcelains introduced much later if they were much better than the other materials? The reason is mainly because of their late introduction, which was roughly began during the late Sui or early T'ang Dynasties in the seventh century A.D. [see chapter 5]. Their introduction to the foreign markets were thought to be an accidental by-

product of the maritime trade. In the early stage, there is no clear distinction between domestic Chinese wares exported to Southeast Asia and wares made solely for export. Chinese merchants buying the Southeast Asian islands products may have found that the crockery and storage jars they were using on board were of more use to the native than any other barter goods or even Chinese currency [Yatim, 1981 b: 30; Sullivan, 1960-61; Macintosh, 1994: 152]. First they would part with what they could spare and later they regularly carried a surplus for barter. A further stage took place in the thirteenth to fourteenth centuries when South China kilns began producing specifically for export. Some of these export wares were designed specially to cater for foreign markets, such as the *kendi* forms, fruits and vegetables native to Southeast Asia, mango, mangosteen, *durian, belimbing* and gourds. Other alien motifs are similar to Javanese art motifs such as *wayang* characters, betel nut containers [Lim, 1987: 5] and dishes with Arabic calligraphy [Osman, 1992: 10-25; Yatim, 1981 a; see chapter 5].

Since its first appearance in the foreign markets, Chinese and Oriental ceramics began to enjoy high prestige value among Southeast Asian peoples. They were willing to pay a high price for the ceramics as they were technically superior to the native-produced earthenware. The export wares were artistically more attractive, always were glazed and the clay was white due to the presence of kaolin. They were also fired at a very high temperature which produced a hard, impervious translucent body. This had a great affect on the local earthenware industries and may have played a crucial factor in the collapse of many local earthenware industries. In Brunei, it greatly affected the local industries and was possibly one of the contributing factors in the collapse of the once flourishing industries [see chapter 7]. In the Philippines, it contributed to the decline of local industry which reverted to the production of less artistic simple, everyday containers and utensils [Lim, 1987: 7].

Most of the Oriental export ceramics found in Southeast Asia consisted of household and kitchen utensils, such as jars, bowls, plates, dishes, cups, cover boxes and

bottles. Except in the early period of export ceramics as has been discussed earlier, some of these materials produced were specifically intended for foreign demands. This in particular ceramic wares which are alien to the Chinese or other Southeast Asian traditions, such as large plates and dishes. These types of wares are mostly found in the Middle Eastern countries, usually associated with the eating habits of the Arabs. The Chinese and Vietnamese are used to have small eating vessals, such as bowls and small plates. Apart from their unfamiliar size, the designs employed were also alien to the local traditions, such as using geometric patterns [Vainker, 1991: 139; Medley, 1986: 180] or Arabic calligraphy. Another typical ceramic imitated from the local tradition were the *kendis*. This type of ware is typical to Southeast Asian traditions, made either in earthenware or metal and dated as early as 2,000 years ago. The popularity of such wares among the locals encouraged the Chinese to imitate them, but the Chinese produced wares with better design and craftsmanship. The vessels were then exported back to Southeast Asia where they were widely accepted into the local culture.

In many respects, most of the export ceramics found in Southeast Asia are similar to those manufactured and found in China or in other Southeast Asian production centres of Thailand and Vietnam. There are no clear distinctions between these wares, either in their designs, forms or shapes, such as bowls, plates, dishes, jars, *kendis* and bottles. This clearly shows the uniqueness of the Southeast Asian societies. Although they are distant in many respects, there are some common elements in their traditions. This is typical of Southeast Asia which can be seen since the ancient time. It also shows the way in which these societies were willing to accept new changes and incorporate them into their own culture. Obviously, export ceramics were widely accepted because of their quality and technical superiority over their own produced earthenware. After such a long period under primitive earthenware traditions[2], they barely needed changing. Other Southeast Asian societies, never practised an earthenware tradition. They used natural

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2 The Southeast Asian Earthenware Traditions can be dated as early as 6000 B.C. found in the Mailand Southeast Asia.

resources such as bamboo and plantains[3]. An account in the *Ming Annals* tells us that the people of Banjarmasin in Kalimantan, southern Borneo 'formerly used plantains as plates, but since they have traded with China they have gradually begun to use porcelain [Sullivan, 1960-61; Macintosh, 1994: 165].

In agrarian societies like Southeast Asia, export ceramics were as important as earthenwares. They were used in a variety of utilitarian functions, mainly in connection with food [Solheim, 1965: 255]. Export ceramics may have been used for the packaging and transportation of food, for storage, preservation, fermentation, cooking, serving, and for eating and drinking. Large glazed porcelain or stoneware jars, for instance, were usually used in several areas of southeast Asia to store rice or fruit wines. In eastern Indonesia and the Philippines the most popular form of this fruit wine was derived from the palms of lontar, coconut, or sugar [Reid, 1988: 39]. In Sabah and Sarawak of Borneo, rice wines were common and were preserved in dragon or martaban jars [Yatim,1981 b]. To serve food, porcelains were used, such as bowls and plates. In the eating and feasting habit of Southeast Asian in the sixteenth century by Anthony Reid [ibid: 41], it is said that among the upper classes the master of the house would eat first, served by women, as a mark of his status. Royal courts and noble houses were marked by the elegance of the bowls in which the side dishes were served.

Apart from being used as household and utilitarian functions, Chinese and other Oriental ceramics were also an important medium used by certain indigenous societies for ritual ceremonies and religious functions. In many of the non-Muslim communities in Southeast Asia, for example, porcelain vessels and dishes were used as grave furniture and this is practised even in the present day. In Calatagan in the Philippines, for instance, food was often place in local earthenware dishes and buried with the dead, while Chinese

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3 In Southeast Asia, bamboo proved so versatile. It can be used for building materials, weapons, etc. It can also be used to prepare food such as rice, fish and meat. It still flourishes today in the shape of scaffolding or basketry.

dishes were placed over the pubic areas of the dead body and saucers beneath the hands, while other imported wares, particularly small jarlets from Sawankhalok in Siam were placed behind the head. It is particularly clear that the imported wares were keenly revered, for they were always wrapped with the dead body, whereas local earthenware pieces were merely placed in the grave [Macintosh, 1994: 166].

In some societies, export ceramics were only used during special occasions, such as weddings, religious festivals, and so on. In New Guinea, for example, large celadon dishes were until recently kept buried in the sand on the seashore, to be dug up and used only on feast days [Sullivan, 1963]. Among the Palawan people in the Philippines, export ceramics were used in their ritual ceremonies. For a good ceremony, only a true porcelain bowl was preferred so that the spirits of relatives and other deities would be able to hear more clearly and hence partake of the offering [Mcaintosh, 1986: 165]. Similarly in Malaysia, export ceramics were highly valued, while the most treasure vessels were often fitted out with handsome silver mounts and stoppers [Sullivan, 1960-61]. The same practise can be seen in the Indonesian Archipelago, which even extended to small articles like powder boxes and miniature *kendi* medicine vases [Te-K'un, 1972: 11].

Apart from being used at ceremonial functions, export ceramics were also used for games. In Malaysian villages, for instance, shards of Ming Blue-and-White were smoothed into handy disc shapes for use as gambling counters [Sullivan, 1960-61]; while in the Philippines, shards were used as markers in various types of games vaguely like quoits or bowling, where shards are tossed to come as close as possible to a mark or previously thrown shard, or to knock a shard out of a ring [Solheim, 1965: 259].

Besides these significant functions, export ceramics were also sought for their beauty and perfectness compared to the native earthenware traditions. The durability of these export ceramics is shown by their popularity among the local societies and their immediate acceptance into the local culture. The admiration contributed to the invention of myths and legends connected to export ceramics. Among these legends was the

connection with the gods and the possession of supernatural and magical powers in healing diseases and virtue [see chapter 5]. Among pagan societies such as in the Philippines, Borneo and Indonesia, for example, export ceramics were used as grave furniture to accompany the dead on their journey to another world [Reid, 1988: 104]. Perhaps ceramics were used because of their high value, aesthetically and functionally, and not just because they were hard and would therefore last a long time. In Burma, they regarded excavated Chinese porcelain bowls with such awe that they usually either buried them again or presented them to a local temple. Only the most daring kept these bowls, in which they pounded their drugs or drank their medicine, for such porcelains were reputed to be possessed of supernatural and often dangerous qualities [Jenyns, 1988: 206]. More surprisingly, even some Muslims in the Eastern world such as the Malays of Borneo, Malaysia and Indonesia and the Indians, Arabs and Persians believed and still believe in the magical power of celadon wares [ibid: 207] and 'magic squares' [Yatim, 1981 b; see chapter 5]. In Islam, such a belief is against their faith, for only God (Allah) is the only who knows the unknown or only with Allah willing can the diseases be cured.

Whatever the arguments, export ceramics have played an important role in almost every Southeast Asian society since their first introduction in the late tenth century A.D. To many Southeast Asian societies, these ceramics provided them with many advantages as discussed earlier in this chapter. To other societies, it provided them with further advantages which made them more beneficial than others. The ability to detect the importance of export ceramics and manipulate them gave them power in controlling these materials in their respective areas. Export ceramics began to be used as an important trade commodity, in exchange for jungle and other exotic products. In these circumstances, the roles of kings or chiefs were very important in the dispensing of trade wares over large areas. I have discussed the role of Brunei's kings and their role in controlling this trade monopoly in other chapters of this study [see chapter 2: 52-54; chapter 4]. Elsewhere, this can be seen in some parts of the Philippines in Sulu,

Mindanao and Luzon after the sixteenth century A.D. [Lim, 1987: 48-9]. At that time, these territories had not yet united and were not connected socially one to another. However, after their intimate relations with Brunei, which was an important trading kingdom during those times, they contributed to the formation of the chiefdoms or even rajas in the Manila areas. The trade relations gave them easy excess to many goods, among them were metal tools, weapons and porcelain. The materials were then distributed further within their territories, hence contributing to their dispersal and at the same time enhancing their political power and dominance.

It is the role of these local trade networks that played an important part in the wide distribution of export ceramics to remote regions within Southeast Asia. The role of cities or ports was also very important for their rapid dispersal. As has been discussed earlier, the wide distributions of Oriental trade ceramics in Southeast Asia was due to direct trade with China and the other production centres of Thailand and Vietnam. However, trade was limited to major cities and ports, where the largest concentration of populations and administration were centred. The role of the city or port was to attract foreign merchants by providing a good market place for trade and exchange activities, storage facilities, as well as food, water and shelters for sailors and traders. However, these facilities alone were not enough to attract foreign merchants to trade in their respective ports. They also needed a large substantial quantities of material supplies for exchange with foreign traders, such as jungle and other exotic products. Links to the main sources were very important in order to get a constant and regular supplies of materials essential for their survival. Therefore a continuous series of local trade networks was organised between the city merchants and their hinterlands, as can be seen in Brunei [chapter 2 & 4], the Philippines [Lim, 1987], the Srivijayan and the Majapahit kingdoms of Indonesia [chapter 2] and the Melakan kingdom of the Malay Peninsular [chapter 2]. This was also seen in other Southeast Asian countries, all eager to grab the profit from the increasing growth of the international trade networks. The outcome from these local trade networks were the outflows of supplies, jungle and exotic products from the

hinterlands to the cities, while luxury materials moved from the cities to remote and far away hinterlands.

Archaeologically, the evidence left by these trade networks can be seen in almost every proto-historic site within the Southeast Asian countries, both in the Mainland and Insular of the region, in particular there is the evidence left by the Oriental trade ceramics of Chinese, Thai and Vietnamese types dated from the late tenth to the eighteenth centuries A.D. This is the period when Southeast Asia shared a common general cultural context as demonstrated through the same ceramic assemblages. This is considered a great event in the history of the region because it was the first time such concurrent events could be seen in the region's long standing history. The study of the historical past in Southeast Asia is now becoming clearer. The dating of sites is also becoming easier, while more references are widely available throughout the Southeast Asian regions.

3.2 Southeast Asia main archaeological sites in relation to Chinese and Oriental ceramics

Before proceeding to the next Chapter which will deal specifically with the distributions of Oriental ceramics in the northern and southwestern parts of Borneo and Brunei, I would like to discuss briefly the distributions of Chinese and Oriental ceramics in Southeast Asia [see fig. 4]. This study is essential in order to understand distributions of ceramics within the Southeast Asian context and then to be able to relate it to Brunei. The study will also attempt to review the background history of commercial activities in the region, which only began in certain parts before spreading to Brunei. The study will give some chronological reviews of sites in countries of Southeast Asia from the late tenth to seventeenth centuries A.D.

3.2.1 Peninsular Malaysia

The Federation of Malaysia was formed in 1963, comprising the Malay Peninsula and the states of Sabah and Sarawak [Taha, 1987: 205]. It is ideally located along the Melaka

Straits, situated halfway between the major trade centres of China in the east and India and the Arab world in the west. This strategic position had enabled the Peninsula to develop at least 1,700 years ago [Andaya & Andaya, 1982: 14]. Since the beginning of A.D., the Peninsula had social and trade contacts with a variety of nations throughout the world, including Indians, Arabs, Chinese and Europeans.

Most of the early archaeological research investigations in Peninsular Malaysia were conducted as early as the 1880's by antiquarians, mostly colonial administrators. This was followed in the 1950's by members of the Federal Museums in Kuala Lumpur and Taiping and some local universities. After gaining its independence, most of the archaeological activities were carried out by the locals. This continues up to the present day, with involvement from the National Museum and local universities.

One of the earliest and most important archaeological sites in Peninsular Malaysia is Pengkalan Bujang in Kedah. The site was excavated in 1961 by A. Lamb where they discovered several thousands of fragments of Chinese porcelains, mainly green-glaze celadons of the Sung and Yuan periods dated from the eleventh to thirteenth centuries A.D. These wares were mixed up with other Oriental Ceramics from Thailand and Indo-China. They were also fragments of Islamic glass, parts of small bottles of a kind which was at one time was widely exported from the Middle East and beads. The excavation has shown the important role of Pengkalan Bujang as an early cosmopolitan trading centre in the Malay Peninsula before the emergence of Melaka in the fifteenth century [Lamb, 1961]. This assumption is further strengthened by Arabs accounts about the importance of *Kalah* as an important trading station half way between India and China [see Chapter 2]. Kalah here is definitely Kedah of the western Malay Peninsula.

The discovery of Pengkalan Bujang as the pre-fifteenth century entrepot before the emergence of Melaka had encouraged further research along the coastal areas of the western part of the Malay Peninsula. In 1980 a slightly earlier entrepot was discovered in Kampong Sungai Mas at the mouth of the Muda River in Kedah [Abd. Rahman &

Mohd. Kamaruzzaman, 1985]. Archaeological excavations have revealed that the ceramics were classified as Chinese of T'ang and early Sung types, while the Middle Eastern ceramics can be dated to the seventh to ninth centuries A.D. [Abd. Rahman, 1991: 23]. The site may be have functioned as an entrepot for foreign ships that traded between India and China.

Another important site along this western coastal region is Kuala Selinsing in Perak and Jenderam Hilir in south Selangor [Abd. Rahman, 1990; Heng, 1977]. Both sites functioning as collecting centres and feeder points for special local produce. Chinese ceramics found at both sites were dated from the eleventh century of the Sung Dynasty.

In 1962, a variety of Sung type shards and Thai wares were found in a rockshelter of Tioman island, about 40 miles off the coast of Pahang [Medway, 1962]. Among them, Tom Harrisson identified as Yueh type, green-ware with folded rims, white Ch'ing pai porcelain of export types and a fine celadon fragment of Lung-Chuan type. A shard among the finds was also identified by Tom Harrisson as Sawankhalok, which was dated as late as the fifteenth century [Yatim, 1991]. A large number of post-fifteenth century ceramics were also found, including seventeenth to nineteenth century ceramics from China, Thailand and Europe [Martin, 1986: 146]. The variety of export ceramics shows the importance of the island in the trading and shipping of the Malay archipelago and in the wider maritime trade between China and the Middle East from the eleventh to the nineteenth century.

Melaka is another important archaeological site and is dated fifteenth century A.D. An important discovery was made in October 1960 when a party of Malay workmen found a buried hoard of ceramics, both stoneware and porcelain at Kampong Kerubong, Melaka [Te-K'un, 1972: 3]. Among the discoveries was eighty pieces of Chinese and Annamese Blue-and-White wares dated fifteenth century A.D. Another discovery made in Melaka was during the excavation of the old foundation wall of Melaka town which uncovered some 7,000 shards of Ming Blue-and-White, some

Celadons, Thai Sawankhalok wares and Vietnamese Blue-and-white wares dated from the fourteenth to fifteenth centuries A.D. They may both be ascribed to pre-Portuguese occupation in the fifteenth century, the period when the Melaka Sultanate was at the height of its power and prosperity [Te-K'un, 1972: 4; Yatim, 1982: 147]. The assemblage is very much related to Kota Batu which is dated from the fourteenth to seventeenth centuries A.D. [see chapter 4].

Johore Lama, in the state of Johore, south of the Peninsula was an important entrepot in the late fifteenth and sixteenth centuries A.D. It became a refuge place for the deposed Melaka Sultanate after 1511. Export wares were dominated by Chinese ceramics of the mid-Ming and early Ch'ing periods, primarily blue underglaze, celadons, polychrome enamels, and Dehua wares. Some Thai wares of Sawankhalok were also recovered from the site. Fine wares from Jingdezhen and coarse wares from Southern Chinese kilns were also found together [Gibson-Hill, 1955; Yatim, 1991; Lim, 1987: 78].

Apart from the above sites, numerous smaller sites were discovered throughout the Peninsula, and yielded a variety of Chinese ceramics and other Oriental ceramics from the Sung to Ch'ing Dynasties of the eleventh to nineteenth centuries A.D. [see Yatim, 1982: 146-61]. Beside the on land discovery, Malaysia is also actively involved in underwater archaeology, especially along the Melaka Straits. Several important discoveries have been made, such as the 1726 Dutch ship named *Risdam* found off Mersing, Malaysia. Among the materials recovered were 150 glazed pots which were loaded at Ayutthaya, Thailand; Chinese Blue-and-White porcelains, storage jars, tin ingots, elephant tusks and *sappanwood* [Green & Harper, 1987: 11]. The latest discovery was made in 1993 off the Melaka Straits. It was an English ship, named *Diana*, laden with 18 tons of Ch'ing Dynasty porcelain, including Blue-and-White wares of the nineteenth century A.D. [Wells, 1995: 118]. The wares were made specially for the European markets as shown by the European scene motifs drawn on the porcelain. The significance of these two discoveries was the increasing influence of European merchants

in the region and their role in dispersing Chinese ceramics to the European markets. It also shows the continuing importance of China in producing and supplying the world's trade ceramics, despite increasing competition from the Southeast Asian and Japanese ceramics.

3.2.2 Thailand

As its Malaysian counterpart, Thailand was also an important site located along the passage way that linked between East and West, in particular the area around the Kra of Isthmus and southern Thailand where numerous entrepots and ports emerged since the early of A.D. Among the important sites is Takuapa on the northwestern coast of Peninsula Thailand. The area comprises the town of Takuapa town and Ko Kho Island. The site was studied in 1961 by Alaistar Lamb and it is suggested that it was probably a site of a pre-Melakan entrepot dated between the seventh and tenth centuries A.D [Lamb, 1964: 76-86]. Archaeological findings include a mixture of trade ceramics from western Asia, glass beads from India and western Asia and earthenware shards which he presumes to have originated from India. Similar study was made at the site by Dr. J. O'Connor in 1963. He believed that the site did not extend very much beyond the T'ang and early Sung periods [O' Connor & Harrisson, T., 1964: 526-66]. Further excavation was conducted at the site in December 1988 and January 1989 by an archaeological team from the Fine Arts Department of Thailand and the Field Museum, University of Pennsylvania, U.S.A [Abd. Rahman, 1991: 13]. Among the archaeological finds were Chinese ceramic shards, which according to Ho Chuimei [1991: 291-2] consisted of ten ware groups of Changsha wares, Ding wares, Yueh wares, Northern White wares, Meixian wars, Guangdong Coastal Green wares, Gulao wares, Yanggan ware, Fengkai wares, and Green-and-White wares. They were all dated in the ninth century, hence confirming the importance of Takuapa from the ninth century onwards.

In early 1989, another excavation was conducted by the same team at a place known as Laem Pho-Payang near Chaiya in southern Thailand [Tharapong, S., Bronson,

Tharapong, A. & Chuimei, 1989: 15-26]. The site covers about 25 hectares and was quite densely covered with potshards of Chinese and middle eastern origins. As at Takuapa, the site is strategically located along the passage way that linked the Eastern and Western world. It had a good harbour, the contributing factor for its growth from the ninth century onwards. The Chinese ceramics were composed of the late T'ang and early Sung types which included Ding wares from northern China, Changsha wares from central China and various wares from southern China in the Guandong Province [ibid: 16].

Away from the Isthmus and southern Thailand, few other sites began to develop. Among the important regions is the Menam Valley, with its capital was centred at Sukothai. It was founded in around 1220 by a powerful Thai tribe and very soon grew into a powerful kingdom which eventually replaced the Khmer as the sole power in the region [Hall, 1994: 187; Spinks, 1965; Robinson, 1985: 114]. Since its formation, the kingdom had established strong diplomatic relationships with China, and gifts were exchanged. Among these gifts were Chinese ceramics [Robinson, 1985: 115]. The wares were greatly admired by the Thai kings, which may have influenced them to encourage the locals to transform their traditional earthenware traditions using better organizational and technical skills. This may have played a crucial factor in the transformation of the city into a prolific ceramic centre for the whole of Thailand from the late thirteenth or early fourteenth centuries onwards [see chapter 6]. However, despite being able to produce their own good quality ceramics, the Thai continued to import Chinese ceramics into the early Ch'ing Dynasty corresponding to the late Ayutthaya period of the eighteenth century [ibid.: 115].

Another important archaeological site is the Gulf of Thailand. For the last twenty years, the Fine Arts Department has been involved in this region and until 1990, a total of 25 wreck sites had been excavated and ceramics from 19 of these sites have been rescued and conserved. More than 10,000 pieces of ceramics material has been studied and came from three main sources, Thailand, China and Vietnam. Their dates span from

the thirteenth to the eighteenth centuries A.D. [Charoenwongsa & Prishnchit, 1990: 15]. There were also a variety of types, such as Chinese Lung-Chuan wares of Yuan and Ming periods, Chinese Blue-and-White wares of Yuan, Ming and Ch'ing periods, Thai of Sawankhalok and Sukothai wares and Vietnamese Blue-and-White wares of the fourteenth to seventeenth centuries A.D.

Among the important wreck sites is the Ko Kradat site, which was excavated in 1979/80 [Green, Harper & Prishanchittara, 1981; Green & Harper, 1987: 9]. The 1980 excavations alone have managed to collect some 4,403 ceramic and pottery shards, which composed Thai and Chinese ceramics and local earthenwares from the mid-sixteenth century A.D. Among the other important sites is the Pattaya wreck site [Green & Harper, 1983; 1987: 9-10], the Rayong wreck site [ibid: 73], the Songkhla wreck site, the Rang Kwien wreck site, the Ko Samui wreck site, and the Ko Chang Two wreck site [Green & Harper, 1987]. All these sites date between the fifteenth and early seventeenth centuries, the peak period of Thai involvement in the international trade networks with the Southeast Asian regions. All the ceramic shards found were a mixture of Thais, Chinese and some Vietnamese export ceramics. There was also a large proportion of local earthenware traditions.

3.2.3 The Philippines

The Philippines is one the earliest countries in Southeast Asia to take a serious approach to the study of Oriental trade ceramics. The country has more ceramic shards than any other archaeological material. This explains why ceramic research started in the Philippines as early as the 1900's, and why H. Otley Beyer postulated a "Porcelain Age" for the period covering half a millennium to the advent of Spanish accounts [Lim, 1987: 2; Aoyagi, 1991]. The National Museum of the Philippines began its studies in 1901. The first research site was in Tinguian in northern Luzon, where large quantities of Chinese ceramics of Sung and Ming types were collected and reported in 1902 [Aoyagi, 1991; Te-K'un, 1972: 8].

In the 1950's and 1960's, the important archaeological burial sites of the Calatagan in Batangas Province and the Sta. Ana in Manila were excavated. A total of 505 pit-graves were excavated at Calatagan site and this unearthed a total of 520 ceramics of the Ming types dated from the fifteenth to the early sixteenth centuries A.D. At Sta. Ana, a total of 290 pit-graves were excavated and from these were recovered a total of 1,800 Yuan and some Vietnamese ceramics dated from the middle of the fourteenth century A.D [Aoyagi, 1991: 3]. The Calatagan collections including 411 Chinese ceramics, 96 Thai wares, 9 Vietnamese wares and 4 unidentified. All were dated between the late fifteenth to early sixteenth centuries A.D. 278 pieces of the Chinese wares were Blue-and-White types (67.6%), 88 celadons (21.4%), 13 White wares (3.2%), 7 red painted wares (1.7%), 25 stoneware and others (6.1%) [ibid]. The Sta. Ana collections consisted of various types, including, lead glazed wares, Brown wares, Ochre glazed wares, Grey glaze wares, Celadon wares, Cremish white wares, Ch'ing pai wares, Blue-and-White wares and a Sawankhalok ware dated from the late thirteenth century to the fourteenth centuries A.D. [Locsin & Locsin, 1967; Lim, 1987: 70]. These sites are related to the Kota Batu and Pulau Chermin sites dated from the fourteenth to seventeenth centuries A.D. [see chapter 4].

Another important site is the Butuan site in northeastern Mindanao of the southern Philippines. The site was discovered in 1976 and was known to have engaged in trade activities with other Southeast Asian centres during the tenth and the fifteenth centuries A.D. The site was also actively involved in the direct trade network with China and Western Asia. The important archaeological finds were boats and a total of three boats have been recovered. The available radiocarbon dates for the three boats were 320 A.D., 900 A.D., and 1250 A.D [Ronquilio, 1989]. Other important archaeological findings were Chinese ceramics. The majority of these wares were monochromes, which were similar to the findings at many sites in Southeast Asia, such as at Santubong in Sarawak, Kota Cina near Medan in Sumatra, Pengkalan Bujang in Kedah Malaysia and Takuapa

and Kra Isthmus in Thailand [Lim, 1987: 56]. Yueh wares were also numerous, followed by stoneware jars, qinbai and green glaze wares with iron brown spots. Other Oriental ceramics found were from Thailand and Vietnam. The stonewares were mostly *kendi* type, iron black painted under the glaze, brown and black wares, some celadons and Blue-and-White wares [ibid: 57]. Only one Middle Eastern ware was found, the *Faiyum* three-coloured ware. This may indicate some direct trade contact between Batuan and Persian or Arab merchants in the past [Aoyagi, 1991].

The Philippine's government is also actively involved in underwater archaeology throughout the Philippine Islands. Among the important discoveries in 1960 off Marinduque Island was containing about 1,260 items of Chinese trade porcelain and stoneware storage jars said to be sixteenth century of the Ming period [Green & Harper, 1987: 4]. Another site was discovered in 1983 at the Puerto Galera site in the northern Mindoro Island. The ship contained Chinese trade ceramics, but unfortunately the site had been looted. The ceramics are both Chinese and Thai in origin [ibid: 4]. The Thai wares of Sawankhalok included incised celadon dishes, jarlets and small bowls; and the underpainted, fish-design dishes of Sukothai [Locsin & Locsin, 1967; Green & Harper, 1987: 19, 21].

3.2.4 Indonesia

Indonesia is one of the largest countries with the highest population density in Southeast Asia. Archaeologically, the country has also everything to offer. It has proper archaeological and historical records, from the Stone Age period to the classical, medieval, Islamic and of European contacts. Their archaeological evidence on ceramics is considered vital, especially in the reconstruction of the country's role in trade and contacts beginning from the late tenth to the seventeenth centuries A.D.

The chief centre for the study of Oriental ceramics is to be found in the Jakarta Museum. Here the former curator, Dr. E.E. van Orsoy de Flines has built up a remarkable collection of various types of ceramics found in Indonesia. After years of persistent and

intelligent collection, the assemblages cover practically all the known types of Chinese, Vietnamese, Khmer and Thai export wares, ranging from the Han to Ch'ing periods [Te-K'un, 1972: 11].

The Indonesian Archipelago was one of the important trade routes connecting East and West, especially along the coast of Sumatra facing the Melaka Straits. Numerous entrepots and ports have developed along this region and took an active part in the ocean-borne trade since the early century of A.D. Among the important kingdoms that emerged was Srivijaya in the seventh century [see Chapter 2]. In the Palembang area, Chinese trade ceramics dating to the T'ang Dynasty have been found [Abu Riho, 1979; Mc Kinnon, 1979; Abd. Rahman, 1991: 32; Ambary, 1991]. Among the important sites are Talang Kikim, Bukit Seguntang, Ladangsirap, Karanganyar, Lorong Jambu, Kembang Unglen and also the finds from beneath the Museum Badaruddin, the former Dutch Residency of Palembang. These ceramic finds cover a wide range of material dating from the T'ang period of the eighth to tenth centuries to the period of the Dutch occupation from the sixteenth to nineteenth centuries A.D. [Ambary, 1991].

Other important sites are Jambi, the Lampung area, and Kota Cina and all revealed T'ang ceramics of assemblage. They were functioning as feeder points from which products from their hinterlands were channelled to their ports before being transported to the city port of Srivijaya. Interregional trades were organised between these feeder points and Srivijaya, which have been contributed to the dispersal of goods, including export ceramics. At Kota Cina, large quantities of Chinese ceramics were found, composed of monochrome white wares, grey and Yueh wares dated to the tenth century A.D. Other wares include celadon and other green wares from southern Chinese kilns of the Sung and the late Sung to early Ming period dated from the tenth to thirteenth centuries A.D. [Lim, 1987: 76]. There were, however, no Blue-and-White shards of the late fourteenth century found. The reason was perhaps due to the "Ming Ban," which resulted in the port's decline. Obstacles to Chinese trade meant that they could not sell

their products or to purchase the silks and ceramics which were highly valued items in its inter-regional trade [Guy, 1986: 34].

After the collapse of Srivijaya, Sumudera-Pasai became an important centre in Sumatra. It rose into supremacy in the late fourteenth century and became the centre of trade and Islamic learning [Hall, 1981]. Large quantities of Chinese ceramics dated from the Ming Dynasty of the fourteenth century onwards were found, including Blue-and-White shards, Lung-Chuan wares, White wares and stonewares. Other wares to be found included Oriental ceramics from Thailand and Vietnam of the fifteenth to sixteenth centuries A.D. [Aoyagi, 1992: 3].

On the Javanese Island, numerous entrepots and ports emerged. Among the important ports was Banten Girang in the Serang area of west Java, dated from the eight to seventeenth centuries A.D. Banten was strategically well located on the northeastern end of the Sunda Straits. Archaeological research has revealed numerous discoveries of items of trade including Chinese ceramics of Sung, Yuan, Ming and Ch'ing periods from the eight to the seventeenth centuries A.D., Thai and Vietnamese ceramics dated from the fifteenth to sixteenth centuries, Japanese wares dated seventeenth century and European wares dated nineteenth centuries [Ambary, 1991; Lim, 1987: 75; Wibisono, 1992: 137-45].

Large quantities of export ceramics were also found on temple sites such as in the Prambanan area of Central Java. It was dominated by Chinese wares of Yueh types dated from the ninth to the tenth centuries A.D. At Trowulan, east of Java and the centre of the Majapahit kingdom, the earliest dated ceramics were of the Sung types from the twelfth to fourteenth centuries. Most of the ceramics were of the Yuan and Ming types, followed by the Thai wares of Sawankhalok and Sukothai and Vietnamese wares of the fifteenth to sixteenth centuries, also a few Persian, Khmer and European wares [Lim, 1987: 74]. The Vietnamese ceramics consisted of monochrome, Blue-and-White, underglaze blue, overglaze red, and green enamels [Wibisono, 1992].

Sulawesi or Celebes is another important archaeological site which contributes a great deal of information and foundation in the study of export ceramics in Indonesia. Among these sites are Kampong Pareko and Kampong Patingogang between Takalar and Makassar on the southern coast of Celebes. Excavations at these sites began as early as the 1930's by a Japanese scholar named Kanji Sawada [Te-K'un, 1972: 11; Lim, 1987: 75-6; Brown, R., 1988: xiv-xv]. They were an ancient dwelling and burial site yielding 600 pottery vessels. Sawada divided the ceramics into three categories, namely, Sino-Siamese, Sino-Annamese and Chinese. Sino-Siamese was composed of Sawankhalok wares, totaling 140 pieces or 20% of the total findings. Their types were underglazed black wares, celadons, and brown-glazed wares. Vietnamese wares were mostly composed of Blue-and-White, some with overglaze enamels and three copper green pieces. According to Sawada, Vietnamese wares were totalling 104 pieces, but based on the latest study by Roxanna Brown, only about 50 pieces were Vietnamese and the rest were Chinese [Brown, R., 1988: XV]. The site is very similar to the Philippines Sta. Ana and Brunei's Kota Batu assemblages. These similarities may point to the Eastern Route that I have mentioned in the previous Chapter [see chapter 2].

Indonesia is also actively involved in underwater archaeology. Among the important sites is Tuban, the 'South China Sea' site and the Bukit Jakas ship [Green & Harper, 1987: 3,4]. The Tuban site is located off the Java Sea and the materials that were recovered are mainly Chinese ceramics of Celadon types, Yuan and Ming wares, and Vietnamese and Thai wares of the fourteenth to sixteenth centuries A.D. The Thai ceramics consisted of iron-decorated plate, green-glazed, and white-glazed material [ibid: 19]. Tuban is the place where the Yuan or Mongol armada under Admiral Yi-k'o-mu-su first arrived in 1293 in a battle against Majapahit [Hall, 1994: 89-90]. The Mongol was defeated and Majapahit emerged as a powerful Javanese kingdom [see chapter 2].

The 'South China Sea' site was discovered by Michael Hatcher, the owner of a commercial salvage company based in Australia. The site was not recorded and the

materials that were auctioned in Amsterdam in March 1984 consisted of Chinese Transitional porcelain, together with some European stoneware and pewter. The cargo is said to have come from the wreck of an 'Asiatic merchant ship' dated to about 1640 [Green & Harper, 1987: 4]. Some other reports say that some 22,000 pieces of intact Ming Dynasty porcelain were sold and netted US$2 million [Marx & Marx, 1993: 148].

The Bukit Jakas site was discovered in the Riau Archipelago and excavated in 1981. Only four ceramic porcelains have been recovered; one is a piece of Chinese porcelain dated late Ming of the sixteenth century [Green & Harper, 1987: 3]. Another important discovery was made in 1985 by Michael Hatcher. This was a Dutch ship named *Galdermalsen* that sailed from Nanking, China to Batavia of Java. In 1752 the ship struck a reef in the South China Sea, taking with it 239,000 pieces of Chinese Ch'ing porcelain [Marx & Marx, 1993: 148-9]. More than 170,000 pieces were still in good condition and when sold half of the materials at a 1986 auction at Christie's in Amsterdam, netted in excess of US$15 million. The porcelain became known as the 'Hatcher Collection', and today many of these porcelain pieces are being resold for as much as ten times the auction prices.

3.2.5 Singapore

Geographically, Singapore sits in the centre of Southeast Asia. Before gaining independence, the main stream of archaeological activities of the Peninsula was concentrated at the Raffles Museum. In the early 1950's, the Art Museum was established in the University of Malaya (now Singapore). It became the centre for pottery study. Singapore is also prominent for research on Chinese trade ceramics in the South Seas. Some of the main contributors in this field are Professor Wang Gungwu, Mr. A. Lamb, and Professor P. Wheatley. Their research serve as a useful background for ceramic study in this area [Te-k'un, 1972: 2,3].

Among the important archaeological sites in Singapore is Fort Canning Hill. It is the centre of old Singapore, Tumasik. It existed as early as the eleventh century, based on an inscription dated 1031-1 written by Rajendra. Among the places named on the inscription was Tumasik, the old name for Singapore Island [Hall, 1994: 68]. The first excavation conducted at the site was in 1984 by members of the Singapore National Museum staff [Yap, 1989]. In 1987, the site was chosen as the venue of the fifth Intra-ASEAN Archaeological and Conservation Workshop which was attended by representatives of all ASEAN countries of Brunei, Malaysia, Indonesia, the Philippines, Thailand and Singapore. The 1987 excavations discovered a few Chinese ceramics which include Lung-Chuan celadons and Ch'ing-pai wares of the Sung, Yuan or Ming periods of the thirteenth to sixteenth centuries. Other export ceramics included Khmer wares and stonewares [Alexandra & Choo, 1986: 45-62]. The Fort Canning site is undoubtedly one of the important archaeological sites in Singapore. However, the site is rapidly disappearing due to the country's rapid development. During the 1987 Workshop alone, only a small portion of the site remained and this had been badly disturbed.

Another important site is the Parliament House Complex or PHC site. This is a new site to have been discovered, located on the shore of the Singapore River. According to Lise Young Lai, the present Secretary of the Singapore Ceramics Society, more Oriental ceramics were discovered at the site than at the Fort Canning Hill site [per. comm., 1996]. Among the ceramics were celadon shards of the Yuan Dynasty of the thirteenth century, a few pieces of Blue-and-White and white wares of the Ming Dynasty of the fifteenth century.

3.3 Summary

To summarise, it could be said that the wide distribution of Chinese and other Oriental ceramics in Southeast Asia from the tenth century onwards is a clear indication of international trade networks and movement of peoples from one country to another. Archaeological evidence from these ceramics excavated from settlements and burial sites,

port areas and temples, shipwrecks and transhipment areas, all assist in the reconstruction of an understanding of the early Southeast Asian centres and their interdependence. As the number of identified sites grows, a more comprehensive overview begins to emerge, progressively explaining the nature of trade patterns and regional differences in ceramic taste within Southeast Asia.

This Chapter has reviewed the Oriental trade ceramic distributions and typology in Southeast Asia from the tenth to the seventeenth centuries A.D. From this generalised study, we can see the movement of Oriental ceramics from their manufacturing source in China, Thailand and Vietnam to the Southeast Asian ports and cities. On arrival, the goods were then traded and channelled further to smaller entrepots and feeder-points and this contributed to their wide distribution and dispersal. Their presence in major and important ports and cities and the far and remote interior and highlands has clearly shown their importance and value among the Southeast Asian societies. As the study has shown, the region began to receive these export ceramics as early as the tenth century, first limited to certain ports along both sides of the Melaka Straits and later to a much wider area within the Southeast Asian regions. The evidence of more than seven hundred years of commercialism is shown by a variety of trade ceramics present throughout Southeast Asian archaeological sites, including the Chinese wares of T'ang, Yuan, Sung and Ming types, Thai wares of Sawankhalok and Sukothai, Vietnamese wares, Khmer and Japanese wares. I will discuss some of these ceramics in chapter 5 and 6 respectively.

CHAPTER 4

ORIENTAL TRADE CERAMICS IN BORNEO WITH A SPECIAL REFERENCE TO BRUNEI: ITS DISTRIBUTIONS AND TYPOLOGY

4.1 Introduction

Borneo is the third largest island in the world, with the total area of 746,295 square kilometres (286,162 square miles). The Island comprises four territories; Brunei Darussalam, Sabah, Sarawak and Kalimantan. Brunei is an independent country, while Sabah and Sarawak are part of Malaysia and Kalimantan is part of Indonesia [see fig. 1]. During the height of Brunei power or the Golden Age of Brunei in the sixteenth century, the whole Island came under Brunei's command [see Chapter 2]. In fact, as recently as a few hundereds years ago, Brunei territory was always referred to as 'Borneo Proper'. During that time Brunei was at its zenith; the terms 'Brunei' and 'Borneo' were synonymous and the whole island was subject to the dominion of Brunei [Hughes-Hallett, 1981: 1].

This study will only concentrate on the northeastern and southwestern parts of Borneo, which include the states of Sarawak and Sabah. These states are believed to be the probable location of P'o-lo, Poli and P'o-ni, Brunei's predecessor. Why did I just choose these territories and to exclude Kalimantan in the south? The reason is mainly because of their closeness to Brunei. They are only separated by a political land boundary created after the 1963 formation of Malaysia. These three states also share many common social and cultural values. Geographically, these regions also share many common physical environments, especially along its coastlines. As Fisher [1964: 622-3] notes, this is a region "in which the land divided but the sea unites." Indeed, it is the sea and shorelines that have influenced me to concentrate on these three territories. Apart from the eastern part of Sabah, these regions all face directly to the South China Sea, one of the busiest and most important sea lanes in the world. Kalimantan, despite its many

similarities to the above-mentioned territories, is nevertheless located away from the South China Sea. Its shorelines are under the influence of Java and Sulu Seas, which are less important than the South China Sea [see Fig. 1].

In the age of commerce, the South China Sea was the major highway linking the East and the West. The sea was as busy as the Mediterranean in Greek and Roman times. Chinese, Indian, Persian and Arabian merchants, monks and travellers moved up and down the sea-lanes in constant streams. The areas located near to the South China Sea had the better chance to develop than those located far away from this major highway. This can be seen at a number of ports and entrepots along the Melaka Straits, the western coast of the Malay Peninsula, the coastal ports of Sumatra and the southern Kra peninsula of Thailand [see chapter 2 & 3]. Kalimantan, which is located near to the Sulu and Java seas, is under more direct influence from the Indianized Kingdom of Srivijaya centred in the Palembang area of Sumatra. The archaeological evidence of the early fifth century Sanskrit inscriptions of *Mulavarman* found in the region of Kutei, on the east coast of Kalimantan may support such an assumption [Coedes, 1968: 18]. Similarly at Sambas, on the west coast of Kalimantan, a hoard of Hindu religious objects was found consisting of nine gold and silver images and a bronze vessel [Braddell, 1949: 1-15].

Apart from that, none of the Kalimantan territories seem to fit to any of the old Chinese documentation on P'o-ni's apparent and approximate location in reference to other places in the Chinese sources or the descriptions of P'o-ni's customs, history, produce and climate [see, Gungwu, 1958; Chau ju-kua (trs) Hirth & Rockhill, 1970; Groeneveledt, 1960; Wheatley, 1959]. On the other hand, they point to the northeastern or southwestern part of Borneo as the most probable location of P'o-ni.

There was also a big difference in export ceramic collections between the two regions. In northeastern and southwestern Borneo, large quantities of Oriental ceramics were found from the late tenth century onwards. They were found all the way from Sarawak, Sabah and Brunei [see below for further discussion]. In contrast, very little was

known about ceramic collections in Kalimantan. This is probably due to both the lack of archaeological research and the limited amount ceramics to be found in the region. An account from the *Ming Shih* (Ming Annals) tells us that the people of Banjarmasin (southern Kalimantan) "formerly used plantains as plates, but since they have traded with China they have gradually begun to use porcelain" [Sullivan, 1960-61: 66; chapter 3]. This southern region began to establish this trade contact perhaps after the establishment of the Eastern Trade Route during the Yuan Dynasty of the thirteenth century [see chapter 2].

Whatever the arguments, I have a strong belief that geographical factors still play an important role in influencing the choice of site location. For this reason, it may have influenced many scholars in their belief that the northeastern and southwestern part of Borneo was the most probable location for P'o-lo, Poli and P'o-ni [see chapter 2]. This chapter is going study these territories and then try to pin point the location of these three P'o's in relation to Brunei. I will use two methods of study, archaeological evidence and historical sources. My main source of archaeological evidence will be ceramic shards. I use previously collected materials and my own collected shards gathered during my four months field work in Brunei in 1995. As for historical evidence, I will use the fragmentary available sources from Arabs, Chinese and Europeans. To avoid confusion, I am just going to use the name of P'o-ni, rather than P'o-lo or Poli. P'o-ni is more appropriate to my study, first appearing in the Chinese historical sources from the tenth century onwards. P'o-lo and Poli, on the other hand, are a bit early to my study, which began from the sixth to seventh centuries A.D.

Tom Harrisson has dominated the ceramic research in Borneo. Since he joined the Sarawak Museum in the 1940's as the Emeritus Curator, he has done a lot of field research and excavations throughout Sarawak, Sabah and Brunei. Much of this work was published in the local Journals as well as in the foreign publications [see chapter 1]. It was

through his scholarly research and publications Borneo archaeology has become known to the outside world. On this basis, Professor Solheim said that:

> "no one can deny his pre-eminence in the field of archaeology in Borneo during the past 30 years of his life in association with western Borneo. He conceived of and gave birth to organized archaeological programs in this area and was the architect not only of an extremely healthy museum program in Sarawak, within which the foundation of Sarawak prehistory was framed, but presented the model for and helped to start similar museum programs in Sabah and Brunei" [Solheim, 1973: 27].

In Brunei, Tom Harrisson was responsible for the formation of the Brunei Museum Department after his successful 1952/53 excavations at Kota Batu. He was also actively involved in the Museum's ceramic collections with the formation of one exhibition gallery primarily for these huge collections. Nowadays, Brunei ceramic collections are among the largest collections in Southeast Asia, if not in the world. They range from Chinese ceramics of T'ang, Yuan, Ming and Ch'ing types, to other Oriental ceramics of Thai wares of Sawankhalok and Sukothai types, Vietnamese, Japanese, Islamic, and European wares.

The role of export ceramics in Borneo is more pronounced compared to their counterparts in Southeast Asia [see Chapter 3]. Among the Borneon natives[1], they are highly valued objects and handed from one generation to the next. In the interior of Borneo, dishes, bowls, and jars form part of the treasure of the family and they played

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1 The natives of Borneo, to name a few, are including Dayak, Dusun, Murut, Punan, Kadazan, Melanau, Bisaya, Kelabit, and Kenyah. In ancient times, they, like nowadays, used to live in the interior and highland of the regions. The coastal areas are usually inhabited by the Malays, who are believed to have originated from the Malayic-speaking traders of Srivijaya from the last millennium A.D. onwards [Bellwood, 1990; 1992; 1993; Bellwood & Omar, 1980; Solheim, 1981 b; 1990]. These Malayics were originally from the Austronesian world of southern China or Taiwan about 5,000 years ago [Thiel, 1984-85; Bellwood, 1993].

a significant role in ritual ceremonies of the native people [Harrisson, T., 1955; Harrisson, B., 1986; Yatim, 1981 b: 30-40]. In the Melanau wedding ceremony, for example, it was the traditional practise for the bridegroom's father to give a dowry to the bride's father before the wedding. Payment depended on the social rank of the bride. For a girl of the upper class the proper dowry would consist of nothing less than a Blue-and-White plate with a Chinese character underneath it, a gold bracelet which would encircle the wrist nine times and a *kris*, placed in a round wooden box wrapped in a cloth [Sarawak Museum, 1988: 28]. Chinese ceramics were also used in the Melanau healing ceremony. At a certain stage, the medium performs the traditional dance while standing on a special plate which is usually a Lung-Chuan celadon plate about 600 years old and very valuable [ibid: 28].

The old generations of Murut and Dusun tribes still used export jars as their secondary burials and ceramics as their grave furniture [Harrisson, B., 1956: 153-65]. Because of such practices, the jars are widely known as the *Dusun* jars. It is also still widely believed among the old generations of the Sea-Dayaks of Borneo that Chinese porcelain and jars were constructed by the gods when they made the sky. They being supposed to possess supernatural power and healing virtues [Gould and Bampfylde, 1989; see chapter 3]. *Gusi* or jarlets are another type of ware believed to possessed magical power and are highly valued by all the indigenous tribes of Borneo. They hold a place of honour in the sleeping quarters of a Dayak longhouse or Kadazan village [Wilson, 1994]. Among the Melanaus, jars can be used as a medicine to cure illness. The jars had to be broken into shards and then pounded into powder and drank by the sick person [Kaboy, 1967]. Certain members of the Malay society still believe in the magical power of the celadon wares. It will break or change colour if the foods served in it contain poison [Yatim, 1981 b: 23]. Another Chinese ceramics known as "magic square" is believed to be able to give additional potency when used medicinally [Te-K'un, 1972: 12]. Broken shards are also smoothed into disc shapes for games, a practise similar to that

in Malaysian villages [see Chapter 3]. I have encountered some of these shards during my recent field research in Brunei [see plate 18].

Oriental ceramics therefore had a variety of functions, values and significance among the local societies. It is no wonder that they were highly valued and in demand among the locals. When the Malays, masters of the coastal regions, knew about their great value and significance, they began to manipulate these items as exchange commodities. They actively controlled the wares and exchanged them for both native jungle and exotic products. This trade system operated in three ways. First, the natives themselves came to the coastal ports and brought with them their own products. This usually applied to natives that lived near to the commercial centre. As Wilson [1994] said 'wherever the main rivers or jungle tracks reached the sea, a *tamu* or market was held at set times of the year. *Kadazans* and *Muruts* would travel from 50 to 100 miles away. At the *tamu,* the produce would be exchanged for iron, *sarong* material or *gusi* jars brought in by the merchants or 'buyers' from Brunei.' Second, the traders themselves went to the natives settlements and exchange activities took place usually at a specially built place such as at a jetty, a river station or a *pengkalan.* In Brunei, as recently as fifty years ago, this system was still practised between the city merchants and the inland villages [Hassan, Z., 1992]. Thirdly, the traders themselves established trading stations at certain points such as at or near the entrance of a main river in the native territories. The stations were usually owned by the central ruler and supervised by a noble. During the Golden Age of Brunei, these stations were usually controlled by a Brunei *Pengiran* or noble, who supervised trading activities as well as collecting taxes [Saunders, 1994: 22; Brown, D.E., 1970: 63-5; see chapter 2]. The stations attracted the natives of the interior to trade for desired goods such as export ceramics and jars, Indian cottons, Chinese silks, beads, as well as Brunei's local product, brass works. In exchange, the natives produced their own goods, especially the much demanded jungle products such as camphor, rattan, resin, bees' wax and birds' nests.

The results of these inter-regional trade networks were the wide distribution of Oriental export ceramics as far as the interior and highlands of Borneo, as archaeologically demonstrated throughout the region. The wares quickly became popular among the natives, highly priced and played a significant role in the daily life of the societies. These practises continue even to the present day as been witnessed by Tom Harrisson in the northeast corner of the territory of Sarawak, the southwest corner of north Borneo, and a large area in northern Kalimantan Borneo. These regions are very remote and some are located as high as over 1,000 metres above the sea-level [Harrisson, T., 1955 a: 549-59; 1955 b: 301-6].

The earliest evidence of trade contacts between the coastal ports of northern and northwestern of Borneo and foreign merchants began as early as the late tenth century of the T'ang Dynasty. This was shown by the evidence of some late T'ang ceramics found at the Sarawak River Delta of Santubong [Te-K'un, 1969; Harrisson, T., 1959, 1961; O' Connor & Harrisson, T., 1964; Chin, 1977]. The trade was probably operated by Arab and Persian merchants, who actively controlled the trade activities during this time[2]. However, in comparison with other sites along the Melaka Straits, the Santubong site is among a few sites in Island Southeast Asia to have traces of T'ang ceramic (the other site is in Batuan of the southern Philippines). Most of the wares were found along the Melaka Straits, the most important passage way that links the East and West [see chapter 2 & 3]. The presence of these foreign traders in Borneo shows the importance of

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2 The roles of local traders are also seemed very important, especially among the Malays of Indonesia, Peninsular Malaysia and the Philippines. According to some scholars [eg. Wolters, 1970; Suleiman, 1981: 63-5; Lapian, 1981: 73] that Southeast Asian Archipelago was known to have their skilled mariners since ancient times, such as the *Orang Laut* or sea-gypsies of the Melaka Straits, the Buginese of southern Sulawesi, and the Sulu of the southern Philippines. The Chinese sources of the 3rd to the 8th centuries also mentioned the *K'un-lun* people of the South Seas [Manguin, 1980: 274] as active trader with China. It is therefore not possible that some of these early Chinese export ceramics were brought by these traders on their returned from China and distributed further on their way to their respective ports.

the island, not as a transit place as some of the ports in the Melaka Straits have been, but more for its rich and valuable resources. The importance of Borneo was due on its rich hinterlands, whereby rare and valuable products were available in substantial numbers. Among these products was Borneo camphor, one of the best to be produced in the world. According to the Portuguese sources of the sixteenth century "the true camphor produce in Borneo is valued like gold in India and brings a much higher price than the camphor of China. The Persians try to pawn off imitations of Borneo camphor on their customers because of its great value" [Lach, 1965]. The importance of Borneon camphor in the Arab world can be seen when numerous accounts of it were written by the Arabs and studied extensively by Robert Nicholl [see, 1978,1979, 1980, 1982 & 1984].

There are few historical records about Borneo or P'o-ni during this late T'ang period of the tenth century. There was, however, one Chinese account which mentioned P'o-ni for the first time, which said that "in 979 A.D. the king of P'o-ni sent envoys with tribute to the Chinese court" [Brown, D.E., 1970: 132; Mills, 1974: 9]. Could this mean that the Sarawak River Delta of Santubong on the northwestern part of Borneo is the first location of P'o-ni? On this basis, Jan Wisseman Christie [1985] believed that the location of P'o-ni was definitely at Santubong. Her argument was based on the fact that larger quantities of Sung ceramics were found at Santubong compared to any of the Brunei sites. She said that:

> "It appears, on the basis of archaeological data, that the state called P'o-ni by the Sung Chinese sources was centred on the Santubong port complex, though it apparently drew on feeder ports strung out along much of the north coast, including such sites as (Terusan) Kupang and Tanjong Batu in Brunei..... The heart of the state of Brunei, which for some centuries controlled most of the north coast, was located on Brunei Bay. The Brunei Bay sites do not, however, appear to have been of much importance before the fifteenth century. Relatively few Sung ceramics have been found in that region, though the numbers of Ming wares are enormous" [ibid: 80].

The Brunei sites mentioned by Christie are definitely Kota Batu and Terusan Kupang, both included in this study. Tanjong Batu, on the other hand, is of the same assemblage as Terusan Kupang, although it is not as important as the two other mentioned sites[3]. The shards that were found at Tanjong Batu were possibly washed up onto the beach from a ship wreck located somewhere around the vicinity [Omar, 1975, 1978]. However, I agree with Christie's view that large amounts of Ming ceramics were found in Brunei, although I disagree with his view about the scarcity of Sung ceramics found in the country. As a matter of fact, large quantities of Sung ceramics of Yueh, celadon types and Luan-Chuan wares have been found in Brunei, particularly at Terusan Kupang. From the late 1970's until to the present day, tens of thousands of such wares have been collected and stored in the Archaeology section of the Brunei Museum Department. I must admit, however, that there are no archaeological reports written about the site, except the one written by Matussin Omar in 1981 [Omar, 1981]. It is worth mentioning though that the Terusan Kupang site extends much further into the Malaysian border of Limbang Division. The so-called Jai-Jai site is much larger than Brunei's Terusan Kupang site [Maidin, 1994]. I have been to the site on several occasions and observed the richness of the Sung ceramic shards, mixed up with various other archaeological materials, such as Chinese coins, beads, iron objects and remnants of wooden poles. According to a local villager that I interviewed, he has seen stone structures buried in the mangrove swamps further up the Limbang River [Haji Jungal, 1994]. Since I informed my colleagues at the Sarawak Museum in Kuching about this latest finding, they have visited the site several times and proposed to the state government that they should gazette the site as a historical site under the Sarawak Antiquities and Treasure Trove Act [pers. com. Datan, 1994]. Another long term proposal is a joint project between the Brunei Museum and the Sarawak Museum Departments to explore and excavate these two important sites. Meanwhile, I have gathered a

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3 The Tanjong Batu assemblage are dominated by Yueh wares of the Sung Dynasty.

substantial number of ceramic shards from Terusan Kupang during my field research at the site which I will present in this Chapter below.

I have a strong belief that the location of P'o-ni is somewhere around Brunei Bay, rather than in the Sarawak River Delta. My arguments are based on the fact that substantial numbers of Sung wares have been collected in Brunei over the last fifteen years. The location is, however, not static, but it keeps on moving from one place to another. This is due to a lot of factors, such as the discovery of a new place of more strategic importance, for either economic or defensive reasons; the shifting of political and economic fortunes of the hinterlands they served and so on. This has been a common phenomena in our societies since ancient times. This also happened to Brunei, when in the late seventeenth century, Kota Batu, the country's old capital, was abandoned for a new place named Bandar Brunei. It became the new capital and since 1970 the name has changed to Bandar Seri Begawan. It is about ten kilometres down the Brunei River and about eighteenth kilometres from the open sea. Geographically, it is far from the South China Sea, but strategically, the new capital is more secure against enemy threat, especially pirates. There is also a large area of flat land around the new capital, essential for farming and new settlements[4].

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4 Traditionally, Brunei Town and settlements were built on stilts over the shallow of the Brunei River [see, Ch. 2 footnote 1]. Nowadays, there are still about 30,000 inhabitants living on the water village. The land sides used to be inhabited by the *Kedayans,* usually on the fringe between the water village and their settlements. Further into the interior are inhabited by other indigenous societies, such as the *Dusun, Murut, Penan* and *Dayak.* Both Kedayan and Dusun are Brunei's Malay indigenous groups, which include Brunei, Tutong, Belait, Bisaya and Murut. These distributions might have influenced in the spreading of Islam to Brunei [see ch. 2 footnote 3]. Only Malays and Kedayans are Muslims, while the other indigenous societies are pagan, although in recent years some have converted to Islam or Christianity.

The Santubong site is, without any doubt, one of the most important archaeological sites in the southwestern part of Borneo. It is, however, a polity of its own, rather than connected to the northeastern part of Borneo. Moreover, the distances between the two areas are more than one thousand kilometres apart [Franke and Ch'en, 1973: 91], quite a distance during this time. The success of Santubong is due to its rich hinterlands which abound with jungle and exotic products, such as camphor, rattan, resin and so on. These have attracted foreign merchants to come to the port to establish trade links as early as the tenth century A.D. The presence of iron ore at the site also contributed to its growth and prosperity. The evidence of a large amount of iron slag remains at the site have suggested the existence of some kind of iron-smelting industry. Dr. Cheng Te-K'un [1969: 20-1] believed that it was opened by the Chinese for the home market. Large quantities of archaeological materials have also been found at the site, ranging from Chinese ceramics of late T'ang to Sung wares dated from the tenth to the thirteenth centuries A.D., earthenware shards, glass beads, bangles and Hindu images.

However, during the Yuan Dynasty of the thirteenth century, Santubong began to decline in importance. Archaeologically, no Yuan or Ming ceramics were found while large quantities of late T'ang and Sung wares of the late tenth to thirteenth centuries A.D. were. Cheng Te-K'un believed that this was probably due to a state of turmoil in China during the early part of the Yuan period which greatly affected China's overseas trade, including Santubong [ibid: 22]. Tom Harrisson [1958], on the other hand, believed that this was caused by the shifting of power and the recentralisation of trade to Brunei on the northeastern of Borneo. His argument was based on a 'Ming-gap theory' of no Ming ceramics were found in Santubong while Kota Batu at Brunei has much Ming ware. However, this theory has changed. Since his retirement, more and more archaeological sites have been excavated in Sarawak which produced a variety of Chinese ceramics, including Ming wares of the fifteenth century onwards. Some of these sites include Bukit Sadong, Nanga Kalaka, Tebing Tinggi and Muroh [Solheim, 1973; Chin, 1977]. I will discuss some of these sites later on in this chapter.

The discoveries of these new archaeological sites indicate that the southwestern part of Borneo was not deserted or abandoned as previously been thought. After Santubong, more ports, entrepots and feeder-points emerged as been attested by archaeological discoveries at the above-mentioned sites. However, these new ports or entrepots were not as important as the Santubong port. Archaeologically, not much Oriental ceramic remains were discovered compared to the vast amount in Santubong. Nevertheless, their emergence has shown how this part of the region tried to maintain their former status as the leading port of the region. However, the area gradually began to lose its importance when a new port began to emerge on the northeastern part of Borneo. The new port is P'o-ni, Brunei's predecessor.

The success of P'o-ni is due to its ability to provide better facilities for trade as well as the ability to supply a variety of jungle and exotic products in the foreign market. In addition to this, it is strategically well located on the northeastern part of Borneo, very near to the southern Chinese coastal ports. All these factors contributed to the growth of P'o-ni as an important trading port in the South seas. Despite ups and downs since her emergence in the late tenth century, she remained in control in the northern part of the region [see chapter 2]. Nevertheless, in order to survive, she had to move from time to time, as archaeologically demonstrated at Terusan Kupang and Kota Batu, which I will discuss later on in this chapter.

In north Borneo of Sabah, less Chinese and other Oriental ceramics were found than in the two regions mentioned earlier. This is especially true of the late T'ang and Sung ceramics of the tenth and twelfth centuries A.D. Tom and Barbara Harrisson [1969-70: 216] believed that the distribution of these ceramics was limited to northwestern Borneo of Sarawak up to Brunei Bay of Brunei. However, during the Ming Dynasty, there is an appreciable change in the tempo of ceramic imports when Ming ceramics were discovered at several sites in Sabah such as at Suluk Caves, Agop Budgado, Mandag Awan, Sipit Cave, and many other smaller sites [ibid: 222]. The wares included

monochrome, Blue-and-White, as well as monochrome and painted wares from the Sawankhalok and Sukothai kilns of ancient Thailand.

However, unlike the Brunei sites, the Sabah collections represent heavier, coarser and much simpler forms. Small or delicate cups, plates and saucers, cover boxes and jars, bottle and ewers that were common at Kota Batu site are lacking. On this basis, Harrisson believed that "the limited range in Sabah may have been the way in which Ming barter trade operated; the probability that finer, more attractive pieces became exhausted in principal trading stations where the main traders anchored, and where the population included prosperous aristocrats and residents with high status. As a result the bulk of cruder, simpler wares were carried away on lesser vessels and carriers, further along their way up the coasts, rivers, and into the mountains" [ibid: 222]. Furthermore, in order for these ceramics to survive the long journeys into the remote highland regions, the ceramics need to be heavy, strong and simple forms. This may explain why most of export ceramics found in the remote longhouses of Borneo are large jars. Because of their difficulty reaching this part of the region, it may also contributed to their high value and significance among the Borneon natives.

4.2 Northern and northwestern Borneo sites in relation to Oriental trade ceramics

Before going into detail about the Brunei archaeological sites of Kota Batu, Pulau Chermin and Terusan Kupang, I would like to discuss briefly the main archaeological sites within the northern and northwestern part of Borneo, in particular those sites which are of the same cultural context as Brunei. The main points to be highlighted are types of Oriental trade ceramics found at these sites and their periods. This is a very useful reference since all these sites are very similar to the three Brunei sites that are to be discussed later.

4.2.1 The Sarawak River Delta of Santubong

The site was first excavated in 1948 under the direction of Tom Harrisson. It was a large site, scattered over an area of no less than sixteen kilometres. The sites include Sungai Jaong, Bongkisam, Bukit Maras, Sungai Buah, Tanjong Kubor and Tanjong Tegok [Te-K'un, 1969; Harrisson, T., 1970:22-4; Harrisson, T. and O'Connor, 1968]. These sites are very rich in archaeological remains, such as export ceramics, earthenware shards, tons of iron slag and crucibles, glass beads, metal objects, and Hindu religious deities and symbols. Among these materials, export ceramics are one of the largest materials collected, with more than tens of thousands of piece. They include a variety of types, such as White wares, Yueh wares, Lung-Chuan wares, Temmoku wares, Green glazed wares, Ting wares, T'zu-Chou wares and Chun wares of Chekiang, Kiangsi, Fujian and Guangdong Provinces [Te-K'un, 1969; Chin, 1977; Lim, 1987: 78]. There are also numerous stoneware jars and earthenware shards found throughout these sites, and some of them are very similar to the Terusan Kupang types [see Chapter 7]. The ceramics are dated from the late T'ang to Sung Dynasties of the late tenth to thirteenth centuries A.D. They are, however, dominated by Sung ware types, similar to the Terusan Kupang site assemblage. Only a small number of late T'ang wares were found, indicating that the site might have been developed during the late T'ang or perhaps during the early Sung Dynasty, when the T'ang ceramics were still in use.

The discovery of Hindu/Buddhish Tantric Shrine and other religious objects at Bongkisam and Bukit Maras may indicate the presence of Indian influence in this northwestern part of Borneo. The influence might have been brought in by the Indianized kingdom of Srivijaya centred at the Palembang area of Sumatra. The influence might also have been brought in via Sambas, on the western coast of Kalimantan, which was located very near to Santubong [see above].

4.2.2 Gedong

Located about 40 miles from the Sarawak River Delta sites and some 56 miles inland from the South China Sea. This is a new site excavated after the Tom Harrisson period. A large quantity of ceramics of the same types, provenance and antiquity as those excavated in the Sarawak River Delta sites were recovered [Chin, 1977: 4]. The materials included are coarse stoneware jars, White wares, Celadons, Yueh types, Temmoku, Green glazed wares and T'zu Chou wares. Like the River Delta sites, there was a total absence of any Ming, Thai or Vietnamese element at this site. The site is also very similar to the Terusan Kupang assemblage.

4.2.3 Bukit Sadong

Another important site in the post-Harrisson eras is located on a hill along the left-hand side of Sungai Merbau, a tributary of Batang Krang and about 18 miles upriver of Gedong. About 30,000 ceramic shards have been recovered at the site and consist of White wares, Yueh types, celadons and green-glazed wares. A total of 1,896 Blue-and-White shards were also discovered and they account for 6.2% of the total excavated ceramic material. These wares were associated with 143 Thai ceramics of Sawankhalok types and constitute 0.5%of the total excavated material. They were dated from the sixteenth and seventeenth centuries A.D. [ibid: 4]. The site is dated Ming period of the fifteenth century onwards.

Other important sites are Nanga Kalaka, Tebing Tinggi and Muroh. Ten of thousands of ceramic shards were excavated which include Yueh types, celadons, T'zu-chou wares, green-glazed wares, Blue-and-White wares, stoneware shards, Thai wares of Sawankhalok types and Vietnamese wares. Their dates range from the sixteenth to seventeenth centuries A.D. [ibid: 5,6].

4.2.4 Limbang sites

Limbang Division is located very near to Bandar Seri Begawan, the capital of Brunei. The district is the last territory lost to Rajah Brooke, the first white Rajah of Sarawak in 1890. Compared to the northwestern part of Sarawak, not much archaeological research has been carried out in this district. The reason is its location far from Kuching, the administration centre of Sarawak. The district is, however, part of an important historical and archaeological site in Sarawak. In 1921, for example, a hoard of gold "Indian" ornaments and the *Ganesa,* the elephant-headed god was found at the site of the Residency at Bukit Mas [Harrisson, T., 1949, 1969]. The site is strategically located on top of Bukit Mas, overlooking the Limbang River. Since then, no more research has been carried out, despite its archaeological importance.

A few kilometres down the Limbang River at a place named Kampong Buang Abai, a stupa sandstone tomb was found. The tomb was very similar to the one found at the Dagang cemetery in Bandar Seri Begawan, Brunei. It was about one metre high and engraved in the script of a southern alphabet with some affinity to Grantha Indian and assignable to about the sixth century A.D. [Jibah, 1982: 19-36]. Professor J.C. Wright of S.O.A.S., London University translated the inscriptions: "From lack of knowledge is accumulated Karma. Karma is the cause of Rebirth" [ibid].

Another important site is Kampong Jai-Jai, about ten kilometres from Limbang town and a few kilometres from Bandar Seri Begawan, Brunei. I have mentioned this site earlier in this Chapter in relation to Terusan Kupang site of Brunei [see above]. The ceramics are very similar to the Terusan Kupang assemblage, which are dominated by Sung wares of Yueh and Lung-Chuan types dated from the tenth to the thirteenth centuries A.D. No archaeological excavation has yet been carried out at the site, although several inspections have been made by the Sarawak Museum staff. Some of the ceramic shards found at this site are displayed at the Limbang Museum.

4.2.5 Northern Borneo of Sabah

Sabah, formerly known as British North Borneo, has an area of 29,000 square miles. Despite its huge size, the country has few archaeological remains, in particular early export ceramics of the late T'ang and early Sung of the tenth to twelfth centuries A.D. are rare. However, this pattern changes after the Ming period of the middle fourteenth century A.D. when more Chinese and other Oriental ceramics were found in Sabah. They were found mostly on the offshore islands, along the coast and the rivers and in the caves. This indicated that trade activity only began to reach this region from the Ming Dynasty onwards. This period coincided with the opening of the Eastern Trade Route in the thirteenth century which opened up the eastern part of island Southeast Asia to Chinese merchants. Sabah which was located right on this passage route might have encouraged traders to come to its land. Another possibility is that these sites functioned as feeder points to Kota Batu. This resulted in a constant interaction between the two regions, not only in terms of raw materials but also in export products including export ceramics.

Historically, there is no written Chinese record about Sabah, although the local folklore tells of Chinese influence as early as the fourteenth century. It was widely believed among the local communities that Kinabatangan River, the largest river in Sabah, derives its name from *batang* (river) and *Kina* (China). Similarly, Sabah's dominant mountain and the highest in Southeast Asia, mount Kinabalu, derives its name from a fusion of the native term with a derivative of the word *China* [Harrisson & Harrisson, 1969-70: 25]. In the Arab sources of *Geography* Ibn Said of the thirteenth century mentions of "the island of Tawaran where comes camphor." Robert Nichol [1979: 68] believed that Tawaran can hardly be other than Tuaran of Sabah.

Among the earliest known sites in Sabah with evidence of export ceramics are Lobang Tingalan in the Baturong massif. The ceramics are of the Sung types, in particular green-glazed wares, and coarse stonewares. This is the only site in Sabah bearing

imported stoneware and porcelain where a Sung date may be indicated [Harrisson & Harrisson, 1969-70].

There are numerous sites of the Ming period beginning from the fifteenth century onwards. Nine sites were recovered by Harrisson in 1969-70, namely, Suluk Caves, Agop Budgado, Mandag Awan, Samang Itay, Bagdapo, Sipit Cave, Pusu Samang Alag, Eno Island and near the Panampang site [ibid: 222]. Two more sites were recorded in the 1980's by Dr. Peter Bellwood, namely, Baturong and Madai cave of northeastern Sabah [1988: 231-4]. All sites bore Chinese ceramics of Blue-and-White types, White wares, brown, buff and black monochromes, glazed stonewares, Thai wares of Sawankhalok and Sukothai types and Vietnamese wares.

4.3 Brunei Bay sites

Brunei Bay, located at the northeastern end of Brunei, is one of the largest bays on the coast of north Borneo. It is about 48 kilometers wide from east to west and 23 kilometers from north to south [see fig. 6; chapter 1]. It is strategically located facing the South China Sea and sheltered from the strong monsoon winds. Behind the bay rises a formidable forest hinterland, source of many jungle and exotic products, in high demand in the international markets. The bay is also connected by a series of river tributaries, all derived from the Brunei River system. All these factors played a significant role in the establishment of ports and harbours around every corner of the bay since the earliest time. Numerous important archaeological and historical sites both in Brunei and Sarawak are centred around the Bay from the late T'ang of the tenth century A.D. onwards. The sites in Brunei include Garang, Tanjong Batu, Pulau Chermin, Terusan Kupang, Butir, Junjongan, Kampong Delitan, Kota Batu, Gedong Batu, Dagang[5] and Rangås

5 Dagang Cemetery is located in the heart of Bandar Seri Begawan, the capital of Brunei, where a variety of foreign tombstones are found. Among the interesting ones is a stupa tombstone with Sanskrit inscriptions, a Bugis and a Acheh inscriptions tombstones. The cemetery is perhaps reserved for foreigners who died in Brunei, because the name *Dagang* itself derives from a Brunei word,

cemeteries, Kiulap, Gadong and Kilanas. On the Malaysian site, they include Kampong Jai-Jai, Limbang Town (Bukit Mas) and Kampong Buang Abai. Some of these sites are located far from the bay, but they are all derived from the Brunei river tributaries, such as the Mendaun River of Terusan Kupang and Butir sites; the Jai-Jai River of Jai-Jai site; the Kedayan River of Rangas and Kiulap sites, and the Limbang River of Limbang Town and Kampong Buang Abai sites.

For this study, I will only concentrate on three of the above Bruneian sites, namely, Kota Batu, Pulau Chermin and Terusan Kupang. I will discuss the site locations, previous research and the data I collected at these sites. From the data, I will try to tackle the question of P'o-ni, which I believe is located around Brunei Bay.

4.3.1 Terusan Kupang

The site of Terusan Kupang is located in Kampong (village) Kupang in the Brunei/Muara District, about five kilometers upriver from Bandar Seri Begawan [see fig. 6; 7 a & b]. Kampong Kupang is combined with two adjacent Kampongs of Putat and Kasat to form a large *Mukim*[7], named Mukim Kasat [Omar, 1981: 7]. On the other side of Terusan Kupang is the Malaysian territory of Kampong Jai-Jai of Limbang Division. The two villages are separated only by a political land boundary with Brunei in one side and Malaysia on the other side. However, in many respects, the two villages share common cultural and social traits. Most communities on both sides include relatives.

According to Awang Haji Junggal [1994], the village was formally inhabited by the *Murut* tribes before they retreated further down the river to the Temburong District

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meaning alone, without relatives and usually applied to foreigners. It also means traders.

6 Rangas is a cemetery where a Chinese tombstone with the name Mr. Pu of 1264 is located [see chapter 2].

7 Mukim is a cluster of villages under the headmanship of a *Penghulu*.

and to the Lawas and Terusan areas of Sarawak. The Malay came to the village only about 150 years ago. According to him the name of the village was derived from a tree named *Kupang*. The name Terusan came later, perhaps to differentiate it with another village by the same name in the Tutong District. Terusan here means canal, channel or river. Could this mean that Terusan Kupang is the place described by Pigafetta in the sixteenth century as "a huge village over the water inhabited by pagans?" [Nicholl, 1990: 11; Harrisson, T, 1976: 83]. Or, could it be the centre of Brunei before the coming of Islam to Kota Batu? I am not going to discuss these questions because it is outside of my study. Nevertheless, I raise the issues for future research.

The present Kampong Kupang is a small village which covers an area of about four hectares on the bank of the Mendaun River, a tributary of the Brunei River [see fig. 7 a & b]. The village is reached easily by river and the motor boat is the most common form of transport. It can also be reached by land, but it takes about 30 minutes to reach the village compared to just 10 minutes by the motor boat.

The Terusan Kupang site was brought to the attention of the Brunei Museum late in 1974 when a few shards of Chinese stonewares and porcelains, together with earthenwares of local manufacture were collected and handed over to the Museum by a staff member. This was immediately followed with a visit by a Museum party and a rescue collection has since been carried out on the site. Up to the middle of 1977 more than ten thousand fragments of ceramic were collected from a stretch of riverbank only 40-50 metres long. The quantity that has been collected so far represents only a small percentage of the ceramics visible [Omar, 1981: 7].

In late 1977 and early 1978, the site was excavated for the first time by members of the Archaeology Section of the Brunei Museum. Three small trenches were laid out in areas specified by the villagers after difficult negotiations [ibid: 7]. Trench K I was measured 4.5 X 1.5 metres, trench K II was measured 4 X 1.5 metres, and trench K III was measured 4 X 1.5 metres [ibid: 9, 12]. Though the trenches were specified by the

villagers and archaeologically not in a very good location, the teams recovered a total of 4,891 ceramic shards, which consist of 2,562 pieces (52.4%) of local earthenware and 2,329 pieces (47.6%) of export wares. The export wares were dominated by Sung wares dating from the late tenth to thirteenth centuries A.D. These were classified into seven categories; White wares, Yueh types, Celadon wares, Temmoku types, Green glazed wares, T'zu Chou types, coarse stonewares and miscellaneous which include post-Yuan wares, Siamese and European wares [ibid: 34].

Since the 1970's, the site has been closely monitored by the Brunei Museum Department. More rescue explorations have been conducted and tens of thousands of ceramic shards have been collected. Like the previous collections, they are dominated by Sung type wares dated to the tenth to thirteenth century A.D. However, no archaeological excavations have been conducted because of the difficulty getting permission from the village communities. Since the site is located near to the Jai-Jai site, several visits were also made to the site with the aim of making a comparative study between the two sites. Based on these observations, it could be said that the Malaysian site is more substantial and richer in its archaeological remains, in particular export ceramics. They were widely dispersed along the river bank and into the mangrove swamps and beyond. The two sites are, however, of the same cultural context and assemblage. This indicates that both sites at one time were united under one large territory and with one central ruler. It is only at the end of the last century these regions were sperated by the political boundary of Malaysia on one side and Brunei on the other.

Recent research was conducted at the site in May to June 1995, under my own supervision. The aim of this research was to collect a new data base primarily for this study. However, no archaeological excavation was made due to the problem mentioned earlier. Surface collection was the only means of collection of ceramic shards and other archaeological materials. Even this too was not an easy task because the site is so low that much of it is under water. This is due to continuous erosion of the site by wave action

created by motor boats that pass along Mendaun River, an important route linking Bandar Seri Begawan with the Temburong District and Limbang in Sarawak. Erosion is worsened by seasonal high tides that may flood the village and wash away soil. Surface collections therefore had to be carried out during low tides, particularly during a maximum low tide[8]. My research at the site coincided with a minimum low tide. Surface collections were conducted near to the river bank, leaving the rich ceramic concentrations in the river largely untouched. This has greatly affected my effort to collect as many ceramic shards as I could.

4.3.1.1 The Present data: Methodology

Surface collections were made along 40 to 50 metres of the Medaun River [see fig. 7 b]. For better recording, grid boxes were laid along the river bank, each box measured 10 X 10 metres and was named in alphabetical order. Only three boxes were workable, TK. G, TK. H and TK. J. Only half of these boxes were explored and the other half submerged under the water. Working time was also influenced by the tides and confined to only a few hours a day. In three days field work 516 ceramic shards were collected, representing less than 5% of the three boxes or less than 1% of the whole of Terusan Kupang site.

Apart from the above collections, I also use selected ceramic shards that I gathered on the dry-land site of Terusan Kupang. However, no recording was taken and only selected shards were collected. They include rare, big or half complete pieces and with beautiful design motifs. Small and common shards are often large but they were left untouched. In total, 28 ceramic shards were collected, all of which were export ceramics.

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8 The tides in Brunei water have a large diurnal component and are classified as diurnal tides. During neap tides, the semi-diurnal components of the tides are more apparent, and two high and low tides per day are observed. The heights of both the high and low tides are not the same, but diurnal differences resulted in a higher high and a lower low tide [Brunei Museum, 1989: 12].

I also use the ceramic shards collected by my colleagues at the same site on the 21st. and 22nd. January 1995, when they organised two days surface collections during the maximum low tide. Ceramics from two boxes were gathered, namely, TK. E and TK. G. The TK. G box is the box of my own collections as mentioned earlier. The collected materials were not representative. Only interesting, half complete and rare beautifully designed motif shards were collected. Furthermore, only visible shards were collected, leaving the others buried and undisturbed. A total of 793 ceramic shards was collected as shown in table 1.

4.3.1.2 Analysis of ceramic shards

There are two shard types found at Terusan Kupang, local earthenwares and export wares. The former have soft earthenware bodies, and the latter are of stoneware and have porcellaneous bodies. This chapter will deal only with the latter wares, while earthenware shards are to be discussed in Chapters 7.

The combined ceramic collection from the three collecting events described above totals 1,364 pieces and is composed of eleven types, celadon wares, Lung-Chuan wares, Yueh wares, white wares, green glazed wares, temmoku wares, coarse stonewares, Blue-and-White wares, earthenwares, European wares and unidentified wares. The ceramics from trench TK. G are from the two different working groups of my own collections of 233 pieces and my colleagues collections of 410 pieces. Their classifications are shown in table 1 and 2.

Table 1: Total ceramic shards collected from Terusan Kupang surface collections

TRENCH	EXPORT CERAMICS	EARTHENWARES	TOTAL
TK. E	366 pc. (95.6%)	17 pc. (4.4%)	**383 pc.**
%	28%	29.3%	**28.1%**
TK. G	614 pc. (95.5%)	29 pc. (4.5%)	**643 pc.**
%	47%	50%	**47.1%**
TK. H	124 pcs. (93.2%)	9 pc. (6.8%)	**133 pc.**
%	9.5%	15.5%	**9.7%**
TK. J	174 pc. (98.3%)	3 pc. (1.7%)	**177 pc.**
%	13.3%	5.2%	**13%**
ON-LAND COLLECTIONS	28 pc. (100%)	0	**28 pc.**
%	2.1%	0%	**2.1%**
TOTAL	**1,306 pc. (95.7%)**	**58 pc. (4.3%)**	**1,364 pc.**

Table 1 shows that export ceramics dominate the overall collections by 95.7% to 4.3% to local earthenwares. Trench TK. G has the highest total ceramic collection with 47.1%, followed by TK. E, 28.1%, TK. J, 13%, TK. H, 9.7% and on-land collections, 2.1%. Export ceramics also dominate the collections from the individual trench. The highest of which is on land collections by 100%, followed by trench TK. J by 98.3% to 1.7%, TK. E by 95.6% to 4.4%; TK. G by 95.5% to 4.5%, and TK. H by 93.2% to 6.8%. The reason for this big difference is probably the rapid decay of earthenware shards found in the waterlogged environment compared to stonewares or porcelains. This statement is based on evidence from the excavations at the same site by Matussin Omar in 1977/78. The excavations recovered a total of 2,562 or 52.4% of local earthenwares, in contrast to just 2,329 or 47.6% of export wares [1981: 34; see chapter 7]. More than 90% of these ceramics are of the Sung and Yuan periods of the tenth to thirteenth centuries, and the rest are of the later period of the Ming to Ch'ing periods from the fourteenth to eighteenth centuries A.D. Some European ceramics were also recovered and dated to the nineteenth century.

Table 2: Types of Export ceramics found at Terusan Kupang

TR	CL	LC	YH	WHT	GRN	TEM	STW	BW	ETH	EUR	UN	TOT
E	48 pc. 12.5%	0	52 pc 13.6%	33 pc 8.6%	5 pc. 1.3%	13 pc 3.4%	212 55.4%	0	17 pc 4.4%	3 Pc. 0.8%	0	**383 pc 100%**
	15.5%	0%	86.7%	34.4%	71.4%	34.2%	31.8%	0%	29.3%	100%	0%	
G	120 pc 18.7%	32 pc 5%	73 pc. 11.4%	46 pc. 7.2%	5 pc. 0.8%	19 pc 15.5%	314 48.8%	1 pc. 0.2%	29 pc 4.5%	0	4 pc. 0.6%	**643 pc 47.1%**
	38.7%	53.3%	60.8%	48%	71.4%	50%	47.1%	50%	50%	0%	100%	
H	38 pc. 28.6%	18 pc 13.5%	7 pc. 5.3%	5 pc. 3.8%	3 pc. 2.3%	0	53 pc 39.8%	0	9 pc. 6.8%	0	0	**133 pc 9.8%**
	12.3%	30%	5.8%	5.2%	42.9%	0%	8%	0%	15.5%	0%	0%	
J	50 pc. 28.2%	34 pc 19.2%	1 pc 0.6%	8 pc. 4.5%	2 pc. 1.1%	6 pc. 3.4%	73 pc 41.2%	0	3 pc. 1.7%	0	0	**177 pc 13%**
	16.1%	56.7%	0.8%	8.3%	28.6%	15.8%	11%	0%	5.2%	0%	0%	
OLC	11 pc. 39.3%	8 pc. 28.6%	0	4 pc. 14.3%	1 pc 3.6%	0	3 pc. 10.7%	1 pc 3.6%	0	0	0	**28 pc. 2.1%**
	3.5%	13.3%	0%	4.2%	14.3%	0%	0.5%	50%	0%	0%	0%	
TOT	**267 pc**	**92 pc**	**133 pc**	**96 pc.**	**16 pc**	**38 pc**	**655**	**2 pc.**	**58 pc**	**3 pc.**	**4 pc.**	**1364**
%	**19.6%**	**6.7%**	**9.8%**	**7%**	**1.2%**	**2.8%**	**48%**	**0.1%**	**4.3%**	**0.2%**	**0.3%**	**100%**

Key:- TR: Trench; CL: Celadon; LC: Lung-Chuan; YH: Yueh; WHT: White wares; GRN: Green Glazed wares; TEM: Temmoku wares; STW: Stonewares; BW: Blue-and-White wares; ETH: Earthenwares; EUR: European wares; UN: Unidentified wares; OLC: On-land Collections; TOT: Total; pc.: pieces.

Table 2 shows that stoneware shards dominate the overall collections by 48% or 655 pieces, followed by porcelains, 47.9% or 654 pieces, and earthenwares, 4.1% or 58 pieces. Most of the porcelain shards are dated to the Sung period from the tenth to thirteenth centuries A.D.; some Ming, Ch'ing and European wares dated from the fifteenth and nineteenth centuries A.D. They were dominated by celadon types, 19.6% or 267 pieces, followed by Yueh wares, 9.8% or 133 pieces; White wares, 7% or 96 pieces; Lung-Chuan wares, 6.7% or 92 pieces; Temmoku wares, 2.8% or 38 pieces; Green glazed wares, 1.2% or 16 pieces; European wares, 0.2% or 3 pieces, and Blue-and-White ware, 0.1% or 2 pieces. Four other shards (0.3%) were too worn to identify. Similarly, coarse stonewares were mostly dated to the Sung to Yuan periods [Omar, 1981: 34] of the late tenth to thirteenth centuries. Some pieces were, however, dated post

Yuan period after 1368 A.D. They range from Ming to Ch'ing periods, and some pieces perhaps originated from the Thai kilns and dated from the fifteenth century onwards [see chapter 5 and 6].

Table 3 a: Forms of export ceramics found at Terusan Kupang**

TRH.	BASE	BODY	RIM	RIM/BASE	SPOUT/HANDLE/LID	TOTAL
G	93 pc. 42.7 %	30 pc. 13.8%	75 pc. 34.4%	4 pc. 1.8%	16 pc. 7.3%	**218 pc.**
	40.4%	34.5%	43.4%	17.4%	51.6%	**40.1%**
H	33 pc. 26.6%	28 pc. 22.6%	52 Pc. 42%	5 pc. 4%	6 pc. 4.8%	**124 pc.**
	14.3%	32.2%	30.1%	21.7%	19.4%	**22.8%**
J	93 pc. 53.4%	28 pc. 16.1%	41 pc. 23.6%	3 pc. 1.7%	9 pc. 5.2%	**174 pc.**
	40.4%	32.2%	23.7%	13%	29%	**32%**
OLC	11 pc. 39.3%	1 pc 3.6%	5 Pc. 17.9%	11 pc. 39.3%	0	**28 pc.**
	4.8%	1.1%	2.9%	47.8%		**5.1%**
TOT	**230 pc. 42.3%**	**87 pc. 16%**	**173 pc. 31.8 %**	**23 pc. 4.2%**	**31 Pc. 5.7 %**	**544 pc. 100%**

** Excluding ceramics collected by my my colleagues at trench TK. E and TK. G
KEY: TRH: Trench; TOT: Total; pc.: pieces.

Table 3a shows that the base parts dominate the overall collection by 42.3%, followed by the rims by 31.8%, the bodies 16%, the spouts/handles/lids 5.7% and the rims/bases by 4.2%. Their classifications in according to their types are as follows (table 3 b, c, d, e and f).

Table 3 b: Base parts from Terusan Kupang

- Celadon types 85 pieces (TK. G: 37, TK. H: 14, TK. J: 30 and On-land: 4).
- Stonewares 60 pieces (TK. G: 18, TK. H: 14, TK. J: 27 and On-land: 1).
- Lung-Chuan wares 54 pieces (TK. G: 22, TK. H: 3, TK. J: 25, and On-land: 4).
- White wares 15 pieces (TK. G: 7, TK. H: 1, TK. J: 5, and On-land: 2).
- Yueh wares 6 pieces (all from trench TK. G).
- Temmoku wares 6 pieces (TK. G: 2, and TK. J: 4).
- Green Glazed wares 4 pieces (TK. G: 1, TK. H: 1 and TK. J: 2).

Table 3 c: Body parts from Terusan Kupang

- Stonewares 60 pieces (TK. G: 18, TK. H: 21 and TK. J: 21).
- Celadon types 10 pieces (TK. G: 4, TK. H: 2, TK. J: 3 and On-land: 1).
- Yueh wares 5 pieces (TK. G: 2 and TK. H: 3).
- White wares 5 pieces (TK. G: 2, and TK. J: 3).
- Green Glazed wares 4 pieces (TK. G: 3, and TK. H: 1).
- Temmoku wares 2 pieces (TK. J).
- Lung-Chuan wares (TK. H: 1)
- Blue-and-White wares (TK. G: 1).

Table 3 d: Rim parts from Terusan Kupang

- Stonewares 90 pieces (TK. G: 52, TK. H: 18, TK. J: 18, and On-land: 2).
- Celadon types 36 pieces (TK. G: 6, TK. H: 16, and TK. J: 14).
- Lung-Chuan wares 29 pieces (TK. G: 8, TK. H: 11, TK. J: 9, and On-land: 1).
- Yueh wares 7 pieces (TK. G: 4, and TK. H: 3).
- White wares 7 pieces (G: 3, H: 3, and On-land: 1).
- Temmoku wares (TK. G: 1).

Table 3 e: Rim/Base parts from Terusan Kupang

- Celadon types 11 pieces (TK. H: 2, TK. J: 3, and On-land: 6).
- Lung-Chuan wares 8 pieces (TK. G: 2, TK. H: 3, and On-land: 3).
- White wares 3 pieces (TK. G: 2, and On-land: 1).
- Blue-and-White ware 1 piece from the On-land surface collections.

Table 3 f: Spout/Handle/lid parts from Terusan Kupang

- Stonewares 20 pieces (TK. G: 13, and TK. J: 7).
- Celadon type 6 pieces (TK. G: 2, and TK. H: 4).
- Yueh wares 3 pieces (TK. G: 1, TK. H: 1, and TK. J: 1).
- White wares 2 pieces (TK. H: 1, and TK. J: 1).

A variety of vessel shapes are identified through these body forms. The porcelain wares are dominated by bowls, while stonewares are dominated by jars. Other common shapes are plates, jarlets, saucers, cover boxes, ewers, and incense burners [see table 4]. All the identifications combine shards from all three collection events.

Table 4 shows that most of the ceramics consist of household materials, especially kitchen utensils. The highest collections are jars by 48.5%, followed by bowls 40.4%, and so on. Jars are always made of stoneware bodies, some with glazes and design motifs, while some others are plain, with coarse bodies. There are a variety of glazes, brown, blackish-brown, ochre, greenish-brown and olive. There are also a variety of types. Most common are the *martaban* types also known as dragon jars. Some are in the kendi form and others are cylinder jars, common in Vietnam. Most originate in China but some are from other Southeast Asian ceramic centres in Vietnam and Thailand. Their dates are mostly from the ninth to the fourteenth, but are as recent as the eighteenth century A.D.[see chapter 5]. The abundance of jars show their importance in the social functions of the local communities. They might be used as liquid and food containers, or for food processing, preservation and pickling.

Table 4: Types of vessel shapes from Terusan Kupang

TRH	Bowls	plates	saucers	I. burner	jars	basins	jarlets	ewers	C. box	unid.	Total
E	123 pc 33.6%	3 pc 0.8%	0	0	197 53.8%	12 pc 3.3%	4 pc 1.1%	2 pc 0.5%	9 pc 2.5%	16 pc 4.4%	**366**
	23.3%	25%	0%	0%	31.1%	54.5%	9.3%	33.3%	42.9%	64%	**28%**
G	251 pc 40.9%	3 pc 0.5%	6 pc 1%	0	309 50.3%	9 pc 1.5%	18 pc 3%	3 pc 0.5%	7 pc 1.1%	8 pc 1.3%	**614**
	47.5%	25%	50%	0%	48.8%	41%	41.9%	50%	33.3%	32%	**47%**
H	55 pc 44.4%	2 pc 1.6%	4 pc 3.2%	0	53 pc 42.7%	0	8 pc 6.5%	0	2 pc 1.6%	0	**124**
	10.4%	16.7%	33.3%	0%	8.4%	0%	18.6%	0%	9.5%	0%	**9.5%**
J	81 pc 46.6%	3 pc 1.7%	0	3 pc 1.7%	71 pc 40.8%	0	11 pc 6.3%	1 pc 0.6%	3 pc 1.7%	1 pc 0.6%	**174**
	15.3%	25%	0%	75%	11.2%	0%	25.6%	16.7%	14.3%	4%	**13.3%**
OLC	18 pc 64.3%	1 pc 3.6%	2 pc 7.1%	1 pc 3.6%	3 pc 10.7%	1 pc 10.7%	2 pc 7.1%	0	0	0	**28**
	3.3%	8.3%	16.7%	25%	0.5%	4.5%	4.7%	0%	0%	0%	**2.1%**
TOT	**528 pc**	**12 pc**	**12 pc**	**4 pc**	**633**	**22 pc**	**43 pc**	**6 pc**	**21 pc**	**25 pc**	**1306**
	40.4%	**0.9%**	**0.9%**	**0.3%**	**48.5%**	**1.7%**	**3.3%**	**0.5%**	**1.6%**	**2%**	**100%**

The abundance of kitchen utensils shows the importance of such materials among the communities. This clearly demonstrates the eating and drinking habits of the locals. Like the present day, large plates are normally used to serve rice, while small plates and bowls are used to serve fish, vegetables or soups. The presence of ewers, small bowls and saucers may possibly be associated with tea drinking which was perhaps introduced into the societies at the time pouring vessels were brought in large numbers. Unlike jars, these vessels are always of porcelain, and include celadon types, Lung-Chuan wares, white wares, and Yueh wares. Their dates are mostly from the late T'ang to Yuan Dynasties of the late tenth to the thirteenth centuries, but some are as recent as Ming and Ch'ing periods of the sixteenth to seventeenth centuries A.D.

Based on the statistics given, almost 90% of the ceramic shards date from the late T'ang to early Yuan period of the tenth to the thirteenth centuries A.D. This date corresponds to dates given by early scholars at around the late tenth to the thirteenth

centuries [for eg., Omar, 1981; Omar and Sharifudin, 1978; Omar and Bellwood, 1980; Morimoto, 1991; Aoyagi, 1992; Lim, 1987]. This date was further proven by radio carbon dating which was dated around A.D. 750-800 of late T'ang Dynasty [Omar, 1979: 75-7]. These dates are consistent with each other, and with the first Chinese account of P'o-ni in the tenth century A.D. On this basis, I argue that Terusan Kupang is an important site in Brunei, and is perhaps the important late tenth to thirteenth century port of P'o-ni, prior to its moves to Kota Batu at the beginning the fourteenth century. I will discuss this argument later on in this chapter.

4.3.2 Kota Batu

Kota Batu is located 5 kilometres from Bandar Seri Begawan, the capital of Brunei Darussalam [see fig.2 & 6]. It is an important archaeological site in Brunei, being the old capital of Brunei in the fourteenth to sixteenth centuries A.D. It is situated between two hill ridges, the Subok and the Berambang Hills. The site covers a large area, which can be divided into three main zones, the high terrain, foot slope and tidal flat [see fig. 8]. The high terrain is the hilly area or the strike ridge located north of Kota Batu, with the highest point reaching to 150 metres high. The foot slopes are narrow fringes along the base of the terrain with slopes ranging from 10 to 25 degrees. The tidal flat extends from the foot of the slope to the bank of the Brunei River [Brunei Museum, 1989: 12]. The zones have influenced the distribution of population of Kota Batu since the ancient time. The most populated region is the tidal flat, which even extended further to the shallow part of the Brunei River. In the middle zone, only a sparse population live, while the high terrain is uninhabited. It is densely forested and a source of rich jungle and exotic products. On the other side of the terrain is the Subok region, another important hinterland and source of a variety of jungle and exotic products. On the other side of Kota Batu, south of the Brunei River, is another vast area of hinterlands, the Berambang and the Lumapas regions. All these hinterlands provide a plentiful supply of products, essential for Kota Batu's survival as a trading kingdom.

"Kota Batu" is a Malay word for "a stone fort", which according to the Royal Genealogical Tablet of *Batu Tersilah* was built during the reign of Sultan Sharif Ali (1425-1432), the third Sultan of Brunei [Low, 1880: 3, 7]. Archaeological excavations at the site have shown that it was occupied as early as the tenth century as has been attested by T'ang coins discovered during the 1952/53 excavations [Harrisson & Harrisson, 1956]. During this early period, however, Kota Batu was only a small settlement and perhaps depended much on Terusan Kupang for its survival. The presence of a small amount of Sung ceramics of Terusan Kupang assemblage at the site may indicate inter-trade relations between the two sites in the past. During the Ming period, however, Kota Batu began to emerge as a powerful polity, replacing Terusan Kupang as a sole and dominant power on Brunei Bay. This account was supported by the presence of a large concentration of archaeological materials found at the site, especially Ming Blue-and-White shards and a variety of other Oriental ceramics such as Thai wares of Sawankhalok and Sukothai, Vietnamese wares, some Khmer and Japanese wares and Ch'ing wares dated from the fourteenth and seventeenth centuries A.D.

The background of archaeological activity at Kota Batu began in 1951 when Mr. Dennis Trumble, the State Treasurer at that time, collected a substantial number of Oriental ceramics of Sung celadon, Ming Blue-and-White wares, White wares and Thai wares of Sawankhalok and handed them over to the Sarawak Museum in Kuching for further studies [Harrisson & Harrisson, 1956: 286]. This was followed in 1952/53 by full scale archaeological excavations conducted by Tom Harrisson. The excavation discovered substantial numbers of archaeological materials, which included 45,000 fragments of local earthenware and 35,000 pieces are of export ceramics. These were dominated by Ming wares of Blue-and-White shards (57%), some Lung-Chuan wares, Thai wares of Sawankhalok and Sukothai and Vietnamese wares of the fourteenth to sixteenth centuries A.D. [ibid].

In 1968, 6,230 shards were collected at Kota Batu during a drainage project leading from the foot of the hillside down toward the river. They were collected from a

2 foot deep 2 X 400 foot long channel. The shards were consisted of three categories, earthenware, porcellaneous shards and stoneware. 4,141 of these shards were of porcellaneous types, which included celadons (731 pc. & 17.6%), White and grey wares (735 pc. & 17.7%), Browns, ochers and green glazed (58 pc. & 1.4%), Blue-and-White (2,394 pc. & 57.8%), polychromes (35 pc. & 0.8%), Vietnamese Blue-and-White (22 pc. & 0.5%) and Siamese mono-polychrome (166 pc. & 4%). Other shards were large, coarse stoneware jars (1,428 pc.), local earthenwares (221 pc.), shards of recent date (220 pc.) and indistinct shards (220 pc.) [Harrisson, B., 1970: 114-88].

In late 1978 and early 1979, rescue explorations were conducted at Kota Batu, south of the Brunei Museum. The site is to be reclaimed to build the proposed Malay Technology Museum. Only 28,214 shards were collected, leaving behind more ceramics to be buried for ever. This is due to both time constraints and lack of manpower. The report of the collections is not yet published, although they have been analyzed and catalogued. They were dominated by coarse stonewares (9,899 pc. or 35.1%), followed by Blue-and-White shards (8,515 pc. or 30.2%), local earthenwares (6,737 pc. or 23.8%), Thai wares (1,241 pc. or 4.4%), Celadon wares (947 pc. or 3.4%), Vietnamese wares (426 pc. or 1.5%) and Miscellaneous shards (449 pc. or 1.6%). These were dominated by Chinese ceramics of Ming related wares, some Lung-Chuan celadons of the Ming period, Thai and Vietnamese wares, all dated from the late fourteenth to sixteenth centuries A.D.

A number of archaeological excavations were also conducted at different locations within the Kota Batu site in the 1970's, 1980's and 1990's. Although these excavations were not specifically planned as a search for ceramics, nevertheless, their findings seem to be more substantial than any of the other archaeological materials. In the 1979 excavation of the stone wall and earthen causeway, for example, a total of 578 shards were recovered. They were classified into two types, local earthenware and export ceramics. The former totaled 79 pieces (15%) and the latter 499 pieces (85%). Export wares originated in China and Thailand and dated to the thirteenth and seventeenth

centuries A.D. There was a total of 46 pieces of Sung wares, 308 pieces Ming wares and 145 pieces of Swankhalok wares [Omar, 1983].

In a two-week workshop on archaeological excavation and conservation in 1988, a total of 202 ceramic shards were recovered. These included three types, local earthenware (56 pc. or 27.8%), stoneware shards (38 pc. or 18.8%) and porcelain ware (108 pc. or 53.4%). They were dominated by Chinese ceramics of Ming related wares and some Thai and Vietnamese wares of the fourteenth to sixteenth centuries A.D. [Brunei Museum, 1988].

Similarly, during the Sixth Intra-ASEAN Archaeological and Conservation Workshop at Kota Batu in 1989, a total of 811 ceramic shards were collected. These included 608 porcelain wares, 27 stoneware shards and 104 earthenware shards. The porcelain shards were dominated by Chinese ceramics (248 pc. or 30.5%), followed by Vietnamese wares (216 pc.or 26.6%), Thai wares (97 pc. or 12%), European wares (5 pc. or 0.6%) and Khmer ware (1 pc. or 0.1%). The rest included local earthenware (104 pc. or 12.8%), indeterminate wares (113 pc. or 14%) and stonewares (27 pc. or 3.3%). Like the previous collections, they were dominated by Ming dated wares from the late fourteenth to sixteenth centuries A.D. [Brunei Museum, 1989].

4.3.2.1 The Present data: Methodology

For the present study, there are three methods of ceramic collecting were undertaken at Kota Batu. The first was surface collections along the Brunei River bank; the second was test excavations on the river bank, and the third was excavation on the dry-land [see fig. 8 & 9]. The objective of this study is to determine the different types of ceramic distribution found at the two different localities within Kota Batu, with special attention to their topologies, qualities and quantities. The study will try to reconstruct the various aspects of Kota Batu's past, economically and socially. Historically, Brunei was known as an important trading kingdom and had attracted many foreign traders to come to its thriving port. So far, however, no attempt has ever been made to study and relocate the

Brunei port where these trade activities took place. Nor has there been any attempt to reconstruct the social structure of Kota Batu's past communities. Historically, it was known that there are two zones of settlements at Kota Batu [see above: footnote 2; chapter 2: footnote 1]. The dry-land site was inhabited by the kings and his chieftains, while the river bank site was inhabited by the commoners. Apart from a few glimpses of archaeological evidence found at both sites[9], there is no other evidence to prove these statements. Since ceramics are found in large amounts at both zones, I will seek another solution to these questions.

4.3.2.2 The Brunei River Bank sites: Surface collections

The site is situated along the Brunei River, southeast of the Brunei Museum and south of the Malay Technology Museum. The research site is in an area we identified as Tidal Flat "a", i.e., an area between the dry-land and the exposed part of the Brunei River during extreme low tide or Tidal Flat "b" [see fig. 9]. The surrounding area was covered by mangrove vegetation and filled with accumulated rubbish brought by the tidal current and trapped by the mangrove. The soil in the research area is hard due to the thick accumulation of ceramic shards. The site is affected by the tides and submerged during the high tide.

Like at the Terusan Kupang site, squares were laid along the research area each measuring 10 X 10 metres. Squares were named alphabetically and numerically. Four squares were chosen, namely KB. A2; KB. A3; KB. AA2, and KB. AA3. Surface collections were done only during low tides and working times depended on the rate of

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9 Among the archaeological evidence found at the river-bank site were remnants of wooden poles and *nipah* palms. They were very closely arranged and found scattered over a large area along the Brunei river bank. This indicates that the houses were built in clusters and sustained large populations. On the On-land site, some of the materials found were more elaborate, such as remnants of a stone-wall like structure, and a recent discovery was a square shaped sandstone structure measuring 25.8 X 25.4 metres at a site named KB. I.

tides. In every trench, less than 5% of ceramic shards were collected, or less than 1% of the total area of Kota Batu.

4.3.2.3 The River bank site: Excavations

The aim of the excavations was to determine the density of ceramic shards vertically and to study the type of ceramic which dominate the site. Two trenches were excavated and both were located in the squares as mentioned earlier. The trenches were KB. A3 and KB. AA2. Each trench measured 1 X 1 metre and represented 10% of the total area of each trench. KB. A3 was located near to the edge of the Brunei river, i.e., between the outer edge of the mangrove and the exposed part of river bank. KB. AA2 was located at a much higher level, about 10 metres from the former trench [see fig. 9].

Both trenches were affected by the high watertable. It was only possible to excavate up to 15 cm. depth at trench KB. 3 and 20 cm. at KB. AA2. Excavations used the spit system of 20 cm. per-interval. No recording was applied due to the nature of the trenches which were waterlogged. Excavations were merely intended to recover as many ceramics as we could and we abandoned the excavations soon after the coming of high tide or when we struck watertable. The trenches were badly disturbed with the presence of modern materials such as bottles, plastic and tin cans.

4.3.2.3 The Dry-land site of Kota Batu: Excavations

Two trenches were excavated, KB. II and KB. III. The trenches were located very near to each other and separated only by an old road of Kota Batu that once passed through this area[10]. Trench KB III is located to the south of Brunei River, while KB II in the

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10 Since 1967, the site and the surrounding area were gazetted under the 1967 Antiquities and Treasure Trove Act. Since then, the road as well as the houses here have been moved, the former to the present road, north of the Brunei Museum and the houses to the nearby villages of Kampong Pelambayan and Kampong Kota Batu.

middle part of Kota Batu, i.e, in between KB III and KB I. KB I is located at the upper/hilly part of Kota Batu [see fig. 8].

Each trench measured 2 X 2 metres. Excavation was using spit system of 20 cm. intervals. The objective of the excavations was to recover archaeological materials, especially ceramic shards, through adequately controlled excavations. The excavation also aimed to determine the vertical distribution of ceramic shards and the type of shard which dominated the site. Another objective was to make comparative studies of ceramic shards found at this site with those found at the river-bank site. The last objective was to determine through the analyses of the archaeological materials recovered, the type of activities and social structures of the former inhabitants of the area and to have an idea of the time range of the use of the site.

Excavations were conducted in a scientific way, since the site was not as disturbed as the river-bank site. Trowels were used throughout the period of the excavations to have maximum control in the recovery of the archaeological materials and the exposure and recording of the archaeological features which may be encountered. Any important discoveries, changing of soil stratigraphy or archaeological features was properly recorded, either measured three-dimensionally, drawn or photographed (including video tape) or a combination of all these methods.

Throughout the excavation, from 20th April to 20th May 1995, we encountered by numerous of problems, such as heavy rainfall and strong winds caused by the monsoon. Another problem was the presence of a high watertable, especially at the depth of 100 cm. downwards. All these factors affected the progress of our excavations progress drastically and eventually stopped our progress exactly one month after the start of the excavation.

4.3.2.5 Analyses of ceramic shards

There are two types of ceramic collected, earthenware and imported wares. Earthenwares can be classified as two types, locally made and foreign imports [see Chapter 7]. Similarly, there are two types of imported wares, stoneware and porcellaneous wares. Stoneware consisted of large, coarse jars and vases, and originated from China, Thailand and Vietnam. Their dates range from the thirteenth to seventeenth centuries A.D. Porcellaneous wares are porcelain with glazes and some with design motifs, which include celadon types, Lung-Chuan wares, Blue-and-White wares, White wares, Sawankhalok and Sukothai wares and Vietnamese wares. Their date spans from the fourteenth to the seventeenth centuries A.D.

Some 1,860 ceramic shards were collected from surface collections, weighing 107.1 kilograms. The river-bank site excavations recovered a total of 1,261pieces which weighed 23 kilograms. The on-land excavations have managed to unearth a total of 2,244 shards at a weight of 29 kilograms [see table 7]. Their classifications are as follows [see table 5].

Table 5 shows that export ceramics dominate the overall collections by 74.2% or 3,980 pieces to 25.8% or 1,385 pieces to earthenwares. There is also a big gap in weights: 141.2 versus 17.9 kilograms. Export ceramics also dominate individual contexts: 84% or 1,564 pieces to 16% or 296 pieces to earthenwares in the surface collections; 64% or 807 pieces to 36% or 454 pieces to earthenwares in the river-bank site excavations, and 71.7% or 1,609 pieces to 28.3% or 635 pieces to earthenwares in the on-land excavations. These statistics show the dominance of export ceramics at Kota Batu and its importance in the daily use of the local communities. This is due mainly to an influx of export ceramics in the local market, competing with the existing traditional, less sophisticated native pottery. The attraction of export wares may have had a drastic effect on the local earthenware industries and might contributing to their decline. Production was perhaps limited to certain products, such as cooking pots. This is the most important vessel among the

earthenware found at Kota Batu [see chapter 7]. This is probably because of the absence of any type of cooking vessels in the export ware, which may have encouraged the continued production. However, even this production virtually came to an end at the change of the century when iron pots became increasingly popular among the locals.

Table 5: Total ceramic shards from Kota Batu

TRENCH	EXPORT CERAMICS	EARTHENWARES	TOTAL	%
SURFACE COLLECTIONS				
KB. A2	313 pc. (24.3 kg) 84.6%	57 pc. (1 kg) 15.4%	**370 pc. (25.3 kg)**	100%
%	7.9%	4.1%	**6.9%**	
KB. A3	399 pc. (22.3kg) 83%	82 pc. (1.7 kg) 17%	**481 pc. (24 kg)**	100%
%	10%	5.9%	**8.9%**	
KB. AA2	510 pc. (23.8 kg) 83.5%	101 pc. (2.1 kg) 16.5%	**611 pc. (25.9 kg)**	100%
%	12.8%	7.3%	**11.4%**	
KB. AA3	342 pc. (30.6 kg) 86%	56 pc. (1.3 kg) 14%	**398 pc. (31.9 kg)**	100%
%	8.6%	4%	**7.4%**	
RIVER-BANK EXCAVATIONS				
KB. A3	409 pc. (9.6 kg) 61.4%	257 pc. (3.3 kg) 38.6%	**666 pc. (12.9 kg)**	100%
%	10.3%	18.5%	**12.4%**	
KB. AA2	398 pc. (8.1 kg) 66.9%	197 pc. (2 kg) 33.1%	**595 pc. (10.1 kg)**	100%
%	10%	14.2%	**11.1%**	
ON-LAND EXCAVATIONS				
KB. II	806 pc. (13 kg) 68%	380 pc. (4.6 kg) 32%	**1,186 pc. (17.6 kg)**	100%
%	20.3%	27.4%	**22.1%**	
KB. III	803 pc. (9.5 kg) 75.9%	255 pc. (1.8 kg) 24.1%	**1,058 pc. (11.4 kg)**	100%
%	20.2%	18.4%	**19.7%**	
TOTAL	**3,980 pc. (141.2 kg)**	**1,385 pc. (17.9 kg)**	**5,365 pc. (159.1 kg)**	
%	**74.2%**	**25.8%**	**100%**	

There are six different sources of export ceramics found at Kota Batu: China, Vietnam, Thailand, Khmer, Japan and Europe. The majority are from China of Southern Chinese kilns; a large number are from the Sukothai and Sawankhalok kilns in Thailand

and from Vietnam, and a few from Khmer, Japan and Europe. Their dates are mostly Ming and early Ch'ing periods from the fourteenth to seventeenth centuries A.D., although some shards date to the earlier Sung and Yuan periods of the twelfth to thirteenth centuries and to the later period of the nineteenth century. The types are Blue-and-White of Chinese, Vietnamese, Japanese and European ware; Lung-Chuan wares; Celadon types; White wares; polychrome wares; Sukothai wares; Sawankhalok wares; Khmer wares; stoneware, and earthenware. There are three types of Sawankhalok wares, celadon; iron-glazed and the Brown type. However, for this classification, I group them as Sawankhalok wares. I will elaborate on these types of wares later on in chapter 6. I also classified rare and uncommon ceramics as Miscellaneous category. Here I include Japanese, Khmer and European wares. Their classifications are shown in table 6.

If we look at the individual ceramic collections as shown on table 6, it shows that stoneware shards dominate the overall collections by 28.6%, followed by earthenwares 25.8% and so on. However, when grouped according to type, porcelain wares dominate the collections at 45.6% or 2,445 pieces, followed by stoneware shards at 28.6% or 1,535 pieces and earthenware shards at 25.8% or 1,385 pieces. Chinese Blue-and-White shards dominate the porcelain types at 19.8% or 1,062 pieces; followed by White wares and so on. They came from six different sources, mostly from China, 88.5% or 2,165 pieces; followed by Thailand, 9% or 219 pieces; Vietnam, 2.3% or 57 pieces; Japan, 0.1% or 2 pieces; Khmer and Europe, 0.04% or 1 piece each. This statistics show the continuous importance of Chinese ceramics in the local market and the growing influence of other Oriental ceramics, particularly from Thailand and Vietnam. This pattern is slightly different from Terusan Kupang ceramic collections, where about 90% of the collections were Chinese ceramics and the other 10% was later ceramics from different sources of Mainland Southeast Asia and Europe [see above]. The significance of this is that it can help in the dating of both sites based on the typological study of the ceramics. It is known from historical sources that both Thai and Vietnamese ceramics began to be exported in the fourteenth century after the Chinese "Ming ban" [see chapter 3]. This means Terusan

Table 6: Types of export ceramics found at Kota Batu

TRH	BW	LC	CL	WHT	P/M	SWK	SKI	VNM	STW	ETH	MCS	TOT
SURFACE COLLECTIONS												
KB. A2	77 pc. 20.8%	44 pc. 11.9%	42 pc. 11.4%	14 pc. 3.8%	0	21 pc. 5.7%	3 pc. 0.8%	5 pc. 1.4%	106 pc. 28.7%	57 pc. 15.4%	1 pc 0.3%	**370 pc**
%	7.3%	16.2%	12.5%	2.9%	0%	10.8%	12.5%	8.8%	6.9%	4.1%	25%	**6.9%**
KB. A3	82 pc. 17%	38 pc. 7.9%	47 pc. 9.8%	22 pc. 4.6%	1 pc 0.2%	31 pc. 6.4%	4 pc. 0.8%	5 pc. 1%	169 pc. 35.1%	82 pc. 17%	0	**481 pc** **9%**
%	7.7%	14%	13.9%	4.5%	14.3%	16%	16.7%	8.8%	11%	6%	0%	
KB. AA2	157 pc 25.7%	70 pc. 11.5%	43 pc. 7%	31 pc. 5.1%	1 pc 0.2%	47 pc. 7.7%	11 pc. 1.8%	10 pc. 1.6%	140 pc. 23%	101 pc. 16.5%	0	**611 pc** **11.4%**
	14.8%	25.8%	12.8%	6.4%	14.3%	24.2%	45.8%	17.5%	9.1%	7.3%	0%	
KB. AA3	100 pc 25.1%	34 pc. 8.5%	54 pc. 13.6%	25 pc. 6.3%	0	32 pc. 8%	3 pc. 0.7%	1 pc 0.3%	93 pc. 23.4%	56 Pc. 14%	0	**398 pc** **7.4%**
	9.4%	12.5%	16%	5.1%	0%	16.5%	12.5%	1.8%	6%	4%	0%	
RIVER-BANK EXCAVATIONS												
KB. A3	62 pc. 9.3%	30 pc. 4.5%	25 pc. 3.8%	38 pc. 5.7%	0	19 pc. 2.9%	0	1 pc 0.2%	234 pc. 35.1%	257 pc. 38.6%	0	**666**
	5.8%	11%	7.4%	7.8%	0%	9.8%	0%	1.8%	15.2%	18.6%	0%	**12.4%**
KB. AA2	82 pc. 13.8%	28 pc. 4.7%	35 pc. 5.9%	32 pc. 5.4%	0	5 pc. 0.8%	3 pc. 0.5%	6 pc. 1%	206 pc. 34.6%	197 pc. 33.1%	1 pc 0.2%	**595**
	7.7%	10.3%	10.4%	6.6%	0%	2.6%	12.5%	10.5%	13.4%	14.2%	25%	**11.1%**
ON-LAND EXCAVATIONS												
KB. II	252 pc 21.2%	9 pc. 0.8%	44 pc. 3.7%	213 pc 18%	0	19 pc. 1.6%	0	7 pc. 0.6%	261 pc. 22%	380 pc. 32%	1 pc 0.1%	**1,186**
	23.7%	3.3%	13.1%	43.6%	0%	9.8%	0%	12.3%	17%	27.4%	24%	**22.1%**
KB. III	250 pc 23.6%	18 pc. 1.7%	47 pc. 4.4%	113 pc 10.7%	5 pc. 0.5%	21 pc. 2%	0	22 pc. 2.1%	326 pc. 30.8%	255 pc. 24.1%	1 pc 0.1%	**1,058**
	23.5%	6.6%	14%	23.1%	71.4%	10.3%	0%	38.6%	21.2%	18.4%	25%	**19.7%**
TOT	**1,062**	**271 pc**	**337 pc**	**488 pc**	**7 pc.**	**195 pc**	**24 pc.**	**57 pc.**	**1,535 pc**	**1,385 pc**	**4 pc.**	**5,365**
	19.8%	**5.1%**	**6.3%**	**9.1%**	**0.1%**	**3.6%**	**0.4%**	**1.1%**	**28.6%**	**25.8%**	**0.1%**	**100%**

KEY:- TRH: Trench; BW: Blue-and-White wares; LC: Lung-Chuan wares; CL: Celadon wares; WTH: White wares; P/M: Polychrome/Monochrome wares; SWK: Sawankhalok wares; SKI: Sukothai wares; VNM: Vietnamese wares; STW: stonewares; ETH: earthenwares; MSC: Miscellaneous wares; TOT: Total; pc.: pieces.

Kupang can be dated to pre-fourteenth century, while Kota Batu is post-fourteenth century. Some pre-fourteenth century ceramics were also present at Kota Batu, however, their number is minimal. This was the period when Kota Batu was still a small settlement or perhaps functioning as a feeder-point for Terusan Kupang. However, the presence of these early and later ceramics have shown the continuous occupation of Kota Batu since ancient times.

Table 7: Classification of porcelain vessel forms found at Kota Batu

PORCELAIN TYPES	BASE	BODY	RIM	RIM/BASE	LID/COVER	TOTAL
BLUE-AND-WHITE	344 (30.7%)	358 (32%)	367- 32.7%	32 pc. (2.9%)	21 (1.9%)	**1,122 pc.**
%	39.4%	18.5%	35.6%	59.3%	25%	**28.2%**
LUNG-CHUAN	89 (32.8%)	80 (29.5%)	98 (36.1%)	3 pc. (1.1%)	1 pc 0.4%	**271 pc.**
%	10.2%	4.1%	9.5%	5.6%	1.2%	**6.8%**
CELADON	144 (42.7%)	99 (29.4%)	91 (27%)	1 pc (0.3%)	2 (0.6%)	**337 pc.**
%	16.5%	5.1%	8.8%	1.9%	2.4%	**8.5%**
WHITE WARES	105 (21.5%)	167 (34.2%)	194 (39.7%	15 pc. (3.1%)	7 (1.4%)	**488 pc.**
%	12%	8.6%	18.8%	27.8%	8.3%	**12.3%**
POLY/MONOCHROME	2 (28.6%)	4 (57.1%)	0	1 pc (14.3%)	0	**7 pc.**
%	0.2%	0.2%	0%	1.9%	0%	**0.2%**
SAWANKHALOK	49 (25.1%)	58 (29.7%)	61 (31.3%)	1 pc (0.3%)	26 (13.3%	**195 pc.**
%	5.6%	2.9%	6%	1.8%	31%	**4.9%**
SUKOTHAI	20 (83.3%)	3 (12.5%)	1 pc (4.2%)	0	0	**24 pc.**
%	2.3%	0.2%	0.1%	0%	0%	**0.6%**
KHMER	1 Pc 100%	0	0	0	0	**1 pc**
%	0.1%	0%	0%	0%	0%	**0.02%**
STONEWARES	120 (7.8%)	1,166 (76%)	221 (14.4%	1 pc (0.1%)	27 (1.8%)	**1,535 pc**
	13.7%	60.2%	21.4%	1.8%	32.1%	**38.6%**
TOTAL	**873 pc.**	**1,937 pc.**	**1,032 pc.**	**54 pc.**	**84 pc.**	**3,980 pc**
%	**22%**	**48.7%**	**26%**	**1.4%**	**2.1%**	**100%**

The study also classified vessel types by body forms. Only export ceramics are analysed here, while earthenwares are to be discussed in chapter 7. Export ceramics are divided into two types, porcelain and stoneware. There are five types of body form: base,

body, rim, rim/body, and lid/cover. The data combines shards from the surface collections, river-bank excavations and on-land excavations. For this classification, Blue-and-White shards are grouped into one type. This includes Chinese Blue-and-White (1,062 pieces), Vietnamese Blue-and-White (57 pieces), Japanese and European Blue-and-White (2 & 1 piece respectively). Sawankhalok wares classified into one, which include Sawanlhalok celadon, iron-glazed and Brown wares. The classifications are as shown on table 7.

Table 7 show that the body shards dominate the overall collections at 48.7%, followed by the rims 26%, bases 22%, lid/handle 2.1% and the rim/base shards 1.4%. From this classification, attempts will be made to reconstruct the vessel shapes. Most of the identifications are made through the rim, base, rim/base and lid/handle parts. Nevertheless, some vessels are also identified through the body shards, especially the stoneware. However, many small shards are unidentifiable. Most of these shards are from the porcelain types, which are normally associated with kitchen utensils. Their classifications are as follow [see table 8].

Table 8 shows that bowls dominate the overall collections at 44.2%, followed by jars 32.2%, then plates/dishes 8.1%. The presence of these household vessels shows their importance in the daily life of the Kota Batu communities. Bowls, plates and dishes are used for everyday eating and drinking. They also play a very useful function during festivals or wedding ceremonies to serve food and drink. Bowls are also used for other functional roles, such storing herbs and spices. At the KB II site, for instance, we discovered a Blue-and-White bowl which contained a big lump of resin, probably used as waxing or coating [see plate 32]. Jars are also used for a variety of functions, including food and water storage, and for food processing, such as preservation and pickling. On the other hand, jarlets and cover boxes, which are also found in large numbers at Kota Batu, probably served as decorations, to keep jewellery, perfume, medicinal herbs and religious scented resins. During the 1989 excavation at one of Kota Batu site named KB.

Table 8: Shapes of porcelain wares found at Kota Batu

TYPES	Bowls	Plates/dishes	Saucers	Cover box	Kendi/jarlets	Jars	Unid-entified	Basins/vases	Total
B&W	807 pc. 71.9%	201 pc. 18%	51 pc. 4.5%	21 pc. 1.9%	9 pc. 0.8%	0	33 pc. 2.9%	0	**1,122 pc.**
%	45.9%	62.4%	30.5%	23.9%	9.4%	0%	12.8%		**28.2%**
LC	223 pc. 82.3%	44 pc. 16.2%	0	1 pc 0.4%	0	3 pc. 1.1%	0	0	**271 pc.**
%	12.7%	13.7%	0%	1.1%	0%	0.2%	0%		**6.8%**
CL	310 pc. 92%	19 pc. 5.6%	6 pc. 1.8%	2 pc. 0.6%	0	0	0	0	**337 pc.**
%	17.6%	6%	3.6%	2.2%	0%	0%	0%		**8.5%**
WHT	292 pc. 59.8%	23 pc. 4.7%	107 pc. 22%	9 pc. 1.8%	5 pc. 1%	1 pc 0.2%	51 pc. 10.5%	0	**488 pc.**
%	16.6%	7.1%	64%	10.2%	5.2%	0.1%	19.8%		**12.3%**
P/M	0	0	1 pc 14.2%	3 pc. 42.9%	0	0	3 pc. 42.9%	0	**7 pc.**
%	0%	0%	0.6%	3.4%	0%	0%	1.2%		**0.2%**
SWK	106 pc. 54.3%	31 pc. 15.9%	2 pc. 1%	39 pc. 29%	13 pc. 6.7%	3 pc. 1.5%	1 pc 0.5%	0	**195 pc.**
%	6%	9.6%	1.2%	44.3%	13.5%	0.2%	0.4%		**4.9 %**
SKI	20 pc. 83.3%	4 pc. 16.7%	0	0	0	0	0	0	**24 pc.**
%	1.1%	1.2%	0%	0%	0%	0%	0%		**0.6%**
KHR	1 pc 100%	0	0	0	0	0	0	0	**1 pc.**
	0.1%	0%	0%	0%	0%	0%	0%		**0.02%**
STW	0	0	0	13 pc.	69 pc.	1,275	169 pc	9 pc	**1,535**
				14.8%	71.9%	99.4%	65.8%	100%	**38.6%**
Total	**1,759**	**322 pc.**	**167 pc**	**88 pc.**	**96 pc.**	**1,282**	**257**	**9 pc.**	**3,980**
	44.2%	**8.1%**	**4.2%**	**2.2%**	**2.4%**	**32.2%**	**6.5%**	**0.2%**	**100%**

Key: B&W: Blue-and-White wares; LC: Lung-Chuan wares; CL: Celadon types; WHT: White wares; P/M: Polychrome/Monochrome wares; SWK: Sawankhalok wares; SKI: Sukothai wares; KHR: Khmer ware; pc.: pieces.

I burial complex, for example, archaeologists have discovered a small white ware jarlet, which was presumably used to keep scented resins [Brunei Museum, 1989].

The presence of these materials has shown the variety of roles and functions in the communities of Kota Batu. The vast accumulations of ceramic shards not only shows the intensity of trade networks during this time, but also tells us about the societies who used them. Based on the statistics given, most of these ceramics are associated with utilitarian functions, a common phenomena that can be seen at settlement sites such as Kota Batu. The vastness of ceramic refuse found at the site shows the importance of Kota Batu as Brunei's main population centre during this time. It is in this city that people interacted with one another and generally lived the life of city dwellers. Although ceramics are not a good indicator of these activities, it is through ceramic remains that we can tell that Kota Batu was not only an important port of call, but also a city with a large population.

The on-land excavations are now examined separately since the site is less disturbed than the river-bank site. Of the two excavated trenches, however, only trench KB. II is problematic due to the discovery of one piece nineteenth century European Blue-and-White shard in spit V (80-100 cm). Apart from the shard, the trench seem to be undisturbed. However, acording to Awang Haji Ahmad Shari [1995], the shard might have fallen into the spot through a post hole or a hole created by small animals, which was a common phenomena at Kota Batu. If this is true, the on-land excavations are without any doubt an important source for my research that will be used to establish the stratigraphy and archaeological context.

Table 9 shows export ceramics from the on-land excavations dominate the overall collections by 68% or 806 pieces for KB. II and 75.9% or 803 pieces for KB. III to 32% or 380 pieces and 24.1% to earthenwares for KB. II and KB. III. Collectively, export ceramics also dominate the overall collections by 71.7% or 1,609 pieces to 28.3% or 635 pieces to earthenwares. They also dominate the collections vertically. For spit 1 of both trenches, the ratio is 83.7% (118 pc.) to 16.3% (23 pc.) ; spit 2, 80% (194 pc.) to 20%

Table 9: Vertical distributions of ceramic shards from the on-land excavations at Kota Batu

TYPES	TRENCH	0-20 cm	20-40 cm	40-60 cm	60-80 cm	80-100 cm	TOTAL	%
Export Wares	KB. II	20 Pc. 2.5%	74 pc. 9.3%	383 pc. 47.5%	119 pc. 14.7%	210 pc. 26%	**806 pc.**	100%
		14.2%	30.4%	42.4%	25.4%	43%	**35.9%**	
	KB. III	98 pc. 12.2%	120 pc. 15%	204 pc. 25.4%	222 pc. 27.6%	159 pc. 19.8%	**803 pc.**	100%
		9.5%	49.4%	22.6%	47.3%	32.6%	**35.8%**	
Earthenware-Potteries	KB. II	1 pc 0.3%	32 pc. 8.4%	254 pc. 66.8%	39 pc. 10.3%	54 pc. 14.2%	**380 pc.**	100%
		0.7%	13.2%	28.1%	8.3%	11.1%	**16.9%**	
	KB. III	22 Pc. 8.6%	17 pc. 6.6%	62 pc. 24.6%	89 pc. 34.8%	65 pc. 25.4%	**255 pc.**	100%
		15.6%	7%	6.9%	19%	13.3%	**11.4%**	
TOTAL		**141 pc. 6.3%**	**243 pc. 10.8%**	**903 pc. 40.2%**	**469 pc. 21%**	**488 pc. 21.7%**	**2244 pc.**	**100%**

(49 pc.); spit 3, 65% (587 pc.) to 35% (316 pc.); spit 4, 72.7% (341 pc.) to 27.3% (128 pc.), and spit 5, 75.6% (369 pc.) to 24.4% (119 pc.). The distributions of ceramic shards are concentrated mainly at 40 cm, with the highest concentration in spit 3. Meanwhile, no archaeological materials were found further than 100 cm. deep. Based on this concentration, it can be said that spit 3, 4 and 5 are the most probable main cultural level for Kota Batu. The dating can be said to be post-fourteenth century onwards based on the evidence of dated ceramic shards found in these levels. Among the identified shards is the presence of *Swatow* wares of late fifteenth to sixteenth century onwards and other Oriental ceramics of the Thai and Vietnamese kilns from the fourteenth century onwards [see ch. 5 & 6]. Another interesting discovery was a bowl with a Chinese character written on its base which read: Emperor Cheng Hua (1465-1487) of Ming Dynasty [see plate 33]. These dates further prove the dating of Kota Batu, which are believed around the fourteenth century onwards.

4.3.2.6 Comparative study between the River-bank site and the On-land sites of Kota Batu: A ceramic case study

Based on my research and survey at both sites, there is a clear distinction between the two zones in terms of their material remains. Archeologically, the land-site is rich in material cultures, with remains of stone or brick structures, while the river-bank site is mostly composed of simple wooden poles and *nibong* palms [see above footnote 8]. In terms of ceramic distributions, however, the river-bank site is richer and is vast compared to the dry-land site. It extended over a large area along the Brunei river bank. This showed the vastness of Kota Batu's settlement patterns during that time. During my field study in this area, I have managed to collect and to unearth a substantial amount of ceramic shards in just a short period of time. These collections, however, only represent less than 5% from the four trenches or less than 1% of the whole area of Kota Batu. The collections and excavations have shown the richness of the site, both horizontally and vertically. Vertically, the excavations have shown the quantity of ceramic shards, despite the excavation being limited to only two trenches measuring merely 1 X 1 meter each and only between 10 and 15 cm. in depth. More ceramics might be recovered if the trenches were not affected by the tides.

In terms of quality, however, most of the ceramic shards found at the river-bank site tended to be coarser and heavier than at the dry-land site. They were also much bulkier, including large stoneware jars or coarse porcellaneous ware such as the later Lung-Chuan types. A comparison of both sites is illustrated here, with special attention focus upon their quantities and weights. The river bank surface collections, for example, amounted to a collection totalling of 1,858 ceramic shards which weighed a staggering of 107.1 kilograms. The excavations of the same site unearthed a total of 1,261 ceramic shards which weighed 23.04 kilograms. In contrast, the on-land excavations produced a much lighter collection, despite their numbers being more or less the same as the former site. At trench KB. II, for instance, a total of 1,186 ceramic shards was collected and

weighed 17.6 kilograms. Similarly, at trench KB. III, a total of 1,058 ceramic shards were recovered and weight only 11.45 kilograms.

Although these statistics are not yet conclusive and need further archaeological research, they show a clear distinction between the nature of settlement on the river-bank site and the dry-land site. As discussed earlier, the former site was known to be inhabited by the largest concentration of local population or commoners; and the latter by the elite - the kings and his chieftains. Based on the ceramic distributions, most of the ceramic shards found on the dry-land site are not only of fine quality, but they also show better craftsmanship, with better design motif and decoration. The most interesting of these shards are those with Chinese characters written on them. I have encountered three pieces of such wares, with one piece readable Emperor Cheng Hua dated 1465-1487. This is very similar to the two shards found at the same site during the 1952/53 excavations [Pope, 1958: 267-72]. Apart from fine ceramics, I have also discovered some Islamic coins, blue glass beads and rusted iron and bronze objects at both trenches. At KB. III alone, 10 Islamic coins were found, together with 4 blue glass beads, rusted iron and bronze objects, wooden items, and arranged sandstone blocks, bricks and wooden structures at a trench measuring 2 X 2 metres and 100 cm. in depth [see fig. 10].

The difference in ceramic quality was perhaps one of the many ways to symbolise the social status of the Kota Batu inhabitation. During this time, export ceramics were considered luxury items and began to replace local, native potteries as part of house hold and kitchen utensils. To own and use these items may be considered as a high status symbols in the eyes of local communities. To the well-off, export ceramics gradually began to replace cheap local earthenware as their everyday functional vessels for eating and drinking. For others, earthenware continued to be used as functional items. From the fourteenth century onwards, however, export ceramics began to come in large numbers and perhaps created ceramic surplus in the local market. This may have been a contributing factor in the fall in the price of export ceramics and at the same time might have drastically affected the local earthenware industries. They became a common

household item and perhaps every family could afford to buy them. This can be seen by the vastness of export ceramic found at the river-bank and on-land sites of Kota Batu.

However, this does not necessarily mean that export ceramics began to lose their former glory as status symbols. The difference then depending on the quality of wares being used or even on display. Better quality ceramics, especially from Jingdezheng, the centre of the Imperial kilns, began to be used by certain members of the Kota Batu societies, especially by the rich and the elite. I assumed this is the circumstance that contributed to the presence of some better quality ceramics at Kota Batu, especially those found at the on-land site. The ceramics might be brought by the rulers and the elites or perhaps given as gifts by the Chinese court. It was known from the Chinese historical records that high quality ceramics were sometimes used as gifts to foreign envoys who visited the Chinese court or were given when the Chinese envoys visited foreign countries[11]. These gifts symbolised honour to the foreign envoys and at the same time to show good friendship. It was known from the Chinese records that close relations between P'o-ni (ancient Brunei) and China existed during the Ming period and from 1405 to 1425, several missions were sent between the two countries. The Chinese emperor thrice sent envoys to Brunei and the ruler of Brunei sent ten tribute-bearing embassies to China [Mills, 1974: 9; Brown, D.E, 1970: 133; see, ch. 2].

Therefore export porcelain has become one way to distinguish one's status along with other items like brass work, such as Brunei's *bedils* or cannons. Anthony Reid [1988: 41] wrote that in Southeast Asia 'Royal courts and noble houses were marked by the elegance of the bowls in which the side dishes were served. As late as the nineteenth century, the princes and the king only differ from their subjects by the richness of their

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11 In Ma Huan account of Cheng Ho missions to the South Seas between 1405 and 1433, he recorded that "although consignments of musk, silk, porcelain, and other valued Chinese products were distributed by the emissaries to the rulers of foreign kingdoms, some were also vigorously traded" [Guys, 1986: 33].

table service and the variety of their dishes'. This has been observed by Pigafetta in 1521, when he visited Brunei as a guest to Brunei's king. He recorded that:

> 'nine men came to the governor's house with a like number of large wooden trays from the king. Each tray contained ten or twelve porcelain dishes full of veal, chickens, peacocks and other animals, and fish. At each mouthful of food we drank a small cupful of their distilled wine from a porcelain cup the size of an egg [Pigafetta, 1524: 189].

In spite of some ceramic irregularities, there are many ceramic similarities found at both sites. This is especially so in the ceramic dating and typology. They were mostly dominated by Ming related ceramics of Blue-and-White ware, White ware, celadon ware and Lung-Chuan ware and dated from the fourteenth to early seventeenth centuries A.D. Other common ceramics are Thai wares of Sawankhalok and Sukothai and Vietnamese wares dated from the fourteenth century onwards. This indicates that both sites were developed at the same period around the fourteenth century onwards. Apart from ceramics, there are no other materials that could help in the dating of the site. The Islamic coins, for instance, do not have any dated mark on them. However, it is known that these coins were issued in Brunei over a period of some 300 years, being first issued before the year 1600, and lasting until the 1870's [Singh, 1980: 24].

4.3.3 Pulau Chermin

The word *Pulau* means Island and *Chermin* mean mirror. It is not known when the name came into use, but according to the Royal Genealogical Tablet or *Batu Tersilah* the island was used by Sultan Sharif Ali, the third Sultan of Brunei (1425-1432) as a fortress. He used his Chinese subjects to build an artificial bar in the river between the island and land to narrow the sea entrance. Forty junks filled with stones were sunk to form this bar [Low, 1880: 7].

The island is strategically located at Brunei Bay and at the entrance of the Brunei River. The island stands as the single guardian of the only direct and easy way out of the South China Sea up into the fine sheltered wide waters of the Brunei land enclave. It is

about 12 kilometres from Bandar Seri Begawan, the capital of Brunei and about 3 kilometres from Kota Batu and 8 kilometres from the Terusan Kupang site [see fig. 2 & 6].

The island is very rich in archaeological remains despite its small size of only 365.76 metres long and 110 wide (40,260 square metres). It is uninhabited and since 1968 was gazetted under the Antiquities and Treasure Trove Act of 1967. Palm trees and other vegetation grow well on the island, with *nipah* palms (Nipa fruticans) covering most of the northern part of the island. Numerous sandstone blocks exist in many part of the island, especially at the northern part. On its sandy beach, large quantities of Oriental ceramic shards, Chinese and Islamic coins and beads were found. The ceramics were dominated by Chinese wares, dated from Ming to Ch'ing Dynasties of the fourteenth to seventeenth centuries A.D. Other export ceramics include Thai wares of Sawankhalok and Sukothai, Vietnamese and Japanese wares dating from the fifteenth to seventeenth centuries A.D.

The role of Pulau Chermin is more to do with defensive than settlement site or trade. The island is too small to be inhibited and it is also not suitable for human occupation due to its poor physical land form and the way it was prone to monsoon winds. Despite these limitations, however, the island is strategically located and therefore very suitable for defensive functions. It was used as early as the fifteenth century by Sultan Sharif Ali as a fortress to safeguard the entrance to Kota Batu [Low, 1880]. In the mid-seventeenth century, it was used as a headquarters by the usurping Sultan Abdul Mubin against Bendahara Muhyiddin, who used Kota Batu as his headquarters [ibid]. In the nineteenth century, the island was used as a fortress by Sultan Omar Ali Saifuddin II (1828-52). Frank S. Marryat wrote in 1848 that "near to the mouth of the river, is an island called Pulo Cheremon (Pulau Chermin), on which the sultan has built some forts. On our entering the river, one of our boats had been fired at from one of these forts...." [1848: 110]. During the 1962-3 Brunei rebellion, Major David Cutfield used the island to

control the passage way into the Brunei capital and they were very successful [Harrisson, T., 1970: 199].

Not much archaeological research has been carried out at Pulau Chermin, although numerous surface collections have been conducted since the 1970's. Only one report was written about the island by Tom Harrisson [1970: 198-207] in the study of 441 ceramic shards found on the island. They consisted of three main types, earthenware, stoneware and porcelain shards. Their classifications are as follows: Blue-and-White wares (99 pieces), Green and white wares (1 piece), Celadons (41 pieces), White wares (32 pieces), Grey crackled glazed wares (42 pieces), Temmoku wares (11 pieces), Brown coarse jars (78 pieces), Small brittle jars (46 pieces), special incised wares (2 pieces), earthenware (3 pieces) and unidentified, probably worn-off brown jars (86 pieces) [ibid: 200]. Most dated later Ming period, with a fair amount of Ch'ing wares. They were mostly originated from China and some pieces from Thailand of Sawankhalok and Sukothai types dated of the fifteenth and sixteenth centuries A.D.

4.3.3.1 The Present data: Methodology

The objective of my research is to make a comparative study of ceramic shards found on the island with those found at the Kota Batu site. The sites are related historically. Geographically, both sites are also located very near to each other at just three kilometres apart.

I managed the ceramic collections on the island in two ways. The first through surface collections; and the second, through archaeological excavation. No archaeological excavation had previously been conducted on the island.

4.3.3.2 Surface collections

Surface collections were organised along the western coast of the island over an area of about 50 metres [see fig. 11]. Like the two previous sites, it is affected by the tides, particularly at the lower coastal zone, where most of the archaeological materials tend to

be found. Surface collections were done only at the upper coastal zone along the coast line. No trenches were made, since the working area, i.e., between the sea and the island, was too small for trench laying. No collection was done at the other side of the island due to the difficult access, which was mostly covered by dense vegetation, rugged sandstone blocks and steep coastal bank. Collections were only organised for two days and limited to only a few hours. Collections had to be abandoned once the tides reached their maximum. The total collections represent less than one percent of the total ceramic shards found on the island.

4.3.3.3 Excavation

Only one test trench was excavated. This was located about five metres from the shore line [see fig. 11]. The objective of the excavation was to determine the vertical distributions of ceramic shards in relation to its horizontal distributions and to learn the soil stratification, and to find out which ceramic types dominate the trench. The trench was however badly disturbed by the presence of modern materials such as bottles, plastics, etc. at all levels. Only one trench was excavated and did not well represent the whole island. Attempts to excavate more trenches at different localities within the island were hampered by lack of manpower and the constraints of time. The excavation does give a glimpse of the site's stratigraphic ceramic distribution.

The trench measured 1 X 1 metre. Excavation used the spit system of 20 cms. per-interval. Trowels were used throughout the excavation activities. Proper planning was also applied, either by using three-dimension drawing, photograph or video recording. The materials recovered were kept in plastic bags, labelled and sealed. They were recorded according to their spits or depths.

4.3.3.4 Analyses of ceramic shards

There are two types of ceramic shards common at Pulau Chermin, the first are export ceramics and the second are local earthenwares. The former consisted of two types,

stoneware and porcellanious ware. They originated from four regions, mostly from China and the rest from Thailand, Vietnam and Japan. Earthenware shards are mostly of local origin, while some other shards are thought to be of foreign origin [see chapter 7]. They are classified into seven types, stonewares; Blue-and-White wares; Celadon wares; White wares; earthenwares; Lung-Chuan wares and Sawankhalok wares [see table 11]. Their dates are from the Ming period of the fourteenth century right through to the late seventeenth and early eighteenth centuries of the Ch'ing Dynasty.

The combined collections from the surface and excavation total 1,633 pieces and weight 47.6 kilograms. The surface collections include 1,401 shards and weigh 42.6 kilograms; while the excavation collected 232 pieces which weigh 5 kilograms. Their classifications are as follows [see table 10 & 11].

Table 10: Total of ceramic shards found at Pulau Chermin

Types	Surface collections	Excavations	Total
Blue-and-White	381 pc.; 36.7kg; 87%	57 pc.; 785g; 13%	**438 pc.; 37.48kg; 100%**
	27.2%	24.6%	**26.8%**
Celadon Types	228 pc.; 46.2kg; 86.4 %.	15 pc.; 110g; 5.7%	**243 pc.; 46.3kg; 100%**
	16.3%	6.4%	**14.9%**
Lung-Chuan	18 pc.; 580 g.	0	**18pc.; 580 g; 100%**
	1.9%		**1.1%**
Sawankhalok ware	3 pc.; 160 g; 100%.		**3 pc.; 160 g; 100%**
	0.2%		**0.2%**
White wares	72 pc.; 1.1 kg; 66.7%	36 pc.; 635g; 33.3%	**108 pc.; 1.7kg; 100%**
	5.1%	15.5%	**6.6%**
Stonewares	641 pc.; 27kg; 86.3%	102 pc.; 3.2kg; 13.7%	**743 pc.; 30.2kg; 100%**
	45.7%	44%	**45.5%**
Earthenwares	58 pc.; 890g; 72.5%	22 pc.; 300 g; 27.5%	**80 pc.; 1.1 kg; 100%**
	4.1%	9.5%	**4.9%**
TOTAL	**1,401 pc.; 42.69 kg.**	**232 pc.; 5.02 kg.**	**1,633 pc.; 47.7 kg.**
	85.8%	**14.2%**	**100%**

Table 10 shows stoneware shards dominate the overall ceramic collections at 45.5%, followed by Blue-and-White wares 26.8% and so on. Stonewares also dominate both surfce and excavated collections 45.7% and 44% respectively, followed by Blue-and-White shards, 27.2% and 24.6% and so on. Of the three ceramic types of porcelain, stoneware and earthenware, however, porcelain wares dominate the overall collection at 49.6% or 810 pieces, followed by stonewares 45.5% or 743 pieces and earthenwares by 4.9% or 80 pieces. They consisted of Blue-and-White shards, celadon types, Lung-Chuan shards, White wares and Sawankhalok shards. About 90% of these shards were Chinese of the Ming period from the fourteenth century right up to the Ch'ing period of the late seventeenth or early eighteenth centuries A.D. The rest came from other Oriental regions of Sawankhalok and Sukothai kilns from Thailand, Vietnam and Japan, and dated from the fourteenth to seventeenth centuries A.D. Most of these shards resembled the Kota Batu assemblage, although some of them continued further up to the Ch'ing period. These later wares can be identified through their variety of forms and design patterns. Some stoneware pieces, for example, were drawn in relief design, while others in incised patterns. Similarly, most of the Chinese Blue-and-White shards were dominated by *Swatow* types, which were produced during the late sixteenth century onwards. Some Japanese and Ch'ing Blue-and-White shards were also collected and dated to the early seventeenth century. These dates fit well with the date of Pulau Chermin, which was around the fourteenth century onwards. The presence of some later wares indicates the island's continuous occupation, despite the abandonment of Kota Batu further down the Brunei River. Its role and function remains as the same as before to monitor and control Brunei Bay and the entrance to the Brunei River, the capital and settlements beyond.

Table 11 shows that the stratigraphic distributions of ceramic shards the first two spits were dominated by stoneware before being replaced by Blue-and-White shards in spit 3. However, these distributions were unreliable due to the disturbance of the trench throughout the levels. Nevertheless, porcelain wares still dominate the overall ceramic collections at all levels, followed by stoneware and earthenware. At this stage, however,

it is very difficult to pinpoint the main cultural level of Pulau Chermin. What I can say is that the shards were still dominated by Ming related wares of the fourteenth onwards, very similar to that of the surface collections data as been discussed earlier.

Table 11: Vertical distributions of ceramic shards found at Pulau Chermin.

Types	SPIT 1	SPIT 2	SPIT 3	TOTAL
Blue and White	37 pc.; 65%.	15 pc.; 26.3%.	5 pc.; 8.8%.	**57 pc.; 100%**
	22%	27.8%	50%	**24.6%**
Celadon types	9 pc., 60%	6 pc.; 40%	0	**15 pc.**
	5.3%	11.1%	0%	**6.5%**
White wares	28 pc.; 77.7%	7 pc.; 19.4%	1 Pc, 2.8%	**36 pc.; 100%**
	16.6%	13%	10%	**15.5%**
Stonewares	75 pc.; 73.5%	24 pc.; 23.5%	3 pc.; 3%	**102 pc.; 100%**
	44.6%	44.4%	30%	**43.9%**
Earthenwares	19 pc.; 86.4%	2 pc.; 9.1%	1 Pc; 4.5%	**22 pc.; 100%**
	11.3%	3.7%	10%	**9.5%**
TOTAL	**168 Pc.**	**54 Pc.**	**10 Pc.**	**232 pc.**
	72.4%	**23.3%**	**4.3%**	**100%**

Table 12 shows that the body shards dominate the overall collections at 57.8%, followed by bases at 20.3%. Only porcelain and stonewares are identified, while earthenwares are identified in chapter 7. The identifications of vessel shapes are made through these vessels forms. Two clear distinctions are made through the classification. The porcelain wares are normally associated with kitchen utensils, such as bowls, plates and dishes; while stonewares are usually associated with jars. The classifications are as follows [see table 13].

Table 12: Forms of ceramic shards from Pulau Chermin

TYPES	BASE	BODY	RIM	RIM/BASE	LID/SPOUT/HANDLE	TOTAL
BW	139 pc 36.5%	169 pc 44.4%	127 pc 33.3%	2 pc 0.5%	1 pc 0.3%	**381 pc** **100%**
	44.1%	18.8%	44%	11.8%	3%	**24.5%**
LC	3 pc 16.7%	9 pc 50%	6 pc 33.3%	0	0	**18 pc** **100%**
	1%	1%	2.1%	0%	0%	**1.2%**
CT	78 pc 32.1%	96 pc 39.5%	48pc 19.8%	13 pc 5.3%	8 pc 3.3%	**243 pc** **100%**
	24.8%	10.7%	16.6%	76.5%	23.5%	**15.6%**
WHT	45 pc 41.7%	27 pc 25%	34 pc 31.5%	2 pc 1.9%	0	**108 pc** **100%**
	14.3%	3%	11.8%	11.8%	0%	**7%**
SWK	1 pc 33.3%	2 pc 66.7%	0	0	0	**3 pc** **100%**
	0.3%	0.2%	0%	0%	0%	**0.1%**
STW	49 pc 6.6%	595 pc 80%	74 pc 10%	0	25 pc 3.4%	**743 pc** **100%**
	15.6%	66.3%	25.6%	0%	73.5%	**47.8%**
TOT	**315 Pc.** **20.3%**	**898 Pc.** **57.8%**	**289 Pc.** **18.6%**	**17 Pc.** **1.1%**	**34 pc. 2.2%**	**1,553 Pc.** **100%**

KEY: BW: Blue-and-White wares; LC: Lung-Chuan wares; CL: Celadon types; WHT: White wares; SWK: Sawankhalok wares; STW: Stonewares; TOT: Total; pc.: pieces.

Table 13 shows that jars dominate the overall collections at 45.7%, followed by bowls 42.7%. This shows the importance of these wares as an everyday functional item, much the same as can be seen at the two previous sites discussed earlier. However, unlike the Kota Batu assemblage, the local assemblage has shown a slight difference in their dating, which show a continuation in their use from the fourteenth century right into the late seventeenth or early eighteenth centuries A.D. During the fourteenth to sixteenth centuries A.D., the island was used primarily for defensive purposes and therefore the use of ceramics was minimal because only a limited number of people lived or worked on the

island. However, this situation began to change when civil war broke out in the seventeenth century and the island was used as a refuge centre [see above]. The influx of refugees from the mainland brought increased use of ceramics as their everyday functional items, for cooking, eating and drinking, as well as for storage and preservation. Archaeologically, more late fifteenth and seventeenth centuries ceramic shards were found on the island than early dated wares of the fourteenth and early fifteenth centuries A.D. However, this statement is only based on the present available data, which is far too small to draw a conclusion from. More archaeological research is therefore required, not only on the island but more importantly under the water surrounding the island.

Table 13: Vessel shapes from Pulau Chermin

SHAPES	BOWLS	PLATES	SAUCERS	C. BOXES	KENDIS	JARS	TOTAL
BW	362 pc. 82.6%	54 pc. 12.3%	17 pc. 3.9%	3 pc. 0.7%	2 pc. 0.5%	0	**438 Pc.** **100%**
	54.6%	58.1%	73.9%	23.1%	5.9%	0%	**28.2%**
LC	16 pc. 88.9%	2 pc. 11.1%	0	0	0	0	**18 Pc.** **100%**
	2.4%	2.2%	0%	0%	0%	0%	**11.6%**
CT	201 pc. 82.7%	21 pc. 8.6%	0	6 pc. 2.5%	15 pc. 6.2%	0	**243 Pc.** **100%**
	30.3%	22.6%	0%	46.2%	28.8%	0%	**15.6%**
WHT	81 pc. 75%	16 pc. 14.8%	6 pc. 5.6%	4 pc. 3.7%	I pc 0.9%	0	**108 Pc.** **100%**
	12.2%	17.2%	26.1%	30.8%	2%	0%	**7%**
SWK	3 pc. 100%	0	0	0	0	0	**3 Pc.** **100%**
	0.5%	0%	0%	0%	0%	0%	**0.2%**
STW	0	0	0	0	34 pc. 4.6%	709 pc. 95.4%	**743 Pc.** **100%**
	0%	0%	0%	0%	65.4%	95.4%	**47.8%**
TOT	**663 pc.** **42.7%**	**93 pc.** **6%**	**23 pc.** **1.5%**	**13 Pc.** **0.8%**	**52 pc.** **3.3%**	**709 pc.** **45.7%**	**1,553 Pc.** **100%**

4.4 The implication of ceramic distributions and typology towards the study of P'o-ni

I have discussed in great detail the Oriental ceramic distributions and their typology at the three Bruneian sites of Terusan Kupang, Kota Batu and Pulau Chermin. In this final section, I will relate these studies to the question of P'o-ni and its relation towards Brunei. This study is, however, still in a preliminary stage and not yet conclusive. More archaeological data and historical evidence are still required in order to draw a final conclusion.

Before this study, not much was known about Terusan Kupang, in particular about the Jai-Jai site of the Limbang Division. However, this study has shown the significance of Terusan Kupang and its surrounding area as the most important archaeological site in Brunei. Archaeological evidence gathered at this site for the last fifteen years has shown that the site was among the earliest site in Brunei. It was perhaps established as early as the eighth century A.D. and continued occupation up to the thirteenth century A.D. The period extended from the late T'ang to early Yuan period, an estimated span of 500 years. I assumed that Terusan Kupang was among the earliest locations of ancient Brunei before it moved to Kota Batu in the fourteenth century A.D. Many scholars believe that this was an important site, although no attempt has ever been made to relate it to Brunei. As Matussin Omar [1981: 45] said that "the enormous quantities of ceramic shards of local and foreign imports recovered from the site may suggest that it was one of the major centres in Brunei and perhaps in Borneo at the time."

The question is, why was Terusan Kupang developed before Kota Batu? Geographically, Terusan Kupang is located further down the Brunei River and far away from the South China Sea. Why was Terusan Kupang chosen as the main centre of P'o-ni instead of Kota Batu? Why only after hundreds of years was Terusan Kupang abandoned in favour of Kota Batu?

The emergence of Terusan Kupang may be due to a number of factors. The site was chosen probably because of its favourable location, for both economic and security

reasons during this time. The area surrounding the site was very rich in jungle and exotic products, which were essential for their survival as a trading nation. Among these hinterlands are the Limbang regions, the Temburong regions, the Limau Manis regions and beyond. Archaeological surveys conducted at these regions have shown a similar type of ceramic assemblage, which were dominated by Sung related wares of celadon and Yueh types dated from the late tenth to thirteenth centuries A.D. Among the sites is Butir, Garang, Kampong Junjongan and many other smaller sites further inland. Some of these wares also found their way to Kota Batu and other sites along the Brunei River, indicating the existence of trade contacts between these neighbouring regions. Perhaps, interregional trade was also organised to far-away regions such as Santubong of the northwestern part of Borneo. This was indicated by the similarity of local earthenware shards found at both places, apart from the similarity of export ceramic assemblage of Sung related wares as mentioned earlier [see Chapter 7].

During my field research at Terusan Kupang, I had an opportunity to survey the river tributaries around this region. From these observations, I came to the conclusion that there is another easy and shorter route connecting the South China Sea and Terusan Kupang instead of using the Brunei River as was previously thought. Although the route is not as important as the Brunei River, nevertheless it provides an easy access to the open sea. The route was through Kuala (bay) Labu and some part of Limbang territory of Pengkalan Tarap [see fig. 2 & 6]. The passage way connects all the way to Limbang, its town and beyond. However, this outlet is no longer popular among large seagoing vessels because of its shallowness. The annual report on Brunei in 1904 mentioned that "the direct mouth of Limbang is spoilt by reefs and sand banks. In consequence, small boats, find it convenient, as a rule, to enter and leave the river Brunei side of Pulau Berembang [McArthur, 1904: 106]. This outlet began to lose its importance after the discovery of Kota Batu at the entrance of Brunei River at the beginning of the fourteenth century. It began to disintegrate, mangrove trees and other swamp vegetation began to

grow, trapping sand and marine particles and therefore contributed to sand deposition and siltation.

Another reason for Terusan Kupang early growth was for security reasons. During this time, pirates were very common, especially around the many bays and islands throughout the region. Sites which were located near to an open sea were therefore prone to pirates attack, plundering and so on. I assumed this is the main factor for Kota Batu's late development because of its location close to the Brunei Bay and South China Sea which made it accessible to enemies or pirates' attack. Terusan Kupang, on the other hand, was strategically located far from the main Brunei River and the open sea. The Mendaun River, where Terusan Kupang was centred, was only a small tributary of Brunei River, with shallow water and lots of sharp and dangerous meanders. This might discourage enemy vessels from entering the site or at least slowed down their movement. This provided the population with ample time to make preparation against the coming enemies. Furthermore, the dense forest would provided them with shelters, and provided them with plentiful supplies of jungle products.

Although the port of Kupang perhaps had a naval force of about 100 *prahus* or small fighting boats [see chapter 2], this was not enough to protect P'o-ni's vast territorial waters. Furthermore, the vessels were more suited to coastal guards or patrolling rather than for wars. Perhaps, for this reason, P'o-ni territories were limited to certain areas within Borneo [ibid]. The naval forces were more for patrolling and to ensure political security within P'o-ni's territorial waters. This strategy, however, began to change when Kota Batu began to emerge in the fourteenth century. The naval forces were then built not only for security reason, but also to extend Brunei's power to wider areas as far as the southern Philippines. I will discuss this issue later on in this chapter below.

In the fourteenth century, Kota Batu began to develop as the main centre at Brunei Bay. The site, without any doubt, is the predecessor of modern Brunei. The success of Kota Batu was due to three important factors. The first is its geographical

location; the second, its naval power, and the third, the right political events that occurred both internally and externally. Geographically, Kota Batu was strategically located on the upper part of the Brunei River, sandwiched between two hill ridges, the Subok and the Berambang Hills [fig. 2 & 6]. This location was favourably sheltered from strong seasonal winds of the Southeast monsoon. Furthermore, the Brunei River was wide and calm, which enabled Kota Batu to control the main approaches from the South China Sea and Brunei Bay into the Brunei River, its town and beyond, and, thus, a control of the revenue and income to both external and inland resources. The growth of Kota Batu was further stimulated after the introduction of the Eastern Trade Route during the Southern Sung and Yuan Dynasties of the thirteenth century. This route started from the southeastern Chinese ports of Quanzhou, Guangzhou, to Taiwan, to Luzon in the Philippines, the Visayas, Sulu, northern and eastern Borneo, Sulawesi, finally to the Moluccas [see fig. 5]. This has contributed to Kota Batu's growth as Chau Ju-kua wrote in the thirteenth century and quoted by Roxas Lim of P'o-ni's role as "the most important entrepot in the Eastern Ocean, it had a well-organised government, it traded regularly with China, and it had many ships and an excellent harbour, all qualities that characterized the Srivijayan Empire of the seventh to thirteenth centuries A.D." [Lim, 1987: 44].

Kota Batu was thus geopolitically well situated to take advantage of the international traffic and commerce. This resulted in the growth of some wealthy classes in Brunei, in particular among the royal families who actively controlled the trade. The Sultan dominated the trade by exercising direct authority on regional shipping, over rivers and their outlets to the sea and their hinterlands. This gave him mass wealth, which was essential not only for his own benefit, but also for the states. The wealth gave the Sultan power and, at the same time had tightened his position on the top. To maintain this position, the king also invested his wealth to built naval force to secure his vast territorial waters against piracy or foreign invasions. Apart from that, the city also needed further protection because to its position so close to Brunei Bay and the open sea. Brunei naval

force was known to have large ships, with cannons and artillery. A Spanish account of the sixteenth century mentioned that :

> "In the ships they use artillery although it is not very big because almost all (that) are in service are such as *falcones* and half *falcones* and large and small *uersos*, and of this (artillery) they have a great quantity because from the kingdom of Pattani.....In their city are 100 ships, among which (are) *galeras*, *galeotas*, and *fustas*, which are so prepared that inside six hours when they call to arms in the city all are ready to go at the enemy...." [Carrol, 1982: 14-5].

Apart from having a powerful naval force, Kota Batu had also a strong inland defense at Pulau Chermin at the entrance of the Brunei River [see above]. At Kota Batu itself, it had a strong defensive stone wall located on the dry-land of Kota Batu [Omar, 1983]. The remains of this stone wall can be seen to the present day of Kota Batu. Perhaps the same wall was mentioned by Pigafetta in 1521. He said that " ....in front of the king's house is a thick wall of brick, with towers in the manner of a fortress, and on it were 56 large brass cannons, and 6 of iron" [Nicholl, 1990: 11].

Politically, Kota Batu owed to its success to the establishment of a strong centralized government. The first Sultan (Sultan Muhammad[12] - (1363-1402) who had converted to Islam, had transformed Kota Batu into a strong empire whose influence extended beyond Borneo throughout the Southeast Asian region. During Sultan Sharif Ali's rule (1425-1432), he established a well-organised system of justice and legislation based on Islamic law, for which the Kingdom became known and respected throughout the region. He was also responsible for the construction of stone of forts or *Kota Batu*,

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12 Sultan Muhammad was the first officially registered Islamic Sultan of Brunei, based on the Royal Genealogical Tablet or *Batu Tersilah*. However, based on the Chinese written sources, there were still more Brunei's kings that were not recorded, such as Hsiang-ta that sent an envoy to the Chinese court in the 10th. century. However, these early rulers were not Muslim and therefore not recorded in the Tablets. Meanwhile, there was still some confusion on the Tablets mainly because they were written in the early 19th century and describes these earlier periods. The accounts were only based on memory, rather than factual data.

which remain to the present day. The rise of Kota Batu was further stimulated after the downfall of Melaka in 1511. Kota Batu became an important centre and experienced something of a Golden Age. Cesar Aib Majul said that: "Following the Portuguese conquest of Melaka, and its harassment of Johore, there was a considerable exodus of Muslim Malay nobles and merchants to Brunei, which was then a well established and busy port [Majul, 1973; see also chapter 2].

4.5 Summary

As mentioned earlier, Brunei lacks written sources prior to the sixteenth century. It is therefore extremely difficult to study Brunei's early history which remains surrounded by controversial issues and arguments. The role of archaeology is therefore essential in trying to solve these problems. Indeed, as this thesis has shown its contribution is vital and has enabled the reconstruction of pieces of Brunei history based on the archaeological evidence. This study is, however, not yet conclusive and more archaeological research and documentary evidence is required in order to draw a final conclusion. More archaeological research is required especially at the sites of Terusan Kupang and Kota Batu. These are sites I presume to be the key to Brunei history. Apart from the on-land sites, which still require more intensive studies, the importance of underwater areas around the vicinity of these sites cannot be ignored. Based on the abundance of export ceramics and other artifacts found at these sites, it is likely that most important and interesting materials are still buried under the mud and sand in the Brunei River, Mendaun River and Brunei Bay waiting to be explored and studied.

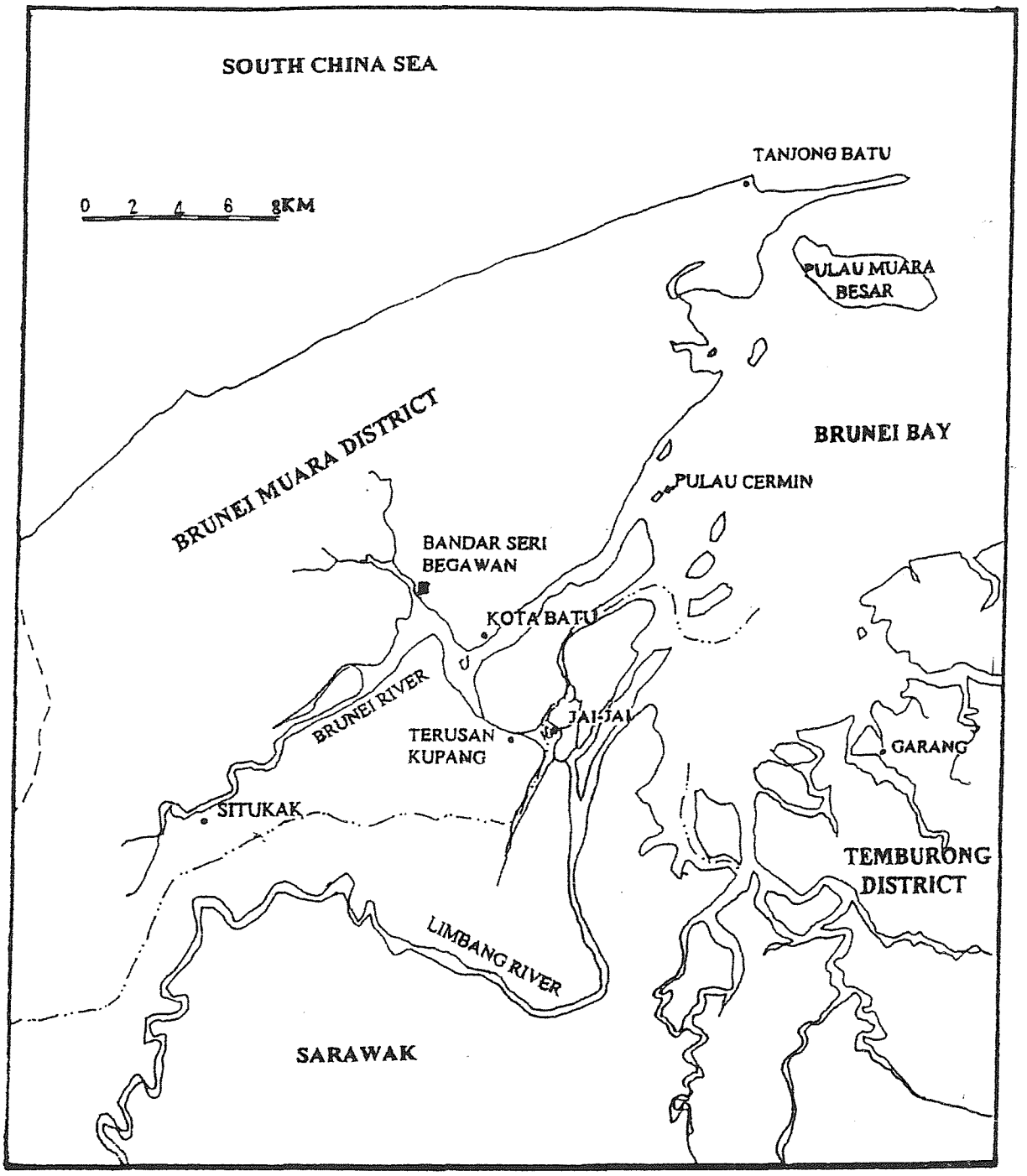

Figure 6: Brunei Bay and major archaeological sites.

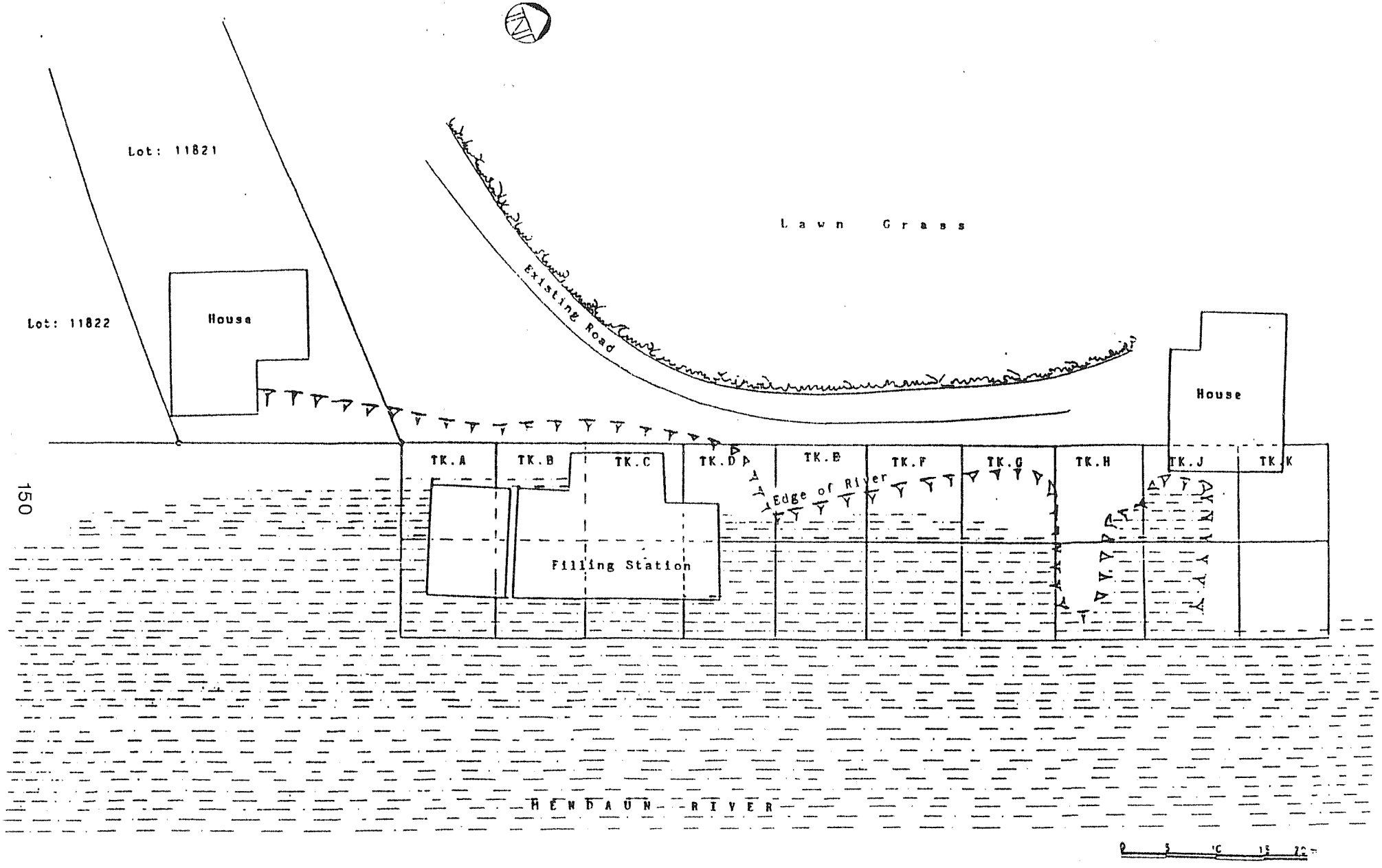

Figure 7 a! Map of Terusan Kupang archaeological site.

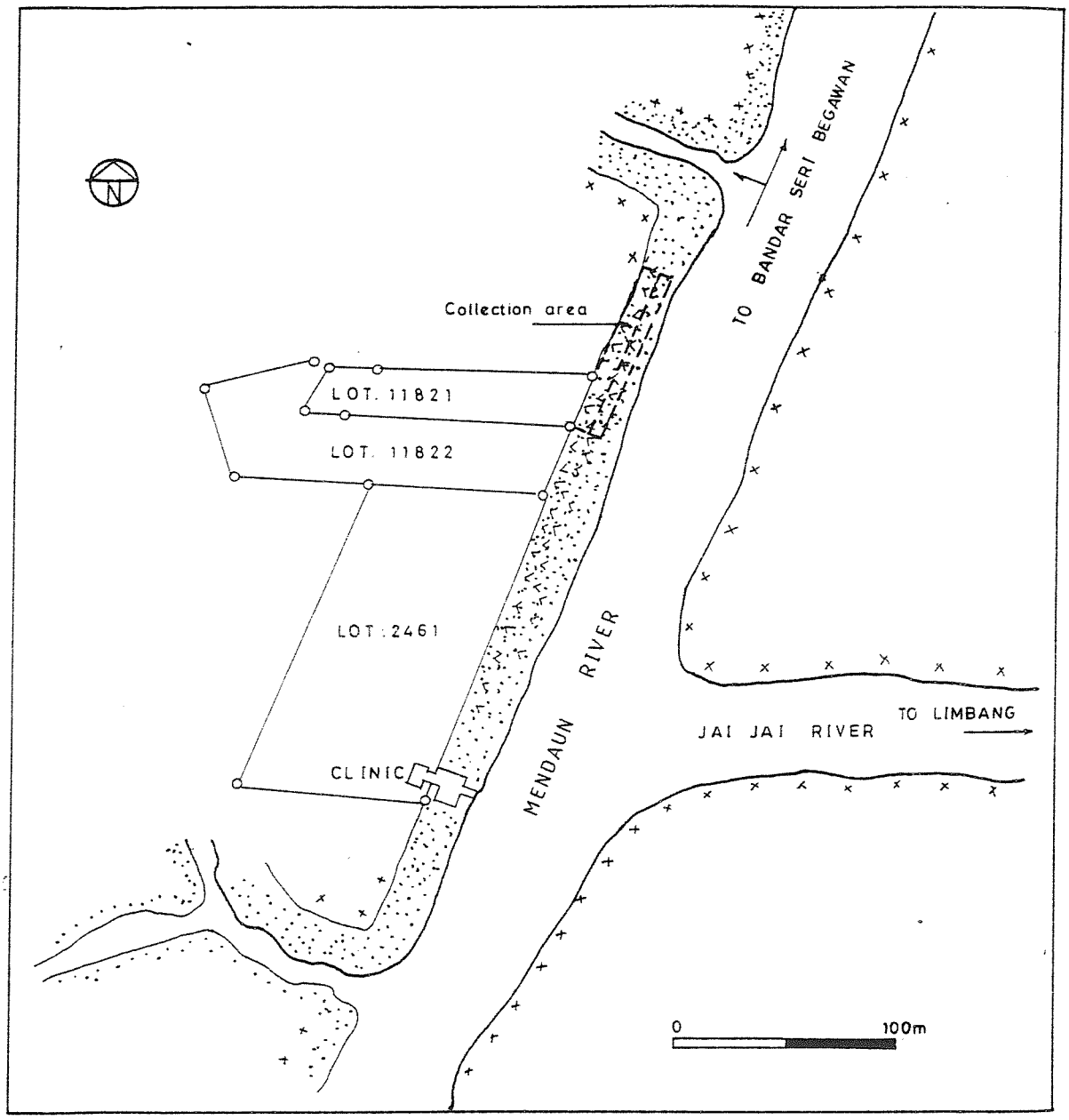

Figure 7 b: Map of Terusan Kupang showing the surface collection site.

CERAMIC SHERDS

TIDAL ZONE

NIPAH PALM

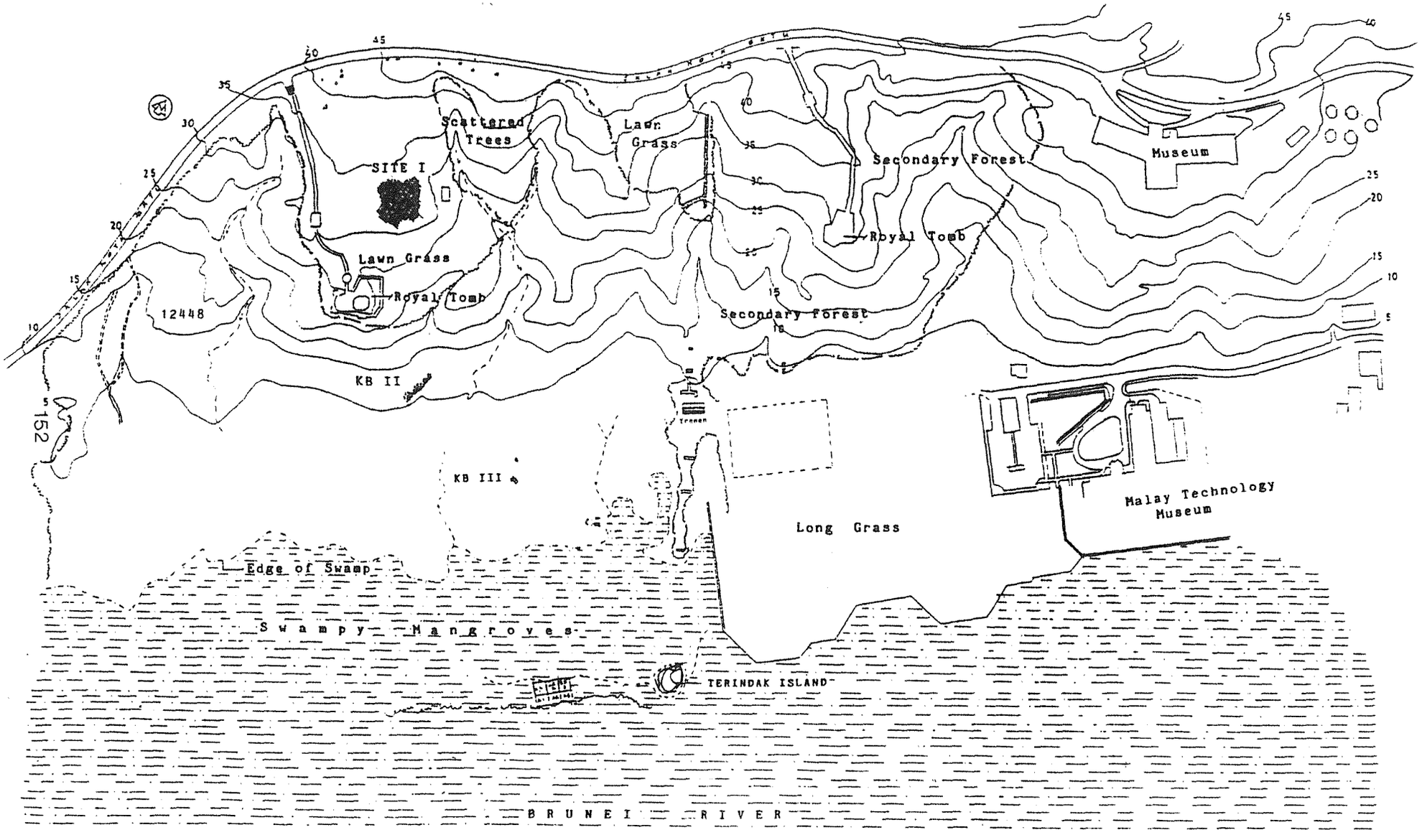

Figure 8: Map of Kota Batu archaeological site showing the River-bank site and On-land site.

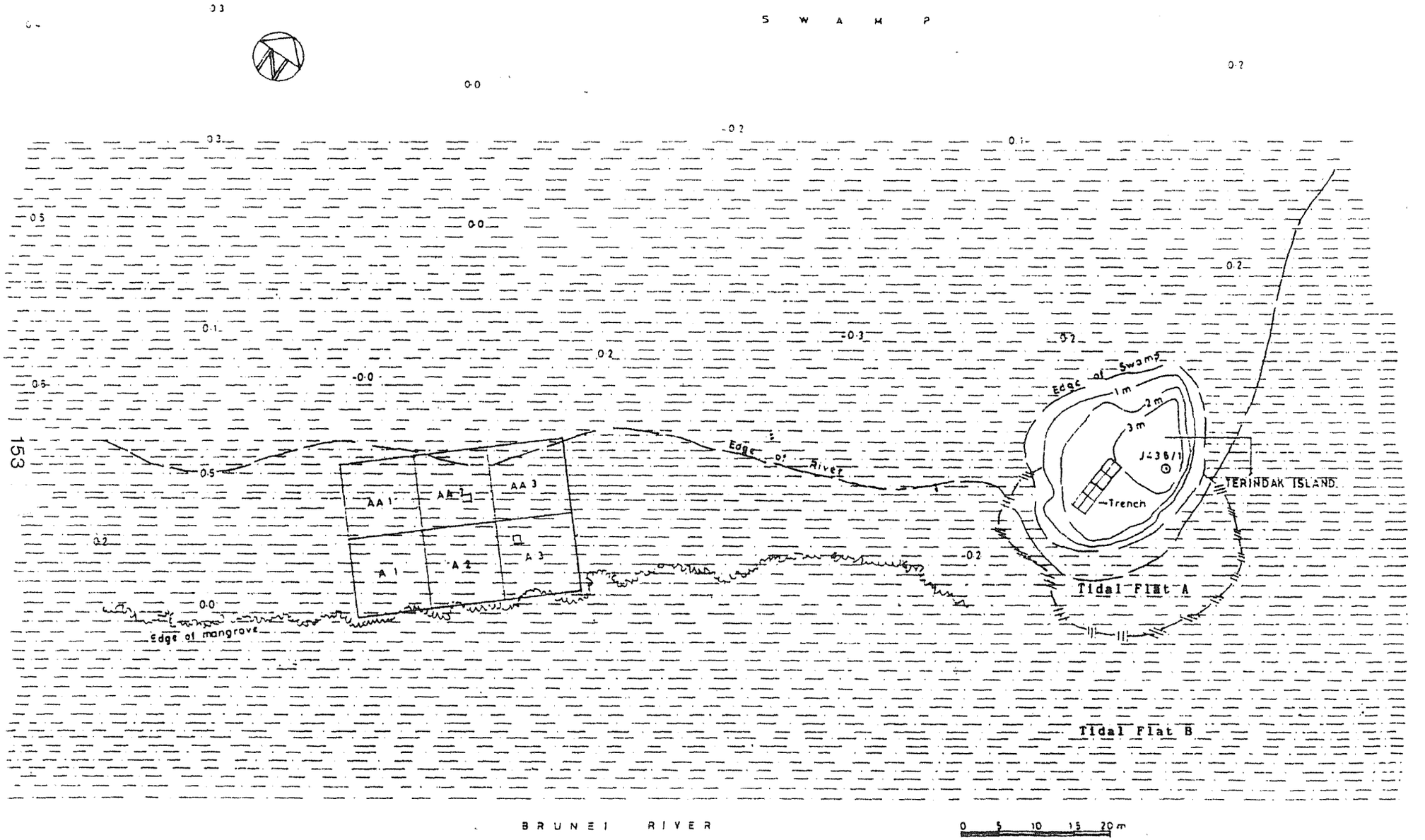

Figure 9: Kota Batu River-bank site showing trench KB. A2, A3, AA2 and AA3.

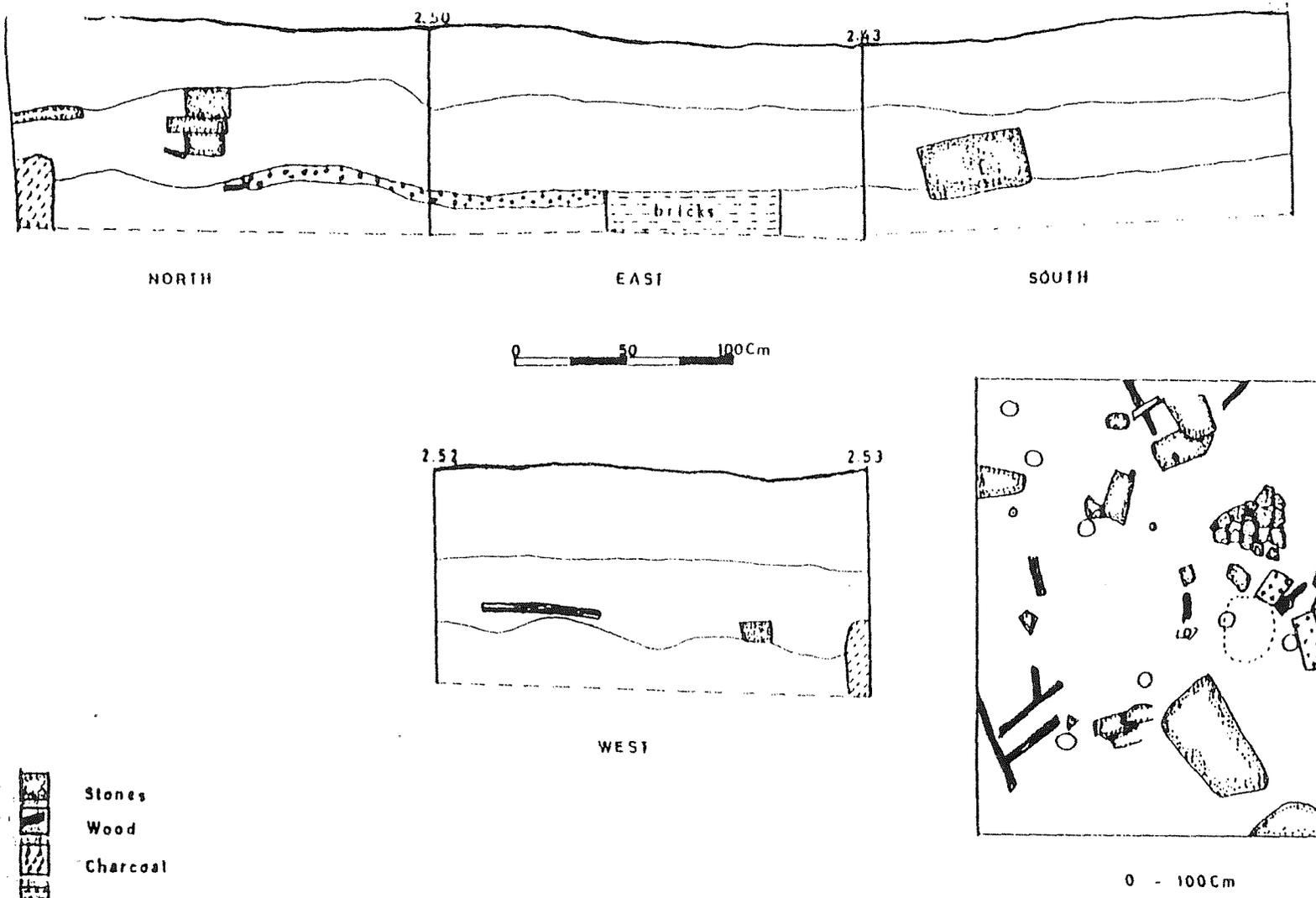

Figure 10: Trench KB. III showing the archaeological materials discovered during the excavation (excluding ceramics). Top view and section of north-east-south-west trench.

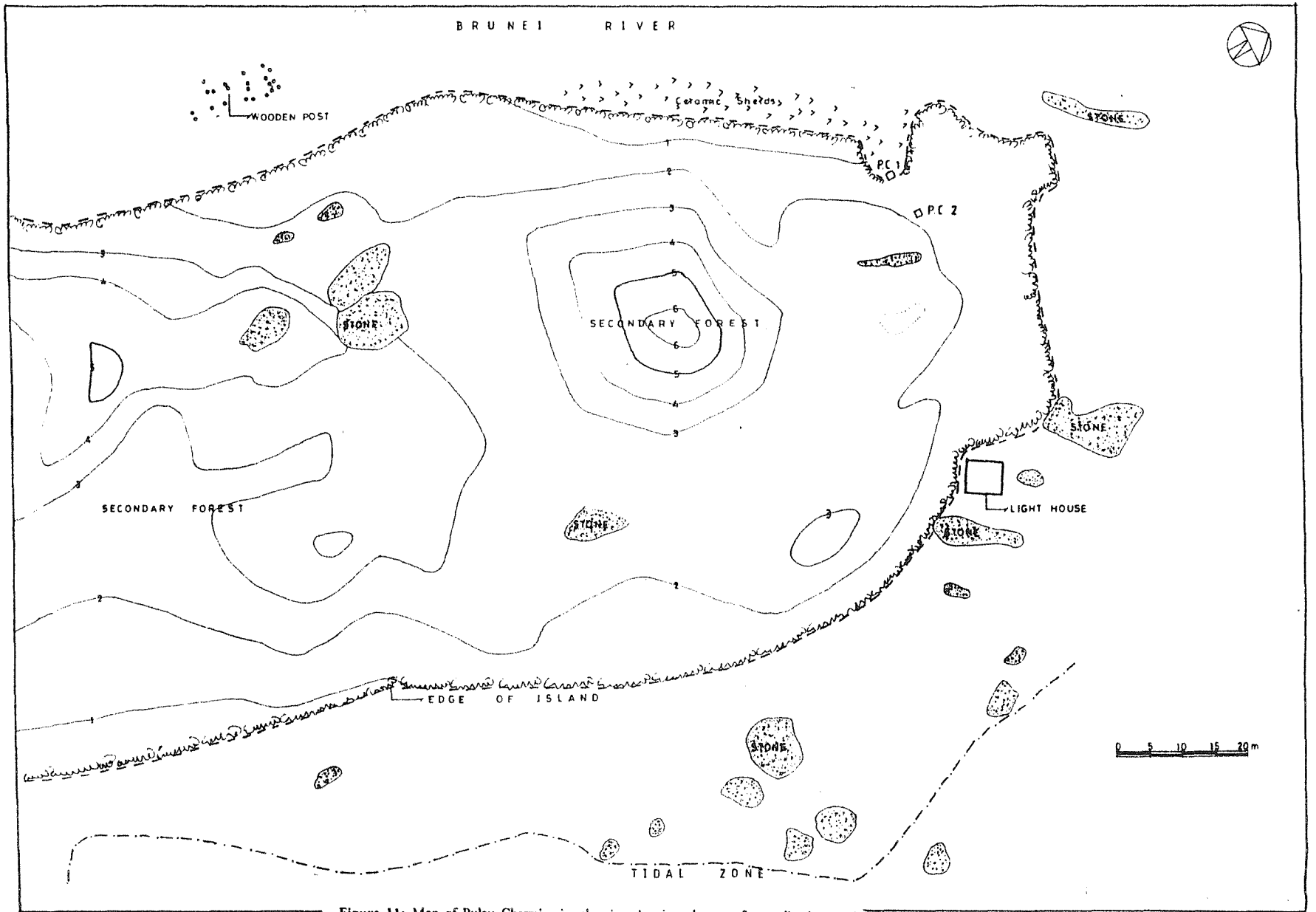

Figure 11: Map of Pulau Chermin site showing the site where surface collections and excavation took place

CHAPTER 5

CHINESE CERAMICS: A BACKGROUND HISTORY AND ITS RELATION TO THE TERUSAN KUPANG, KOTA BATU AND PULAU CHERMIN CERAMIC COLLECTIONS

5.1 Introduction

The Chinese civilization is one of the earliest in the world [see table 14]. The Shang or Yin Dynasty made its first appearance in the seventeenth century B.C. at the juncture of two successive Neolithic cultures of the Yang-shao and Lung-shan, in the fertile loess soils of the Huang-Ho or Yellow River basin in Honan and Shansi Provinces [Vidal-Naquet, 1987: 30; Whitehouse & Whitehouse, 1975: 192]. The civilization has introduced various important inventions typical of ancient Chinese culture, such as pottery, writing, the harnessed cart and bronzes. Although these inventions are not the first in the world, the wealth as a result of these creative works and innovations have left their mark on the political, economic and cultural development of Chinese society, and at the same time have influenced the history of some world civilization as well. Their influence can be felt over a wide area around the world to as far as Africa and Europe. One of these great innovations is pottery and porcelain which is the main focus of this chapter.

China is among the first countries in the eastern world to use pottery, and her ancient invention, porcelain, has been admired and valued throughout the world. This great innovation has made the country recognized as the "home of Porcelain." As R.L. Hobson and A.L. Hetherington [1923: 3] said:

> "In some countries of the world, especially in Great Britain, the name "china" is synonymous as for porcelain. They are the only manufactured material which has been identified so closely with a nation in the eyes of the English-speaking races that the name applied to it is that of the country of its origin. The children of this country become familiar with the word "china" as signifying the cup or plate from which they eat long before they learn that there is a country of that name."

Since the ancient time, pottery has played a significant role in the Chinese way of life. The potter has held a unique position in the social structure of the societies; and pottery has been worshiped for its enormous benefit to society in the form of such common everyday objects as water carriers, food storage vessels, cooking vessels, and serving vessels. Apart from utilitarian functions, pottery was also used for ceremonial and religious functions and for trade as well as for other types of objects such as figurines, jewelry and even toys. The earliest pottery vessels so far found in China were unearthed at the site of the Peiligang Culture in Xinzheng, Henan Province and the site of the Cishan Culture in Wuan, Hebei Province, both dating as far back as 7,900 years ago [Zhiyan and Wen, 1989: 8]. These were technologically simple, and yet they have shown a better sign of improvement. Surely, from this time onwards, the technology has steadily improved and evolved with the progress of time. It has developed from simple handmade plain pottery, to wheel-made painted pottery, to a high-fired stoneware and porcelain. The technology has also gradually changed from a solely household and part time job for home consumption, towards a better organization level of workshop and industry for local and foreign consumption. The Chinese mastery of this technology placed them ahead of all their rivals and made them as among one of the greatest inventors of pottery, perhaps ahead the Egyptians, Persians and Greek. Their supremacy in this industry was hardly challenged before the nineteenth century A.D.

The greatest achievement in the Chinese ceramic technology is the invention of porcelains. The first porcelain was probably made during the late Sui (618-906 A.D.) or the early T'ang Dynasties (618-906 A.D.). This is the period when Chinese societies began to achieve a definite technological level. Porcelain was appreciated by the people of China and those of other countries, and eventually replaced pottery as China's main greatest innovation. As Li Zhiyan and Cheng Wen [1989: 23] said "the ware touches closely the life of all mankind, and today, after three millennia of development, porcelain is ever more cherished as it is used in a wide range of people's pursuits in daily life."

Porcelain differs from pottery in the following respects. China clay is used to form the white paste, it is non-porous and covered in a felspathic glaze, with a hard body and resonant. It also has a translucency and a smooth surface. It is fired at a very high temperature of between 1,300 and 1,400 degree Celsius. These are all the characteristics that made porcelain one of the greatest technological achievements in the entire history of ceramics. Its technical superiority is synonymous with perfection. When Chinese porcelains was first exported from the tenth century onwards, they soon became highly demanded commodities in the overseas market. In some countries, such as in certain regions of Southeast Asia, it had greatly affected the local earthenware industries and was perhaps crucial factor in their downfall. In certain areas, such as in Thailand or Vietnam, its influence provided inspiration for the development of local industries of a high technical level [see chapter 6]. While in some other countries, like Europe, they tried to imitate the technology in their own industries. However, it was not until the seventeenth or eighteenth centuries they were able to understand the mystery of Chinese porcelain [Lach, 1965: 769-70; Rooney, 1987: 4].

During the Sung Dynasty (906-1279 A.D.), porcelain kilns mushroomed in many places throughout China and different regions began to develop their own particular styles. Chinese ceramics began to enter into the overseas market on a larger scale than before, as discovered in many archaeological sites throughout the world. During the Ming and Ch'ing Dynasties (1368-1911 A.D.), porcelain manufacture attained its height in the history of China. This can be seen in the tremendous variety of vessel shapes, lustrous colours and splendid designs which were made possible by the fine texture of the paste, adequate firing and abundance of pigments. The improvement of craftsmanship and various socials influences of the time also contributed to the diversity. Since then, Chinese ceramics became very popular and highly demanded in the overseas market. They were found all the way throughout the world, from Southeast Asia, to South Asia, the Near and Middle Eastern countries, the Mediterranean world, Africa, Europe and to North and South America.

For this study, I will only focus on Chinese ceramics dated from the late T'ang to early Ch'ing Dynasties from the tenth to the mid-seventeenth centuries A.D. as this is the period when Chinese ceramics became famous on the international markets, especially in Southeast Asia. The main groups of Chinese ceramics to be discussed include Yueh wares, Celadon types, Lung-Chuan wares, Black-and Brown-glazed wares, Ch'ing-pai wares, White wares, and Blue-and-White wares. These are the wares very common in the foreign market, in particular in Southeast Asia, including Brunei. Other common types of Chinese wares found in Southeast Asia are polychrome and monochrome wares, either in green, red, yellow, black or blue. In Brunei, however, only a small number of such wares were found. From my three research sites, for example, only Kota Batu has remains of such wares. However, only seven pieces or 0.1% were recovered out of 5,365 pieces of shards that have been collected [see chapter 4]. For this reason, I will not include this type of ware in my discussion.

In order to understand more about Chinese ceramics, one needs to know the background of Chinese civilization which was developed over thousands of years. For this reason, I am going to briefly discuss the history of China, in particular the dynasties which are relevant to my study, namely the T'ang, Sung, Yuan, Ming and Ch'ing Dynasties of the seventh to seventeenth centuries. These are the dynasties which played an important role in changing Chinese ceramic history and gaining it fame throughout the international market.

5.2 A background history of T'ang, Sung, Yuan and Ming Dynasties and their relation to the development of Chinese ceramics

China has a long history of thousands of years [see table 14]. The country was ruled by a succession of dynasty, the earliest being Shang Dynasty about 1600 B.C. and the last the Ch'ing Dynasty in 1912 A.D. After the Ch'ing Dynasty, China came under the Republic until 1949, when it was ruled by the People's Republic until the present day. Throughout this long history, Chinese civilization has evolved, with many great scientific

discoveries and inventions. These not only left their mark on the Chinese societies, but have influenced the history of the world as well. Among these great inventions were ceramics, which are the main focus of this study. Different dynasties have their own distinctive ceramic styles, although some ceramics were also copied and produced until recent time.

Most of the early Chinese ceramics were confined within China, although they were widely traded over large areas throughout the country. It was only towards the end of the T'ang Dynasty of the tenth century that some Chinese ceramics began to be found in the overseas market, in particular along the passage way between India and China [see chapter 2 and 3]. The limitations of early Chinese export ceramics are due to China's lack of interest in the South Seas, which she only took seriously in the eleventh or twelfth century A.D[1]. The reason for this was the belief of Confucius regarding foreign travel to be interfered with important familial obligations and believed trade was inherently mean and debasing [Levathes, 1994: 33]. They also considered China as 'The Middle Kingdom,' 'The Multitude of Great States,' or simply 'All under Heaven.' Beyond the borders of the empire lay only wilderness and lawless, barbarian tribes. With these attitudes, they considered themselves as the superior nation and their country had everything to offer.

During the Han Dynasty of 206 B.C. - 220 A.D., for example, Confucianism became the moral code for the upper classes of Chinese society and the foundation of the emerging feudal bureaucracy. Under the system, the government service and farming were quickly elevated as the honoured professions for virtuous men, while commerce and the barter of goods were shunned as inherently exploitative and corrupt. Merchants

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1 The earliest Chinese contacts with the South Seas began as early as the reign of Emperor Han Wu-ti (141-87 BC), in search of 'rare' and 'precious' items [Wheatley, 1959: 19]. However, their commitment in this region is not as serious as the Indian, Persian or Arab merchants, who dominated the trade monoploy from the first century AD.

were ranked below artisans and were forbidden by sumptuary law to wear the finest-quality silk [ibid: 34]. Similar practises were also adopted during the early T'ang Dynasty of 618 - 907 A.D. Emperor Xuanzong, for instance, had burned pearls and jade and fine cloth when he first became emperor in 712 A.D. to show that these curiosities meant nothing to him [ibid]. However, these attitudes began to change during the later T'ang emperors, when they began to initiate foreign trade under the guise of 'tribute' to the Chinese Court. As a result, more foreign traders came to trade in China and hence slightly changed the Chinese attitudes towards the rest of the world. Foreigners were well received and tributes were presented with great ceremony at court. This was the period considered as great in Chinese history and marked the beginning of great changes. For the first time foreign luxuries and curiosities began to enter the local markets, while at the same time Chinese products began to be exported in the foreign markets. Although most of these transactions were dominated by foreign traders, nevertheless, it had opened up Chinese awareness of the value of trade and contacts with the outside world. In ceramic production, these changes had a drastic affect on the local industries and within just a short period of time had transformed the industries towards big and profitable enterprises. Perhaps, without these changes, Chinese ceramics would have remained like its predecessor thousands of years before.

The first Chinese dynasty which contributes to the dispersal of Chinese ceramics overseas was the T'ang Dynasty. The dynasty was founded in 618 A.D. after the collapse of the Sui Dynasty [see table 14]. The new dynasty is marked by superb power and the splendour of its feudal society. The success of the T'ang is owed to its efficient government administration, based on the old Han civil service, but with refined and fine-tuned improvement. It owed its integrity to the recruitment by special competition of state officials whose influence counterbalanced the power of the nobles. The setting of an efficient secretarial service also enabled the coordination of all the different states departments.

In the military, the new dynasty continued its expansion policy and added the whole of central Asia as far as the borders of Persia, Sogdia, and Khorezm in the west [Medley, 1986: 76]. This has made the empire the largest and most populous state in the world, thus making itself the exception in the pre-modern world to the rule that political units of such magnitude are unable to survive over long periods of time. To monitor these large regions, a good system of internal communication by the canals and the roads were improved. This contributes further to the success of the government, in addition to the efficient government administration as mentioned earlier.

Culturally, the T'ang Dynasty was an era of a renaissance. There were many inventions, such as the water mill, wheel-barrow, movable printing type, and fine porcelain. During Emperor T'ang Hsuan-tsung, known during his reign as Ming Huang, 'the Bright Emperor', he presided over a splendid court. Poets, painters and musicians thronged the palace; and architects were commissioned to enhance the beauty of the capital [Yap & Cotterell, 1977: 19]. Chang'an, the T'ang capital, became the most cosmopolitan city in the world. It is estimated that among the one million city residents, 50,000 were foreigners or members of ethnic minorities [Fagan, 1996: 144]. At the outer city, two enormous markets were built. An eastern market specialized in goods from within the borders of the empire and a western market specialized in exotic goods from India, Persia, Southeast Asia, and beyond, to the distant shores of Africa [Levathes, 1994: 35].

The political stability had created economic security, which in turn encouraged the growth of trade activities to take place. During the early T'ang, trade across Central Asia grew rapidly and not only did merchants flood into China bearing luxuries of all kinds from western Asia and India, but all kinds of people came too, Buddhist monks, Nestorian Christian, Zoroastrians, Manichaens, and with them craftsmen and entertainers all anxious to enjoy the opportunities that the new and prosperous empire offered [Medley, 1986: 76]. During this period, the overland route or the Silk Route still played

an important role in connecting China with the outside world. This is due to the importance of northern China as China's main frontier.

In the latter period of the T'ang Dynasty, however, the economic and then political centre of gravity shifted from the north to the south. This was because of the growing peace in the south, which generated population growth, more land was occupied and cultivated and commerce and industry became increasingly important to its economy [Gungwu, 1958: 74]. Unlike the north, where it is more close to Central and Western Asia, the south is much nearer to the *Nanhai* or the South Seas. The prosperous and cosmopolitan nature of China had attracted many merchants to its shore, via the South China Sea to the Southern Chinese coastal ports. Arab, Persian, Indian as well as Southeast Asian merchants came to south China and brought their luxury items for trade. This resulted in the growth of numerous coastal ports along the Chinese coastal Provinces of Fujian, Guangdong and Zhejiang. Among the ports were Canton or Guangzhou, where they "enjoyed the profits of the foreign ships, where all the valuable goods were gathered" [ibid: 83]. In the seventh century, some two hundred thousand Persians, Arabs, Indians, Malays, and others lived in the city as traders, artisans, and metalworkers. To monitor the flow of goods in and out of China, the government had appointed an official to be in charged of sea navigation, shipbuilding and foreign trade - the Bureau of Merchant Shipping [Zhiyan & Wen, 1989: 100; Levathes, 1994: 38].

The pattern of trade also began to change, whereby it not only involved goods of the court and the Imperial households, but also goods of a religious, medicinal and condimental nature and aromatics and spices and various forest products for an increasingly urbanized element of Chinese society [Guy, 1986: 6; Gungwu, 1958: 71]. For foreign exchange, the Chinese had introduced some 999 lists of trade items, including silk, gold, silver, Chinese cash, coined moneys, lead, porcelains and so on [Chau Ju-Kua, (trs) Hirth & Rockhill, 1970: 19]. Chinese porcelains thus become an official trade commodity and therefore marked a new era in the Chinese ceramic history. From this

time onwards, Chinese ceramics become an important trade commodity as archaeologically demonstrated in many countries throughout the world.

The introduction of T'ang ceramics into the international market was due to the Arab and Persian merchants, who actively controlled the East and West trade activities during this time [see chapter 2]. The introduction was further enhanced after the increased use of shipping for commercial activities during this time. Unlike the overland Silk Route, ships were able to carry heavy loads of cargoes and could travel over a long distance. This is especially true for ceramics which are not only bulky and heavy, but also fragile. During the early T'ang period, the inland routes still played an important part in transportation between China and central and western Asia and beyond. This perhaps hindered the transportation of heavy, bulky and fragile cargoes, such as ceramics. Perhaps only small amounts of ceramic were traded, while the other cargoes mostly consisted of light but valuable materials, such as silk, tea, and so on. However, unlike ceramics, these materials were perishable and so have been very difficult to trace in the archaeological records. Nevertheless, there must have been substantial amounts since the overland route is amongst the earliest trade routes in the eastern world before the increased use of sea transport in the seventh century A.D.

The T'ang role was significant in the history of ceramics because this was the period in which earthenware was superseded by stoneware and later by porcelain. The success of T'ang ceramics was largely due to the government policy of encouraging artistic value among the societies. This cultural renaissance encouraged the development of a flourishing artistic life among certain members of the Chinese society [Yap & Cotterell, 1977: 19; Ayers, 1991: 288]. The T'ang rulers adopted a new measure which allowed craftsmen to pay money into the imperial treasury as a substitute for conscript labour and to work as hired labourers according to feudal practises. An independent stratum of handicraftsmen thus appeared in society and handicraft workshops in their true sense sprang up [Zhiyan & Wen, 1993: 33]. This played a crucial role in the

development of the T'ang porcelain industry as it flourished and achieved a high standard of excellence.

It was, however, only towards the end of the T'ang Dynasty in the late tenth century that some well known T'ang wares such as the Yueh wares began to enter the international market. I will discuss this type of ware below. When the T'ang Dynasty came to an end in 960 A.D., it was succeeded by the Sung Dynasty (960-1279 A.D.) [see table 14]. The Sung period in Chinese history was more noted for its civilian administration than military power. Art and culture in these three centuries achieved new heights and the development of ceramics surpassed that of the Han and T'ang periods to reach its zenith. Though smaller in territory than the T'ang, the Empire was, however, more populous. Before the fall of K'ai Feng, the Northern Sung capital in 1127, the population of the Sung Empire had topped one hundred millions, and the annual revenue of the imperial government was twice as much as the T'ang [Cotterell & Yap, 1975: 181]. After the fall of Northern Sung, the capital moved to the port city of Hangzhou, just south of the Yangzi River. Unlike the T'ang or Northern Sung, the Southern Sung was marked by the growth of the *shang*, the merchants who were becoming a powerful element in the society, where their affluence directly related to the revolution in money and credit. This was further added to by the emperor's attitude to overseas trade and its use to finance the needs of the state. Emperor Gao Zong (1127-1162), for example, he expressed the new attitude towards commerce and demanded the reexamination of Confucian texts to put trade and profit into a more favourable light [Levathes, 1994: 41].

The Sung was renowned as the classical period of Chinese ceramics. Sung wares have been so renowned for their elegance, restraint, equilibrium and beauty that the dynasty has long been regarded as the classic period of Chinese ceramics [Vainker, 1995: 88]. Many factors contributed to this rapid development. One of which was the relatively peaceful and tranquil social environment which permitted the stable economic growth of towns and cities. The proliferation of towns and cities as cultural and economic centres

had already begun in the late T'ang Dynasty, but it had continued to grow from the Sung onwards. This contributed to the growth of affluence and improved living standards of the city communities. In addition to other luxury items, demand for Chinese ceramics began to increase, both for practical use and also for decoration and appreciation. It was known during this time that tea houses and restaurants were noted for the fine wares that they provided [Minben, 1987: 5]. Apart from that, tea drinking and tea-tasting contests became popular, filtering down from the upper strata of the ruling class [Zhiyan & Wen, 1989: 53].

The Sung government also instituted the system of hiring craftsmen, abolishing the old system of using unpaid labourers for the government workshop. Control over the personal liberty of artisans and technicians was also slackened. This facilitated the development of ceramic production and that of various related trades and professions [ibid: 53]. It also contributed to the growth of kilns towards an industrialized system of production [Medley, 1986: 105]. More and more schools of porcelain began to operate, each with their own distinctive style, depending on their locations, characteristics of the raw materials and fuels. The outcome from this was the production of a variety of celadons, each with different form and glaze. I will discuss this issue later on in this chapter.

Another significant factor in the development of Sung ceramics is the expansion of maritime trade. This is especially so during the Southern Sung Dynasty (1128-1279 A.D.), when the Sung government began to take a serious approach towards the overseas trade. Unlike the T'ang and Northern Sung Dynasties, the Southern Sung were more oriented towards the sea. Since their region was confined to a small area, with a large population and limited land for farming, they had to look to the sea as another solution for making a living. The region had already been established since the late T'ang of the tenth century, so the foundation was already there waiting to be explored to its maximum. To achieve this, the government had encouraged foreign merchants to trade

directly with Southeastern Chinese coastal ports and at the same time offered incentives to a growing Chinese merchant class to sponsor overseas trade. More new ports were also opened, subsidized harbour and hospitality facilities, and offered to foreign trading communities some degree of extra territory [Guy, 1986: 14]. As a result, more foreign ships came to the region, bringing rare and expensive South Sea's products. The presence of these foreign merchants also contributed further to the growth of the ceramic industries. The supremacy of Chinese ceramics by far surpassed any ceramics produced elsewhere in the world and made them highly demanded items among Chinese products. This resulted in the increased growth of ceramic production, and at the same time had encouraged the growth of more private kilns to cater for this huge oversea's demand.

Apart from foreign merchants, the Chinese themselves ventured into the *Nanhai* regions, more than any of their previous predecessor ever had. To go there, they needed better ships and navigational skills in order to challenge the long-standing supremacy of Persian and Arab traders in the South Seas. To achieve this, the emperor offered cash rewards to spur innovation in ship design, which resulted in the innovation of ten different oceangoing junks [Levathes, 1994: 43]. By the thirteenth century the Chinese had the best ships in the South Seas and had captured the bulk of the sea trade from the Arabs. This contributed further in the export of ceramics to the foreign markets. The *P'ing-chou-k'o-t'an* note that ships trading out of Guangzhou in the eleventh century, the 'greater part of the cargo consists of pottery, the small pieces packed in the larger, till there is not a crevice left and that this trade was conducted by small merchants, each man gets several feet (of space for storing his goods) and at night he sleeps on top of them [Guy, 1986; Hirth & Rockhill, 1970: 31].

The government also encouraged the export of less valued commodities in an attempt to conserve the reserves of copper, gold and silver. In 1216 the government issued an edict officially encouraging the export of porcelain, and in 1219 an official declared that 'using gold and silver to trade for maritime products are a regrettable

practise'[Wheatley, 1959: 37, 39]. This favourable timing has an immense effect on the ceramic industries. More private kilns were opened along the coastal regions in Southeastern China, in particular at the Fujian, Guangdong and Zhejiang Provinces [see fig. 12-15]. Chinese merchants who saw the profitability of export ceramic production also provided much of the capital for the rapid increase in the number of kiln centres and for the improvement of distribution systems [Guy, 1986: 14]. These added to the efficiency of ceramic production, which not only produced better ceramics, but also produced a substantial number of export ceramics to cater for the foreign demand. As John Guy [ibid: 21] said "the picture which emerges during the Sung period is one of diversification, innovation, cross-fertilization, and an altogether greater complexity in the ceramic map of South China."

The importance of ceramics during the Southern Sung period was recorded by Chau Ju-kua's *Chu-fan-chi* which mentioned that each of the major units of Southeast Asia received Sung pottery, as did Peninsular India and Sri Lanka, together with the Zanzibar coast of Africa [Chau Ju-ku, 1264 (trn): Hirth & Rockhill, 1970]. The wide distribution of Sung ceramics, such as celadon and Lung-Chuan wares, indicates the intensity of trade networks between China and the South Seas, and at the same time shows their acceptance as a form of trade exchange commodities instead of using coins as had normally been used. This account is based on the fact that no or few Sung coins have been found in the Sung related sites in Southeast Asia as in the Ming or Ch'ing related sites [for examples see, Omar, 1981; Te-K'un, 1969; Abd. Rahman, 1991; Alaister, 1961; Lim, 1987; Srisuchat & Srisuchat, Bronson and Chuimei, 1989]. Whether this absence or scarcity might have been related to the ban is yet to be confirmed. However, evidence from Brunei excavations might have shown this relationship. At Terusan Kupang site, for example, archaeological excavations have revealed that no Sung coins were found, despite it being a Sung site settlement of the tenth to thirteenth centuries A.D. [Omar, 1981]. On the other hand, several Ch'ing coins were found, dated in the seventeenth century, which was of course outside the Terusan Kupang period.

Similarly, at Kota Batu, the 1952/53 excavations, 97 pieces of coins were discovered, 2 of which were dated T'ang period (723-726), 27 dated Sung and Yuan periods (998-1180), 7 of Ming period (1368-1425), 44 pieces Islamic coins (1368-1425) and 19 coins were unidentified [Harrisson & Harrisson, 1956]. Of the Sung coins, however, none of them were dated later than 1180 A.D. The absence of the post-1200's coins may perhaps be related to the 1226 Sung edict which banned the export of Chinese coins due to the excessive outflow of copper cash or their presence were due to other factors, such as heirloom. The outcome of this was that no more Sung coins were used instead the Sung ceramics were used as a new form of exchange commodity. Archaeology bears abundant witness to the truth of this remark when large quantities of Sung wares were found throughout Southeast Asia, including Brunei [see chapter 3 and 4].

The prosperity of Chinese ceramics continued during the Yuan or Mongols Dynasty, which came into power in 1279 A.D. [see table 14]. The period was marked by the unification of China into a multinational country, with territories spanning Europe and Asia. The diversity of peoples and places had compelled Genghis Khan to divide it into four *ulus*, or dominions of China, Chaghadai (Central Asia), Persia and Kipchak (West Asia and Russia) [Zhiyan & Wen, 1989: 68; Yap & Cotterell, 1975: 223]. Kubilai Khan (1260-94) became the first emperor of the Empire, he was called 'ruler of rulers' and 'overlord of mankind' [Levathes, 1994: 49]. Unlike the two predecessors, the Mongols had little use for Confucians and their methodical means of counting populations and levying taxes so that the dynasties would last 'ten thousand years.' To remain in power, the Mongols punished resisters severely, and in China they massacred entire towns, sparing only artisans and others the Khan thought could serve him.

The policies adopted by the Yuan in relation to foreign trades were very much the same as the Southern Sung. The desire for profit from trade acted as a great stimulus to the Chinese ceramic industry and for the taxation of trade [Guy, 1986: 23]. The Bureau of Maritime Trade continued to control sea trade, with Quanzhou in the Fujian Province

becoming an important port [Rinaldi, 1989: 21]. For the first time an attempt was made to organize a state-owned mercantile fleet, and the state both built ships and financed traded expeditions. Chinese private investment in foreign trade was severely forbidden, while tribute missions and private foreign merchants continued [ibid]. Taxation was also much lower than under the Sung administration, and hence created further growth of trade activities bringing them to even greater prominence than for the two predecessors.

Apart from foreign trade, the Mongols also paid serious attention to the ceramic industries, which were already famous since the late T'ang and Sung Dynasties. The government introduced regulations to ensure they benefited directly from the industry at the point of production to shipping. The *T'ao-ch'i lueh* (Appendix to the Ceramics Records) of 1322 said that a Porcelain Bureau was formed under the direction of Chiang Ch'i to supervise ceramic production [Medley, 1974: 7-8; Guy, 1986: 24]. Taxation was based on kiln capacity, rather on merchandise as it had been during the Sungs. This bureau is a clear indication of the economic importance of the ceramic industry in the fourteenth century China.

As during the Sung Dynasty, the influx of foreign traders had added to the growth of ceramic industries. The demand for Chinese ceramics had continued to increase, especially the newly introduced Blue-and-White types. The introduction of this type of ceramics is largely influenced by the Arab and Persian merchants who actively control the trade activities and also live in large numbers in the port cities of Guangzhou and Quangzhou. This type of ware had been in the Near East since the ninth century A.D. [Lane, 1971: 24]. However, they were not as good as the Chinese porcelain and this had influenced the Chinese to make similar wares for them as well as for a home market. I will elaborate on this type of ceramic further in my discussion below.

Another factor for the growth of Chinese ceramic during the Yuan was the introduction of new markets along the Eastern Southeast Asian islands, after the opening of the Eastern Trade Route in the thirteenth century [see chapter 2]. This as a result

stimulated the demand for Chinese ceramics more than had been experienced before. More kilns were established, especially along the Southeastern Chinese coastal ports of Fujian, Guangdong and Zhejiang. Guangzhou, which was prosperous during the late T'ang Dynasty has continued to progress. An account by the Moroccan traveller Ibn Abdullah (1304-77) said that there were:

> "no big city elsewhere in the world can match this one in the splendour of its market. But the biggest of all markets are its ceramic shops. Merchants ship porcelain from the city to different provinces in China as well as to India and Yemen. The Chinese ship porcelain ware to India and other countries. These ceramics are indeed the best in the world" [Zhiyan & Wen, 1989: 103].

Indeed, Yuan ceramics were found scattered throughout the world, from the South Seas, to South Asia, the Middle Eastern countries, the Mediterranean world, Africa and Europe. In Southeast Asia, Yuan ceramics were found in almost every proto-historic site, from the earliest coastal ports of the Melaka Straits, western coastal Malay Peninsula, southern Thailand and coastal ports of Sumatra, to the later dated sites of northern and western Borneo, the northern and southern Philippines and the eastern Indonesian islands of Celebes and beyond. These sites are new ports opened up between the late Sung and early Yuan periods, after the establishment of the Eastern Trade Routes. The new route passed from south China to the Philippines, the north coast of Borneo, Celebes, the Moluccas, as far as Timor and west to Java [see fig. 5].

Throughout ninety-seven years in power, the Mongols or Yuan Dynasty had to face many uprisings within the empire and major wars with many nationalities. The final blow came in the 1340s, when widespread unrest and the rebellion by the 'White Lotus', a secret society of Taoist and Buddhist cosmology, had weakened the Yuan power. After more than twenty years of civil wars, Togan Temur, the last Yuan emperor, fled the capital to Mongolia in 1368, leaving the Empire to be taken over by the Ming Dynasty (1368-1644), with its first emperor Huang-wu [Yap & Cotterell, 1977: 24-8; see table 14]. Thus, China was once again control led by the local, the Ming, meaning 'bright' or

'enlightened'. On accession to the throne, Huang-wu revoked all Mongol rules and re-established the traditional political system in the characteristic Chinese way. In relation to foreign rule, the Ming Dynasty looked at past examples as models of administration, particularly that of the T'ang Dynasty. This meant a return to Confucian ideals and a strong concentration of power in the Emperor's hands. The system of civil examinations, which for centuries had provided the government with able administrators, was reinstated [Rinaldi, 1989: 16].

This policy brought new changes in China, and the first sixty-seven years, until the end of the reign of Xuande (1425-35) were the golden years of the Ming Dynasty. Meanwhile, under the government of the first five Ming Emperors China prospered. The next eighty years, however, saw a succession of weak Emperors who had forgotten the rule established by Huang-wu that no eunuch should be allowed in the administration. In the sixteenth century, two Emperors, Jia-Jing and Wanli, gave some stability to the country and allowed the dynasty to recover some of its splendour [see table 15]. In ceramics, these ups and downs had affected the industries, influencing the production and quality. Nevertheless, the Ming period was known as the classic period in the Chinese ceramic histories. The popularity of Ming ceramics is no match for the previous Chinese ceramics, either in quality, perfection, design patterns or colours.

The establishment of the Ming Dynasty did not interrupt China's overseas trade but it did bring profound changes in its organization. Guangzhou and Quanzhou remain as important ports, where most of the foreign trade activities took place. However, unlike the previous three dynasties, the new dynasty began to change their policy in favour of the old tribute system. Private trade which had flourished during the last two dynasties was prohibited. Soon after accession to the throne, Huang-wu dispatched his envoys to foreign countries, to Japan and Southeast Asia to announce the restoration of order in China. Foreign rulers were invited to establish tributary relations with the Chinese court.

Among these missions were sent to Brunei in 1370, whereby the king of Brunei sent its envoy to China in 1371 [see chapter 2].

Through the tribute mission, trade was limited to permission to sell goods brought to China on the occasion of the tributary mission. This meant that only tribute mission countries were benefitted through such a system. However, this too did not produce a satisfactory result because trade was only limited on an irregular basis and depended on the emperor's approval. Therefore, the unprecedented wave of anti-commercialism at the Chinese court had a dampening effect on overseas trade, and at the same time affected the Chinese provincial ceramic industries. Smuggling activities were common and pirates threatened the ships at sea and pillaged and attacked the eastern and southern coast of China. It had also created havoc among the small city-states in the South Seas, since their principal source of income had been abruptly cut off. This can be seen at Santubong in Sarawak and Kota Cina and Pulau Kompei in Sumatra. When trade resumed in the fifteenth century, these sites no longer existed, the former replaced by Kota Batu in Brunei [see ch. 4], and the latter by Samudara-Pasai [Guy, 1986; see chapter 3]. Meanwhile, the shortages of early Ming ceramics were substituted by Thai and Vietnamese export ceramics of the late fourteenth century as archaeologically discovered in many of the Southeast Asian sites [see chapter 6].

During the Yung-lo reign (1403-24), the policy of tribute was modified and unprecedented series of voyages were made by Admiral Cheng Ho between 1405 and 1433. Therefore, foreign trade began to regain its former glory [see chapter 4, footnote 11]. However, after 1433, the missions were abolished and the next twelve Emperors reestablished the old tributary system and imposed private trade. It was only during Emperor Wan-li (1573-1619) that he formally revoked the prohibition on overseas trade. However, his period was marked by a steady deterioration in the quality of Blue-and-White ceramics and a decline of ceramic industries in China. Ming ceramics also faced

severe competition from the other Southeast Asian ceramic productions centre of Thailand and Vietnam.

During the Ch'ing Dynasty (1644-1912), trade between China and Southeast Asia was dominated by the Europeans. Chinese ceramics were still dominated by Blue-and-White types and mostly designed for the European and Japanese markets. China's domination in the ceramic industries continued to be unchallenged, despite new competition created by the Japanese ceramics in the middle of the seventeenth century. Meanwhile, Vietnamese ceramics began to decline, while Thailand ceramics gradually came to an end. In Southeast Asia, only limited amounts of Ch'ing ceramics were found, probably due to the growth of political instability brought about by the European interventions.

5.3 Yueh wares of the T'ang and Sung periods: 10th - 13th centuries A.D

Beginning in the early T'ang period, hard-bodied wares grew more and more important, and many glazed stoneware pieces with olive-green glaze of celadon types or also known as proto-celadon type began to appear. There were three regional areas where these wares were made. The first is from the north central region, with southern Shensi and Hunan as the main areas of manufacture. The second was from the eastern and southeastern region with Zhejiang as the most prolific area, but Fujian and Guangdong further south also contributed a considerable amount. And the third was in the south central regions with Hunan and Kiangsi producing a much smaller quantity [Medley, 1986: 89]. The main centre of production, however, was located at Jingddezhen of Jiangxi Province and here they produced porcelain of highest quality [see fig. 12-15].

Since liberation in 1949, Chinese archaeologists have discovered many T'ang kiln sites and so far 35 clusters of kilns have already been recovered and these account for 56.4% of all T'ang kilns. From these kilns or group of kilns, different ware types began to emerge, such as Yueh celadons which took its name from Yuehzhou kilns in Zhejiang

Province, Wuzhou wares from the Wuzhou kiln sites in the Jinhua area of Zhejiang Province, Dingzhou wares from the Dinzhou area of Shaanxi Province and so on [Zhiyan & Wen, 1989: 34]. At the Yuehzhou kilns alone over twenty kiln sites have been discovered, mostly in the area of Shanglinhu and Binhu where the findings are extremely rich [Hughes-Stanton and Kerr, 1981: 11].

Of the many types of T'ang proto-celadons, Yueh wares are the most important and highly valued. The wares are among the best quality ceramics produced, as has been documented by T'ang hermit Lu Yu in his *Cha jing* of 760 A.D. He said that "The best tea-bowls are those of the celadon of Yuehzhou. Next come Dingzhou, and then Wuzhou, Yozhou, Shouzhou and Hongzhou" [ibid: 34; Vainker, 1995: 68]. This type of ware is common throughout T'ang related sites in Southeast Asia as has been discussed previously in chapter 3 and 4. From my three research sites in Brunei, only Terusan Kupang has remains of Yueh ceramics totalling 133 pieces or 9.8%. The route by which the wares travelled from the Chinese kilns was from southeast over the Mei-ling pass to Guangzhou. From the city, the wares together with other wares from the southern kilns and other Chinese products were transported by the Muslim traders out to the overseas market [Medley, 1986: 97].

By the late T'ang, the Five and early Sung Dynasties, Yueh wares were produced in large quantities, the production skills had steadily improved. The merit of Yueh wares led to a number of its kilns coming under government control. The beauty of Yueh wares was expressed in a poem by Lu Guimeng in the ninth century:

> "The misty scenery of late autumn appears when the Yueh kilns are thrown open; the thousand peaks have been despoiled of their bright colour for the decoration of the bowls. Let us take them out at midnight to collect the falling dew, or fill up the cups with wine in emulation of Chi Chung-san" [Gompertz, 1958: 5].

In contrast with government controlled kilns, most of the private kilns produced wares for the home and foreign markets. They were mostly simple and the quality was

not as good as the former. They mostly consisted of vases, bowls, dishes, covered boxes, saucers and so forth. The decorations are incised by hand under the glaze, and derive mostly from the natural forms of plants, clouds and, on later wares, birds [Vainker, 1995: 71-2]. Another common pattern was the combed design of scrolls, lines and so on. These patterns were common at Terusan Kupang, together with some pieces of clouds and plants motifs of lotus and leaf designs [see plate 1; 2 & 3 and Illustrations 1-2].

There is also a variation of colour in Yueh wares, from yellow-green to grey-green, pale whitish grey to the rare jade green [Vainker, 1995: 72; Medley, 1986: 89-97]. These variations are due to changes in firing conditions inside the kilns as well as the amount of iron oxide used in the proportion of each ware. For a jade-green, for example, it requires a balance of iron oxide and a well-controlled reduction atmosphere. Yellow-green wares are due to poorly controlled reduction atmosphere. The firing temperatures are in between 1,190 and 1,200 degree Celsius. In Southeast Asia, most of the Yueh wares consisted of cream, olive green ochre, grey, brownish and yellow-green glazes [Lim, 1987: 11; Liang-Yu, 1991; 237]. At Terusan Kupang, only a few pieces of Yueh wares consisted of jade-green types and the others resembled the above Southeast Asian assemblages. The variety in colours may indicate that they were made to cater for foreign demands. They made mass produced and so it was very difficult to control the right firing temperature.

Most of these Yueh export ceramics originated from the Southern Chinese Provinces of Guangdong and Fujian kiln sites of Guangzhou Xicun and Chaozhou Bijiashan and dated from the tenth to twelfth centuries A.D. [Aoyagi, 1991, 1992: 144-58]. Both centres produced a variety of ceramics, including Yueh types. At Xicun, most wares were worked under the influence of other kilns, notably from the north, such as imitating *Ching-pai*, black wares and so on. Another important kiln sites in the southern Chinese provinces included the Pi-chia-shan kiln centre in Guangdong and the Tong'an and Chih-chu-shan kiln centre of the Fujian Provinces [See, Liang-Yu, 1991: 237-253;

Hughes-Stanton & Kerr, 1981: 21-36; see fig. 12-15]. The wares from these kiln sites were dated as early as the late T'ang or early Sung Dynasties from the tenth and eleventh centuries A.D. At the Tong'an kiln centres, most Yueh types tend to be yellowish-green in colour, with the inside of bowls often being embellished with carved decoration together with stripped designs or comb marks. On the outside, the bowls were decorated with carved lines, which are common at Terusan Kupang [see illustrations 1 & 2].

Other common T'ang wares are T'ang Three Colour wares. They were lead glazed stoneware, with a white body, pinkish tinge, sometimes buff, covered with a slip and then glazed in uneven splashes which drip down in irregular welts just above the base. Glaze colour ranges from brown, ochre, amber, to grey, and green on the same vessel, hence the term "three colour glaze." Many of these wares were exported to west Asia, but only a few were found in Southeast Asian sites, although there are several items in the Indonesian, the Philippines and Brunei collections.

5.4 Lung-Chuan Wares and Celadon Types of Sung, Yuan and Ming periods: 12th-17th Centuries

Among early Chinese ceramics, none have achieved greater fame or been admired more widely than the celadons. The name is believed to have been taken from that of celadon, a shepherd dressed in green who appeared in a pastoral play, *L'Astree*, first produced in Paris in 1610 [Zhiyan & Wen, 1989: 103]. Originally celadon was designed as a man-made-jade, to reflect the Chinese yearning for the propitious stone, enshrining nine virtues [Misugi, 1991].

Celadon wares are closely related to the Sung Dynasty, which came into the two periods, the Northern Sung (960-1127) and the Southern Sung (1128-1279). Both periods produced their own distinctive celadons. The northern celadons were, however, more advance than its Southern counterpart. The potters in the north were more imaginative in their use of material and showed strong initiative in the development of decorative technique. However, the northern provinces were not able to take full advantage of their

opportunities to build up overseas trade and work towards industrialization. The reason for this was the threat of invasions from the northern tribes, and the geographical and geological position, which were far away from the sea [Medley, 1986: 103]. For these reasons, very few northern celadons[2] found their way to the foreign markets, notably in Southeast Asia, including Brunei [Harrisson, B., 1972: 35]. Most celadons that were found in Southeast Asia were dominated by the southern celadons of the Southeastern Chinese coastal kilns of Guangdong, Zhejiang and Fujian Provinces.

During the Sung period the true focus of economic wealth was centred in the south, which was more accessible to foreign trade through the ports of the Southeastern coast. The ceramic industry, however, was less developed and technically lagged behind the north. This was mainly because the patronage of the southern kilns was less wealthy and sophisticated compared to the north. It was only after the Southern Sung court settled at Hangchou in northern Zhejiang following the flight from K'ai-feng in 1127 that the southern kilns attained their height. During the following centuries, the kilns flourished not only as the result of the court and the new metropolitan patronage of Hangchou, but also as a result of the foreign patronage [see 5.2 above].

Of the wares which enjoyed both types of patronage, Lung-Chuan wares gained preeminence in the period up to the middle of the fourteenth century and continued up to the Yuan, Ming and the early Ch'ing periods of the seventeenth century. It was manufactured in fairly vast areas in Southwestern Zhejiang Province. The sites of former celadon kilns and workshops are found throughout the counties of Lishui, Suichang, Yunhe, Qingtian and Lung-Chuan on the upper Oujian River. There were also many kiln sites in Songxi and Pucheng in northern Fujian Province [Zhiyan & Wen, 1989: 62].

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2 Among the famous northern celadons are Yaozhou, Jun and Ru wares. These wares were finely made and for about three and a half centuries are regarded as 'classic' wares.

Archaeological excavations in China have discovered the sites of more than 150 porcelain kilns and workshops. The centre of ancient Lung-Chuan wares was around Dayao in Liu-tian township. It was reported that 72 kilns were operating full-time, indicating a flourishing of the Lung-Chuan celadons trade. The excavations also unearthed "dragon" kiln types, each was 50 to 80 metres long, yielding close to 10,000 bowls and other vessels at one firing [ibid: 63]. Another type of kiln is known as down-draught was built in a series of interconnected chambers each a step higher up the hillside, climbing to a considerable height. In another excavation, Chinese archaeologists have discovered ten to twelve chambers, these could fire from 20,000 to 25,000 pieces in a single setting [Medley, 1986: 147].

The manufacture of Lung-Chuan celadons started during the Northern Sung period, dated 1080 A.D. After Southern Sung, however, it began to excel in production and quality and soon became the dominant name of the south. During Yuan Dynasty (1280-1368), it continued to progress and the new technique of firing large pieces was successfully mastered. This continued until the late Ming Dynasty (1368-1641), however, the kilns were gradually declining in importance. Some of the most notable changes in the late fourteenth century was the foliated mouthrims of plates and dishes, closer and thinner lotus petals, combination of moulded, incised and impressed decorative motifs, proliferation of different shapes, and the increased dimensions of vessels.

The characteristic feature of Lung-Chuan wares is the fine body, and the thick translucent glaze with jade-like, opaque grey green or grey blue colour and texture. It is made of a greyish white, fined-grained clay. The base or foot rims feature burn marks of reddish brown. These easily distinguished the southern type of celadon from that of the northern provinces. It is due to oxidation of the iron in the clay just at the end of the firing process that the unglazed portions of the wares were a scorched red colour. The glaze owes its colour to a small amount of iron oxide and a reduced firing cycle. The actual tone of the glaze, whether more green or more blue, is dependent on both the

temperature and the stage at which reduction is begun. The opacity is caused by the presence of plant ash and a close bubble structure which tends to scatter the light. The firing temperature is reported to fluctuate between 1,180 and 1,280 degree Celsius. The greener pieces were usually fired in the upper end of the bracket, between about 1,250 and 1,280 degree Celsius [Medely, 1986: 147].

A large number of Lung-Chuan wares that were found at Kota Batu, Terusan Kupang and Pulau Chermin consisted of thick glazes, lush and bubbly. Some specimens were shiny, while others were dull. Colours were predominantly of medium green, but range from a light apple green to deep olive brownish or orange. All foot-rims and exterior bases are glazed, except for a broad bare ring washed and burned reddish [see plates: 4, 5, 6 and 7]. The wares were thought to be produced in the Southeastern Chinese kilns Provinces of Fujian and Fuzhou. A characteristic feature of Lung-Chuan wares produced at these kilns, such as the Tongan kilns, was softer and reddish or orange or grey body, typical to the Bruneian sites. Their designs were impressed or stamped in the interior or base of the bowls and were usually double fish or floral spray motif. In addition, they sometimes had moulded and applied decoration [Brunei Museum, 1994: 9]. These wares are common at Kota Batu and Terusan Kupang sites [see Plate 4, 5, 6 and 7].

Although Lung-Chuan celadons were mass-produced, yet the profusion of different shapes allowed full scope for the potters creative talent. Among the more successful and abundant forms are conical bowls or flat dishes of various sizes with lotus petal carving outside, dishes or basins with a pair of fishes or a dragon moulded in relief inside, incense burners of cylindrical or tripod shape and many different kinds of vases including the so-called mallet vase [Gompertz, 1958: 56]. Better adjusted to foreign taste were the large basins, massive dishes and plates, and wine jars, often with lids, which began to be made in increasing quantities from the later years of the thirteenth century, once the prosperity of the kilns had become securely established [Medley, 1986: 148].

These types of wares were common in many archaeological sites along the trade routes, from Southeast Asia, to South Asia, the Near and Middle Eastern countries, down to the African coast in Kenya and Tanganyika, while numerous complete specimens have been preserved in India, Egypt, Persia and Turkey, and even some in Europe [Gompertz, 1958: 50].

Large amounts of Lung-Chuan wares were also found in Brunei, notably at the Terusan Kupang and Kota Batu sites, where I have managed to recover a total of 92 pieces or 6.7% for the former and 271 pieces or 6.8% for the latter. At Pulau Chermin, only 18 pieces or 1.2% were found. They mostly consisted of bowls, dishes, plates, saucers and jars [see chapter 4]. Two different types of Lung-Chuan wares were noted at both sites. At Terusan Kupang, the wares were mostly much smaller and simpler in forms, with little decoration, and a fine foot-ring; while at Kota Batu, the wares were mostly heavier, bolder, more elaborate and the foot-rings were thicker and less well finished. These show that the former wares were dated much earlier than the latter wares. It was known that earlier Lung-Chuan celadons of the eleventh century were much smaller in their sizes and simpler in form. The latter wares, which were made during the Ming period of the mid-fourteenth to sixteenth centuries and for export, were much bigger and heavier. Some dishes were fifty to sixty centimetres in diameter and these were contrary and alien to Chinese traditions. Meanwhile, these differences could help in the dating of both sites. The former site can be said to be dated as pre- fourteenth century; while the latter as post-fourteenth century [see chapter 4].

Most of Lung-Chuan celadons that were found at the Terusan Kupang and Kota Batu sites are plain or without any decorations. Some of the decorated wares had carved lotus petals round the outside of the bowls. Some wares also had moulded designs such as a pair of fish or a dragon rotating round a conceptual centre in the bottom of a dish. Other common design patterns were incised floral and plants motifs. Some of the wares

were foliated in shapes, others were with moulded ribbing on the outside body [see plates: 6 & 7].

By the second half of the fourteenth century increased competition was developing from the great pottery centre of Jingezhen, where the production of white porcelain decorated in underglaze blue had reached large proportions. This resulted in the lost of Lung-Chuan wares in favour of Blue-and-White wares. Chinese annals indicate that few kilns survive into the late Ming, but they had declined to poor rural kilns producing miscellaneous wares [Gompertz, 1958: 64-5]. The reason for this, according to the local annals were "the mass-production of poor quality wares and the rise in popularity of the Blue-and-White and red-enamelled wares of Jingdezhen. Natural calamities also may have affected the kilns, for example, there is a belief that the Tayao kilns were destroyed by flood, while most of the settlements in the region perished at the hands of invaders" [ibid].

Another important Sung ceramic are the celadons. In my classifications in chapter 4, I have classified this type of ware as the celadon types. This is because of their variety of types, glazes, and shapes. This diversification is because of their widespread origins, and manufacture was mostly at the southeastern coastal provinces of Fujian, Guangdong and Zhejiang [see fig. 12-15]. These were private kilns established after the demand of Chinese ceramics increased at the beginning of the Southern Sung Dynasty in the early twelfth century. I have gathered a substantial amount of such wares at the site of Terusan Kupang, Kota Batu and Pulau Chermin.The largest collections were at Kota Batu with 337 pieces or 6.3%, followed by the Terusan Kupang site with 267 pieces or 19.6%; and the Pulau Chermin site with 243 pieces or 15.6% [see chapter 4]. Most of these celadon types were coarser in their texture and form, and the glazes often lacked thick smoothness. They were also a variety of colours, from olive green ochre, to cream, yellowish and grey glazes. The most common forms were bowls, some decorated with stamped or freely incised or combed decorations [see plates 8-11]. Their dates span from

the eleventh to seventeenth centuries A.D. Among the best known kiln sites is the Kwangtung kiln centre of Pi-chia-shan and the Fujian kiln centre of Chih-chu-shan. The wares are generally of a greyish-green colour or greyish-white, and a light coffee colour on the surface where the biscuit is unglazed [Liang-Yu, 1991: 240].

5.5 Black-and Brown- glazed wares of Sung, Yuan and Ming periods: 12th-17th centuries

Another type of wares which was widely exported to Southeast Asia is the Black-and Brown-glazed wares of the Sung, Yuan and Ming periods. However, this term is hardly covers the wide-range of wares under this classification. This is because until now specialists have not yet worked out a clear scheme for distinguishing the various types of Black-and Brown- glazed wares, either from China, Thailand or Vietnam. In any case, I will only discuss some of these wares which are available in my collections, namely, Temmoku, Cizhou, 'Provincial' Black-and Brown- glazed wares and Coarse stonewares. The first three wares are porcelain types, while the last are stonewares. Of the two types, coarse stonewares are very common in Southeast Asia, while the other types are not as popular as stonewares or the Celadons, Lung-Chuan wares, White wares or Blue-and-White wares. Only a small number of them were found in Southeast Asia, including Brunei [Harrisson, B., 1972: 36]. I have accounted for just a small number of such wares at the Terusan Kupang site totalling 38 pieces or 2.8% [see chapter 4]. They were mostly exported to Japan or perhaps to Korea. In Japan, they were known as *Temmoku*, the Japanese equivalent to Tien-mu, a mountain near Hangchow, where certain of these southern wares were shipped to in Japan as early as the tenth century as tea-ceremony ware.

The true Temmoku, however, was made at the Chien kilns in northern Fujian Province of South China. They consisted almost exclusively of the type of tea-bowls which proved so popular in Japan. They have a dark stoneware body decorated with thick, oily iron glaze running to big drops at the foot. The colour is basically a very dark

brown verging on black, often streaked with blue or a steel grey, producing marks known as hare's fur, or bluish 'oil spots', caused by coagulation of grey crystals. Production of Chien kilns were limited to the period from about the middle of the eleventh century to some time early in the fourteenth century.

Cizhou wares are another important ceramic under the Black- and Brown- glazed wares. The wares were produced in the region of Cizhou, from which the name Cizhou wares was derived. The central kiln was located at Guantaizhen in Han-dan, Hebei (Hopei) Province in northern China [Zhiyan & Wen, 1989: 65; see fig. 12]. The kilns are said to have begun operations in late T'ang, and reached their apogee in Sung and then begun to decline in the late thirteenth century and finally closed down in the fourteenth century [Medley, 1986: 158].

Cizhou wares are characterized by hard, stoneware body, dense, heavily potted, thick walled, paste resembles Dehua type, although the majority appear from creamy to buff. Its most outstanding achievement was applying the traditional Chinese art of painting on porcelain, the painted decorations on white glaze being mostly black or brown glaze over the slip. The painting mostly floral motifs was generally free and spontaneous. Other common motifs were fish, birds, galloping deer, frolicking rabbits, acrobats, poems and essays [Zhiyan & Wen, 1989: 65]. According to Professor Aurora Roxas Lim [1987: 15] and Professor Aoyagi Yoji [1992: 144-58] that Cizhou wares that were found in Southeast Asia mostly originated from kilns of Jizhou, Jiangsi, Xicun, Guangdong, Tongan and Anxi of Fujian Province. Some of these wares were also found at Kota Batu and Terusan Kupang sites, although I did not encounter any of them during my last field research at these sites in 1995 [See Harrisson, B., 1970: 136; Omar, 1980: 34].

The beauty of Cizhou wares may have encouraged some potters in Southeast Asia, in particular from Thailand and Vietnam kilns to imitate the Cizhou styles into their own ceramic styles. This can be seen on some Thai wares of Sukothai and some

Sawankhalok types and some Vietnamese wares of the late fourteenth and sixteenth centuries. Decorative patterns were mostly single floral sprays, classic scrolls, fish medallion, sun-burst designs and the solar whorl [Guy, 1986: 124]. They were drawn quickly and boldly in the interior centre of the plate or dish. Whether the parallels with Chinese Cizhou wares reflect direct contact with Chinese potters or an influence transmitted through the presence of Cizhou ceramics in their regions, is uncertain. However, in terms of technical superiority, the Chinese ceramics were more advanced than the two Southeast Asian kilns. The Southeast Asian wares were generally compact, dense body, fired to grey to tan, to orange. Many wares, however, had coarser bodies with many inclusions, roughly potted, the bases unglazed with many scar marks in the interior and on the base [see chapter 6].

Another common wares are 'provincial' Black- and Brown- glazed wares of the Southeastern China Province. Like the celadon types, Black-and brown- glazed wares were manufactured in large numbers at the private kilns scattered along the southern and southeastern of Chinese Provincial kilns, which grew up during the Southern Sung taking advantage of the increasing foreign demand. Some twenty-two kilns in the Yueh and other districts of southeastern China were known to produce these types of wares, along side other popular wares such as Yueh types, celadon types and Blue-and-White wares. These wares were mostly imitations of well-known and established wares of northern kilns and then exported to the foreign markets. The problems with these wares were the difficulty in identifying them, since they were mostly imitated and therefore very similar between one kiln and another kiln. Similarly, they were produced mainly for foreign markets and foreign taste. On this matter, Liang-Yu said:

> "Generally speaking, Sung and Yuan period export wares produced in the southeastern coastal Provinces were virtually identical, due to the fact that they were exported to the same overseas markets. In fact, without the support of archaeological data it would sometimes be impossible to distinguish which kiln centre they come from simply judging by their external appearance" [Liang-Yu, 1991: 239-40].

Recent archaeological research in China has identified numerous kiln sites at the southeastern coastal Provinces which produced Black-and Brown- glazed wares. Among the kilns was the Hsi-ts'un kiln centre of northwest Guangzhou City of Guangdong Province. At the Fujian Province, numerous kilns were discovered, among them were Quanzhou, Tung-men-ai, Wan-yao-hsiang, and Hsu-shan. At Tz'u-tsao Suburb there were two important kiln sites of T'ung-tzu-shan and Chih-chu-shan. At An-hsi, more than 20 different kiln sites were recovered, the main concentration being at An-yuan [ibid: 238-39; see fig. 12-15]. Most of the ceramics produced were consisted of bowls, plates, saucers, boxes and ewers. I have encountered some of these wares at Terusan Kupang, Kota Batu and Pulau Chermin sites. The texture of the shards was mainly coarse, greyish in colour and the glazes range from brownish black to ochre. They tend to have a mottled appearance and some have a slight metallic sheen. These wares dated from the Sung, Yuan and continued into the early Ming period of the twelfth to early seventeenth centuries [see plates 12, 13 and 14 and Illustration 3].

The last category of Black-and Brown- glazed wares are coarse stonewares. These vary from very large jars to smaller jars, vases and jugs, and include 'dragon jars' or *Martaban* types (so called because they reached the Indian Ocean by way of the Burmese port of Martaban). These are large stoneware jars, often decorated with dragons or other auspicious motifs in relief under a green or brown glaze. Glaze colour varies, from buff to grey and from yellow, brown, grey-brown to black iron-glazed. The bodies are rough, gravelly and paste, with many impurities including grog. The jars often have lug handles and sometimes bear incised and moulded decorations. Among the important kiln sites that exported stoneware jars to Southeast Asia were Fushan (Fat-shan) and Shiwan kilns near the city Guangzhou [Lim, 1987: 14; Vainker, 1995: 147].

Most of these coarse stonewares were very similar and indistinguishable from the other Oriental coarse stonewares from Thailand and Vietnam. Unlike porcelain wares, coarse stoneware is little studied despite how common and widely distributed they were

in the overseas market. Due to these limitations, this study is not attempting to identify their sources. I simply categorise them as 'export coarse stonewares', which include wares from China, Thailand and Vietnam [see chapter 4]. It is known from these wares that China dominated the overall collections due to its early commitment in the South Seas, as compared to the two regions, which only began in the late fourteenth century [see chapter 3]. Chinese coarse stoneware was also produced since the ancient time, about a thousand or so years ago. They only began to be exported in the T'ang Dynasty of the ninth or tenth centuries A.D. These early export wares were simple in form, plain and if decorated, simply adorned with iron glaze drips. At the beginning of the Sung period of the twelfth century, stoneware was produced for overseas markets, along side porcelains. Technically, they were more sophisticated, with simple moulded or incised bands and simple dragons made their first appearance. In the fourteenth century, decorations had become more sophisticated and varied. Both hand and stamp incisions and mouldings have reached a high level of skill. Decorative handles too attained their peak within this time, with some elaborate handles in the form of masks and animals. In the sixteenth to the eighteenth centuries, Chinese coarse stonewares were more elaborate and sophisticated. Dragons were striking and elaborately finished [Adhyatman & Lammers, 1971].

In Brunei, coarse stonewares dominated almost every collection, obtained either through the excavations or surface collections. I have collected a substantial number of these wares. At Terusan Kupang, for example, there were 655 pieces (48%); at Kota Batu 1,535 pieces (28.6%), and at Pulau Chermin 743 pieces or 45.5% [see Chapter 4]. They mostly originated from China, some from Thailand and Vietnam [see plates 15-22]. Their dates span from the tenth to eighteenth centuries A.D.

The most common types are large jars, often referred to as 'dragon jars' or *Martaban* wares. Their height and size range from 15 cm. to almost 1 metre, and from 3cm. to 16 cm. in diameters. The colours are from buff to grey and from yellow, brown,

grey-brown to opaque black glaze. Their shapes are also varied, from flares upwards from the base, swells at the shoulder, and then quickly narrows at the neck. The neck is usually short and concave, although there are straight and convex or swollen examples as well. The mouth-rim is rolled on some jars and merely thickened on others. Some jars appear to be undecorated except for grooved and moulded lugs. Others, also with lugs, were often moulded in the shapes of a demon's head, and had incised patterns on the sides, usually swirls or floral designs; and some have stamped and/or applied dragons [see plates 15-22 and Illustrations 4-5]. Some known Thai's wares are distinguished by bands of Bhodi tree leaf-like motifs and impressed designs, similar to that have been found at Rang Kwian wrecksite, Gulf of Siam [Green & Harper, 1982]. Their provenances are perhaps from Ban Bang Poon and vicinity and dated from the thirteenth century onwards.

Chinese 'Dragon jars' or *Martaban* jars are among the earliest bartered trade items used by Chinese merchants in exchange with native products, before the use of the actual export wares during the Sung Dynasty onwards [see chapter 3]. They continued to be exported, some as containers of preserved food, salted eggs, medicine and so on; some as household utensils and decoration. Apart from China, other countries also began to export their own products, such as Thailand, Indonesia and Malaysia. Some of these contemporary wares even imitate antiques, such as some from kilns in Thailand [Rooney, 1987: 64] and from kilns in Sarawak [Harrisson, B., 1986]. These have created further the complexity in the study of coarse stonewares. As Professor Lim [1987: 14] said that "until the development of more thorough and scientific retrieval methods in archaeology, these nondescript and unsealable wares were ignored completely by excavators."

5.6 Ch'ing-pai wares of Sung and Ming periods: 12th to 17th centuries

The clay body used for *Ch'ing-pai* ware was composed of the kaolin clay available in the Jingdezhen area and china stone, also known as petuntse, a felspathic material that has a high melting point. Due to this mixture, the clay was highly plastic and contracted

tightly in firing. The characteristic of the body is thus hard and compact and the first wares to be known to have a real porcelain body. The ware was first made in the Sung Dynasty and continued well into the Ming times. It is also known as *Ying-ch'ing* 'shadow blue'. The name *Ch'ing-pai,* however, must take precedence, as this is the name that occurs earliest in Chinese texts in the Southern Sung of the fourteenth century [Medley, 1986: 165].

Ch'ing-pai porcelain formed a distinctive school founded in Jingdezhen, Jiangxi Province. It was mainly made in Hutian and Xianghu. Scores of the kilns have been discovered elsewhere in Jiangxi and in certain places in the east and south of China. Relatively famous were Jiangshan and Antai in Zhejiang Province, Tengxian County in Guangxi, Fanchang in Anhui Province, Jian in Jiangxi Province, Dehua and Jiangxi Fujian Province and Guangzhou in Guangdong Province [Zhiyan & Wen, 1989: 66; Hughes-Stanton & Kerr, 1981: 43-50; see fig. 12-15]. But Jingdezhen may be regarded as producing the best and artistically the most representative of misty blue porcelain. Its period of production is also the longest, from Northern Sung to the Yuan Dynasties.

The success of Jingdezhen owes very much to its geographical location very near to the raw materials of both china clay and china stone. Apart from that, their craftsmen were also very creative and masters in the ceramic technology. For glazing, fine crushed china stone were mixed with water to a thin creamy consistency before being applied to the unfired wares. The slight bluish tone in the fired glaze is due to traces of iron oxide in the raw materials.

Early *Ch'ing-pai* wares were much smaller in sizes compared to the later wares of the end of the eleventh century. Among the common types included bowls of various sizes, vases, often of great elegance, a variety of ewers, dishes and saucers. Two decorative techniques were employed, incising and moulding. For incising, two techniques were employed, carving and combing. The combing effects are quite different from those found on other wares, for, instead of the lines being continuous, they are

broken so that the appearance is of dotted lines, an effect described as 'dotted combing' [Medley, 1986: 166]. The moulding technique, on the other hand, was of a later date, beginning in the middle or late twelfth century of the Sung Dynasty and continuing right into the fourteenth century of Ming Dynasty. The design motifs tend to be more static, such as lotus flowers, plant motifs, plum blossom and so on.

Later *Ch'ing-pai* of late Yuan and Ming Dynasties began to show some changes in style. Thick pieces became more prominent. Large vessels, such as *meiping* vases, were formed with thick, heavy walls. The carved decoration on these wares does not have the vitality of its predecessors, and even the glaze is of a poorer quality [Sato, 1981: 125]. This decline was due to stiff competition from the private kilns of the Southeastern Provinces[3]. The *Ch'iang-pai* techniques were applied to these kilns and then exported to overseas market. Among the kilns was the Dehua kiln of Fujian Province, which later produced its own distinctive white wares style.

The great number of *Ch'ing-pai* wares found throughout both Southeast and West Asia indicates how popular this ware was even outside China. The people of these regions must have been fascinated by the beautiful shadow-blue glaze and refined shapes characteristic of *Ch'ing-pai* ware. Some *Ch'ing-pai* wares were also discovered at Kota Batu and Terusan Kupang sites and I have encountered a few pieces during my recent research in Brunei. There were mostly bowls, with bluish-white glaze, thin, transparent and some pieces were full of minute bubbles [see plates 23 and 24]. A few pieces of these shards were also discovered at the dry-land site of Kota Batu at both trench KB. II and KB. III. They were, however, dated Ming period of the fourteenth century onwards, due to their direct association with Ming Blue-and-White wares [see chapter 4]. However, in my classification of ceramic shards found at Terusan Kupang and Kota Batu, I just

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3 According to the study conducted by P. Hughes-Stanton and R. Kerr [1981] the widespread imitation of successful types of wares appears endemic, both in the immediate vicinity of prospering kiln centres, and in the port regions through which the wares destined for the overseas market were sent.

classified these wares as White wares. This is because they seemed similar to White wares, which are very difficult to distinguish at this stage.

The main kiln centres of provincial *Ch'ing-pai* are Tong'an, Dehua, Anxi, Nan'an, Quanzhou, Putian and Lianjiang kilns of the Fujian Province [Hughes-Stanton and Kerr, 1981: 21-38]. In the Guangdong Province, they were produced at the Chaozhou and Xicun kilns [ibid: 40-2]. Apart from *Ch'ing-pai*, these kilns also produced a variety of export ceramics, such as celadon wares, White wares and Black- and Brown- glazed wares. Their dates span from the T'ang, Sung, Yuan and Ming Dynasties.

5.7 White wares of Sung and Ming periods: 12th - 17th centuries

White wares are among the commonest and most widely exported to Southeast Asia. In Brunei, White wares are the third most important export wares after Blue-and-White wares and the Celadons (Yueh, Lung-Chuan celadons and Celadon types). During my recent research in Brunei, I have collected a large quantity of these wares. At Terusan Kupang, it totals 96 pieces (7%); at Kota Batu 488 pieces (9.1%), and at Pulau Chermin 108 pieces or 6.6%. Most of these wares consisted of saucers, small plates and a small number of bowls [Chapter 4; plates 25, 26 and 27].

The most outstanding of the Chinese White wares are *Ting* wares of the Northern Sung. Its first appearance was during the late T'ang Dynasty at Ting-chou in Hopei Province, northern China. This ware has a hard, white to greyish-white texture, with transparent ivory toned or creamish white glaze body. Vessels are soft and thinly potted and often resonant. The glaze is hard and containing titanium oxide. *Ting* porcelain decoration was applied by incising, engraving and impressing patterns, as well as by moulding. Incised patterns were used for vessels of the early period and after the beginning of the twelfth century mould technique was applied.

Very few fragments of northern *Ting* occur in excavation sites in the Southeast Asian regions. According to Barbara Harrisson [1972: 38], the *Ting* wares that were traded into ancient Borneo, including Brunei, and islands of Southeast Asia were generally derived from kilns in Fujian, Guangdong and Zhejiang Provinces of Southeastern China. They were imitations of the northern tradition after the Imperial Court moved south to Hangchow in 1127 A.D. These White wares were called 'Southern Ting', also 'early De-hua', because they were produced in the same district, as the later Ming wares from De-hua which were known as *Blanc-de-China* or also termed as *Marco-Polo-ware* because one specimen of it was brought back to Europe by Marco Polo in the twelfth century [ibid: 38]. I will discuss this type of ware below.

Southern *Ting* was produced during roughly 250 years from 1127 A.D. onwards. It commonly occurs in Southeast Asian occupation and burial sites, such as at St. Ana and Calatagan in the Philippines and Celebes Island of Indonesia [Chapter 3]. In Brunei, some specimens of *Ting* shards have been found at Terusan Kupang and Kota Batu and dated Sung period [Harrisson, B., 1970: 130]. They were of the same type as the Sarawak River Delta assemblage, such as bowls with folded-rim, high-footed, incised ring bowls and spurmarked plates [Zaine and Harrisson, T., 1967: 37- 41]. Some of my Kota Batu shards resembled this type of wares, although I am still doubtful that these wares might be *De-hua* wares, which were common in Southeast Asia, including Brunei [see plates 25, 26 & 27].

Another important White ware type is *De-hua* ceramics, also known as *Blanc-de-Chine*, a French term meaning 'White of China'. The kilns which were located in the Fujian Province, came into operation during the Sung period and reached their height during the Ming and following centuries [fig. 12-15]. So far a total of 180 kiln sites dating from the Sung to Ch'ing Dynasties has been discovered [Hughes-Stanton and Kerr, 1981: 22]. The porcelain is pure white, and when fired has a very glassy fracture. The glaze is colourless and transparent and is exceptionally smooth and brilliant. The colour varies

from a warm, sometimes pinkish, ivory tone to a pale skimmed-milk white, depending on local oxidation or reduction [Medley, 1986: 232]. The kilns were renown for their art statues, and many porcelain sculptors came to prominence. In later periods, the kilns began to produce vessels for everyday use for export, such as vases, jars, bowls, basins, cover boxes, dishes, ewers and cups.

Decoration is usually by the moulding technique, such as a simple band of overlapping lotus petals on the exterior surface of bowls. Some with floral elements freely disposed round the interior surface. The most common decoration used is based on scrolling motifs of various kinds or based on varieties of simple floral scrolls and sprays. Some of these design motifs were recovered at the Kota Batu site. I have discovered a few pieces of such wares and they were mostly covered boxes, saucers and some bowls. One interesting shard was a covered box with a foliage and ribbing design patterns. Other shards showed delicate designs, with thin body wall and shiny, ivory glazes [see plates 25 and 26].

Among the most valuable of the Brunei Museum ceramic collections are the rare *Dehua* wine-cups, moulded in shapes imitating the venerable expensive cups of rhinoceros horn. Rhinoceros horn was a very important article of export from Borneo and Sumatra - the habitat areas of the Sumatran Rhinoceros, now on the verge of extinction. The raw horns were imported to be carved in China into wine-cups mainly, for the use of the Emperor and the court. The wares were imitated in *Dehua* porcelain and sought to capture these rare qualities [Harrisson, B., 1972: 52].

Other common White wares found in Southeast Asia are the 'Provincial' White wares. These wares were produced in the Chinese Southeastern Provincial kilns of Fujian, Guangdong and Zhejiang. These kiln centres began their operation during the Sung Dynasty of the twelfth century in production export ceramics for overseas markets, in particular Southeast Asia. Most of their products were imitated from the famous and well-established kilns, such as Jingdezhen, to produce various types of White wares,

Celadon types, Blue-and-White wares and so on. I have encountered a large quantity of these wares at Terusan Kupang, Kota Batu and Pulau Chermin Island. They were simpler in forms, rougher, coarser and thickly potted. They consisted of a variety of shapes, saucers, bowls, some plates and dishes. At Kota Batu and Pulau Chermin, some of the wares resembled to *Swatow* types of the sixteenth century. They were heavy and roughly potted, with girt and sandy particles adhered to the exterior base [see plates 25 and 27].

There were several private kilns along the Southeastern Chinese Provincial which were known as the main producers of these type of wares. At the Hsi-ts'un kiln centre of the northwest of Guangzhou, for example, the kilns were known to be operated from the Sung to Ming periods of the twelfth to fifteenth centuries A.D. Other kiln centres were in Fujian where they also manufactured White wares during the Sung, Yuan and Ming periods. Most notable among these are Quanzhou and Anxi (An-hsi) kilns. In Quanzhou, several kiln localities were discovered, including the Quanzhou suburb of Tung-men-wai, Wan-yao-hsing, and Hsu-shan, Tongzishan (Tung-tzu-shan) and Chih-chu-shan at Tz'u-tsao [Liang-Yu, 1991: 237-8; Hughes-Stanton and Kerr, 1981: 21-42; see fig. 14 & 15]. Production at Quanzhou mainly consisted of bluish white porcelain, apart from other export ware types such as Black-and Brown-glazed wares. At An-hsi, more than 20 kiln sites have now been discovered, all producing similar export wares like other kiln centres of the region. At An-yuan kilns, for example, output consisted mostly of a range of flat dishes, bowls, vases, ewers, kendis and boxes, all very similar in appearance to De-hua ware. In 1979 Chinese archaeologists working on these kiln sites unearthed some shards of bluish white porcelain, some with brown painted decoration dating to the Southern Sung period onwards [Liang-Yu, 1991: 239].

5.8 Blue-and-White wares of Yuan, Ming and Ch'ing periods: 13th to 17th centuries A.D.

In the long history of the development of decorated pottery and porcelain, no single type of has been so admired or had more widespread influence than that which is known as Blue-and-White. It became one of the most widely exported wares which soon rivaled celadon and *Ch'ing-pai* wares in importance and gradually replaced them not only as the most important export ware but also as the most favourable household ware all over China. It has been imitated in Japan, in Indo-China, and Persia, and it was the inspiration of the pottery of Delft in decoration of the Chinese taste, and other European factories as well.

The popularity of Blue-and-White wares is due to the aesthetic appeal of vivid colour and ornamental style. The use of cobalt oxide to produce a blue colour has a great effect on the porcelain. Its application on white wares produced a beautiful set-piece which was unparalleled among the porcelains prior to the late Yuan and Ming periods. Their decoration was strong, precise, usually fairly copious, with borders and panels that followed conventional layouts which were also popular with Southeast Asian, South Asian and Middle Eastern customers. The popularity of such wares can be seen world wide, from the neighbouring countries of Southeast Asia, South Asia to the Middle and Near Eastern countries, Africa and Europe.

Since its introduction in the international markets during the late Yuan Dynasty of the fourteenth century, Blue-and-White wares had enjoyed the greatest popularity. The exact date when the Chinese first created Blue-and-White ware is a matter of debate but certain evidence suggests that production was not started much before the beginning of the fourteenth century of the Yuan or Mongol Dynasty. According to Harry Garner [1970: 12], Blue-and-White in the first half of the fourteenth century was still in its early development and had not yet reached the stage of being accorded Imperial favour. However, underglazed painting techniques had been practised in Hunan and Szechwan

as early as the T'ang Dynasty and more successfully in the *Tz'u-chou* wares of the Sung period [Sullivan, 1984: 196]. It was only at the end of the fourteenth century that the Chinese began to master in the manufacturing of Blue-and-White wares, destined to be the highest achievement of the fifteenth century. The most famous of the earliest Blue-and-White piece are the pair of vases in the Percival David Foundation in London, dedicated to a temple in Kiangsi in 1351, which show a mature handling of this difficult technique [Garner, 1970: 12; Carswell, 1985: 27; Sullivan, 1984: 197].

Before the Chinese, however, Blue-and-White techniques were first introduced in the Near East. Excellent paintings in blue on Mesopotamian wares were made in the ninth century A.D., and in the twelfth century, blue under glaze was effectively used in wares at Kashan, Raqqa and Cairo [Lane, 1971: 24]. However, Persian Blue-and-White is not superior to the Chinese wares. Some scholars believed that these techniques were later to diffuse to mainland China through trade contacts between the Arab and Persian merchants with their Chinese counterparts [Misugi, 1991; Krahl, 1986].

During the late T'ang Dynasty, many Arab and Persian merchants settled in large numbers in the Chinese seaports along the coast of South China Province, notably at Guangzhou and Quanzhou. It was through these merchants that Persian cobalt blue was introduced into China and they too encouraged the Chinese potters to use the new colour in their local ceramic industry. Most of the earliest Blue-and-White wares manufactured in China were to cater for these Muslim traders and later to be exported by these traders back to their countries. They had encouraged their Chinese counterparts to manufacture large Blue-and-White dishes which were suited to their taste, rather than the small bowls and saucers plates that the Chinese habitually used. This was the situation that contributed to the early development of Blue-and-White industry in China. Soon after that the Chinese began to appreciate the beauty of these wares and before long it became the dominant wares in China as well as throughout the world.

During the early development of Blue-and-White porcelain, it was centered in Jingdezhen in Jiangxi (Kiangsi) Province [see fig. 12-15]. The city was famous for its porcelain industries and had been in operation since the tenth century of the T'ang Dynasty. It was ideally located, very near to the raw materials of *kaolin* and *petuntse*, which come from the Jiangxi mountains. During the Yuan period, an increasing production of porcelain took place in this region. During the Ming period, an Imperial factory of the Ming rulers was officially established in the city during the second half of the fourteenth century, probably in 1369. Until then, and since Yuan times *Shu-fu* or privacy council or Imperial Palace wares and other fine vessels were made here [Harrisson, B., 1972: 43]. The wares were for use in the court and some were for gifts to the foreign rulers.

Recent excavation at Hutian in the Jingdezhen area, however, revealed that coarser and sketchily drawn style porcelains were also produced in the same kiln that produced far finer porcelain decorated in a more sophisticated style. These coarse wares were for the unsophisticated and undemanding market in Southeast Asia [Addis, 1975-77: 1-11].

There were also a number of Provincial and private kilns operating alongside the Imperial factories and elsewhere in the region, they switched from the production of celadons to that of Blue-and-White wares. Most of these kiln sites were located at the southeastern Chinese Provinces, especially in the Fujian, Guangong and Zhejiang Provinces [fig. 12-14]. Most of the Blue-and-White wares produced in these private kilns were coarser and rougher wares and both intended for the common peoples in China and to be exported mainly to Southeast Asian markets. One of the most common type of such wares was known as *Swatow* wares. This was produce in the sixteenth and seventeenth centuries, with cracked glaze applied over a coarse body. Designs were drawn freely and sketchily. Common motifs were floral scrolls, dragons, phoenixes,

kylin, and other mythical animals. These types of wares are common in Brunei, especially at Kota Batu and Pulau Chermin [see plates 28, 29, 30 and 31; Illustrations: 6-10].

The earliest Blue-and-White porcelain of the second half of the fourteenth century were large dishes, vases and bowls, with boldly decorated designs. Decoration includes Near Eastern ogival panels and Chinese dragons, lotus and chrysanthemum scrolls, and the narrower bands of petals some of which had already appeared in the *Cizhou* wares of the Southern Sung. As discussed, most of these wares were for the Near and Middle Eastern markets. Only a small amount of these wares found their way to Southeast Asia.

The Blue-and-White of the classical wares of the fifteenth century has been regarded in China as the outstanding period for Blue-and-White. The most important reigns were those of Yung-lo (1403-1424), Hsuan-te (1426-1435) and Ch'eng-hu (1465-1487). During the reign of Yung-lo, for example, Ming ceramics in particular Blue-and-White wares were characterized by the classic blue. During Hsuan-te reigns, fine, high quality blue glazes were produced. Imported cobalt resulted in a vigorous *Mohamedan* blue colour which turned blackish or brownish where thickly applied [Harrisson, B., 1972: 44]. The reign of Ch'eng-hua was famous for its palace bowls decorated with floral scrolls of lilies, poppies or fruiting melons. This group is quite distinct from the early fifteenth century wares and has a subtle, refined and delicate quality. A number of these wares were excavated at Kota Batu, including stem cups [ibid: 44; Pope, 1958: 217]. I have managed to recover three shards with Chinese characters written on their bases. One of the shards read: Emperor Ch'eng-Hu [see plates 33; see also chapter 4].

In Brunei, large quantities of Blue-and-White wares were found in almost every archaeological site throughout the country. I have collected a total of 1,062 pieces or 19.8% at Kota Batu; 438 pieces or 26.8% at Pulau Chermin, and 2 pieces or 0.1% at Terusan Kupang [see chapter 4]. They dated from the fourteenth to seventeenth centuries A.D. They mostly originated from the southeastern China coastal kiln centres of Fujian, Guangdong and Zhejiang Provinces. One common type of Blue-and-White ware

produced at these regions was the *Swatow* type, so-called after the sea port of Swatow north of Guangdong Province [see plates 28, 29, 30 and 31]. Other common Blue-and-White wares were 'Provincial' or 'export' Blue-and-White ware types of the Southeastern Provincial kilns. Like the Swatow wares, they were potted from an inferior clay. However, most of them were very attractively decorated in underglaze blue and frequently showed a far greater freedom and spontaneity than many of the later Ming wares that were officially commissioned. The decorations were freely drawn designs of floral scrolls, dragons, phoenixes, kylin, and other mythical animals. Their popularity can be seen by their wide distribution in Southeast Asia, including Brunei [see plates 33 & 34; Illustrations 6-10].

Another important kiln centre in the southeast is the so-called Minnan ceramic region. Recent archaeological excavations have discovered large kiln sites covering the counties of Xian of Dehua, Anxi and Yongchun [Ho, 1988: 10]. So far a total of 65 sites containing 150 localities has been discovered within the five ceramic manufacturing districts of this region. All these districts produced rough and coarse Blue-and-White wares to be exported to the foreign markets, notably Southeast Asia. The production was limited to ten types of vessels, namely, bowls, flared-rim bowls, plates, cups, incense burners, vases, brush-holders, spoons, spouted jars and tomb tablets. The chief products of most of most or all kilns were bowls and plates. There were five design motifs, namely, animal, floral, graphic, scenic and word [ibid: 11]. These vessels, in particular bowls and plates were common in Southeast Asia, including Brunei. At Kota Batu, for example, I have managed to collect a total of 983 pieces or 24.7% of bowls and plates and composed of the above design motifs [see plates 35-7; Illustrations 6-10].

Towards the end of the Ming Dynasty, the quality of Blue-and-White ceramics began to decline. This was especially so towards the end Emperor Wan Li (1537-1619) reign, when imported cobalt became scares and also there was difficulty obtaining supplies of high-grade clay. Furthermore, the large quantities of porcelain ordered, often

in excess of a thousand pieces in a year, led to mass production with a consequent decline in artistic quality [Neave-Hill, 1975: 217]. This pattern, however, began to change when the European merchants came in the sixteenth century. They began to take control of ceramic distributions for the European markets. This contributed to the growth of more kilns, with the introduction of special Blue-and-White wares especially for the European market. The ceramics were later known as *Kraak* porcelain, a term coined by the Dutch for an easily recognized type of Blue-and-White ware produced during the reign of Wan Li (1573-1619). To the English, *Kraak* ware, is distinguished by the arrangement of its ornament into panels; they usually radiate to a bracketed rim notorious for its liability to chip, though this feature is typical of mid-seventeenth century wares [Vainker, 1995: 147]. I have encountered some of these wares at Kota Batu and Pulau Chermin.

During the last of the Ming Emperors, T'ien Chi (1621-1627) and Chung Cheng (1628-1645) marked a steady decline, degeneration and reduced output took place in Imperial kilns. Unrest and rebellions during the latter's reign hindered a progress in the ceramic industry. These situations had encouraged a further increase in the number of private and commercial kilns located around the imperial kiln of Jingdezhen and the southeastern coastal ports of South China. However, Chinese ceramics began to face stiff competition from other Oriental wares, especially from Japan. Nevertheless, Chinese Blue-and-White wares continue to be manufactured up to the Ch'ing Dynasty (1644-1912). In Brunei, however, only a small number of these wares were found, mainly due to civil wars, Spanish attacks and insecurity which caused a sharp decline of trade from the seventeenth century onwards [see chapter 2].

5.9 Summary

This chapter has reviewed the role of China as one of the earliest inventors of ceramics. This great invention, in particular its porcelain, has been admired and valued throughout the world. It has influenced many potters throughout the world to try and imitate the

Chinese porcelain, which some of them only mastered as recently as the eighteenth century.

The chapter also discussed the role of the four last Chinese dynasties of the T'ang, Sung, Yuan and Ming as the main actors in the wide distributions of Chinese ceramics throughout the world. The roles of these dynasties are without any doubt remarkable. Without them, perhaps, Chinese ceramics would not be as famous as they are.

The role of China in shaping the Southeast Asian culture is not as impressive as the Indian or the Arabs or the Europeans [see chapter 2]. When the Indian first came to Southeast Asia in the first century A.D., they not only dominated the trade, but they also left behind their Indian influence to the Southeast Asian societies. Indian culture of arts and religion were adapted and adopted by certain Southeast Asia states, such as Funan, Khmer and Srivijaya [see chapter 2]. Similarly, when Arab and Persian merchants were actively involved in Southeast Asia from the seventh century onwards, they transferred some of their culture and religion to the local societies, such as in Melaka, Brunei, Pasai, and Acheh. Islam became the official religion, while some of the Arab culture was transformed into the local traditions. The Europeans also left a remarkable influence to the Southeast Asian culture, such as the European-controlled-city [see chapter 2:].

When the Chinese began to take an active role in Southeast Asia from the eleventh and twelfth centuries, less or no Chinese Culture had been transmitted into the local societies. There are two possibilities for this. In the first place, they were lagging behind by the Indians and the Arabs, who had already transformed all the Southeast Asian societies. The second, the Chinese were not interest in influencing cultural change at all. Their real interests to the South Seas were only business. They had to grab everything that they had lost due to their prolonged isolation policy [see chapter 5].

Whatever the arguments, the people of Southeast Asia have still benefitted through the establishment of direct trade contacts with the Chinese. One of the benefits gained was the art of manufacturing pottery. It had opened up the mind of some local potters towards the Chinese technological capability and achievement. For the adventurous, this provides them with a greater challenge and inspiration. It had motivated some of them to make critical changes to their traditional native potteries towards a high technical skill, with better management and organisation levels. The outcome of this was the emergence of new ceramic power in Southeast Asia, in particular in Thailand and Vietnam. I will discuss this issue in the next chapter.

In the meantime, some local potters were unable to cope with the increasing influence of Chinese ceramics into their local surroundings. Their failure to adapt the Chinese technological skills and management levels into their industries contributed to their failure. Some industries, such as in some part of the Philippines had to limit their productions and some became less and less artistic. Some other local industries, like in Brunei and in some other part in Southeast Asia, faced a very hard time, which eventually led to their downfall. This can be seen in Brunei and some other parts of Borneo and other places in Southeast Asia [see chapters 7].

Table 14: THE CHRONOLOGICAL TABLE OF CHINESE DYNASTIES

Neolithic period	about 7000 - 1600 BC
Shang Dynasty	about 1600 - 1027 BC
Western Chou Dynasty	1027 - 771 BC
Eastern Chou Dynasty: Spring and Autumn period Warring States period	770 - 475 BC 770 - 475 BC 475 - 221 BC
Ch'in Dynasty	221 BC - 207
Western Han Dynasty	206 BC - AD 8
Xin Dynasty (Wang Mang)	AD 9 - 23
Eastern Han	AD 24 - 220
Six Dynasties period: Northern and Southern Dynasties	AD 220 - 580 AD 420 - 580
Sui Dynasty	AD 581 - 618
T'ang Dynasty	AD 618 - 906
Liao Dynasty	AD 906 - 1125
Five Dynasties	AD 907 - 960
Sung Dynasty: Northern Sung Dynasty Southern Sung Dynasty	AD 960 - 1279 AD 960 - 1127 AD 1128 - 1279
Chin Dynasty	AD 1115 - 1234
Yuan Dynasty	AD 1280 - 1368
Ming Dynasty	AD 1368 - 1644
Ch'ing Dynasty	AD 1644 - 1912
Republic	AD 1912 - 1949
People's Republic	AD 1949 -

Table 15: REIGN PERIODS OF MING AND CH'ING DYNASTIES

MING DYNASTY - 1368-1644

Hung-wu	1368-98
Chieng-wen	1399-1402
Yung-lo	1403-24
Hsuan-te	1426-35
Cheng-t'ung	1436-49
Ching-t'ai	1450-7
T'ien-shun	1457-64
Ch'eng-hua	1465-87
Hung-chih	1488-1505
Cheng-te	1506-21
Chia-ching	1522-66
Lung-ch'ing	1567-72
Wan-li	1573-1620
T'ai-ch'ang	1620
T'ien-ch'i	1621-7
Ch'ung-chen	1628-44

CH'ING DYNASTY - 1644-1912

Shun-chih	1644-61
K'ang-hsi	1662-1722
Yung-cheng	1723-35
Ch'ien-lung	1736-95
Chia-ch'ing	1796-1821
Tao-kuang	1821-50
Hsien-feng	1851-61
T'ung-chih	1863-73
Kuang-hsu	1874-1908
Hsuan-t'ung	1909-12

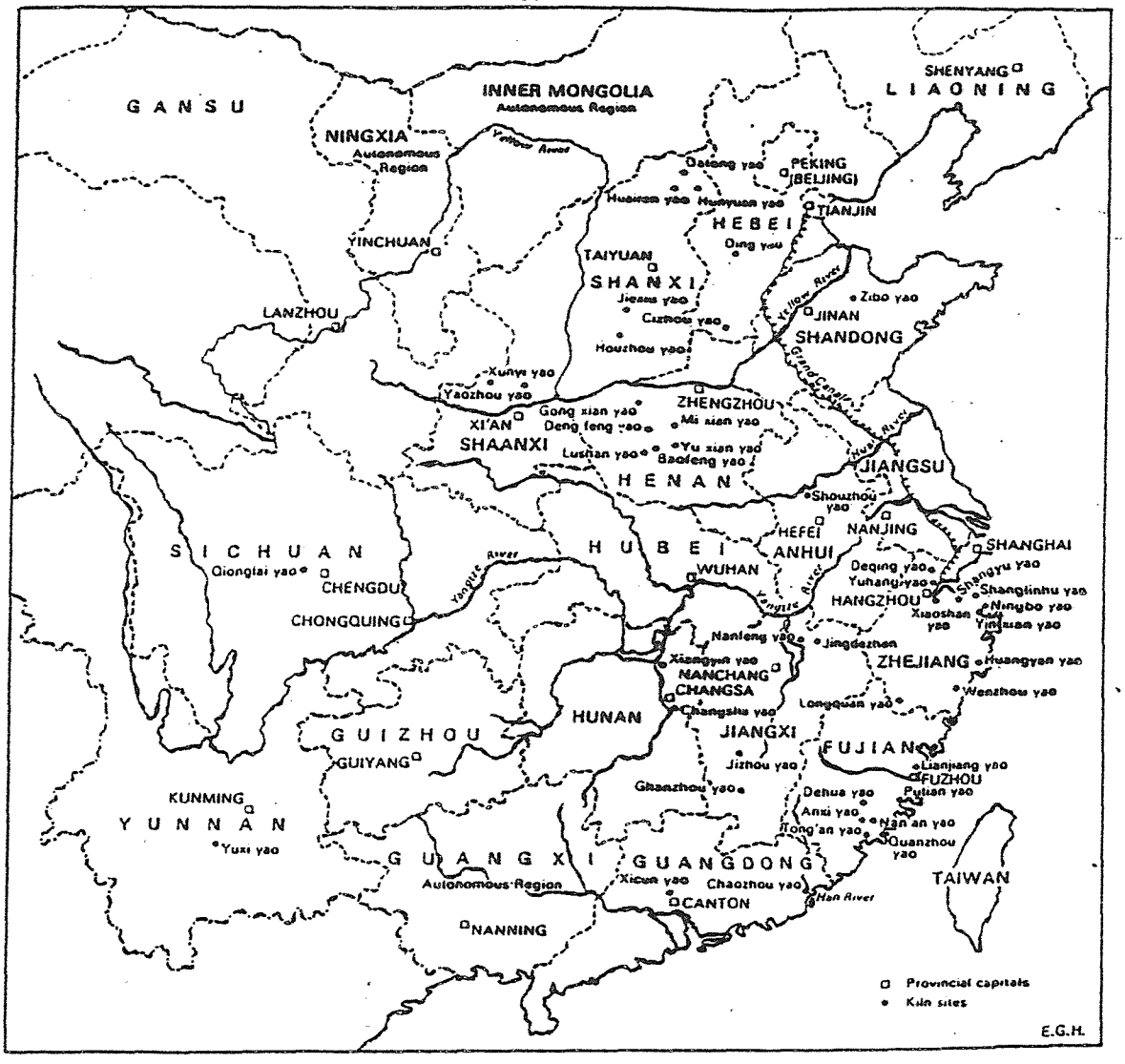

Figure 12: Map of major kiln sites of ancient China.

Figure 13: Map of kiln sites of Zhejiang Province, China.

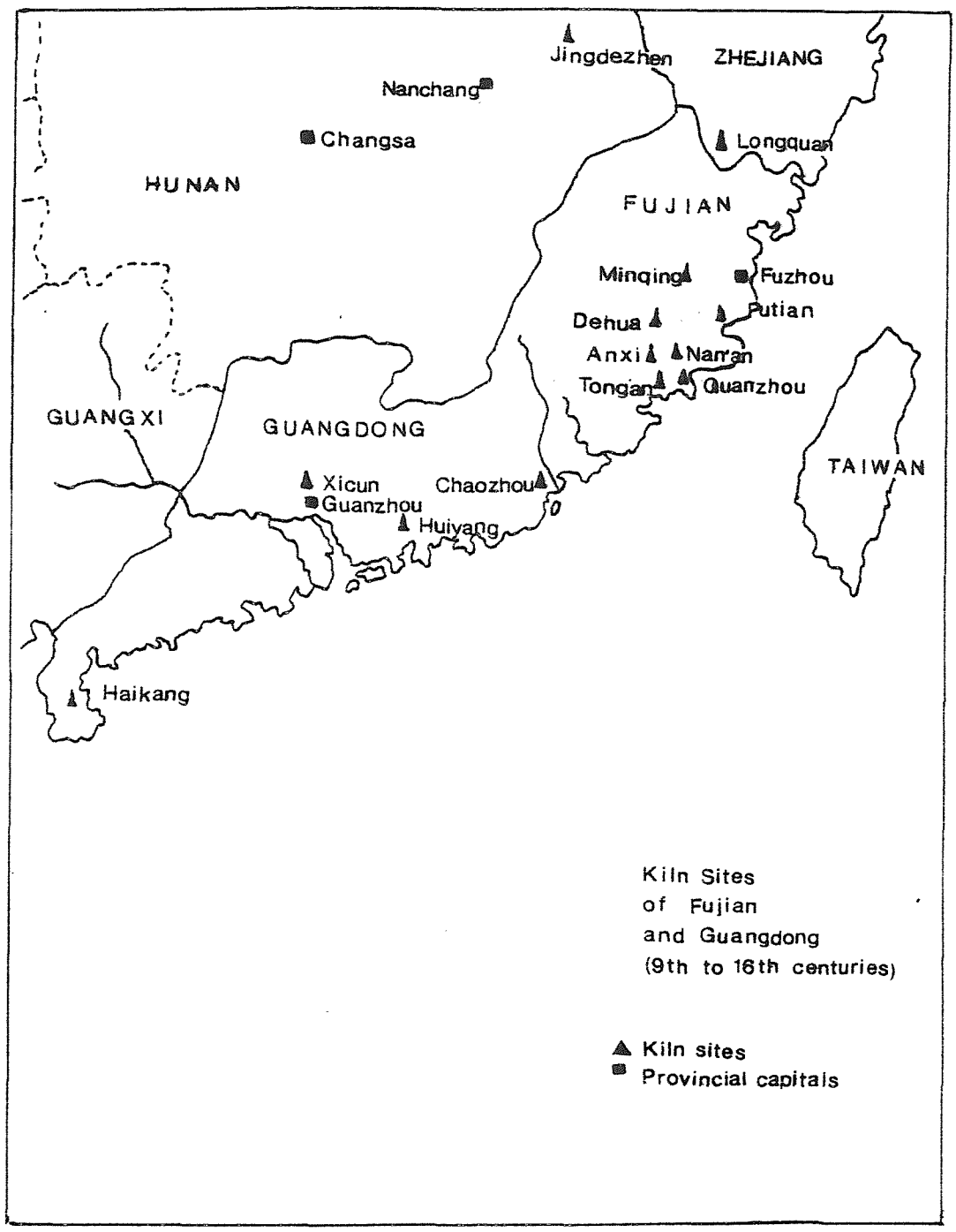

Figure 14: Map of kiln sites of Fujian and Guangdong Provinces, China.

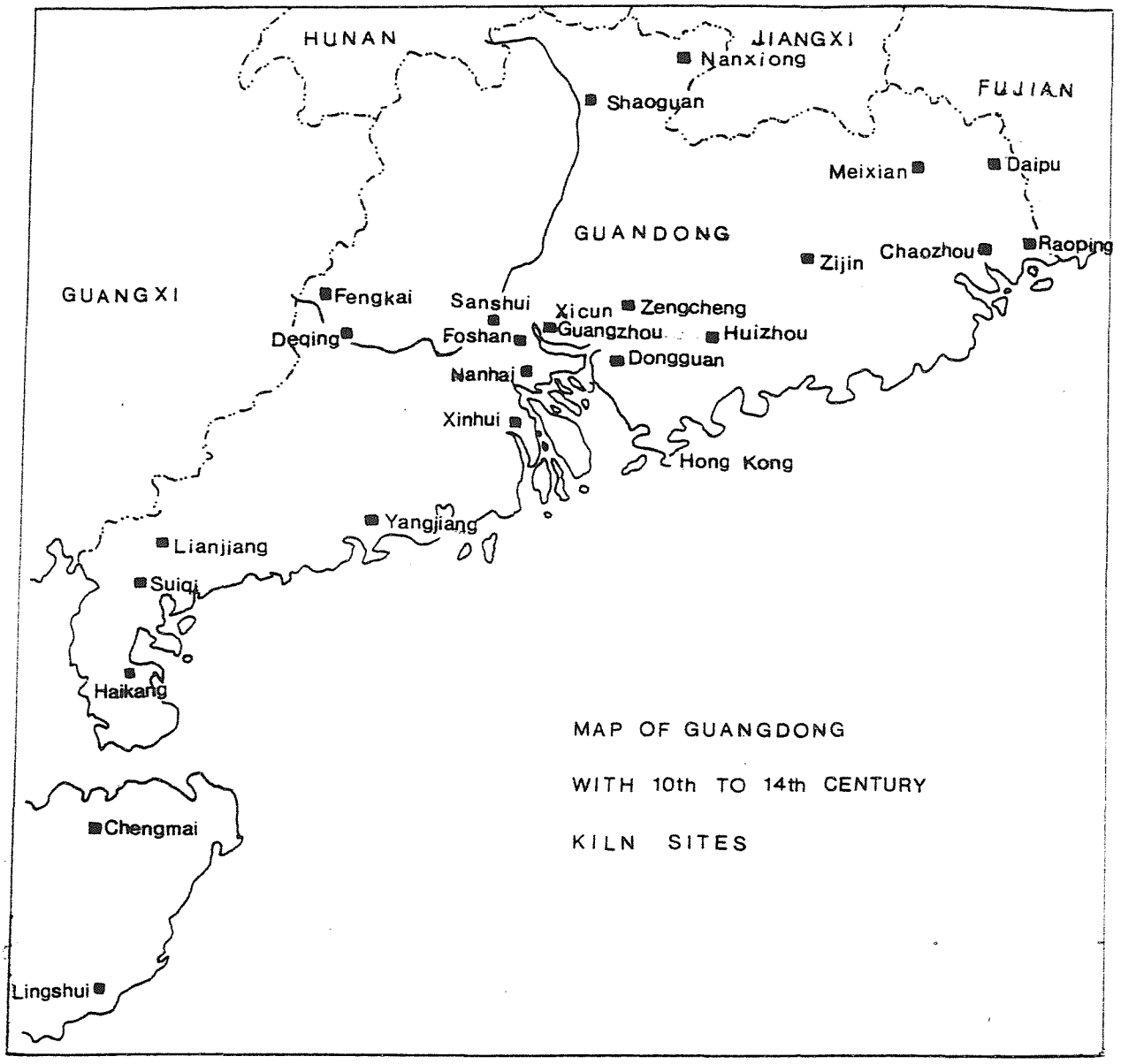

Figure 15: Map of kiln sites of Guangdong Province, China.

CHAPTER 6

SOUTHEAST ASIAN CERAMICS: A BACKGROUND HISTORY AND ITS RELATION TO THE TERUSAN KUPANG, KOTA BATU AND PULAU CHERMIN CERAMIC COLLECTIONS

6.1 Introduction

Southeast Asia is a region of anthropological and archaeological complexity, remarkable for the sheer variety of cultural expression [Bellwood, 1992 b: 56]. The region, for thousands of years, has had its own distinct cultural identity, represented by societies of many socio-economic levels - from hunters and gatherers, through tribal agriculturalists, to socially ranked chiefdoms fully conversant with the manufacture of bronze and iron artefacts. However, despite these cultural diversities, Southeast Asia was, until the mid-1960's, seen as a back-water of history, into which occasional eddies of progress swirled from the more advanced cultures of India, China, or possibly even Eastern Europe[1]. It is only in the last thirty years or so that this view has change by new technology and the introduction of best methods in archaeology. This was added by a new generation of native-born archaeologists, who were inspired by their own powerful heritage and began to realize that despite the lack of written language, the absence of urban concentrations, and no bureaucratic states of recognizable proportions, the Southeast Asian people were highly accomplished and had assumed a significant role in the cultural development of the southern oceans of the eastern hemisphere. It was in Southeast Asia that may have witnessed some of the world's earliest agriculture, produced some of the earlier metalworking, and that stimulated one of the largest diasporas in the history of mankind - that of the so-called *Austronesian* speakers. With these latest discoveries and perhaps

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1 For example as late as 1971 Grahame Clark said that the prehistoric people of Southeast Asia had never progressed from the Stone Age into the age of Metals, as other cultures had moved from Copper through Bronze to Iron Ages. He said that 'unlike Mesopotima and China for example, in Southeast Asia stone tools continued in general use into the Christian era' [Brown, D.M., 1995: 16]

many more to come, the label of Southeast Asian culture is beginning to change from a "backwater" to a "cradle of human civilization."

Southeast Asian civilizations existed both on the Mainland and Islands of Southeast Asia. On the Mainland, despite being partitioned by mountains, they were connected and defined by the great rivers that provided arteries of travel, communication, and trade. Similarly, the Islands of Southeast Asia were defined by the surrounding water and by their proximity to the Mainland and to one another. Interactions between the various Southeast Asian cultures had already existed thousands of years, long before the arrival of foreign traders from the west. These interactions brought about many common similarities between these societies, such as in languages, material cultures and religion.

In agriculture, Southeast Asia was famous for innovative farmers. These farmers were the first in the world to domesticate rice and developed wet-rice cultivation as early as 2000 B.C., found notably in northeastern Thailand [Hall, 1992: 185]. Archaeologists have also found evidence that an intermediate stage of rice between wild and domesticated was practised as early as 3000 B.C. In addition to rice, they also harvested a number of other crops, including sugarcane, yams, sago, bananas, and coconuts. Some scholars suggest that these developments took place around 4000 B.C., marked by a relatively homogenous Neolithic culture of farmers who settled mainly by coasts and rivers [Fagan, 1992: 371]. Spirt Cave in northern Thailand was dated much earlier, around 6800 B.C., where the *Hoabinhian* groups were selecting a wide range of wild plants including *prunus* beans, peas, *Arecas*, bottle gourds, water chestnut, etc. to be domesticated [Whitehouse & Whitehouse, 1975: 203].

The region was also famous in its metallurgical technology. Archaeologists have dated bronze objects uncovered in northeast Thailand to about 4,000 years old, and iron bracelets and spearheads to the first half of the millennium B.C. By 2000 B.C. many peoples in the region possessed a sophisticated metal technology that included bronze, brass, tin, and iron [Brown, D.M, 1995: 30]. Some scholars, however, have suggested a

later date around the earlier second millennium B.C. in northern Thailand and Vietnam, and the spread of India and Chinese influences through parts of the region from about 2,000 years ago [Bellwood, 1992 b: 115]. Among the technologies, few would be more surprising or intriguing than the Dong son Drums, later called as *Don Son* Culture[2]. These are large bronze drums, the largest being almost one meter high and weighing up to 100 kilograms, with lavishly decorated distinctive scenes - often of people in boats and wearing extravagant headdresses with raised geometric symbols, including concentric squares, parallel striations, and rows of dots [Brown, D.M., 1995: 48]. More than two hundred of the bronzes have been found throughout Southeast Asia, indicating their widespread dispersal in the region.

Southeast Asia therefore experienced great technological achievement for the past thousands of years. Archaeological research of Southeast Asia is at an exciting stage, with new discoveries and interpretations appearing almost annually. The region has experienced such an astonishing development in archaeological research and has in the past few years become one of the centres of world archaeology. The understandings of the early cultural history of other parts of Asia are recognised as important in recreating the 'stepping-stones' by which man first reached Australia and the Pacific. In this crowded backwater of the world, culturally overshadowed by Indian and Chinese influences, the people of Southeast Asia maintained the integrity of their cultural genius. From their highly developed aesthetic sense came new forms and styles which enriched almost every aspect of the arts, especially ceramics.

Compared to Chinese ceramics, the achievements of the potters of Southeast Asia have not been widely acknowledged in the histories of the region. This is partly due to the emphasis that was placed on the monumental arts, notably architecture and sculpture,

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2 The *Dong Son* Culture was originated at a place called Dong Son, south of Hanoi. It dates 500 BC to about AD 100. Many of the best bronzes are perhaps closer to 100 or 200 BC.

which drew their inspiration from Indian culture. Also, the technical virtuosity of the Chinese potters overshadow the local ceramic achievements. Much of the emphasis in the study of Southeast Asian ceramics has been on their role in traditional Asian trade and contact. Realizing these limitations, this chapter attempts to provide an introduction to the internal histories of Southeast Asian glaze ceramics, notably from Kampuchea (Cambodia), Thailand and Vietnam. The focus of the study will be discussion of the various types of Southeast Asian wares, their kiln technology, and the evolution of forms and glazes. Wares common to Brunei will be discussed, in particular at the sites of Terusan Kupang, Kota Batu and Pulau Chermin. The wares range from the subdued green and brown monochromes of the Khmers to Vietnamese and Thai stonewares. Also Blue-and-White wares of Vietnam or the Celadons of the Sawankhalok kilns in Thailand, both reflecting the influence of Chinese prototypes. Indigenous potters also developed their own wide repertoire of ceramic shapes, glazes, and styles of decoration, such as the Sukothai kilns in Thailand and this will be discussed below.

The study of Southeast Asian ceramics was given a boost in the late1920's and 1930's when H.O. Beyer began unearthing Thai and Vietnamese wares as well as Chinese ceramics in the Philippines. At the same time excavations were taking place in Vietnam, and on the island of Sulawesi (formerly the Celebes) in Indonesia [Brown, R.M., 1988: xv]. In Borneo, including Brunei, study began in the 1950's pioneered by the Harrissons [see chapters 7; Bibliography]. In 1971, an exhibition on Southeast Asian ceramics was held in Singapore and attracted the interest of the public, including scholars [Guy, 1989: 4]. Since then, the study of Southeast Asian ceramics mushroomed, mostly in the forms of books, including some exhibition catalogues, dozens of articles publishing various aspects of ongoing research; and underwater archaeology, concentrating on shipwrecks and ceramics.

Southeast Asia has an abundance of appealing utilitarian pottery. Robust, balanced forms made for domestic use are an integral part of daily life. Pottery has been

produced in some part of Southeast Asia for at least 6,000 years or so and used for both utilitarian, religious and ceremonial purposes. Typical pottery of the prehistoric period of the region is an earthenware vessel, hand built with coils, and finished with an anvil and beater [see chapter 7]. They were found in Kampuchea, Vietnam, Thailand, Peninsula Malaysia, Indonesia, the Philippines and Borneo. This pottery came into existence when Neolithic societies began to adopt a settled life and practised agriculture and perhaps some sort of stock breeding. This in turn gave them ample time and control of food sources. With an abundance of food, people had an increasing and urgent need for vessels for cooking and storing food, and for eating and drinking purposes. This may have played a crucial factor in the development of pottery-making and eventually the introduction of pottery into people's lives.

The question is, did Southeast Asian potteries originate from within the region or from an outside influence, such as China? It has been suggested that the influence was from China, which began its pottery tradition as early as 7,900 years ago [see chapter 5]. The transition from low-fired earthenware to high-fired stoneware originated from China in the first millennium B.C. before being diffused into Vietnam some time between the first and third centuries A.D. When the transition took place in other parts of Southeast Asian regions is uncertain, but excavated storage vessels confirm that stoneware was made in Kampuchea by the eighth century A.D. [Rooney, 1987: 9]. The technology, however, only managed to reach some parts of Mainland Southeast Asia, in particular Myanmar (Burma), Thailand, Kampuchea and Vietnam, while the rest of Southeast Asia continued to use traditional methods in their earthenware production. Further transformation came later in the twelfth century, with the introduction of glazed-ceramics, particularly in Thailand, Kampuchea and Vietnam. I will discuss these ceramics later in this chapter.

Chinese influence in Southeast Asia began as early as the Han period of B.C. 206 toA.D. 220, especially in the region near to China, in the north and south of Vietnam.

This resulted in the transformation of the local societies, both culturally and socially. In ceramics, some of the Han styles were transformed into the local tradition. When the Chinese began to dominate the South Seas from the twelfth century onwards, more and more Chinese elements influenced the local cultures. This influence can be seen particularly in the styles, forms or design motifs of the ceramics. An example of this can be seen on some of the Thai wares of Sukothai and Sawankhalok types which resembled the Chinese Cizhou and Lung-Chuan types [see chapter 5].

Despite the Chinese influence, the Southeast Asian societies still managed to maintain their own cultural identity and uniqueness. In ceramics, some of the traditional values were maintained, such as those connected to their metal vessels of gold, silver and bronze used in association with the court, temple or in daily life. The influence of the metalwork can be seen in the angularity of the profiles and the use of waisted supports, particularly obvious in the Khmer ceramics. Direct replications of bronze forms are to be seen in Khmer, Thai, and Vietnam ceramics; for example, the Khmer ceramic bird lime container has direct bronze prototypes [Guy, 1989: 2]. Similarly, green-glazed stem plates produced at the Sawankhalok kilns of Central Thailand find direct parallels in both form and decoration in the bronze presentation dishes excavated from fourteenth century East Java [ibid]. Other famous bronze versions were *kendi* forms, although earthenware *kendis* were also present in the local traditions [see chapter 7].

The connections noted between the ceramic traditions of Southeast Asia are not fully understood. There is a considerable degree of shared technology between these traditions which points to closer links than were first believed. Apart from metal replication, it is also common to see a similarity in styles among the Southeast Asian ceramics. An example of this can be seen in the similarity of the kilns employed in Lower Myanmar to those in Thailand of the potting techniques of the newly identified green-and-white wares, including the distinctly Thai-style cutting of the foot [ibid: 4]. There is also a close similarity between the underglazed iron-brown wares of Sukothai and of

Vietnam in both potting techniques and decorative style [ibid: 4]. This shows a wide spread of contacts among the Southeast Asian societies, involving a lot of people, which perhaps included the potters. This contributed to the transfer of knowledge into the local ceramic traditions as demonstrated by the common ceramic traditions mentioned earlier. Also, the traditions may have been simply copied or borrowed without involving the movement of people. Whatever the factors, this common technology shows that Southeast Asian societies still appreciated their own ceramic traditions, despite tremendous influence from the Chinese.

The height of Southeast Asian ceramics was reached in the thirteenth century when local potters improved their pottery skills to a higher standard. They began to gain fame in the local market, although the quality was still not as good as in the Chinese ceramics. In the fourteenth century, Southeast Asian ceramics began to enter the international market, at first as a substitute to the Chinese ceramics, but later as regular merchandise in the international markets. The popularity of Southeast Asian ceramics extended far beyond the communities in which they were made. Many ceramics were produced for distant markets and large quantities of Thai and Vietnamese pottery, including some of the finest known examples, have been excavated in the Philippines, Indonesia, Peninsular Malaysia and Borneo, including Brunei. Southeast Asian ceramics became very popular in the fifteenth and sixteenth centuries, when they dominated the overseas markets, competing side by side with the Chinese ceramics. It is common to see a mixture of these ceramics in the archaeological evidence at most sites throughout Southeast Asia [see chapter 3 & 4]. Their popularity continued until the seventeenth century, when they began to face stiff competition from Chinese ceramics and the new ceramic centres, notably Japan. This competition affected Southeast Asian ceramics considerably which can be seen by their drastic reduction in the overseas market, especially in Southeast Asia.

The quality of Southeast Asian ceramics was not as high as their Chinese counterparts. During the Sung, Yuan and Ming periods of the eleventh to seventeenth centuries A.D., Chinese ceramics were made to a very high standard [see chapter 5]. In every aspect of ceramics production, from the kiln technology to raw materials, Southeast Asian ceramics fell behind. To overcome these limitations, some Southeast Asian potters began to imitate the Chinese styles into their wares, such as the Vietnamese Blue-and-White wares, the Sukothai Cizhou and the Sawankhalok celadon styles. These imitations attracted Southeast Asian buyers and at the same time could be sold most readily to former Chinese markets, which itself was facing a ceramics crisis created by the 'Ming ban' and a stoppage of the kilns at Jingdezhen between 1436 and 1465, the so-called 'Interregnum' period in Chinese ceramics. Southeast Asian potters also began to produce various styles and forms, such as large plates and dishes in order to attract foreign buyers, such as those in the Near East or in Southeast Asia itself. These strategies seemed to be successful and played a crucial factor in their survival for more than two hundred years during which time active competition with the already established ceramic powers of the region continued.

As archaeological evidence shows at almost every site in the country, Brunei was also receptive to the importing and daily use Southeast Asian ceramic products. Although the number of Southeast Asian ceramics found in the country is not so numerous compared to those found in the Philippines and Indonesia, the presence shows Brunei's active involvement in international trade activities, not solely with the Chinese as had been widely believed before, but also with various other nationalities, such as the Thai s and other southeast Asian traders. Despite the small quantity of Southeast Asian ceramics found in Brunei, the evidence is vital and should be given as much attention as the Chinese ceramics. The next sub-chapters are devoted to these ceramics, beginning with the Khmer, Thaiand Vietnamese ceramics. I will examine the background history of these ceramics and then relate it to the ceramic collections I found at Terusan Kupang, Kota Batu and Pulau Chermin.

6.2 Khmer ceramics

During the early centuries of the Christian era, the Mekong Delta region of Mainland Southeast Asia consisted of organised states. From this region emerged the Khmer civilization which grew to become a powerful and dynamic empire. Between the ninth and early thirteenth centuries the brilliance of the Khmers was unsurpassed [Rooney, 1984: 1]. The majority of the time, their centre was based at Angkor but at the peak of their power, territorial boundaries included major parts of Mainland Southeast Asia such as Thailand to the north, Laos to the east, and Vietnam to the south [see fig. 17 & 18]. A large Khmer population now existed in northeastern Thailand, and remaining evidence of Khmer civilization from this area has illuminated the ceramic production.

Of all the Southeast Asian ceramics, the Khmer wares are the most delightfully unique. Their existence has been known at least since the visit of Aymonier to Phnom Kulen in 1883, but Khmer ceramics until today have remained one of the least documented among the Southeast Asian wares. According to the eminent scholar of Khmer culture, Bernard P. Groslier, Khmer glazed pottery evolved out of a long tradition of earthenware-making. It was originated from some pale yellow-brown earthenware unearthed in Sambour Prei Kuk, an ancient ruin of the seventh and eighth centuries A.D. [Hasebe, 1983: 9]. Groslier believed that these wares had their origins in India and surmised that they reached Khmer by way of Funan. Some scholars, however, believed that Khmer ceramics seem to have developed independently, although India strongly influenced other aspects of Khmer culture [Rooney, 1984: 23]. According to Indian caste rules, a dish, or any other eating vessel made of clay, was considered impure once it was used, and reuse was forbidden. Therefore, metal vessels were used for eating and the art of metalwork reached a high level of development during the early period of Khmer civilization. It may have also influenced many of the early Khmer ceramic traditions of the tenth century onwards [see introduction in this chapter].

Table 16: **The Chronology of Khmer ceramics** [based on Roxanna M. Brown terminology]

PERIOD	STYLES AND CHARACTERISTIC FEATURES
INDRAVARMAN - 877-944	*Indravarman* or *Kulen* style - Straw to pale glazed wares, including mould-made tiles, tiny bottles, covered boxes, conical bowls with flat bases. Chinese-influenced.
RAJENDRAVARM-AN- 944-1001	Pale green glazed wares, often with incised decorations. Also, *lie de vin* reddish-violet stonewares, mostly in large shapes.
SURYAVARMAN 1 - 1002-1050	Pale green glazed, hard, fine, grey as well as white-bodied wares. Button-foot jarlets, conical bowls, etc. Also dark glazes, some blackish-glazed wares and olive-glazed basins and jars; brownish-black glazes, such as jars, pots, bottles. Incised and jabbed motifs.
UDAYADITYARMAN II - 1050-1066	Brown-glazed wares, between carmel and blackish brown. Some olive-glazed wares, others with pale green glazed vessels, and two-colour wares. Shapes include small to large jars, conical bowls, covered urns, pots, bottles, tiered covers, etc.
JAYAVARMAN VI - 1080-1107	Dark-glazed vessels often with chocolate slips. Glaze become thinner towards the end of the period. Shape mostly the same at the previous period, now with finer incising and fewer flanges and tiers.also common tiny rounded mouthrim jars, with short necks. Other styles, include a small amount of two-colour wares and Kulen-type wares.
ANGKOR WAT - 1110-1177	Classical period of Khmer wares. Green-glazed wares are rare, comprising cylindrical covered urns and some covered boxes; much more thinly potted vessels from which lustrous glazes rarely chip, with coil trace smoothed out on the interior, often with chocolate slip on the lower body, with incising on the body. Also common footed jars, lenticular pots with a tiny spout and a handle, large storage jars, jarlets, cover boxes, etc.
BAYON or JAYAVARMAN VII - 1177-1250	The number of ceramics is greatly reduced. Green-glazed from Kulen kilns began to appear. Carved decoration replaces fine incising as the blackish glaze becomes thicker and darker; some heavily potted, black-glazed elephant limepots, lenticular-shaped pots, and storage jars.

The earliest true glazed Khmer ceramics first appeared in the Khmer region in the second half of the ninth century, during the reign of Indravarman I [see table 16]. The kiln centre was thought to be located on Phnom Kulen hill, 40 kilometers northeast of Angkor [fig. 16 & 17]. Although there has been no excavation of the site, it appears that production continued over at least three centuries after the establishment of the Khmer Dynasty at Phnom Kulen by Jayavarman II in 802 A.D. [see table 16]. The

site was first visited by a French naturalist, Etinne Aymonier in 1883. According to him the local people called the place Sampou Thleai, which was devoid of trees but covered with high bushes. Along the dike, he saw shards of pale greenish and yellowish-green bowls, covers, heavy tiles, and architectural ornaments. The site was later visited by Parmentier where he noted the presence of bottles and other simple vessels with or without covers [Brown, R.M., 1988: 41].

According to a local legend, the Kulen kilns were founded by the industrious passengers of a Chinese junk that was swept away by a strong storm and was stranded at the slopes of the plateau. This incident accounts for the name of the place, Sampou Thleai, which literally means 'smashed junk' [ibid: 41]. This account was proven by the similarity of certain Khmer ceramics to Chinese wares, such as is reflected in their bottle and jar forms. The impact of China and Khmer ceramic tradition was always present with attempts to copy T'ang and Sung wares, which were mostly modelled on Yueh wares. The shapes were often the same and similarities existed in incised decoration and the use of motifs and details of technique were closely copied. Both Yueh and Khmer ceramics were contemporary between the tenth and twelfth centuries. Likeness can also be seen in modelled animal shapes, narrow necked bottles with carved tiers around a wide mouth. The glaze colours range from dark brown to light green, the use of brown glaze for decorative accents, and a flat base [Rooney, 1984: 24].

However, some ceramics, such as bottles and jars still maintain their identity, either in shapes, techniques, and motifs, which were adapted to the taste of the Khmers. There are three types of Khmer typical jars. The first, jar with an oval, round or cylindrical vessel without a handle or spout; often with a sloping shoulder, a flaring mouth rim and a constricted neck. The second, a covered jar with a cylindrical shape; the cover and body usually form a continuous line. And the third, a storage jar with a large heavily potted oval or spherical shape, with a thick mouth rim; often with a broad sloping shoulder; the neck usually absent [ibid: 61-2].

In addition to these kilns, there were hundreds of provincial kilns within the borders of present day Thailand. The main centres were in the lower northeastern part of Thailand, where the Mun river cuts across the highland Korat Plateau through the provinces of Nakorn Ratchasima, Buriram, Surin, Sisakhet and Ubon before joining the Mekong at the Lao border [fig. 16 & 17]. These provincial Khmer centres in all probability provided the strongest stimulus for the Khmer ceramic industry in the late Angkorian period. They may have been in production during the eleventh and early twelfth centuries, especially during the years when Jayavarman IV (1080-1107) had his seat of power at Pimai in northeast Thailand. With the penetration of Khmer culture to the Mun River and the Menam Basin areas of Thailand, the diffusion of ceramic technology and styles could have an influence on the local traditions.

The ceramics found at sites in northeast Thailand represent the range of known glaze types. A pale green glaze, first associated with the kilns at Phnom Kulen is common to all sites [Guy, 1989: 19]. The other principal glaze type is an iron-based glaze which fired from olive-brown to dark chocolate in colour. Sometimes the two glazes were combined on the one vessel, typically with the light colour on the neck and the dark glaze covering the body. Such wares were also known as 'two-colour' wares. They were produced for a short period of time from the middle to the end of the eleventh century and represented only a small per cent of the total ceramic production [Rooney, 1984: 29]. Another common type was unglazed ware, which Bernard Groslier classified as *Lie de vin* ('dregs of wine'). Such wares are also similar to those found in Kampuchea, and thought to be produced in the last half of the tenth century and continuing into the first half of the eleventh century [ibid: 33]. A wide variety of shapes were made ranging from large storage jars, classical pedestal vases and covered urns to domestic bowls, pots and covered boxes, animal shaped lime-pots and oil lamps, figurines, conch shells and building material [Shaw, 1987: 18].

A typical Khmer ceramic, either produced within Kampuchea or northeastern Thailand, is characterised by a simple form with balanced proportions and a swelling

body. They were strong, dense, and heavy stonewares. The shapes are vigorous and functional. Most of the wares were made by the coil method and then turned on a wheel, or perhaps only a turning table. Usually the foot is made with a separate piece of disc-shaped clay. Small vessels usually have a flat and button-like foot. There was normally a depression into the foot on the interior of the piece, an indication that they were wholly turned on a wheel from a single lump of clay [Brown, R.M., 1988: 49]. Firing conditions were relatively primitive and relied upon kilns constructed of clay to achieve and sustain high temperatures. Decoration was used sparingly and always to enhance, never to dominate the form. Decorative motifs drew inspiration from parallel crafts such as textiles, metal-work, jewellery, and lacquer [Rooney, 1984: 27].

By the fourteenth century, the glazed ceramic crafts seem to have disappeared from the Khmer Empire, but the ceramic tradition did not vanish altogether and its influence can be seen on the character of Thai ceramics. I will discuss this type of ceramic later on in this chapter.

Compared to the other Southeast Asian wares, Khmer ceramics were not commonly found in the overseas market. This may suggest that they were not made exclusively for export. In Brunei, they were found in very small isolated numbers. In 1988, one piece was found at Kota Batu, at a site known as KB II [Report on the Sixth Intra-ASEAN...., 1989]. I managed to collect one piece of shard during my recent research at Kota Batu. It was found at trench KB. A2, i.e., along the Brunei River bank [see fig. 9]. It was a base of a bowl, with an olive-glazed body, a button-shaped foot with concentric rings and a red biscuit unglazed base. It was perhaps dated around the eleventh to twelfth centuries A.D. [see plate 38].

The few examples of Khmer ceramics found outside the Khmer Empire perhaps suggests that they may have been brought by Khmer migrants or merchants who were involved in trade activities with the region. Dawn Rooney [1984: 112] said that,

"Trade ceramics, or export wares, which were produced in abundance in China and other Southeast Asian countries, do not seem to have been produced by the Khmers. The small number of Khmer ceramics that has been reportedly excavated outside the boundaries of the former empire indicates that they were not made for export. They may have been transported by migrant Khmers, who presented them as gifts, where they were regarded as symbols of status and wealth and became heirloom pieces. Also it seems likely that these wares were used as bargain for other goods of value. Additionally the magical association with ceramics that prevailed in the Southeast Asian archipelago during the Sung and Yuan periods seem to have been absent in the Khmer wares."

6.3 Thai ceramics

The Thai people migrated over centuries from their homeland in, what is today China's Yunnan Province towards the south, as a result of pressure by the Han Chinese from the north. In the eleventh century, these people were already known as *Syam*, and when the kingdom of Sukothai was founded in the first half of the thirteenth century, the Chinese referred to them as *Xian*, perhaps the origin of the word Siam [Maveety, 1980-1981]. As the major states of Southeast Asia warred on each other and the power of the Khmer empire faded in the valley of the Menam Chao Phraya of Thailand, a vacuum was created that was filled by the growing Thai principalities. Under its third and famous king Rama Khamheng (1280-1317 A.D.), the people were unified and his kingdom developed into a powerful state in the mainland of Southeast Asia [Spinks, 1965: 6]. After his rule, however, the kingdom was much reduced and in 1378 A.D. it submitted peacefully to Ayuthaya, which was founded in 1351 A.D. By the mid-fifteenth century it became a battlefield between the warring forces of Ayuthaya and Chiengmai, and its cities were probably depopulated during some devastating raids by Chiengmai forces in about 1512 A.D. [see table 19].

Under King Rama Khamheng's rule, policies were introduced which brought changes and advantages to the people living in Sukothai. Among them was a lenient free trade policy, which certainly encouraged the growth of an extensive ceramic industry. The same policy was adopted later by Ayuthaya and during its heyday it was a renowned

international trading centre and an important port [Kasetsiri, 1992] through which many of the Sukothai wares must have been exported to other neighbouring countries such as the Philippines, Indonesia, Peninsula Malaysia and Borneo. The remains of large quantities of Thai ceramics have been retrieved from the riverbed at Ayuthaya in recent years, pointing to the city's role as a transhipment centre linking the kilns of the Sukothai region with the international trade system [Guy, 1986: 60].

The Thai have excelled in pottery making since ancient times. Shards of a dark reddish-brown earthenware marked with a corded paddle and occasionally bearing incised decorations have been found at a site in northwest Thailand, along with a smooth burnished ware that was dated 6000 B.C. [Maveety, 1980-1981; see also chapter 7]. Glazed ceramics began to appear around the early fourteenth and fifteenth centuries A.D. in north-central Thailand at the newly established Kingdom of Sukothai in the twin-cities of Sukothai and Si Satchanalai (Sawankhalok), soon after the manufacture of glazed ceramics disappeared from the retracting Khmer empire [see above; fig. 17 & 19]. It is interesting to note that the various cultural influences which come together in the kingdom had inspired the Thai to create their own aesthetic sense, especially in Buddha sculpture, temple architecture and ceramics [Spinks, 1965: 7]. In ceramic technologies, their aesthetic beauty is unparalleled compared to the Khmer wares and very much demanded both locally and internationally. These wares, with their legendary Chinese antecedents, supplied both domestic needs and provided an important export product to the island of Southeast Asia and Japan from the late fourteenth century onwards.

Until as recently as twenty years ago there was little interest in Thai ceramics. To all but a few, Thai ceramics meant only those Sukothai export wares found in profusion in Indonesia and Philippine burial sites. Few perfect pieces found in Thailand itself and the very existence of the Northern kilns was doubted by historians. The break through only came after the discovery of a large number of sunken junks in the Gulf of Thailand, laden with thousands of perfect Sukothai and Sawankhalok export wares [see chapter 3].

Since then, more and more excavations have been conducted in Thailand, both on-land and under water, organised either by the Fine Arts Department or with various other foreign institutions. Now Thai ceramics are the most widely studied among the Southeast Asian ceramics and well known to students of Southeast Asian ceramics.

Like the Khmer, the Thai traditionally credit the initiation of their ceramics industry to a group of 500 Chinese potters, a gift from the Chinese emperor to *Phra Ruang*, a general title for all the kings of Sukothai [Brown, R.M., 1988: 59]. The legend tells us the story when king Rama Khamheng went to the Chinese court in Peking before 1300 A.D. and requested potters to accompany him back to Thailand to advise the Thaion how to make vessels and sculptural objects. However, this visit is still questionable and no record of such visits appear in the contemporary Chinese court chronicles. According to Dawn F. Rooney [1989: 35], the Thai chronicles which are the sources of the theory, written between the eighteenth and early twentieth centuries, lack credence because they were primarily based on oral literature and were written five hundred years after the event. Nevertheless, there were a number of diplomatic contacts between Sukothai and the newly established Yuan or Mongol court in the last decades of the thirteenth century, and the Chinese records do acknowledge an audience with an heir to the Sukothai throne in 1299 A.D. [Ibid: 59]. The *Yuan-shih,* History of the Yuan, records that the state of *Hsien* (Sukothai) despatched no less than five missions to Peking between 1292 and 1299 [Coedes, 1968: 206]. The frequency of these missions would suggest that King Rama wished to maintain friendly relations with the Yuan Court in view of his expansion at the expense of the Khmer empire and the declining kingdom of Srivijaya [Spinks, 1965: 11].

Despite the uncertainty about the origins of Thai ceramics, it is apparent that new techniques, probably Chinese, came to the kingdom in the thirteenth century. The Thai had been making earthenwares and simple stonewares and therefore there was already a native Thai ceramic tradition upon which to build. The extensive temple construction that accompanied the founding of the Sukothai kingdom seems a likely stimulus for the development of the industry. Since wood was the traditional building material in

Thailand, the use of ceramics for roofs, building blocks, balustrades and ornamentation supports the theory of Chinese influence [Maveety, 1980-1981].

Gakuji Hasebe [1983: 14-5], on the other hand, gives three points that need to be considered. First, the Thai are believed to have migrated southward from Yunnan in Southern China and it is quite conceivable that they brought the Chinese making techniques along with them. Secondly, before the establishing of its independence, the Thai were ruled by the Khmers who had attained a high level of artistry in the manufacture of ceramics. The *Lopburi* wares in central Thailand are representative of such Khmer influence. And thirdly, the Thai could not have coped with the technical development and expansion of production unless there was a basic technological framework already in existence. By these means that the Thai had already basic skills in pottery, long before the arrival of the Yuan influence in the late thirteenth century.

There were two old kiln centres in the kingdom of Sukothai which produced two different type of ceramics, namely, *Sukothai* wares and *Sawankhalok* or *Si Satchanalai* wares. Both ceramics are usually discussed together and frequently classified under the loose heading Sukothai/ Sawankhalok. Admittedly there are links and similarities between the two kilns, but the links are tenuous. The kilns are located some sixty kilometers apart and were apparently established towards the end of the thirteenth century, but employed different production methods, and used different shapes and glazes. The differences between the two kilns are discussed below.

6.3.1 The Sukothai wares

Even though the Sukothai kingdom's kiln sites have long been accessible, no legal excavations were attempted there until after 1980 when the Thai Ceramics Archaeological Project was established as a joint venture with an Australian group. Until then, fifty-one kilns had been recorded on the banks of a small stream just north of the city wall of Old Sukothai town and to the north of Wat Phra Phailuang [Guy, 1989: 32; see fig. 16 & 18].

Out of these fifty-one kilns, only eleven kilns are cross-draft types that could have fired stoneware, and the reminder are up-draft kilns for earthenware [Brown, R.M., 1988: 60].

There are three types of Sukothai wares that can be identified. Those decorated in underglaze black or brown being the most common type and making up approximately half the wasters and shards found at the kiln site. The second type is a monochrome white and the third an unglazed type. The wares are all thickly potted, strong, and hard. The bodies are made of coarse, dull, brownish-grey clay containing white particles and covered with an off-white slip, or englobe, over which the design is painted or printed in a black iron pigment or a ferrous oxide pigment. The piece is then covered with a thin, transparent, greyish-yellow glaze, which often becomes degraded [Maveety, 1980-1981]. The effect is reminiscent of the *Cizhou* black-painted wares of China, which have already been discussed in chapter 5. Similar decorative techniques were also used at Sawankhalok, at the Northern Thai kilns of Sankampaeng and Kalong, and in Vietnam. Since all these kilns are currently thought to have been in production at about the same time, it is difficult to establish how the influence spread [Mc Bain, 1979: 79], although the possibility of Chinese influence cannot be ruled out [see chapter 5].

The most common forms for Sukothai wares are dishes, plates and bowls, and in lesser numbers, jars, vases, and bottles. The most characteristic design is a fish within a circle painted in the centre of the dish; Buddhist motifs, such as the chakra (or solar whorls) and conch shell, are often seen. Floral decoration is also common, such as sun-bursts, fern-like sprays, classical scrolls, and chevron bands on a mouth rim [see plates 39]. However, fish are the most common design, commonly placed in a central medallion. The reason for the fish design is perhaps its importance in the daily life of Sukothai societies. An inscription of King Ramkamhaeng the Great of 1292 said that "in the time of king Ramkamhaeng this land of Sukothai is thriving. There are fish in the water and rice in the fields" [Rooney, 1989: 35]. Functional structural materials were also

made, such as tiles, balusters, and drain pipes. The architectural ornaments include guardian figures in human form and finials shaped like lion-serpents, or triangular flames.

The Sukothai ware is readily identifiable. It was fired to a stoneware temperature of 1,250 degrees Celsius and achieved the characteristic hardness and density commonly associated with stoneware [Rooney, 1989: 37]. A typical body is buff or grey colour with a grainy texture due to impure and poorly levigated clay. Light-coloured particles, and sometimes dark ones, are dispersed throughout the body. The slip and glaze smeared and unevenly applied, the foot rims roughly cut and the surface of the black coring in the centre due to uncontrolled reduction is common [ibid]. The surface of the dishes and bowls is pitted and scarred with spur marks [see plates 39]. Such spurs marks are due to the firing processes, by which the wares were fired on tall tubular supports and sunk into the sandy floor. The dishes were stacked on top of each other, separated by a flat clay disc that had five, sometimes six, short legs or spurs. The short legs of the discs left scars on the surface of the dishes, a characteristic that does not seem to have bothered the customers.

It is not known when the Sukothai kilns actually began operating, although H.O. Beyer has given the wares a thirteenth to fourteenth century base on the dating of stratified habitation sites in the Philippines. However, R.M. Brown [1988] is of the opinion that, the kiln must have began its operations after 1300 A.D. due to the association of the wares found on the Koh Khram sunken ship with Sawankhalok wares. Recent study showed that the technology was transferred from Sawankhalok at the beginning of the thirteenth century or later [Rooney, 1989: 35]. The kilns at first produced home products for the growing domestic and architectural demands of Sukothai City. In the later fourteenth century and perhaps as a direct response to the first Ming emperor's decree against private Chinese trade overseas in 1371, Sukothai wares began to be exported overseas to fill the gap in the market created by a shortage of Chinese wares [see chapter 3]. The scale of activity at the Sukothai kilns, however, probably began to diminish in the latter half of the fifteenth century as warfare took its toll on the

population, and as building activity reduced with the reassertion of Ayudhya as the power centre of the region. Continuing disruption at home and a renewed Chinese presence in the market may have resulted in a gradual withdrawal from international trade. The kilns were most likely closed in the sixteenth century under the duress of the Burmese invasions [Rooney, 1989: 36].

Compared with Sawankhalok ceramics, Sukothai wares were exported on a much smaller scale. In the cargo of the sunken ship which was recovered from the Gulf of Siam off the island of Koh Khran, only 10.9% of the Thai ceramics proved to be Sukothai. In the areas where Thai ceramics were imported, however, 10% of Sukothai wares is the highest ever recorded [Mc Bain, 1979: 80]. During my recent field work in Brunei, I managed to collect only a small number of such wares compared with Sawankhalok or Chinese ceramics. At Kota Batu, a total of 24 pieces (0.4%) were found which consisted of 20 bowls, and 4 dishes. Common design motifs are fish, floral and line scrolls. All of them have spur marks at their central bases [See plates 39]. They are all dated between the fifteenth and sixteenth centuries A.D. No Sukothai ceramics were recovered at the Pulau Chermin and Terusan Kupang sites. The main reason for this is perhaps that both sites are either too early or too late to have the Sukothai wares [see below for further discussion].

6.3.2 Sawankhalok or Si Satchanalai wares

It is interesting to note that of all the Thai ceramics, the Sawankhalok wares (also known as Si Satchanalai wares) from the Sawankhalok kilns have been found in large quantities throughout Southeast Asia, including Brunei. There is considerable evidence to support the view that the wares were made for the export trade.

Sawankhalok, which means 'The Place of Heaven', is the name of the city which lay a few kilometers to the south of the kilns. Ironically, however, this name was only given to the city after Sukothai was absorbed by the kingdom of Ayuthaya. Until then it was known as Si Satchanalai [Mc Bain, 1979: 81]. The kiln centres were located along the

west bank of the Yom River, at the villages presently known as Ban Pa Yang, Tukatha and Ban Ko Noi, about sixty kilometers northwest of the town of Sukothai [fig. 17 & 19]. Of these three groups of kilns, the Ban Ko Noi kilns were among the largest, with over 200 kilns identified by the end of 1985 and, a further 600 have been estimated [Guy, 1989: 28]. Roughly half of these are bank or slab kilns, the reminder being of the above-ground cross-draft type. These latter kilns produced the underglaze iron-decorated wares and green-wares ('celadons') which became the hallmark of Thai ceramics. I will discuss these types of ceramics later on in this chapter.

Until now the exact dates of the Sawankhalok wares has never been conclusively determined. Traditionally, the kilns are thought to have begun production somewhat later than those of Sukothai, say around the late fourteenth or early fifteenth centuries. Roxanna Brown [1988: 61], however, believed that they were contemporary with the kingdom of Sukothai, since the products of both centres were incorporated into the architecture of both Sukothai and Si Satchanalai. Both wares were also found as cargo on the same sunken ship off the coast of Koh Khran Island in the Gulf of Thailand [see above]. On this basis, Brown believed that the two kiln centres were contemporaneous at least for a time. But the lower percentage of Sukothai wares as compared to Sawankhalok wares found abroad suggests that the Sukothai kilns must have operated over a shorter period of time than those at Sawankhalok. Furthermore, beside having fewer kilns, Sukothai kilns also produced a very homogeneous group of ceramics showing little change; and the shard heaps are simply not as deep nor as extensive as those at Sawankhalok.

Recent studies conducted by the Thai Ceramics Archaeological Project (TCAP) at Sawankhalok or Si Satchanalai between 1980 and 1987, however, provide the latest information on origins and dating. The undertaking is a joint effort by the Department of the Fine Arts of Thailand, the Art Gallery of South Australia, and the University of Adelaide. They proposed that the production of glazed ceramics began at Sawankhalok in the tenth century and continued, without interruption, into the sixteenth century; that

the technology developed indigenously; and that it was transferred to Sukothai at the beginning of the thirteenth century, or later [Rooney, 1989: 35; see also 6.3.1 above].

In the late fourteenth or early fifteenth centuries, Sawankhalok wares were in great demand. Their reputation became known to traders of Ayuthaya, who developed markets for them all over Southeast Asia and as far away as Japan, where they were known as *Sonkoroku-yak* [Maveety, 1980-81]. The production continued until the sixteenth century, even during the severed wars between Chiengmai and Ayuthaya in the middle of the fifteenth century. It was only after the devastating raid on the Sawankhalok or Si Satchanalai area by the army of Chiengmai around 1512 that production was brought to an end. An early European visitor observed that two of the kilns on the site had been abandoned with the wares left in stacks which may indicate a sudden end to the site [ibid].

Compared with Sukothai wares, Sawankhalok wares were more carefully potted and finished. The wares were fired at a high-temperature, above 1,200 degree Celsius and achieved a stoneware stage. The body was thick and the fabric was very fine. They were made in a much greater variety of shapes and glazes than the Sukothai wares, including bowls, dishes, covered boxes, bottles, *kendi*, jarlets, vases, water droppers, as well as miniature figures of people and animals, and large figures of mythical demons. The ceramics can be divided into five categories as shown in table 17.

Table 17: Types of Sawankhalok wares

Chaliang wares, with a dark greyish body and brown glazed.
Incised biscuited wares.
Opaque-white glaze over white body.
Turquoise blue to yellowish green celadon over incised decoration (Greenwares).
Black or brown design under clear glaze (Underglaze-iron)

The paste forming the bodies of Sawankhalok wares shows a wide variation in texture, colour and chemical composition. Since the clay was of a finer-grain, it did not

require the body to be slipped with a lighter colour before the underglaze decoration was painted on. Foot rings are always nicely carved, usually squarely on the celadons and with the interior side beveled on the wares. Many of the wares, like the Sukothai ceramics, had unglazed bases. Most of the ceramics have a black circular mark on the base as a result of having been fired on tubular pontils or kiln supports [see plates 40 & 41]. A small natural iron content in the paste caused unglazed areas of the vessel to flash pink or brown after firing. The space within the pontil mark, however, sometimes remains grey [Mc Bain, 1979: 83].

Of the five categories of Sawankhalok wares mentioned earlier, only two types were the principal products of the Sawankhalok kilns, the greenwares or the 'celadons' and the underglaze-iron wares. Both wares are common throughout Southeast Asia, indicating their popularity in the foreign market. The other three categories were not as popular as the greenwares and the underglazed iron wares and were probably manufactured mainly for the home market. Some of these wares, however, found their way to the Insular Southeast Asia, and have been discovered in Indonesia, the Philippines, Peninsular Malaysia and Brunei. I will discuss this in the chapter below.

The greenwares or celadons with their great range of shapes were the most popular among the Sawankhalok wares. The wares were greatly influenced by Chinese potters who were believed to come from the Lung-Chuan kilns in the Zhejiang Province of China. Most of the wares have a translucent to transparent olive - or sea-green-glaze with a fine crackle. The majority of the Sawankhalok shards collected at Kota Batu are of this type. I have collected a total of 137 pieces or 70.3% out of 195 pieces of Sawankhalok ceramics - 2.6% of the whole ceramic collection. At Pulau Chermin, only three greenwares were found, and none at Terusan Kupang. At Kota Batu, the pieces found were bowls (80 pieces), dishes (34 pieces) and 23 other pieces comprised of jars, jarlets and kendis. They were mostly heavily potted and with simple incised linear and combed designs, classic scroll bands, lotus petals and floral designs [see plates 40, 41, & 42; Illustrations 11 & 12].

Another common Sawankhalok ware to be produced had a black or brown design under clear glaze or underglaze-iron. Large quantities have been discovered in many parts of Southeast Asia, including Brunei. It has been suggested that they were regarded as the poor man's 'Blue-and-White' [Mc Bain, 1979: 85]. Unlike Sawankhalok celadons, plates and bowls are relatively rare among these types of ware, the major products being covered boxes with various shapes, and ewers or *kendis*. The iron pigment used was similar to the Sukothai wares, although at Sawankhalok it was almost always applied direct to the biscuit. In most cases the quality of the painting and the potting was higher than the Sukothai product. The design themes were usually vegetal or linear [see plates 43, 44 & 45; illustration 13 & 14]. I have recovered a total of 47 pieces (24.1% out of 195 pieces) of Sawankhalok wares - 0.9% of the whole Kota Batu ceramic collection [see chapter 4]. This type has not been found at Terusan Kupang or Pulau Chermin.

Other less popular Sawankhalok wares include *chaliang* wares, incised biscuited wares and white glaze wares. Few of these wares found their way into the foreign markets, especially *chaliang* wares and incised biscuited wares. A number of *chaliang* or brown glazed wares have been discovered in Brunei, in particular at Kota Batu, Pulau Chermin and at the Terusan Kupang sites. Most of these have been large and heavy jars. Their glaze varies from dark chocolate brown to caramel. It tends to flow unevenly over the vessel, leaving some areas thinly covered and forming 'tear-drops' lower down. It usually ends in a wavy line well clear of the base, revealing a dark red-brown biscuit. The unglazed base nearly always displays a pontil mark [Mc Bain, 1979:83]. In my classification of ceramic shards in chapter 4, these come under the stoneware types in the category of Black-and Brown-glazed wares [see also chapter 5].

A few Sawankhalok incised biscuit wares were discovered in Brunei. The term describes a group of vessels produced with decoration incised on the biscuit and painted with brown slip, sometimes combined with white glaze. A very limited range of shapes appears to have been produced. Some ewers and jarlets were made, but the medium

seems to have been principally reserved for the decoration of circular boxes (cover bowls, cover boxes), figurines and ceramic statuary. I encountered some of these wares during my recent field trip to Brunei, a total of 11 pieces (5.6% out of 195 Sawankhalok wares) or 0.2% of the total ceramic shards found at Kota Batu. [see plates 46; Illustrations 15 & 16].

In comparison Sukothai wares, a large number of Sawankhalok ceramics were found in Southeast Asia, including Brunei. This indicates that they were manufactured especially for export. The rise of Sawankhalok ceramics also coincide with the political turmoil in China after the Ming ban in the late fourteenth century which created ceramic shortages in the overseas market. This led to the Sawankhalok kilns supplying good quality wares for the international markets [see introduction of this chapter]. The growth of Ayuthaya as one of Thailand's busiest ports during that time also enabled the convenient dispersal of Sawankhalok ceramics to foreign markets. Prior to this, Thai ceramics would probably have been taken overland, by elephant, to the port of Martaban in Burma (Myanmar), a part of the Sukothai empire. The importance of Ayuthaya in the dissemination of the wares must have been enormous. It has been estimated that there are at least one hundred and fifty shipwrecks loaded with ceramics sunk just off the coast of Thailand [Mc Bain, 1979: 93].

My study shows that Kota Batu received the highest amount of Sawankhalok ceramics, a small percentage went to Pulau Chermin and none were found at Terusan Kupang. This statistic fits well to the dating of the three sites as discussed in chapter 4, and at the same time corresponds to the dating of the Sawankhalok kilns. Kota Batu reached its height in the fifteenth century and had its Golden Age in the sixteenth century. The Sawankhalok kilns were began their production in the tenth century, with its peak period in the fifteenth to early sixteenth centuries A.D. No Sawankhalok ceramics were found at Terusan Kupang because the kilns were too early for the site, which was dated from the tenth to the thirteenth centuries. Even though the Sawankhalok kilns began their production in the tenth century, they only began exporting towards the

end of the fourteenth century. By the time Sawankhalok wares entered their way into the foreign markets, Terusan Kupang was already declining and was replaced by Kota Batu as Brunei's new capital [see chapter 4].

How these wares reached Brunei is not yet known and requires further archaeological investigation. However, Matussin Omar [1978: 60] believed that they were brought by the Chinese traders, while trade with Thailand was only by indirect means. I have assumed that the wares were brought by various merchant communities in particular the Chinese, who engaged in trade activities between Brunei and Thailand. Meanwhile, the role of the local as well as Thai merchants in trade activities also cannot be ruled out. An account by a Portuguese named Goncalo Pereira in 1530 A.D. mentioned that Borneo (Brunei) was among one of the chief ports where many rich merchants lived, who traded with Melaka, Siam (Thailand), China and other parts [Nicholl, 1990: 28].

The Thai merchants were without any doubt among the most experienced merchants as well as the most capable sailors in Southeast Asia. This conjecture can be supported by the wide distribution of Sawankhalok wares from the fifteenth to sixteenth centuries found throughout the Southeast Asian regions. The Thai involvement in Southeast Asia was accounted for by the Chinese their incursions into Malayu-Jambi (Srivijaya territories) and the Southern Malay Peninsula [Coedes, 1968: 204-7]. Similarly, when the Spaniards arrived in Cebu (part of the Philippines) in 1521, they witnessed Siamese ships trading in gold and slaves and got the impression that this was a regular pattern before Spanish arrival in the Philippines [Lim, 1987: 40]. Trade in ceramics was not mentioned in the report, but perhaps it did not attract much Spanish interest at that time. However, the wide distribution of Sawankhalok ceramics in the Philippines may indicate the importance of such trade during those time. The Thai merchants may have come directly to Brunei as the Philippines and Brunei were very close to each other. Inter-island trade and contacts between Brunei and the Philippine islands began prior to the establishment of the Islamic Sultanates in the fourteenth century. Among evidence of

these contacts are the similarities in their earthenware traditions [Lim, 1987: 23], which I will deal with in chapter 7.

6.4 The Vietnamese ceramics

Vietnam has spent much of its past under China's influence [see table 19]. The Chinese captured the northern Tonkin region of Vietnam as far south as Thanh-hoa in 111 B.C. and it became an extension of their southern provinces until 979 A.D. in the Sung Dynasty. The Chinese administration named the region 'Annam', which meant 'Pacified South' [Guy, 1986 a: 104]. In 1407 China once again reestablished its rule over Vietnam, as a result of Yung-lo's (1403-1424) expansionist policy. In 1428 the country regained a form of independence, but the name "Annam" remained and was retained until the arrival of the French in the nineteenth century [Macintosh, 1994: 158]. Independence gave the Vietnamese their national identity and pride, but at the same they time retained most of the Chinese influences on their customs, language, architecture, and on other aspect of the arts until the present day.

The tenth century marked the revival of Vietnam under the Ly clan which became the first great national dynasty under which Vietnamese cultural values were strengthened [Guy, 1989: 44]. Hanoi became the capital city of the newly independent kingdom in 1010. The period also saw the renaissance of Vietnamese glazed ceramics, and a remarkable range of distinctive wares were produced. Coincidentally, the region possessed an abundant supply of *kaolin* or china clay, a material substance essential in the manufacturing of porcelain. It was, therefore, not surprising to see the emergence of a number of kiln centres around or in the vicinity of Hanoi, that supplied wares not only for the court, but also for general domestic consumption and export. The oldest of these kilns is at Huong-canh, where many wares were produced for the domestic market. Two other important kiln centres were Thanh-hoa, which started production in 1465 and Bat-trang, which began production in the first third of the sixteenth century respectively [fig. 16 & 19]. For the last decade or so, important kiln centres have been recovered in the

province of Hai Hung. So far fourteen ceramic kiln centres have been identified. Two of these centres are still in operation. The kilns date as far back as the Tran Dynasty (1225-1400) up to the eighteenth century [Hoanh, 1993: 10-11; Aoyagi, Momoki, Morimoto & Ogawa, 1992: 19].

Vietnamese ceramics has a long standing history. The earliest ceramics can be traced to the early centuries A.D. and still remain to the present day as a vigorous industry [Guy, 1989: 42]. This study will briefly discuss the background history of Vietnamese ceramics, with special emphasis on period from the thirteenth to the sixteenth centuries. This is the period when Vietnamese wares began to be exported into foreign countries in the period of the Ly Dynasty (1009-1225) and the Tran Dynasty (1225-1400) [see table 18 & 20].

Table 18: The Chronology of Vietnamese ceramics

PERIOD	STYLES AND CHARACTERISTIC FEATURES
LATER HAN PERIOD - 1st - 3rd Centuries	White-bodied wares with cream-white to slightly greenish glazes. Chinese-inspired shapes.
INTERMEDIARY PERIOD - 4th-10th Centuries	Miscellaneous white to greyish-bodied wares with cream, brown, and watery green glazes.
LY DYNASTY - 1009-1225	Unglazed blackish-grey-bodied; white to greyish-bodied wares of iron brown glaze, pale greenish-ochre, white, black and brown monochromes. Common shapes, covered urns.
EARLY EXPORT ERA, Including TRAN DYNASTIES, 1225-1400, 13th-14th Centuries	Whitish and greyish bodied wares. Shapes include beakers, bowls, jarlets, dishes, covered boxes, ewers. Glazes: celadon, copper green, brown, black, and white monochrome, underglaze iron black.
MIDDLE EXPORT ERA - 15th-16th Centuries	Whitish and greyish-white bodied wares decorated in underglaze blue, sometimes with overglaze red, green, or yellow enamels.
LATE EXPORT ERA - 17th-18th Centuries	Whitish body and cracled ivory-tinted glaze, decorated in medium to dark underglaze blue, and polychrome enamel. Shapes including bowls, bottles, jars, jarlets and dishes.

Vietnamese ceramics are also known as 'Annamese', 'Sino-Annames' and 'Tongkinese' wares. These terms are used by scholars interchangeable in reference to

Vietnamese ceramics. In order to avoid further confusion on these terminologies, I will simply employ the term Vietnamese ceramics throughout this study.

Vietnamese wares are in many ways as exciting as Chinese ceramics and form a distinct class in their own right. They were first recognised during extensive excavations in Thanh-hoa Province in Vietnam in the 1920's and 1930's. The excavations yielded thousands of objects, mainly made of pottery and bronze. The ceramics showed a wide variety of types, paste, shapes and decorations, and dated from the first to third centuries, and the tenth to thirteenth centuries, the periods which parallel with the late Han and Sung Dynasties of China (100-1279 A.D.) [Brown, R.M., 1988: 13].

Since the 1980's and in particular in the 1990's, there has been an increase in archaeological research in Vietnam. The success of the National annual scientific conference on Archaeology in 1986 stimulated further interest in the study Vietnamese ceramics. Joint research projects with foreign institutions have also been organized, involving archaeologists from the United States, Australia and Japan. As a result, more kiln sites have been identified and a better chronological framework of the historical developments of Vietnamese ceramics now exists. The research has shown that Vietnamese ceramics evolved, not only from the Han to Sung Dynasties as been shown by the Thanh-hoa excavations but, into the late seventeenth or eighteenth centuries.

Like the Chinese wares, Vietnamese ceramics evolved in stages, which reflected the shifting requirements of Vietnamese society over time. The earliest glazed wares were produced in response to the needs of sinicized elements of Vietnamese society which appeared during the Han occupation in the first and second centuries A.D. The ceramics excavated were therefore very much the same as the Han styles, which dominated the funerary goods. The excavations that were conducted by O.R. Janse between 1934 and 1939, revealed considerable quantities of glazed and unglazed vessels of the type associated with the funerary practises of Han China. However, the wares are apparently of local manufacture and distinguishable from the Chinese wares, which are usually

reddish-brown to buff. These wares are the earliest glazed white-bodied ones so far known in the Far East [Brown, R.M., 1988: 18].

During the years between the third and the tenth centuries (The Intermediary period), the importance of Annam as a commercial centre declined, in favour of Guangzhou to the north and Champa to the south. This affected the ceramic industry which seemed to be flourishing during the Han period. Janse excavations have unearthed only two tombs which he attributed to the T'ang period of the seventh to tenth centuries [ibid: 19]. The wares recovered composed of simple cups with a whitish body and cream-greenish glaze of possible local origin, a jar, and an olive glazed bowl. The design motifs were characterized by incised and painted decoration with a brown design on a white body [Guy, 1989: 45].

The decline in the ceramic industries were, however, compensated for by a number of major developments in Vietnam, which required large quantities of building materials, such as decorated tiles. Extensive building programmes were initiated by the rulers to service an increasingly influential Buddhist monastic community [ibid: 44]. The construction of temples, monasteries, and pagodas generated a demand for tiles and glazed bricks, which contributed to the growth of glazed tile industries [Guy, 1986 a: 104]. Excavations in Hanoi early this century revealed bricks decorated with carved patterns, principally circles and rhombuses, and tiles, mostly cylindrical roof tiles carved with floral motifs, dragons, and phoenixes [Guy, 1989: 45].

The great period in Vietnamese ceramic history occurs in the tenth century, alongside the beginning of the first great Vietnamese Dynasty, the Ly (1009-1225 A.D.). This period was marked by great national awareness and continued independence following the successful rebellion against Chinese rule in the tenth century. From this period onwards, Vietnamese ceramic history becomes clearer and has been regarded by Vietnamese historians as an age of artistic renaissance. This period was also marked by the reestablishment of maritime trade. According to Vietnamese sources and quoted by

historian Le Thanh Khoi, Vietnam was seriously engaged in maritime trade during the reign of Emperor Ly Anh-tong (1137-75) [Brown, R.M., 1988: 19]. Merchants as far as Java, Lo-lac (perhaps a kingdom on the Malay Peninsula) and Ziem-la (probably Siam), Fujian and southern China came to trade at Vietnam's trading point in the Van Don Islands near what is now Haiphong harbour. However, there is no evidence to say ceramics were exported at this time. None of the wares excavated by O. Janse, mentioned earlier, have exact counterparts excavated abroad [ibid: 19].

The eleventh and twelfth centuries of Ly Dynasty, ceramics are characterized by a variety of shapes, such as dishes and bowls, along with covered food and beverage containers. The shapes, many of them uniquely Vietnamese, include covered urns, covered jars, basins, wine pots, beakers, dishes and bowls [ibid: 20]. Glazed types include brown inlay, crackled cream, brown, white, celadons, and, by the early thirteenth century, underglaze black decorated wares [ibid]. Among the interesting forms and shapes are some white wares with modelled lotus petal decoration, which reflect the strength of Buddhist practise in the Ly court [Guy, 1989: 46]. Another is the lime container used to store the ground shell lime used in the preparation of betel. This type of vessel was made in response to local need [ibid: 47].

The late thirteenth or early fourteenth centuries (the Tran Dynasty 1225-1400 A.D) mark a watershed in the development of Vietnamese ceramics, the period of transition from purely domestic production to participation in the international ceramic trade. It was widely believed that Vietnamese involvement in international trade began when an influx of commercially minded Chinese refugees from China settled in Vietnam after the collapse of the Southern Sung Dynasty in the late thirteenth century. These Chinese refugees helped to ply the local wares abroad [Brown, R.M., 1988: 23; Guy, 1986 a: 47]. The early trade, however, was only on a small scale, but shows signs of expansion in the late fourteenth century, probably as a result of the first Ming Emperor Hung-wu's (1368-1398 A.D.) attempted ban on Chinese overseas voyages. Trade reached its height in the fifteenth and sixteenth centuries, as shown by the wide distributions of Vietnamese

wares at sites scattered through Southeast Asia, Japan, the Middle Eastern countries and to Europe. According to Professor Aoyagi Yoji [1992: 1], wares were discovered in at least thirty-two archaeological sites in the Islands of Southeast Asia. Also large quantities of Vietnamese wares were recovered at wreck sites in the Gulf of Thailand, especially from the Khram, Rang Kwian and Si Chang III Wreck Site, dated between the fourteenth and seventeenth centuries [Charoenwongsa & Prishanchit, 1990: 89].

Like the Thai ceramics, the shortages of Chinese ceramics created after the "Ming ban" in the late fourteenth century resulted in the introduction of Vietnamese wares into the overseas market to fill the gap created by the ceramic shortages [see chapter 3]. This lucrative trade may have influenced the Vietnamese to stay in business, competing with the various ceramic production centres of China, Thailand and Japan. Their involvements in these trade networks played a crucial factor in the development of high standard of Vietnamese ceramics. This development was crucial in order for them to compete with the already established Chinese and Thai ceramics and enabled them to stay in the market for about three hundred years.

The Vietnamese export wares fall into three groups. It is believed that the first group belong to the late thirteenth or fourteenth century. It is comprised of the monochrome wares and in three main colours: brown/black, white and green [Lammers, 1974: 12]. This type is believed to be the earliest in Vietnamese trade wares and was generally represented by jars, beakers, bowls, saucers, cover boxes, vases/bottles, jarlets, dishes, and ewers. The ware is characterized by a fairly smooth, fine greyish-white paste which enables the potter to paint directly onto the body without first applying a slip. The entire surface was then covered in a clear, translucent glaze, which, due to mineral impurities, tended to fire a straw colour or to acquire a greenish tinge. Fine crackling of the glaze was common [Guy, 1986 a: 46; Brown, R.M., 1988: 23]. The decorations were sketchy and calligraphic, such as floral spray and classic scrolls. Beakers have smooth or incised exterior walls rather than ribbed ones.

The Brown/Black wares resemble some of the Sukothai wares and many of the Vietnamese examples have been wrongly categorised as such. They have a stoneware body, buff paste decorated in underglaze iron black mostly in floral and leaf spray [Lim, 1987: 20]. This type of ware was among the most popular, mass-produced in Vietnam and was produced into the sixteenth century [Brown, M.R, 1988: 24]. The wares include bowls with an everted rim and brown exterior. The new shape of the fourteenth century included small cup-like bowls, dishes in various sizes, oval-shaped-covered boxes, flat-based jarlets, and occasionally, small gourd-shaped ewers and bottles. Most pieces had carved foot rings, sometimes straight and tall, others very wide and shallow but very often short and with an inside bevel. The underglazed black designs are relatively limited, the most ubiquitous being a feathery flower blossom, lotus panels and bands of a summary classic scroll [ibid: 24]. The earliest dated example of such a ware found abroad was a fragment of a bowl with a chrysanthemum spray medallion on the interior and an iron chocolate coloured wash on the base excavated at Dazaifu, Kyushu, southern Japan. It was dated late fourteenth century based on recorded account of trade link between the Ryukus and Vietnam from 1363 [Guy, 1981: 47; 1989: 50; Morimoto, 1993: 47].

The introduction of a variety of colours and shapes reflected a desire of the local potters to emulate Chinese wares in an attempt to capture a share of the export market for high-fired glazed ceramics. This can be seen on some of the Vietnamese underglaze decoration in iron-brown, which reflected Chinese prototypes of iron-brown and copper-green of the ninth century Jizhou ware of Jiangxi and in the Cizhou tradition of North China [Guy, 1986 a: 105]. A prototype of this ware was also produced at the Guangzhou and Quanzhou kiln centres in the Fujian and Guangdong Provinces [ibid: 46]. The idea may have spread from these regions, via the ports of Tonkin and Champa. Both ports had long been established on the international maritime route which linked China with the *Nanhai* and the West [ibid: 46].

The second category of Vietnamese export ceramics is the Blue-and-White wares, sometimes seen by the mid-fifteenth century[3]. Other type of wares, but not as popular as Blue-and-White are overglazed red, green and yellow enamels [Brown, R.M., 1988: 24]. Generally speaking, this period is considered to be the most important event in the Vietnamese ceramics history by the majority of ceramic historians due to the introduction of Blue-and-White techniques, a prototype of Chinese Blue-and-White types. In this period a high level of production and export previously unknown in Vietnamese ceramic history took place. It is believed that the first Vietnamese Blue-and-White first appeared in the period when Vietnam was ruled by the Chinese Ming Dynasty (1413-27), corresponding to the reign of Emperor Yung-lo (1403-1424). According to local legend cobalt was first introduced to Bat-trang (Hanoi) by a potter merchant from the country Ming (China). It was sold to a local potter, who later used it in his kiln. The new substance soon became very popular and eventually transformed the local kilns which began to produce of Blue-and-White ceramics [Omori, 1983: 22].

Historical evidence shows that the techniques may have been transferred to the local potters after the invasion of Ming China in 1407 and its occupation by the Chinese until 1428 [Brown, R.M., 1988: 25]. As a result, large number of Chinese began to settle in Vietnam. Among these immigrants were Chinese potters [Macintosh, 1994: 159]. This contributed to the diffusion of Chinese influence in the local ceramic traditions. This influence can be seen in the Vietnamese Blue-and-White which shows Chinese decorative schemes of the fourteenth century, such as floral motifs, especially the peony, lotus and chrysanthemum [Guy, 1986 a: 106-7]. Other famous designs include cloud collars, zoomorphic motifs, and bands of overlapping petals [Brown, R.M., 1988: 25]. The time-lag between the Chinese and Vietnamese Blue-and-White wares were anything

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3 The introduction of cobalt blue in the Vietnamese ceramics began as early as the second half of the fourteenth century. However, the style of decorations were still dominated by the Vietnamese iron black glazed techniques in a purely linear style [Macintosh, 1994 : 159].

up to a hundred years between the first appearance of the motifs on Chinese Blue-and-White and their later popularity in Vietnam [Macintosh, 1994: 159].

In the late fifteenth and sixteenth centuries, Vietnamese ceramic production reached its peak. This is shown by the existence of a large number of Vietnamese Blue-and-White shards found throughout Southeast Asia. They are a variety of shapes, ranging from bowls, plates, dishes, covered boxes, jarlets, jars, vases/bottles, stemmed cups, ewers, *kendi*, figurines, wall tiles, water droppers, and stands [see plates 47 & 48; Illustrations 17-20]. Like the Chinese export Blue-and-White ceramics, they were manufactured in great numbers to cater for every day domestic use and for export elsewhere in Southeast Asia. They were roughly potted, yet sometimes fired to porcellaneous hardness. Compared to the earlier group, the later wares have smudged designs, painted to give a blurred effect. There is a hypothesis which says that cobalt became harder to obtain, while others say that the best cobalt was reserved for wares made for the most fastidious patrons [Omori, 1983: 24; Macintosh, 1994: 162].

This period also saw changes in the forms, shapes and styles of the wares. The Spur marks and unglazed stacking rings of earlier wares practically disappear. Similarly, the very wide, shallow foot rings typical of many fourteenth-century wares were no longer seen, and nearly all former shapes were changed or discarded [Brown, R. M., 1988: 26]. Another characteristic feature of the period was unglazed rim which often appeared almost chalky. The bases of these wares were normally coated with a chocolate[4] or a straw-coloured wash, and when this was not the case they had the colour of putty. The glaze varied from a very light shade of brown in some cases to colourless in others. Sometimes the ware showed signs of crackling and often tended to flake off. This may

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4 The choclate base was first introduced among the late Thanh-hoa wares of the thirteenth century, but becomes common in the fourteenth century. It is a kind of dry paint to avoid sticking of vessels during firing process. It usually applied either to flat-based vessels or those with carved footrings.

be because the paste content was of inferior quality and appeared to be a greyish-white proto-porcelain that was not at all translucent [Macintosh, 1994: 162].

The third and last group of Vietnamese export ceramics occurred in the seventeenth and eighteenth centuries, and mostly consisted of Blue-and-White and some multi-coloured overglazed enamel wares [Brown, M.R, 1988: 24]. The period was marked by the exportation of many Vietnamese ceramics to Japan to satisfy the demands of the practitioners of the tea ceremony. The wares were admired for their unpretentious and often unrefined qualities [Guy, 1989: 57]. This type of ware was known to have been produced at Huong Canh kiln centres. It was an unglazed brown vessel, bears vertical ribbing that gave a corduroy like texture to the plain, cylindrical forms. The Japanese called such vessels *namban,* or "southern barbarian" wares [Cort, 1994: 43-4].

The main Vietnamese kiln centres known to produce these export ceramics was Chu Dua, in the Nam Sach district [see fig. 19]. It was the centre of Vietnamese high fired export ceramics from the fourteenth to the seventeenth centuries A.D. A variety of wares were produced - different types of bowls: small to big bowls, high-footed and tripod bowls, cups, covered boxes, bottles, pots, stem cups, basins, vases and figurines [Hoanh, 1993: 23-7]. There were also different types of glazes including brown, green, white, Blue-and-White, celadon, apple-green, light-yellow and dark glazes. Distinctive Chu Dua wares have been found in collections and sites in Southeast Asia, as far as Turkey and the Middle Eastern countries. A famous piece is in the Topkapi Palace Museum in Istanbul, Turkey, a bottle of Blue-and-White, which bears an inscription on its shoulder which describes the work of a potter from the Nam Sach District in the year 1450 [Cort, 1994: 48].

Another important kiln centres was at Bat Trang, about fifteen kilometres from Hanoi. The kiln produced ceramics for both domestic use and export from the fifteenth century [see fig. 18]. The industry continues to the present day where more than three thousand adults from one thousand households at Bat Trang are active as skilled workers

in the ceramics industry [ibid: 50]. The importance of ceramics to the local communities is reflected in the name "Bat Trang" which means "place for bowls."

In the seventeenth century, the European trading companies increasingly challenged the role of the indigenous traders. In 1640 the Dutch East India company (VOC) office opened at Kachiu (Hanoi) to ensure supplies of porcelain to its headquarters at Batavia (Jakarta), for use in both regional and international trade. This affected the local traders but at the same time stimulated to the growth of Vietnamese ceramics until the late seventeenth century. Furthermore the concurrent disruption to Chinese ceramic production with the gradual collapse of the Ming Dynasty and the struggle of the Manchus to establish their authority in South China had a profound effect on the Vietnamese ceramic industries [Guy, 1986 a: 57].

In the middle of the seventeenth century, Vietnamese ceramics gradually lost their market as Chinese wares resumed their traditional dominance following the revitalization of the Chinese ceramic industry and of overseas trade in the 1680's [ibid: 57]. Moreover, the Japanese were also beginning to export ceramics in the seventeenth century and this created further severe competition to the Vietnamese wares [Aoyagi, 1992: 9]. Internal disorder also created further problems, such as the civil wars between the Le and Mac Dynasties, especially in the Nam Sach region [Hoanh, 1993: 32]. Excavations at Chu Dau kilns in the Hai Hung Province have shown that productions were severely affected in the eighteenth century, seen by the absence of the Nguyen Dynasty (1777-1820) ceramics in contrast to the abundance of high quality early celadons, brown wares, white wares, and Blue-and-White wares and dated between the fourteenth and eighteenth centuries [Aoyagi, Hasebe, Momoki, Morimoto and Ogawa, 1992; Hoanh, 1993]. Similarly, investigations of canals near the VOC stores in eighteenth-century Batavia (old Jakarta) have revealed shards of Chinese, Japanese, and European ceramics, but to date no Vietnamese ceramics [Guy, 1986 a: 57]. The evidence thus suggests that Vietnamese ceramics lost their market in Asia as Chinese wares resumed their traditional dominance.

The distribution of Vietnamese wares in Southeast Asia is different from one country to another. The one and only similarity is that the presence of Vietnamese ceramics among the Chinese export wares is very small. Only an estimated 2% or 4% of the fifteenth and sixteenth centuries wares excavated in the Philippines are Vietnamese, compared to 20% or 40% of Thai wares during the same period [Brown, R.M, 1988: 23]. In the Indonesian sites of Banten Girang, Banten Lama, Trowalan, Selayar, Worloka, and Bangkulu, less Vietnamese wares were recovered compared to Chinese and European wares; there were, however, fewer Vietnamese wares than Thai and Japanese ceramics [Wibisono, 1993: 142]. A similar pattern can be seen in Brunei, whereby less Vietnamese wares were recovered at Kota Batu, Pulau Chermin, and Terusan Kupang as compared to Chinese and Thai wares. At Kota Batu, some 57 pieces or 1.1% were recovered, compare to one piece at Pulau Chermin and none at Terusan Kupang. This classification, however, applies only to porcelain types, while Vietnamese stonewares are classified under export stonewares, which also includes wares from China and Thailand [see chapter 4]. They only consisted of Blue-and-White types. The reasons for these uneven distributions are the different chronological periods of the three sites as mentioned earlier.

In general, Vietnamese wares are always found in direct association with Chinese and Thai porcelains. Of the three wares, however, Chinese and Thai porcelains always surpassed Vietnamese wares in numbers, either in Brunei or its neighbouring region in Borneo, the Malay Peninsula, the Philippines and certain part of Indonesia.This pattern suggests that trade between Vietnam and these regions were not as impressive as the trade with China or with Thailand. Trade activities were probably by indirect means, perhaps with the involvement of Chinese, Thai s, or local merchants. The Dutch accounts at the beginning of the seventeenth century mentioned the role of Javanese merchants in the fourteenth century at the Vietnamese ports in transporting Vietnamese ceramics, and then distributed them by secondary trading. Similarly, Chinese merchants undertook much of this trade in Southeast Asia in later centuries and Muslim traders were responsible for their presence in the Middle East [Guy, 1986 a: 56].

6.5 Summary

This chapter has reviewed the role of Southeast Asian ceramics in Southeast Asian culture. Until recently, not much was known about the Southeast Asian ceramic traditions due to the emphasis that was placed on the monumental arts, notably architecture and sculpture and on the Chinese ceramics which were technically much superior to the local wares. It is only in the last twenty years or so that the study of Southeast Asian ceramics has become more popular and provides a better understanding of the wares. The success of Southeast Asian ceramics was not immediate. It progressed in stages, perhaps from the local earthenware traditions about 6,000 years ago. The early stage is considered an important foundation on which future ceramics were based. However, this foundation alone was not enough for the region's ceramic traditions to become as important as the Chinese ceramics. To achieve this, another source of inspiration and motivation was required to break them away from their earthenware traditions [see chapter 7]. Chinese influence became more apparent in Southeast Asia, first in Vietnam during the early A.D., followed by the other neighbouring regions from the late tenth century onwards [see chapter 5]. This motivated some of the local potters to follow the Chinese example, not only in the terms of their technicality but also in craftsmanship. Thus new ceramic productions centre began to emerge in Mainland Southeast Asia, in particular in Kampuchea, Thailand and Vietnam. The final stage came when the political changes occurred in China when the Ming government imposed restrictions on private trade networks and created Chinese ceramic shortages in the overseas market. This motivated these newly transformed kilns to engage in the region's trade activities, first to fill in the gap created by the shortages, but later to participate fully as a competitor in the market. This also influenced these kiln centres to introduce more ceramics not only based on Chinese popular style, but ceramics which were suited to the southeast Asian taste. This contributed to their success and enabled their survival for at least three hundred years until the mid-seventeenth century A.D.

As evidence from the Southeast Asian and Brunei archaeological finds have shown, products from the Southeast Asian kilns featured prominently among the trade ceramics found [see chapter 3 & 4]. Japan also began to participate in trade activities by exporting large numbers of export ceramics from the mid-seventeenth century onwards [Tagai (trn) Clark, 1984: 87; Aoyagi, 1992: 9]. However, they were mostly marketed to Europe and therefore only small numbers of such wares were found in Southeast Asia, including Brunei. In the eighteenth and nineteenth centuries, European ceramics began to enter the southeast Asian countries and created further competition in the local markets. In the twentieth century, Southeast Asia received all varieties of ceramics and porcelains, either from China, Japan, Korea or Europe, and at the same time local Southeast Asian centres produced also produce their own products for domestic and foreign markets. Meanwhile, China continued to produce cheap export ceramics intended for the Southeast Asian markets. Some European countries also began to export their high quality luxury porcelains, especially for the rich.

These contemporary wares show improved craftsmanship, refined through the discovery of additional materials, improvements in technique, mechanization, and an increased knowledge of clay and glaze chemistry. However, whatever their qualities and origins, the basic principles of pottery and the prime stages of production - selecting the raw materials, shaping and firing the form - remain essentially the same today as in ancient times. Above all, these ancient traditions contribute to their very existence, from where they learn the basic skills upon which to build. It was these ancient traditions that I will examine in the next chapter.

Table 19: The Chronological table of Thailand's period

AD 450 - earliest Sanskrit inscription
c. 600 - Khmer inscriptions in eastern provinces
c. 800 - Expansion of Srivijaya into Menam Plain
1022-5 - Khmer expansion into Sukothai region
1150 - Lopburi rebels against Khmer rule
1220-50 - Founding of Kingdom of Sukothai
1350 - Founding of Kingdom of Ayudhya
1378 - Ayudhya impose lordship on Sukothai
1438 - Sukothai annexed by Ayudhya
1463-91 - Phitsanulok capital of Kingdom of Ayudhya
1569 - Burmese conquest of Ayudhya

Table 20: The Chronological table of Vietnam period

500 BC-AD 250 - Dong-son culture
111 BC-AD 979 - Chinese (Han) occupation of Vietnam
100-537 - Fu-nan
c.375 - Sanskrit inscription from Champa
787 - Javanese sea raids against Champa
939 - Independence of Vietnam
1009-1225 - Ly Dynasty
1225-1400 - Tran Dynasty
1283-5 - Mongol invasion of Champa
1400 - Founding of capital of Thanh-hoa
1407-27 - Chinese (Ming) occupation
1428-1788 - Le-Mac Dynasties

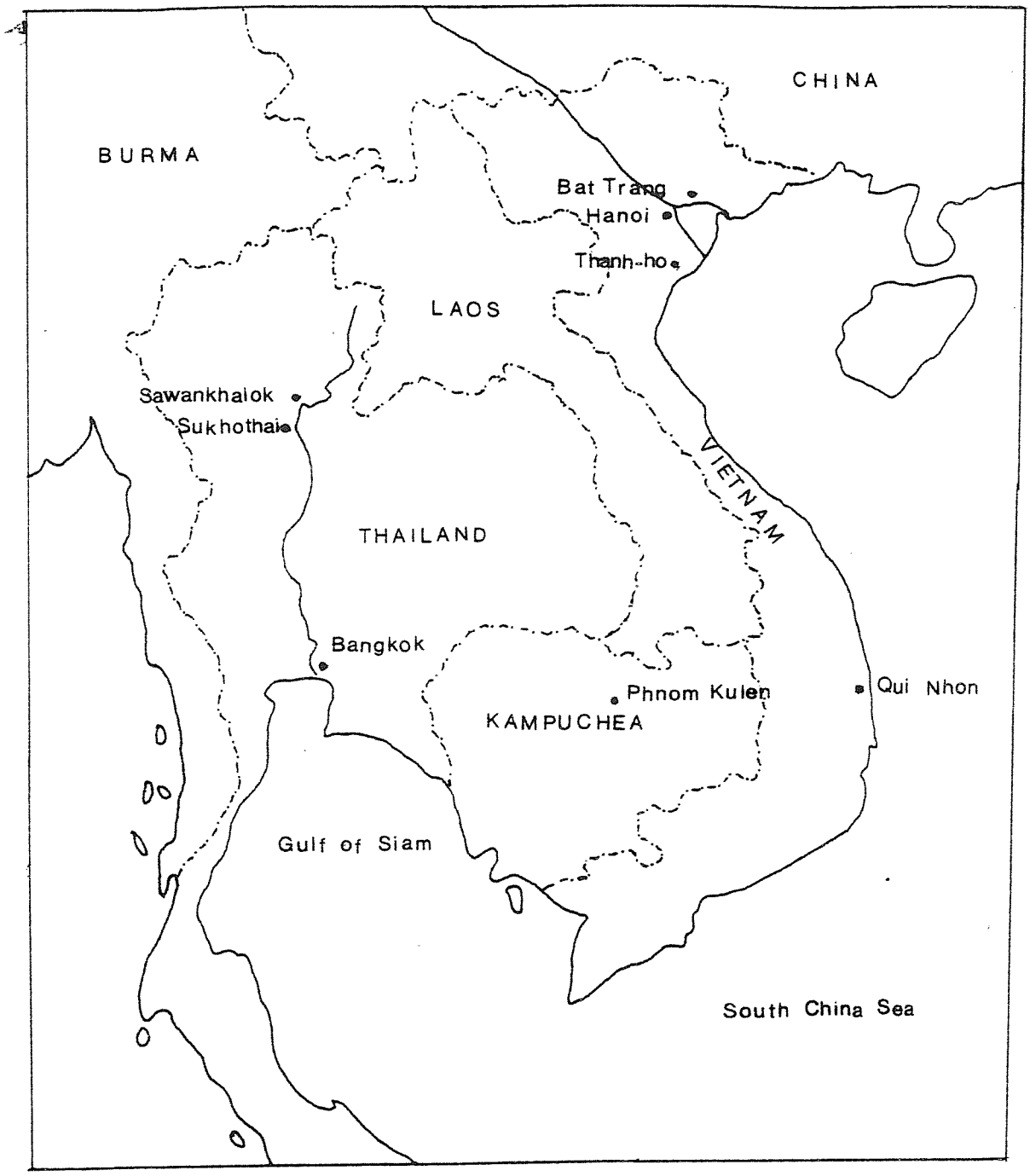

Figure 16: Map of Mainland Southeast Asia showing the location of kiln sites.

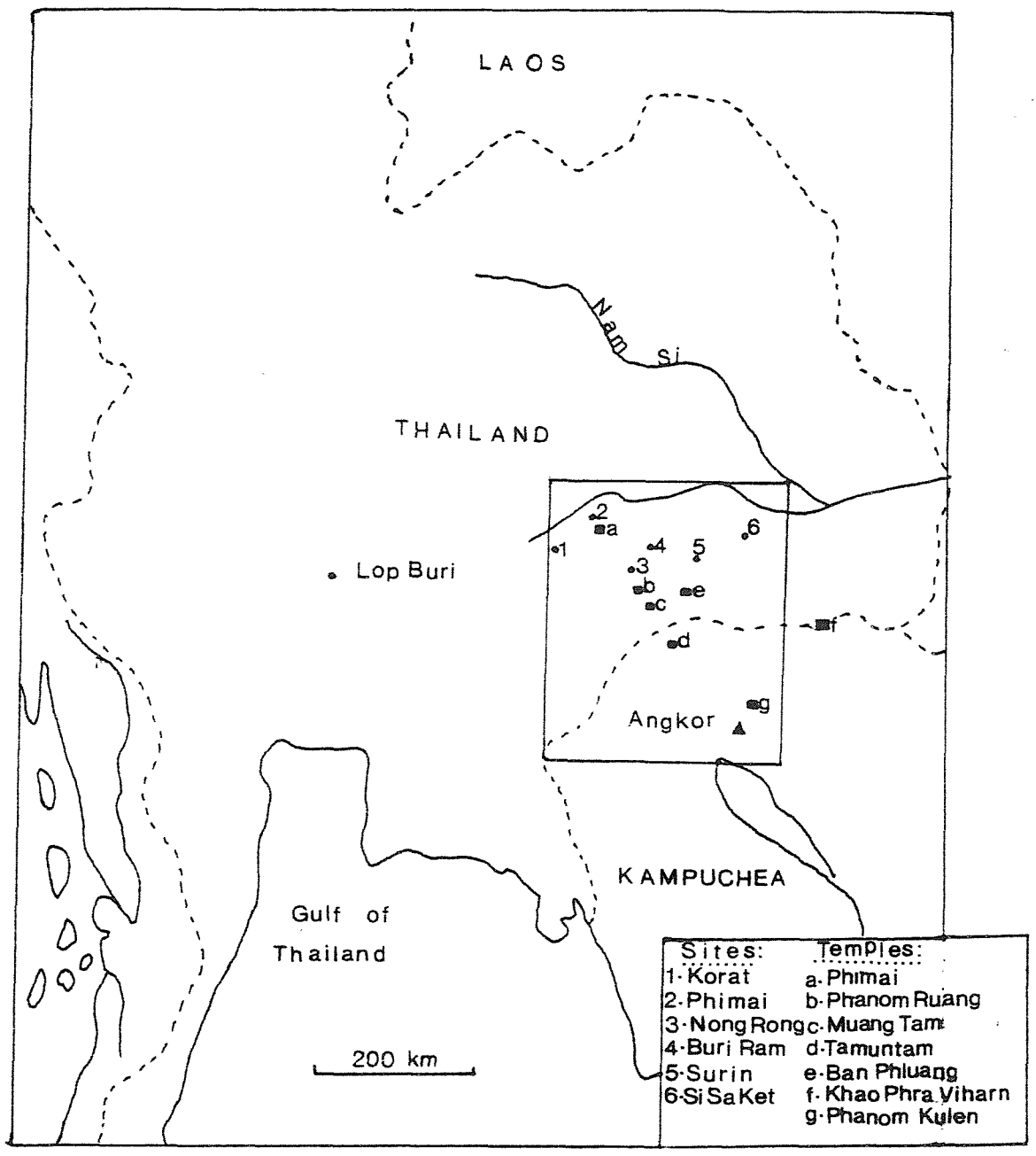

Figure 17: (Inset map) Khmer Empire: Sites in Thailand and temples in Kampuchea and Thailand relevant to Khmer ceramics.

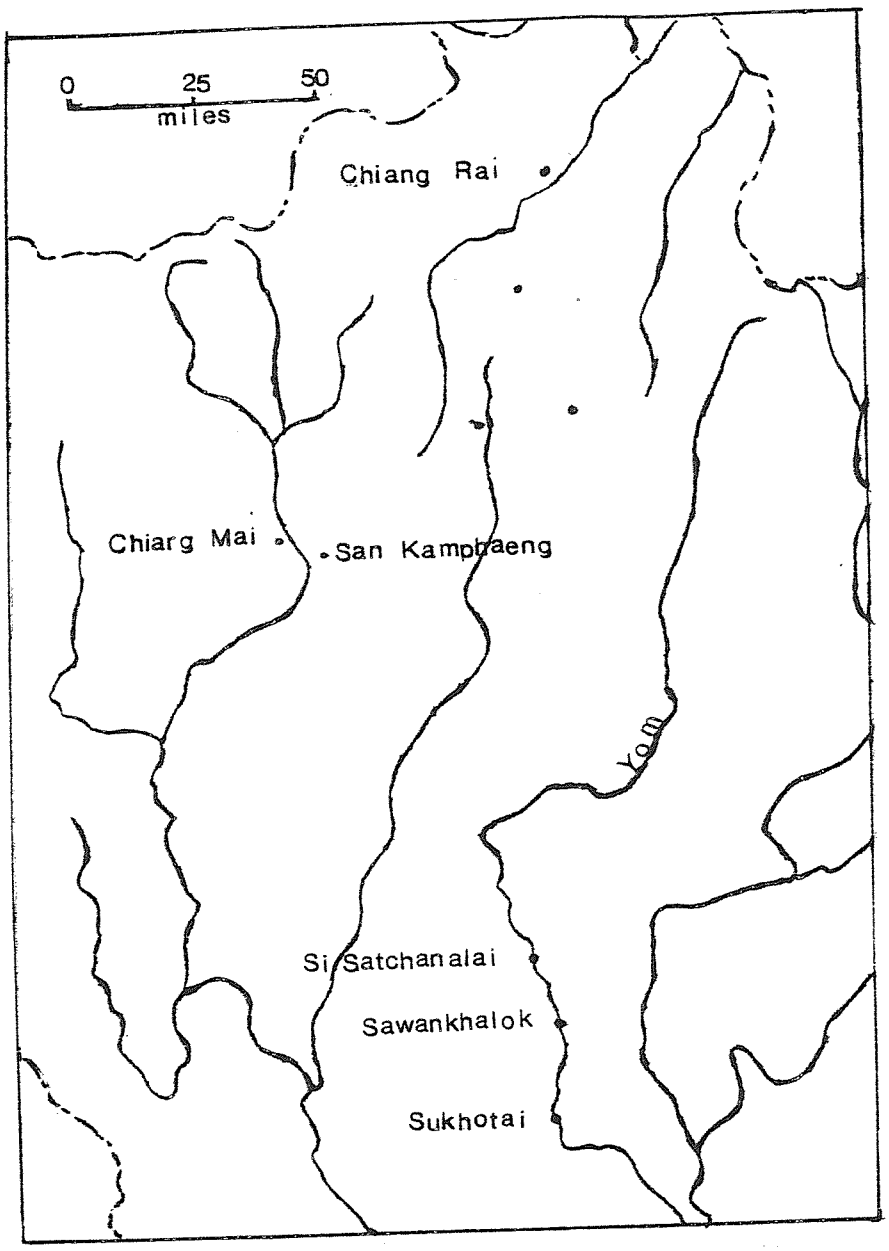

Figure 18: Map of major kiln sites in Thailand.

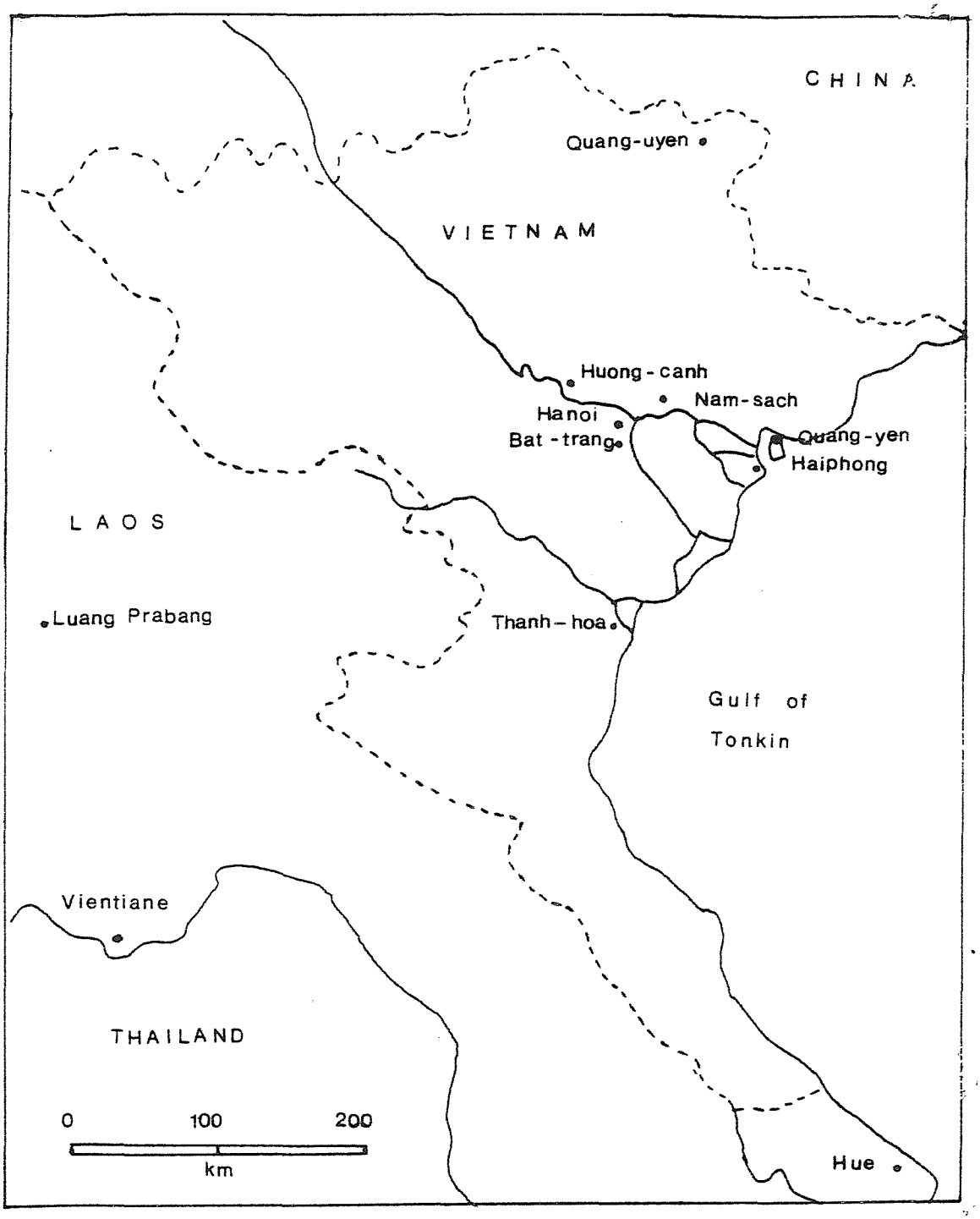

Figure 19: Map of Northern Vietnam and location of main kiln sites.

CHAPTER 7

PREHISTORIC AND PROTOHISTORIC EARTHENWARE TRADITIONS IN BORNEO AND ITS RELATION TO THE TERUSAN KUPANG, KOTA BATU AND PULAU CHERMIN EARTHENWARE COLLECTIONS

7.1 Introduction

This study is concentrating only on the northern and southwestern part of Borneo of Brunei, Sabah and Sarawak [see fig. 1]. As has been discussed previously, these territories shared many common characteristic features, both geographically and archaeologically [see chapter 4]. Like the regions which produced Oriental ceramics, these regions also sustained large quantities of earthenware remains, which showed many common distinctive features, in terms of style, form and design. However, unlike the former, few studies have been focussed specifically on earthenware[1], although they were among the largest single artifacts to be found. They have been neglected in archaeological reported finds, analyses and published references. Where they have been reported, they were usually written in brief and in lacked analytical depth, they lack detail and have been non-scientific. This simplicity of approach is primarily due to lack of interest towards this subject, preference is shown towards the study of large and interesting artifacts, such as Oriental ceramics, bronze, stone and wooden objects. It is because of this lack of attention and study, that in this chapter I intend to study the earthenware remains in Borneo, with special attention to the three main archaeological sites in Brunei, Terusan Kupang, Kota Batu and Pulau Chermin. The study is based on my collected data which I have gathered during my four months field work at these sites in 1995 [see chapter 4].

Like the neighbouring countries in Southeast Asia, Borneo too is abounding with earthenware potteries. They played a major role in the way of life of the community from the prehistoric times to the present. The earliest evidence of earthenware potteries is from

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1 Among a few prominent local scholars on this subject are Matussin Omar and Ipoi Datan [see chapter 1 & Bibliography].

the Neolithic period from about 4,500 years ago [Bellwood, 1992 b]. This is the period marked by a major change in the human picture of Borneo, changes which allowed humans to produce food rather than simply to gather it from the wild[2]. According to Bellwood, agriculture was brought by new populations of *Austronesian*-speaking agriculturists from the Philippines, who were originally from southern China and Taiwan about 5,000 to 4,000 years ago [ibid: 10]. The *Austronesians* who entered Borneo were thought to come via Sabah of eastern Borneo from the southern Philippines. They brought with them a Neolithic material culture of polished stone adzes, pottery, raised-floor houses and clothing of beaten bark-cloth [ibid: 10]. They also introduced agriculture, including rice, sugar cane, millet and yam and domestication of animals, such as domestic dogs, pigs and chickens.

The introduction of earthenware pottery into the local tradition is considered as a break- through in the history of the local society. In this regard, most scholars agree that the local prehistoric earthenware diffused from the outside world rather than locally invented [for example sees Bellwood above]. Solheim, on the other hand, believed that the Southeast Asian pottery traditions have a common origin, i.e., the so-called *Sa-huynh-Kalanay Pottery Tradition*[3] [1967 & 1981 b]. However, differences between

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2 According to Bellwood [1992 b] the first human settlement in Borneo must have occurred about one million years ago. However, the true archaeological record, in the form of human skeletal remains and stone tools, can be traced back to about 40,000 years. Radiocarbon dated archaeological deposits have been excavated in the enormous West Mouth of the Splendid complex of caves at Niah in Sarawak, where people discarded stone flakes and pebble tools, bone points and spatulae, and the animal bones from their meals.

3 The term is used by Solheim [1959] to relate Southeast Asian earthenware complexes through their technological relationship, their patterns and style of decoration and forms. The *Sa-huynh* originates from Vietnam and the *Kalanay* from the Philippines. The culture developed in the late prehistoric in Vietnam and bears many features akin to those of other pottery complexes in Mainland and Island Southeast Asia, such as the small regular punctuations impressed by combs or roulettes within incised lines, also occurred at the site of Gua Cha in

complexes began to occur, which he believed was due to local evolution from the common background [Solheim, 1959 b: 187]. I agree with this theory, although at the same time I am not totally against the idea of local invention. As far as the Brunei earthenware are concerned, I am of the opinion that the technologies were influenced in both ways. It was perhaps locally invented, with an addition of foreign blends at the same time. My arguments are based on my personal observations of the shards collected in the past and my own collected materials, which showed two distinct earthenware traditions existing in Brunei. The first are technically superior earthenwares; the second, crudely primitive earthenwares. To me, these differences are very interesting and need very special attention. I will concentrate on these differences in this chapter below. However, since this study is only just beginning, more further research is required to provide more archaeological evidence. This study is merely a starting point and foundation for future study.

From their introduction in certain parts of Borneo some 4,500 years ago, earthenware potteries became important utilities in human life, socially, economically and religiously. Socially, earthenware was used for daily needs, as containers for storing and cooking food and liquids. A typical traditional vessel used for these functions were jars and cooking pots. These types of wares are among the commonest vessels to be found in Borneo, including Brunei. Of the two types of vessels, however, cooking pots are considered among the earliest vessels to be manufactured, perhaps since the introduction of agriculture in Southeast Asia some 6,000 years ago. It is the most dominant form of earthenware and common throughout the agrarian Southeast Asia. It is usually

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Peninsular Malaysia [Sieveking, 1954: 75-138; Solheim, 1959 b; 179; Peacock, B.A.V., 1959: 125-134; Ibrahim, 1969: 76-88; Taha, 1985], Samrong Sen in Kampuchea [Solheim, 1959 b: 177-8; Tan, 1984-5: 144], Non Nok Tha in Thailand, Mlu Prei and Laang Spean in Kampuchea, Kalumpung in Indonesia [Solheim, 1959 b: 182-186; 1964: 205-6; Soejono, 1985: 357-360], Niah in Borneo [Solheim, Harrisson, B. & Wall, 1959 c: 167-176] and Tres Reyes nd Batungan in the Philippines [Solheim, 1959 a: 157-165; Tan, 1984-5: 144; Peralta, 1985: 225-236; see fig. 20].

characterised by a medium-sized body and a globular or ovoid form with a deep hollow space and a closed and narrowed mouth. Large quantities of such vessels have been discovered in a number of Borneo sites, such as in the Great Cave at Niah of Sarawak [Solheim, Harrisson, B., and Wall, 1959 c], at Gua Sireh and Lubang Angin of Sarawak [Bellwood and Datan, 1993; Datan, 1993] and at theTingkayu, Baturong and Madai sites of southeastern Sabah [Bellwood, 1988]. It is also found in the protohistoric sites such as Tanjung Kubor in Sarawak, Terusan Kupang, Kota Batu and Pulau Chermin in Brunei. Little technical difference has been observed between these pottery traditions. They were low fired, mostly in plains and some with impressed-paddle decorations. This indicates that the tradition continued to be practised and retained their traditional styles and values [see fig. 20 & 21].

As soon as the Borneo peoples began to develop a much complex and civilized way of life, earthenware potteries also took as a more specialized roles and functions. Earthenware began to be used in ceremonial and religious activities and also for burial goods. In funerary rites, for example, earthenware was often used as a burial gift or as a container of human remains. This was known universally as jar burial. Earthenware was considered important as it could be used by the dead on their journey as well as utensils in the hereafter. At the prehistoric Niah caves burial sites, for instance, people buried their dead in the cave floors. They practised either extended burials in log coffins or cigar-shaped caskets of sewn bamboo strips, or in a few cases secondary burials in large jars. Associated with the burials as grave goods are some excellent examples of earthenware pottery- the so-called "three-colour ware" with incised designs filled with red or black pigment and double-spouted vessels perhaps for holding beverages consumed during the funeral ceremonies [Bellwood, 1992 b: 12; Harrisson, T., 1971; Solheim, Harrisson, B. and Wall, 1959 c]. Other common earthenware pottery include plain wares, carved-paddle wares, cord- marked or basketry-marked wares and polished wares. These earthenware vessels perhaps to have originated from the outside influence of the so-called *Sa-huynh-Kalanay Pottery Tradition*. Some other vessels, such as the double-spouted

wares, on the other hand, were possibly from local evolution. Solheim [1981 b: 4] strongly believed that this tradition is a solely local invention of the so-called *Malay Pottery Tradition*[4] [ibid].

The above types of ware are also found at Gua Sireh, in the first Division of Sarawak and at Pulau Burong, near Labuan island of Sabah off Brunei Bay. At Gua Sireh, there is evidence that people used rice husks by about 4,300 years ago to temper the clay from which they made their pottery [Bellwood, 1992 b: 12; Datan, 1993]. Other important Neolithic sites include Lubang Angin Cave in the Gunung Mulu National Park of Sarawak [Datan & Bellwood, 1993; Datan, 1993; see fig. 21]. These sites show some similarity of assemblages, which possibly indicates shared ideas, perhaps either through movement of people, trade networks or intermarriages. In Brunei, none of these wares have so far been found, mainly because of an absent of any limestone caves essential for prehistoric life. However, it is strongly believed that Brunei too is part of this Neolithic sphere of influence, due to its closeness to these regions. The presence of a large open and low land environment may have encouraged the movement of people into the country looking for more land for farming and for living on. It is understood that the success of agriculture allowed major increases in the size of the overall human population and probably encouraged the movement of some people into the rainforest of Brunei. Forests were cut down and burned to allow crops such as rice to be grown. Although no pollen records have been undertaken, however, a comparative study from Sumatra and Java indicates that large scale deforestation began to occur from this time onwards, i.e., about 4,500 years ago [Flenley, 1988].

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4 The term is based on Solheim terminology [1981 b & 1990] in referring to the pottery traditions of the Malay world. The common decoration is impressed on the body with a carved paddle, which is used in the paddle-and-anvil forming or finishing of the vessel. Among specialized forms are water jars with a flat bottom, a low rounded body, and a high narrow neck [1990: 26], known locally as the *kendis*. These types of wares are common in Borneo, Sumatra, some part of the Philippines, Peninsular Malaysia and Thailand.

The typology of earthenware began to change slightly once we move away from the northern coastal parts of Borneo that faced the South China Sea to remote places. At Bukit Tengkorak of southeastern Sabah, for example, recent excavations have brought to light pottery dating about 3,000 years ago which resembles the Lapita pottery[5] made by the initial *Austronesian* settlers of Melanesia and western Polynesia, to as far as east of Samoa [Bellwood, 1992 b: 12; 1992 a]. The earthenware remains are of red-slipped and incised pottery and found associated with a wide range of tools, body ornaments and fishhooks made of shell, and a far-flung exchange network involving obsidian from sources in the Admiralty Islands and New Britain about 3,000 kilometres east of Borneo [ibid; Bellwood & Koon, 1989]. The similarity of assemblages may indicate some kind of social contact between the local communities with those of the Pacific Islanders. Geographically, these two regions were more direct compared to the northern part of coastal Borneo. Movement between these two regions was therefore relatively easy, although it still required some good navigational skills to navigate between these distant lands [see fig. 20]. As observed today, the inhabitants of Bukit Tengkorak ate fish in profusion and used pottery stoves similar to those used even today by the Bajau *orang laut* or sea nomads of the region. Bellwood assumed that since they were a very mobile maritime population, it is very likely that they were related quite closely to those first *Austronesian* settlers in the Pacific from whom sprang peoples such as the Micronesian, Polynesian and Fijians [ibid: 12].

In contrast, Solheim [1996: 106] believed that the ancestors of the Polynesian peoples were the bearers of the Lapita Culture of Melanesia and that the ancestry of the Lapita peoples came from eastern Southeast Asia somewhat before the middle of the second millennium B.C. He believed they were the descendants from the *Nusantao* or *Austronesians* of Southeast Asia, which includes southern China. They moved into the Island of Southeast Asia rather before 5000 B.C., via southeastern China, along the coast

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5 Lapita pottery is identified by its striking dentate-stamped or as incised pottery.

of the China Sea across Borneo and further south to the Pacific Island around 2500 B.C. [ibid: 101, 106]. He also believed that the Nusantao was no doubt directly associated with the development and spread of Malayo-Polynesian languages. The descendants of the Nusantao include the *Bajau*, *Samal*, *Tausug*, *Bugis*, *Orang Laut* of Borneo, Malaysia, Indonesia and the Philippines. This also includes most of the boat people in the seas off Guangzhou, Hong Kong and Hanoi [ibid: 101].

During the Metal Age of 2,000 years ago, further changes began to affect the peoples of Borneo. Like its Southeast Asian counterparts, Borneo also experienced great changes in technological innovations. Knowledge in iron and bronze metallurgy was introduced into the island from regions such as Vietnam or even India and China [Bellwood, 1992 b: 12]. A number of archaeological findings were discovered, such as a number of simple tools and weapons of iron and bronze at the Madai caves in Sabah and Gua Sireh in Sarawak [Bellwood, 1992 b: 12; Datan, 1993]. The advent of iron into cultural life wrought major changes in the landscape of Borneo, especially through greatly improving the ability to clear jungle for cultivation [Cleary and Eaton, 1995: 28]. Earthenware technology of this period was also marked by great technological development, with a variety of forms such as pots, bowls and jars. In general, they have fine surfaces and besides the occurrence of plain wares, various decorative motifs were also found. At Lubang Angin of Sarawak, for example, decorative motifs included angular meander or curvilinear patterns outlined by bands of two or three parallel incised lines filled with black pigment. Also stamped circles, short incised dashes or punctate dots fill the interiors of the incised designs [Bellwood and Datan, 1993: 106].

Similarly, the Madai, Baturong and Tapadong caves in Sabah have also produced many fine pottery assemblages of the first millennium A.D., generally in association with jar burials placed originally on cave floors [Bellwood, 1992 b: 12; 1988; see fig. 20 & 21]. This tradition is also similar to that found in the Tabon Caves and Kalanay Cave of the Philippines and around the Sulawesi and Sulu Seas, apart from south Vietnam as

discussed in the previous chapter. On this basis, Bellwood [1992 a: 135] believed in the existence of "some very frequent inter-island contact and trade, already well developed before any direct impact from the Indian, Chinese or Islamic traditions." He also believed that this contact between islands, especially between the Philippines, Borneo and eastern Indonesia during the first millennium C.E., was probably following inter-island links established as much as two thousand years earlier when Lapita colonists first sailed their canoes into the western Pacific [ibid: 135].

The archaeology of Borneo becomes clearer soon after the coming of foreign traders and travellers to the Island of Southeast Asia from the beginning of the early century A.D. The earliest evidence of foreign visitors to these regions was an Indian vessel, probably originating from Tamil Nadu and Sri Lanka, visiting northern Bali during the first century A.D. [Ardika and Bellwood, 1991]. However, the impact of Indian influence on Borneo was quite ephemeral compared to that on islands such as Java or Bali. Nevertheless, it marked the beginning of foreign influence on the island, which became stronger during the early and middle first millennium A.D., when enormous quantities of glazed ceramics were imported into the island from China and Mainland Southeast Asia of Thailand and Vietnam as discussed in chapter 5 and 6 respectively.

Another important development during this period was the emergence of coastal entrepot settlements such as Terusan Kupang and Kota Batu in Brunei, Santubong near Kuching in Sarawak and a few other smaller centres along the northern and western coast of Borneo [see chapter 4]. The emergence of these coastal entrepots seems to have been associated with the expansion of the Malays to Borneo from the last first millennium A.D[6]. onwards. Also associated with these centres was the discovery of large quantities

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6 Some scholars believed that the spreads of Malay peoples were associated with the development of a series of Malay trading empires, which include historical entities such as Srivijaya, Majapahit, Malayu, and various states of west Malaysia and Sumatra [Solheim, 1981 b: 13; 1990: 30]. Others believed of its connection with the development of the Malay language as a trading language where it is

of archaeological remains, including Oriental ceramics, Chinese and Islamic coins, beads, wooden and stone objects. Large quantities of earthenware pottery was also recovered, mixed together with Oriental ceramic shards of the Chinese, Thais and Vietnamese wares [see chapter 5 & 6]. The presence of these earthenware shards showed that they continued to be produced and consumed, although their popularity may have been affected by the influx of export Oriental ceramics in the local markets.

In terms of craftsmanship, little change has been observed between the prehistoric earthenware and the protohistoric ware. At Tanjung Kubor, Santubong of Sarawak, for example, the decoration and rim forms were very similar to those of Gua Sireh types of carved paddle-impressed decoration, such as ribbed, herringbone, and crossed patterns [Datan, 1993: 92]. Similarly, the Terusan Kupang patterns were very similar to those of the Tanjung Kubor patterns [Omar and Bellwood, 1980; Omar, 19981: 45]. Such resemblance therefore can also be observed between the assemblages of Gua Sireh and Terusan Kupang. Most of these patterns were also present at Kota Batu and Pulau Chermin, although some very crude and primitive earthenware had also been noted at both sites [see fig. 21]. I assumed that these types of ware were locally invented, which perhaps evolved from the past traditional traditions. I will discuss this type of ware later on in this chapter.

From the twelfth century A.D. onwards, Borneo experienced an influx of foreign merchants, especially during the Southern Sung Dynasty (1227-1279 A.D.), when the Chinese began to take a greater interest in the Southeast Asian waters [Gungwu, 1959: 3; Omar, 1981: 74; see also chapter 3 and 5]. This continued during the Ming Dynasty (1368-1644 A.D.), when more Chinese merchants got involved in the Southeast Asian waters, especially after the voyages of General Cheng Ho between 1405 and 1435 [ibid]. The affect of this trade network was an influx of Chinese as well as other Southeast Asian

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most commonly spoken today [Bellwood & Omar, 1980: 173; Bellwood, 1990: 53].

export ceramics into the local markets, competing with the existing traditional earthenwares. This was perhaps a crucial factor for the decline of this traditional industry and eventually led to its downfall. A study by Tom Harrisson [1971] of the Niah pottery of the Niah Caves in Sarawak has shown that great changes in the pottery traditions took place ever since the advent of iron and well into the high growth of the Chinese import trade ceramics beginning the Sung Dynasty (960-1279 A.D.). He believed that it is likely that the increase of hard and fine stonewares was a crucial factor for the gradual decline of the elaborate locally manufactured earthenware of the so-called "three-colour ware" and the very large vessels.

In the twentieth century, the Borneo local earthenware traditions have almost completely disappeared. In Brunei, there is almost no tradition, except one rare report by McArthur in 1904 which mentioned that "there were a number of Brunei potters, whose wares were strictly for home consumption" [McArthur, 1904]. In certain part of Sarawak and Sabah, the traditions are known to have been practised until in the 1960's, as been observed by Moore on the Sarawak Malay pottery [1964], Evans and Alman on the Bajau pottery [1955; 1960], Morrisson on the Murut pottery [1955], Alman on the Dusun pottery [1960], Freeman and the Sarawak Museum publication on the Iban pottery [1955; 1985]. Nowadays, the traditions are almost absent in the three above Boroneo states. They are beginning to be replaced by modern ceramic industries, as can be observed in certain part of Sarawak where high fired porcelains are produced for the daily use and consumption of local population[7]. Although the manufacturing process is refined through the discovery of additional materials, improvements in techniques, mechanization, and increased knowledge of clay and glaze chemistry, the basic principles of pottery and the prime stages of production remain essentially the same today as in ancient times. This show that the tradition continues to be maintained, although the technology and styles have rapidly changed.

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7 For further information on Borneo contemporary ceramics, see Barbara Harrisson, *Pusaka*, 1986.

7.2 A background history of earthenware study in Brunei Darussalam

Like her neighbouring countries in Southeast Asia, Brunei abound with earthenware. However, compared with her neighbours, Brunei does not have any traces of prehistoric record, including prehistoric earthenware[8]. One reason for this is the lack of significant large crops of limestone in Brunei due to an accident of geological factors. This means that there are no-good caves, dry inside and suitable for large scale occupation, funerary or other use [Harrisson, T., 1971 a: 83]. However, this does not necessarily mean that Brunei does not have a prehistoric record of its own. The evidence might be located somewhere in the open sites of the country's vast rainforest, waiting to be studied and explored. Furthermore, Brunei is also located very near to the prehistoric cave sites both in Sabah and Sarawak, such as the Niah and Lubang Angin caves, just on the west coast of Brunei and Pulau Burong, just off Brunei Bay [see fig. 21]. On this matter, B.A. Hussainmiya wrote that:

> "The present political boundaries of Brunei should not blur our perception of the past, as if the early man took into consideration the national borders when he moved from one place to the other in the Borneo jungles. Therefore, such well published findings of prehistoric activities in Niah and Mulu caves of the present day Sarawak have direct relevance to any study of prehistoric Brunei as well" [Hussainmiya, 1993: 151].

If any prehistoric earthenware are to be found in Brunei, they must bear a resemblance to those that have been found at the above neighbouring regions. However, since this is only an assumption, it is therefore too early to be discussed in this thesis. More archaeological research and findings are required in order to support such an

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8 Tanjong Batu is so far the only site in Brunei to be known to have traces of prehistoric record in the form of Neolithic stone tools [Omar and Shariffuddin, 1976]. However, the site is still doubted as a prehistoric site, since all the four tools recovered were only on the surface, rather than from the stratified layers. Furthermore, all the stones were not local but originated from the neighbouring regions of Borneo.

assumption. Meanwhile, back to the study of Brunei's protohistoric earthenwares, study began in the 1950's and was pioneered by the late Tom Harrisson and his wife, Barbara[9]. This early study, however, focal not just primarily on earthenware, but also on a wide range of other material culture as well. Only a brief account was written on earthenware despite its dominance among the archaeological findings. They totaled 45,000 shards, compared to 99 coins, 180 glasses, 21 metals, 40 pounds iron slag and crucible, 74 artefacts vegetable materials, 290 animal materials and 35,000 fragments of porcelain and stoneware [Harrisson & Harrisson, 1956: 288]. The reason for this limitation is probably the lack of knowledge in the local earthenware traditions. Furthermore, this was their first assignment to Brunei, which had archaeologically had never been explored or touched before. On the earthenwares, they briefly wrote:

> "The earthenware presents many headaches. Some of it is evidently what passes in most of Southeast Asia for pre-Metal Age; patterns applied with beaters, paddlers and string, such as the proto-Brunei Muruts still use a few days upriver from Kota Batu. Some is evidently black "Malayan" pottery. Some is perhaps from further west and finer ('Indian')" [ibid: 312].

Since then, more reports have been written on the Brunei earthenware traditions. However, like the earlier study, they were mostly written in brief and in combination with other material cultures. An example of this can be seen in a paper written by Barbara Harrisson in 1970 on the Kota Batu ceramics. Out of forty-two odd pages (excluding plates), only one and a half pages were allocated to earthenware, while the other forty pages were wholly devoted to the Oriental ceramics [Harrisson, B., 1970].

Apart from the above authors, there are also a number of scholars who were interested in the study of Brunei's earthenwares. Among them is Matussin Omar, Bellwood and Solheim. The first two scholars are involved in the excavations of two

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9 The date was in 1952/53. It was the first excavation in Brunei and conducted at Kota Batu. The report was published in 1956, which later encouraged the Government of Brunei in setting up a museum.

Brunei sites of Terusan Kupang and Sungai Lumut. The studies of earthenwares are very well written and scientifically analyzed, although these studies were also devoted to various other material cultures [Bellwood and Omar, 1980; Omar, 1981]. Both scholars are responsible for putting forward a theory of the *Tanjong Kubor Pottery Tradition*. On the other hand, Solheim, a renown scholar on the Southeast Asian earthenwares, is only briefly mentioned about the Brunei earthenware tradition in relation with the other earthenwares traditions in the Malay World. He classified the local tradition as the *Bau-Malay* or *Malay Pottery Traditions* [Solheim, 1981 b].

From these previous works, only three sites have been studied, namely, Kota Batu, Terusan Kupang and Sungai Lumut. Meanwhile, no study has ever been conducted at Pulau Chermin. At Kota Batu, 52,197 pieces of earthenware shards have been collected from a number of excavations and rescue explorations [see chapter 4]. At Terusan Kupang, a total of 2,329 pieces has been recovered from the 1977/78 excavations [see chapter 4], while 114 pieces have been recovered from Sungai Lumut from two separate excavations [Harrisson, B. and Shariffuddin, 1969; Omar, 1981].

Based on these previous reports, all scholars seemed to be agreed that these earthenwares were either locally evolved or shared the outside influence. On the Terusan Kupang wares, they were very closely related to certain assemblages found in neighbouring countries like in Sarawak and Malaya, and as far as Hong Kong. These assemblages were later known as the *Tanjong Kubor Pottery Tradition*, based on the Tanjong Kubor assemblage in Sarawak [Bellwood and Omar, 1980; Omar, 1981; Solheim, 1965]. Both scholars believed that this tradition originated from 'the densely-settled areas of Brunei Bay, the Sarawak River delta and (with slight differences) at Johore Lama of Peninsula Malaysia [ibid]. Solheim, on the other hand, believed that the Brunei earthenware tradition originated from the *Bau-Malay Pottery Tradition* [1981 b], which was common throughout the Island of Southeast Asia beginning 700 A.D.

onwards. He believed that the *kendis* or double-spouted forms, which were largely present at Terusan Kupang and Tanjong Kubor were typical of the *Malay Pottery Tradition* and developed out of the Neolithic double-spouted type vessel series known from the Niah Caves [Solheim, 1981 b: 14; Harrisson, T., 1971 b; 1974].

The Kota Batu earthenwares were reported to bear as a affinity with the Terusan Kupang earthenwares and Tanjong Kubor types [Omar, 1981: 53, footnote 3]. It was also reported that some of the Kota Batu earthenwares resembled the black "Malayan" pottery [Harrisson and Harrisson, 1956: 32; Harrisson, B, 1970: 163], which according to Barbara Harrisson [1970: 163] may have been powerfully affected from Malaya.

The Sungai Lumut earthenwares were reported to be a totally different affinity from any Bruneian or other Borneoan sites [Harrisson, B. and Shariffuddin, 1969: 47; Omar, 1981: 53]. They were low-fired earthenwares, with very soft bodies. Both scholars believed that such type of ware belonged to a Brunei pottery tradition of the past [ibid: 53]. Among the wares were large paddle-decorated pots, ribbed pots with a narrow mouth, brick red pots and a bright reddish spout [ibid]. I strongly believe that these differences are due the site's isolation, far away from Kota Batu, Terusan Kupang or any other Brunei's main archaeological site centred around Brunei Bay [see chapter 4]. Sungai Lumut is located about 77.2 kilometres from Bandar Seri Begawan, the capital of Brunei Darussalam. The isolation may have encouraged the local communities to invent their own potteries, essential to their needs and requirements [see fig. 21].

In terms of dating, it has been generally accepted that the Brunei earthenware traditions belong to the proto-historic period, dated from the first millennium A.D. to the seventeenth century A.D. The dates are based on the dating of export ceramics, which have always been found in direct association with these types of wares.

7.3 The study of earthenwares: the present data

The studies are undertaken at Terusan Kupang, Kota Batu and Pulau Chermin, as already discussed in chapter 4. Briefly, two methods of data collections were employed, i.e., surface collections and excavations. Surface collections were conducted at all the above-mentioned sites, while excavations were done at Kota Batu and a test excavation at Pulau Chermin. Collections were conducted simultaneously, since all the ceramics were found intermixed between one type and another. In contrast with the Oriental ceramics, most of the collected earthenware shards consisted of small fragments. This is because they were mostly soft bodied and therefore prone to erosion. Despite their large quantities, however, surface collections sometimes tended to be selective and only large, recognizable shards were collected. In contrast, all shards were collected in the excavations, no matter what their size or shape.

7.3.1Terusan Kupang

Surface collections were conducted at the same boxes or grids as the collections of the Oriental ceramics [chapter 4]. The boxes are TK. E, TK. G, TK. H and TK. J [fig. 7 a & b]. Random collections were also organised on the dry-land site of Terusan Kupang. Each box measured 10 X10 M. However, only half of the boxes were workable, while the other half were submerged under the water. Only 5% ceramic shards (export wares and earthenwares) were collected from each boxes or less than 1% of the whole of Terusan Kupang. The total collection from the four boxes were 58 pieces [see table 22].

Table 22 shows that there is less eartheware than export ceramic by a proportion of 4.3% to 95.7%. The differences in these distribution patterns is due to the rapid decay of earthenware shards found in the water-logged environment. Only hard bodies earthenwares are able to survive in this harsh, hostile environment. On the other hand, earthenwares tend to survive more in the dry-land, where the environment is more friendly and stable. An example of this was seen during the excavations of the same site in 1977/78. From the three trenches excavated, a total of 4,891 pieces of ceramic shards

were recovered, which composed 2,329 pieces or 47.6% export wares and 2,562 pieces or 52.4% earthenwares [Omar, 1981; see chapter 4]. The excavation data has shown the importance of earthenware in the daily life of the local communities, and the increasing importance of export ceramics.

Table 21: Total of earthenware shards found at Terusan Kupang

Trench	Earthenwares	Export wares	Total	Total %
TK. E	17 (4.4%)	366 (95.6%)	383	100%
Total %	29.3%	28%	28.1%	
TK. G	29 (4.5%)	614 (95.5%)	643	100%
Total %	50%	47%	47.1%	
TK. H	9 (6.8%)	124 (93.2%)	133	100%
Total %	15.5%	9.5%	9.8%	
TK. J	3 (1.7%)	174 (98.3%)	177	100%
Total %	5.2%	13.3%	13%	
Random collections	0 (0%)	28 (100%)	28	100%
Total %	0%	2.1%	2.1%	
Total	**58** (4.3%)	**1,306** (95.7%)	**1,364**	

Meanwhile, the total number of earthenware shards is greater in trench TK. G (50%), followed by trench TK. E (29%), TK. H (15.5%) and TK. J (5.2%). This pattern is almost the same in the distribution of export shards, which is greater in trench TK. G (47%), followed trench TK. E (28%),TK. J (13.3%) and TK. H (9.5%). The difference is only in trench TK. H and TK. J, where they change slightly from the third and fourth position in the earthenware to the fourth and third position in the export wares [see table 22]. However, the difference is only slight just 44 pieces. The differences in these distribution patterns are influenced by the concentration of ceramic shards, which tend to be concentrated at trench TK. G followed by the other trenches. This shows that the distributions of ceramic shards is richer from trench TK. G south wards, i.e., from TK. G, TK. F, TK. E, etc. and lessens north wards, i.e., from TK. H, TK. J, TK. K, etc. [see fig. 7 a & b]. By such arrangements, it can be explained that the town or settlement of Terusan Kupang tended to be concentrated around this area and less to the north. It

might also explain why the Jai-Jai site in Limbang of Sarawak is much richer and more complex than the Terusan Kupang site [see chapter 4].

7.3.1.1 Fabrics

Shard fragments were examined visually and by a hand lens. The colours of pottery is determined by Munsell Soil Colour Charts. The classification is based on the terminology used by Matussin Omar [1981], which bears common similarities to my collected shards.Three types of fabric were identified. They were as follows:

(1) **Fabric 1**: Has two colour cores, dark grey (2.5 YR/N4) and grey (2.5 YR/N6. There are two surface colours, a greyish brown (10YR5/2) and a very pale brown (10YR7/3). Temper can be seen with the naked eye, most consist of coarse sandstones, gravels and grog. Traces of sooth remains can also be seen on some of the cooking pot shards. The body is soft, indicating a low firing on the pottery. The presence of dark grey and grey cores could also indicate a high carbonaceous content incompletely removed during firing. Perhaps the oldest pottery tradition of Terusan Kupang. Their dating remains unknown, however, based on the radiocarbon dating of the site, it was dated around the eighth century [Omar, 1979]. This might correspondent to the date of this fabric type.

(2) **Fabric 2**: A fabric fired to an even light grey (10YR7/2) colour throughout. No temper is visible to the naked eye. The body is hard, with a semi-stoneware body. This indicates that the pottery was well-fired at a high temperature. These were perhaps dated in between the first and the third fabrics (intermediary period).

(3) **Fabric 3**: Have two colour exteriors, a reddish yellow (5YR6/6) and a reddish brown (5YR5/4). The body has a stoneware-like hardness. According to Matussin Omar [1981: 16], this type of pottery is a more recent

production. The pottery was fired in a very high temperature kiln, and almost reached to stoneware standard.

Table 22: Fabric distribution of collected earthenware shards from Terusan Kupang

Trench	Fabric			Total
	1	**2**	**3**	
TK. E	7 pcs. (41.2%)	5 pcs. (29.4%)	5 pcs. (29.4%)	17 pcs. (100%)
	38.9%	23.8%	26.3%	29.3%
TK. G	1 pc. (3.4%)	14 pcs. (48.3%)	14 pcs. (48.3%)	29 pcs. (100%)
	(5.6%)	66.7%)	73.7%)	50%
TK. H	9 pcs. (100%)	0	0	9 pcs. (100%)
	(50%)			15.5%
TK. J	1 pc (33.3%)	2 pcs. (66.7%)	0	3 pcs. (100%)
	(5.6%)	(9.5%)		5.2%
Total	**18 pcs. (31%)**	**21 pcs. (36.2%)**	**19 pcs. (32.8%)**	**58 pcs. (100%)**

Based on the above table, the total number of shards of fabric 2 is greater than that of the two other fabrics. The proportion is 36.2% for the former and 32.8% and 31% for fabrics 3 and 1. This indicates that fabric 2 pottery type of the intermediary period dominates the collection, followed by the recent period of fabric 3 and the earlier period of fabric 1. By such statistic, it can be suggested that the peak period of Terusan Kupang was during the intermediary period, followed by the recent and early period. However, this assumption is only based on a very limited sample, which hardly gives an over view of the dating of Terusan Kupang. If we look at the 1977/78 excavations, on the other hand, it shows that fabric 1 dominates the site by 74.5%, followed by fabric 2 by 14.8% and fabric 3 by 10.7% [Omar, 1981: 16]. If we relied on this data, the importance of earthenware vessels during the early phase of Terusan Kupang is shown. This is due to the lack of export ceramics during the early period of Terusan Kupang, when the local earthenware was still very much needed. However, this trend began to change once export ceramics began to enter into the local markets at the beginning of the tenth century

A.D. It soon began to replace the earthenware traditions, as can be seen by the decrease of fabric 2 and 3.

7.3.1.2 Decoration

Of the 58 earthenware shards collected from Terusan Kupang, 39 pieces or 67.2% are decorated while 19 pieces or 32.8% are plain. The main forms of decoration are carved-paddle-impression numbering 34 pieces or 87.2%, while the other decorative type is stab-and-drag pattern numbering 5 pieces or 12.8% [see table 24].

Table 23: Total of decorated and plain shards found at Trenches TK. E, G, H and J.

TRENCH	PLAIN	DECORATED		TOTAL
		Paddle-impressed	**Stab-and-drag**	
TK. E	8 (47.1%)	7 (41.1%)	2 (11.8%)	17 (100%)
TK. G	9 (31%)	18 (62.1%)	2 (6.9%)	29 (100%)
TK. H	1 (11.1%)	7 (77.8%)	1 (11.1%)	9 (100%)
TK. J	1 (33.3%)	2 (66.7%)	0	3 (100%)
TOTAL	19 (32.8%)	34 (58.6%)	5 (8.6%)	58 (100%)

The classification of the paddle-impressed pottery is based on the terminology used by Solheim [1965] of the *Tanjong Kubor Pottery Tradition* of Sarawak which bears patterns similar to the Terusan Kupang patterns. I also used Matussin Omar [1981] terminology on the Terusan Kupang pottery which bears many similarities to my collected patterns. Some other patterns, however, did not fit either Solheim's or Matussin's terminology. The designs are mostly geometric elements either based on straight line, rectangular and lozenge patterns or those with curvilinear designs. These design elements normally occur on separate vessels. There are however instances where both rectangular and curvilinear designs occur on the same vessel, or where a design comprises both straight lines and curvilinear elements. The different categories of carved-paddle impressions are as follows:

(a) Ribbed or parallel line patterns. These consist of parallel lines in relief, between 1 and 2 mm. wide. This type of decoration is applied vertically, diagonally or horizontally on vessel bodies [see ill. 21 a & b]. This pattern is very common at Kota Batu and the prehistoric site of Gua Sireh [Datan, 1993: 36] and protohistoric site of Tanjung Kubor of Sarawak [Solheim, 1965: 8].

(b) Herringbone patterns or the pine tree design [Solheim, 1965: 8]. This pattern consists of alternate bands of diagonal lines running in the same direction bordered by a single intervening line [see ill. 23 a & b; plate 49 (a)]. Similar to the Gua Sireh and Tanjung Kubor patterns, although it is not common at Kota Batu.

(c) Impressed triangles between bordering lines [see ill. 24 a & b; plate 49 (b, a & j)]. This pattern is also common in the Tanjung Kubor assemblage [ibid: 9] and there were some at Kota Batu site.

(d) Parallel arcs between horizontal lines. Usually found on rims, shoulders and bodies running horizontally or vertically [see ill. 22 a & b; plate 49 (e & f)]. Similar to Tanjung Kubor type 1 [Solheim, 1965: 8].

(e) Discrete triangular/square with diamond motifs. This pattern has single or multiple relief lines crossing each other at a consistent angle to form squares which have relief diamond motifs in them [Datan, 1993: 37; see ill. 26 a & b].

(f) Wavy lines. This could be considered a variant of ribbed motifs as it has parallel wavy lines usually running vertically on the body [Solheim, 1965: 9; see ill. 28 a & b].

(g) Curvilinear circles. In some variants circles and ovals are double and are arranged in rows [Omar, 1981: 15] [see ill. 27 a & b; plate 49 (g)].

(h) Floral and circular motifs. One pattern resembles a sun-rays motif which is unfamiliar to Matussin Omar's terminology.

(i) Meander patterns [see ill. 25 a & b; plate 49 (k)].

(j) The miscellaneous designs. Consist of a considerable variety pattern, some are unclear because of over striking with carved paddles.

(k) Others (too eroded to be recognisable).

Other types of decoration are:

(l) Stab-and-drag patterns. Grooves were produced by stabbing an incising tool into the wet clay and then dragging it towards or away from the operator. The grooves are normally narrow and shallow and tapered at one end [Omar, 1981: 17]. It is usually found on the rims or shoulders as either single or vertical lines or v shapes [see plate 49 (d)].

Of these patterns, (b) is the most common with 8 pieces or 20.5%, followed by (j) with 7 pieces or 17.9%, (c) 6 pieces or 15.4%, (l) 5 pieces or 12.8%, (d & e) 3 pieces each or 7.7%, (a & K) 2 pieces each or 5.1%, and (f, g, h & I) with 1 piece each or 2.6%. In terms of fabric, fabric 2 mostly dominates the paddle-impressed group. Stab-and-drag patterns, on the other hand, are mostly dominated by fabric 3. On the plain shards, they consisted mainly of fabric 1 and some fabric 2 and 3. The main colours are black, probably from resin/damar (7.5 YR /N2), light grey (10 YR 7/2) and light brown colour (7.5 YR 6/4).

7.3.1.3 Vessel shapes

The identification of vessel shapes is made through their rim shapes. Through the various rim shapes, the identification of shapes is easily recognised, such as jars and cooking pots. The identification by body shape, on the other hand, can sometimes cause

problems, especially when dealing with small fragments. For this reason, the identification of vessel shapes is only made through their rim forms. Out of my 58 collected shards, however, only 10 pieces are from the rim parts and the other 48 from body parts. Their identifications are as follows:

(i) Storage jars. Only 2 pieces can be identified from trench TK. G and TK. H. Diameter at lip 12 and 14 cms. One piece is decorated with stab-and-drag patterns on the rim and shoulder [see plate 49 (d)]. The other piece is plain and light grey in colour (10 YR 7/2).

(ii) Cooking pot with everted non-thickened rims and rounded lips. Eight pieces were identified from trench TK. G (5), TK. H (1) and TK. J (2). Five pieces of the rims are decorated, the other three are plain colours. The decorations are all on the shoulders, with double row motifs running horizontally. Two of the decorations are of impressed triangles between bordering lines (c type), both are found at trench TK. G, two with parallel arcs between horizontal lines (d type), at trench TK. G and TK. J, and one piece with a parallel arc between horizonal lines (b type) at trench TK. J. Three of the plain rims are coloured in black resin/damar glaze (7.5 YR N2/) and one piece with light grey (10 YR 7/2). Rim diameters range from 11 to 14 cms. Exterior surfaces are sometimes coated with soot particles [see plate 49 (I)].

The identification is considered important in order to determine how the ancient people lived, their social and economy life. However, the number of rims is small enough to give a true picture the types of vessels which dominate the Terusan Kupang site. Nevertheless, judging from the rims, it has shown that cooking pots dominate the collections by 8 to 2. Perhaps this can show the importance of such vessels in the daily life of the local communities. They were used for cooking, such as rice, fish and vegetables. These were all an essential diet of the local communities, much the same as

nowadays. This type of vessel also dominates the 1977/78 excavations, totaling 149 pieces or 52.8% [Omar, 1981: 31]

In summary, it can be said that the Terusan Kupang earthenware perhaps developed in stages as demonstrated by their fabric types. The first stage probably began in the seventh or eighth century A.D. or much earlier, brought in by the first settlers at Terusan Kupang. The origin of these early settlers remains unknown, although it can be suggested to be in the area around the northern and western coastal part of Borneo or perhaps from within Brunei itself. The second stage developed from the first stage, however, with slight modification and better craftsmanship. This intermediary period perhaps began in the ninth or tenth century and coincided with the growth of Terusan Kupang as a settlement and trading centre around Brunei Bay. Trade with neighbouring regions began to increase, which, not only brought foreign goods into the local markets, but also the diffusion of ideas and technology. The close affinities between the Terusan Kupang pottery and that from several sites in Sarawak, particularly of the Tanjong Kubor pottery tradition, may have supported such a theory. Some of the Tanjung Kubor pottery traditions were borrowed and transferred into the local tradition and vice versa. The third fabric, on the other hand, has shown better craftsmanship, with higher technological skill. I assumed that this pottery type may have originated from the Mainland Southeast Asia, perhaps from China, Thailand or Vietnam. They were brought with other export commodities, in particular the Oriental ceramics. Their dates therefore correspond to the dating of export ceramics that is around the tenth to thirteenth centuries A.D.

7.3.2 Kota Batu

Three methods of data collections were employed, i.e., surface collections and test excavations at the River bank site and a well-controlled excavation on the dry-land site [see chapter 4]. Surface collections were conducted at trench KB.A2, A3, AA2 and AA3; while test excavations at the same trenches KB. A3 and AA2 [see fig. 9]. Two trenches were excavated on the dry-land site, KB. II and III [see fig. 8]. Trenches were measured

differently. For the former, each trench was measured by a 10X10 M; while the second was measured by a 1X1 M, and the latter by a 2X2 M. The River bank sites were badly affected by the tides and less than 5% of ceramic shards were collected from each of the trenches. Similarly, the test excavations were also badly affected and only managed to reach between 15 and 20 cms. depth. On the Dry land sites, excavations managed to reach up to 100 cms. depth [see chapter 4].

Two types of earthenware were recovered from Kota Batu, earthenware pottery and earthenware crucibles. The crucibles were found at the dry land sites and were used as moulds to make a local cannon, known as *bedil*. This is the first time such moulds have been found in Brunei and so it is included in this study.

A total 296 earthenware shards have been collected from surface collections, 454 shards from test excavations and 615 fragments from on-land excavations. Only 20 pieces of crucibles were recovered, 17 pieces from trench KB. II and 4 piece from trench KB. III [see table 25 & 26].

Table 25 shows that export ceramics dominate the overall collections by 74.2% to 25.4% to earthenware and 0.4% to earthenware crucibles. The gap is much wider if we look at the individual trenches as shown horizontally on the table below. This indicates that export ceramics began to dominate the local markets and became an important and popular house hold item used by the local communities. The change in the local taste is perhaps due to an influx of export ceramics in the local markets, brought by the Chinese, locals or other Southeast Asian traders [see chapter 4]. The technical superiority of these ceramics over the native-produced earthenware may also be a crucial factor for the change in local taste. They might have become a high prestige item and perhaps became new fashionable utensils during those days.

TABLE 24: Total earthenware shards from Kota Batu

TRENCH	EARTHENWARES		EXPORT WARES	TOTAL
COLLECTIONS	POTTERY	CRUCIBLES		
KB. A2	57 (1 kg) 15.4%	0	312 (24.3kg) 84.6%	369 (25.3 kg) 100%
Total %	4.2%		7.8%	6.9%
KB. A3	82 (1.7 kg) 17%	0	399 (22.3 kg) 83%	481 (24 kg) 100%
%	6%		10%	9%
KB. AA2	101 (2.1 kg) 16.5%	0	510 (23.8 kg) 83.5%	611 (25.9 kg) 100%
%	7.4%		12.8%	11.4%
KB. AA3	56 (1.3 kg) 14.1%	0	341 (30.6 kg) 85.9%	397 (31.9 kg) 100%
%	4.1%		8.6%	7.4%
TEST EXCAVATIONS				
KB. A3	257 (3.3 kg) 38.6%	0	409 (9.6 kg) 61.4%	666 (12.9 kg) 100%
%	18.8%		10.3%	12.4%
KB. AA2	197 (2 kg) 33.1%	0	398 (8.1 kg) 66.9%	595 (10.1 kg) 100%
%	14.4%		10%	11%
ON-LAND EXCAVATIONS				
KB. II	363 (3 kg) 30.6%	17 (1.6 kg) 1.4%	808 (13 kg) 68%	1,188 (17.6) 100%
%	26.6%	85%	20.3%	22.1%
KB. III	252 (1.8kg) 23.8%	3 (40g) 0.3%	803 (9.5 kg) 75.9%	1,058 (11.4) 100%
%	18.5%	15%	20.2%	19.7%
TOTAL	**1,365 (16.3 kg)**	**20 (1.6 kg)**	**3,980 (141.2 kg)**	**5,365 (159.1)**
	25.4%	**0.4%**	**74.2%**	**100%**

There is also a big gap in the weight of shards by a proportion of 88.7% or 141.2 kg. to export ceramics, to 10.2% or 16.3 kg. to earthenware potteries, and 1% or 1.6 kg. to earthenware crucibles. Most of the earthenware shards were in small fragments, especially those discovered in the excavations. The reason for this is that we sometimes tend to be selective in the surface collections by collecting only large and interesting

shards, while we collect and record all archaeological material recovered during the excavations. The ratios between these two methods are enormous. In the surface collections, a total of 296 shards was collected and weighed a staggering 6.1 kg. On the test-excavations, a total of 454 shards was recovered and weighed 5.3 kg. On the dry-land excavations, a total of 618 was collected and weighed just 4.9 kg. The crucibles, on the other hand, are much heavier despite their small quantity. The fact is that most of them are bigger and with thicker bodies [see fig. 54 a & b].

Table 25: Vertical distributions of ceramic shards from the on-land site of Kota Batu

TYPES	TRENCH	0-20 cm	20-40 cm	40-60 cm	60-80 cm	80-100 cm	TOTAL
Earthenware-Potteries	KB. II	1 (39 g) (0.3%)	32 (190g) (8.8%)	245 (2.3) (67.5%)	35 (340 g) (9.6%)	50 (250 g) (13.8%)	**363 pcs. (3.1 kg) 100%**
		0.7%	13.1%	27.1%	7.5%	10.2%	**16.2%**
	KB. III	22 (80 g) (8.7%)	17 (100 g) (6.7%)	60 (440 g) (23.7%)	89 (500 g) (35.2%)	65 (830 g) (25.7%)	**253 pcs. (1.9 kg) 100%**
		15.6%	7%	6.6%	19%	13.3%	**11.4%**
Earthenware-Crucibles	KB. II	0	0	9 (1 kg) (53%)	4 (300 g) (23.5%)	4 (300 g) (23.5%)	**17 pcs. (1.6 kg) 100%**
		0	0	1%	0.9%	0.8%	**0.8%**
	KB. III	0	0	3 (40g)	0	0	**0**
		0	0	0.3%	0	0	**0**
Export-Wares	KB. II	20 (203) 2.5%)	75 (785 g) (9.3%)	384 (8 kg) 47.5%)	119 (1.7) (14.7%)	210 (2.3 kg (26%)	**808 pcs. (12.9 kg) 100%**
		14.2%	30.7%	42.5%	25.4%	43%	**36%**
	KB. III	98 (582) (12.2%)	120 (745) (15%)	204 (2.8) (25.4%)	222 (3.6) (27.6%)	159 (1.5) (19.8%)	**803 pcs. (9.2 kg) 100%**
		9.5%	49.2%	22.6%	47.3%	32.6%	**35.7%**
TOTAL		**14 (904) (6.3%)**	**244 (1.8) (10.9%)**	**904 (14.5) (40.2%)**	**469 (6.4) (20.9%)**	**488 (5.1 kg (21.7%)**	**2,246 pc. (28.7 kg) 100%**

Table 26 shows that export ceramics not only dominate the overall ceramic collection but the vertical distributions as well. The gaps between levels are enormous by

a proportion of roughly 70% for export ceramics and 30% for earthenware. Nevertheless, earthenware tend to be found at all levels, indicating their continuation in use despite a growing competition from the export ceramics. Their presence also shows that they were dated contemporaneously with export ceramics between the fourteenth and seventeenth centuries A.D. Their popularity, however, began to decline in the fifteenth to the early sixteenth centuries as competition from export ceramics began to increase. This can be seen at the second and first level where their numbers become less compared to the third, fourth to fifth level. As Barbara Harrisson wrote:

> "the height of the Ming (15th to 16th centuries) was also the height of the Brunei Sultanate, with the reigns of the fifth and sixth Muslim Sultans. At this time, everyday stoneware and porcelain goods clearly poured into Brunei. Soft earthenwares were swamped, outmoded....It is the debris of this high aristocrat centre of trade and power that we recover by the excavation of this ancient court, Kota Batu. Here men lived like princes, and proved it with their fine imported domestic crockery. Earthenware took a very low place in this setting of status priorities" [Harrisson, B., 1970: 163, 164].

7.3.2.1 Fabrics

Shard fragments were examined visually and by a hand lens. The colours of pottery is determined by Munsell Soil Coulour Charts. Five types of fabrics were identified, as given below:

(1) **Fabric 1**: A fabric with soft earthenware body. A dark-grey core (2.5 YR N5/) and light brown (7.5 YR 6/4) or grey (7.5 YR N6/) or very pale brown (10 YR 8/3) exterior. Temper can be seen with a naked eye, composed of coarse particles of crushed sandstones and gravels. Sometimes charcoal fragments are also present in the inclusions. Fired at a very low temperature, probably below 500 degree Celsius.

(2) **Fabric 2**: A fabric slightly harder than fabric 1. Smooth surface on both sides of the body. Temper can be seen with a naked eye, composed of tiny, sandy and

glassy particles (mica). A dark grey core (7.5 YR N4/) and very pale brown (10 YR8/3) or reddish yellow (7.5 YR 7/8) or grey (7.5 YR N6/) exterior.

(3) **Fabric 3**: A fabric slightly harder than fabric 2. Rough body surfaces with thin body. Colour range from very pale brown (7.5 YR 8/4) and reddish yellow (7.5 YR 7/8). Inclusions composed tiny, sandy particles and mica.

(4) **Fabric 4**: A fabric similar to fabric 3 but the body is slightly harder and thicker. A semi-stoneware body, with a few visible inclusions. Colour range from brown (10YR 5/3) to grey (7.5 YR N/6). Fired at high temperatures of above 500 degree Celsius.

(5) **Fabric 5**: A fabric with very hard body. A dark grey core (2.5 YR N5/) and a fine black or white tiny inclusions. Colour range from brown (10 YR 5/3) to reddish yellow (7.5 YR 7/8) and very pale brown (10 YR 8/3). Fired to almost equivalent temperature to stonewares of above 900 degree Celsius. Perhaps later production than the other earthenware types.

Table 27 shows that fabric 3 dominates the overall collections by 28.7%, followed by fabric 5 (22.8%), fabric 4 (19.7%), fabric 1 (15.4%) and fabric 2 (13.4%). The pattern is almost the same if we narrow down the scope towards individual working categories. In the surface collections, it was dominated by fabric 3 by 40.5%, followed by fabric 5 (22.3%), fabric 4 (18.6%), fabric 1 (13.2%) and fabric 2 (5.4%). In the test-excavations, they were also dominated by fabric 3 by 24.2%, followed by fabric 2 (20.7%), fabric 5 (19.4%), fabric 4 (20%) and fabric 1 (15.6%). On the dry-land excavations, fabric 3 dominated the collections by 26.4%, followed by fabric 5 (25.6%), fabric 4 (20.2%), fabric 1 (16.3%) and fabric 2 by 11.9%. The popularity of fabric 3 may be due to their aesthetic appeal compared to the other pottery types. They were mostly decorated wares, with bodies of thin and medium hardness. This as a result had attracted the local

communities as demonstrated by their wide distributions both horizontally and vertically [see table 28].

Table 26: Fabric distribution of the Kota Batu earthenware shards.

TRENCH	FABRIC					TOTAL	%
COLLECTIONS	1	2	3	4	5		
KB. A2	5 (65g) 8.7%	3 (15g) 5.3%	36 (400g) 63.2%	7 (130g) 12.3%	6 (800g) 10.5%	**57 PCs. (1.4 kg)**	100%
%	2.4%	1.6%	9.2%	2.6%	1.9%	**4.2%**	
KB. A3	18 (240g) 22%	7 (120g) 8.5%	18 (250g) 22%	15 (130g) 18.3%	24 (960) 29.2%	**82 PCs. (1.7 kg)**	100%
%	8.6%	3.8%	9.8%	5.6%	7.7%	**6%**	
KB. AA2	9 (245g) 9%	4 (120g) 4%	35 (210g) 34.7%	26 (330g) 25.7%	27 (1.2 kg) 26.7%	**101 PCs. (2.1 kg)**	100%
%	4.3%	2.2%	8.9%	9.6%	8.7%	**7.4%**	
KB. AA3	7 (155g) 12.5%	2 (110g) 3.6%	31 (450g) 55.3%	7 (250g) 12.5%	9 (260g) 16.1%	**56 PCs. (1.2 kg)**	100%
%	3.3%	1.1%	7.9%	2.6%	2.9%	**4.1%**	
TEST EXCAVATIONS							
KB. A3	42 (400g) 16.3%	73 (1 kg) 28.4%	54 (350g) 21%	43 (530g) 16.7%	45 (1.1 kg) 17.5%	**257 PCs. (3.3 kg)**	100%
%	20%	39.9%	13.8%	16%	14.5%	**18.8%**	
KB. AA2	29 (220g) 14.7%	21 (220g) 10.6%	56 (230g) 28.4%	48 (320g) 24.4%	43 (1.1 kg) 21.8%	**197 PCs. (2 kg)**	100%
%	13.8%	11.5%	14.3%	17.8%	13.8%	**14.2%**	
DRY-LAND EXCAVATIONS							
KB. II	78 (475g) 21.5%	56 (255g) 15.4%	102 (735g) 28.1%	35 (345g) 9.6%	92 (1.1kg) 25.3%	**363 PCs. (2.9kg)**	100%
%	37.1%	30.6%	26%	13%	29.6%	**26.6%**	
KB. III	22 (80g) 8.7%	17 (100g) 6.7%	60 (440g) 23.8%	88 (500g) 35%	65 (830g) 25.8%	**252 PCs. (1.9kg)**	100%
%	10.5%	9.3%	15.3%	32.7%	20.9%	**18.5%**	
TOTAL	**210 PCs. (1.8kg)**	**183 PCs. (1.9kg)**	**392 PCs. (3 kg)**	**269 PCs. (2.5kg)**	**311 PCs. (7.3kg)**	**1,365 PCs. (16.5kg)**	
	15.4%	**13.4%**	**28.7%**	**19.7%**	**22.8%**	**100%**	

Table 27: Vertical distributions of earthenwares found on the dry-land, Kota Batu.

Fabric	1		2		3		4		5		Total	
Trench	KBII	KBIII	KBII	KBIII	KBII	KBIII	KBII	KBIII	KBII	KBIII	KBII	KBIII
0-20	0	9pcs. (35g) 40.9%	0	4 PCs (15g) 18.2%	1 pc (39g) 100%	9 PCs (30g) 40.9%	0	0	0	0	1 pc (3g) 100%	22pcs (80g) 100%
	0	12.3%	0	18.2%	1%	11.1%	0	0	0	0	0.3%	8.7%
20-40	9 PCs (40g) 28.1%	7 PCs (40g) 41.2%	3 PCs (10g) 9.4%	2 PCs (10g) 11.8%	11pcs (50g)34.3%	6 PCs (30g) 35.3%	3 PCs (20g) 9.4%	1 PCs (10g) 5.9%	6 PCs (70g) 18.7%	1 PCs (10g) 5.9%	32 pc (190g 100%	17 pc 100 g 100%
	11.5%	9.6%	5.3%	9.1%	10.8%	7.4%	8.6%	3.3%	6.5%	2.1%	8.8%	6.7%
40-60	51pcs (340g 20.8%	16pcs (90g) 26.7%	48pcs (200g 19.6%	6 PCs (40g) 10%	67pcs (560g 27.3%	21pcs (130g 35%	20pcs (250g 8.2%	8 PCs (80g) 13.3%	59 PCs (850g) 24.1%	9 PCs (100g) 15%	245p 2.2kg 100%	60 pc (440g 100%
	65.4%	22%	85.7%	27.3%	65.7%	26%	57.1%	26.7%	64.1%	19.1%	67.5%	23.7%
60-80	8 PCs (50g) 22.9%	28pcs (100g 31.5%	3 PCs (35g) 8.6%	7 PCs (60g) 7.9%	7 PCs (55g) 20%	27pcs (90g) 30.3%	5 PCs (50g) 14.3%	7 PCs (60g) 7.7%	12 PCs (150g) 34.3%	20 PCs (190g) 22.5%	35pcs 340g 100%	89pcs 550g 100%
	10.3%	38.4%	5.4%	31.8%	6.9%	33.3%	14.3%	23.3%	13%	42.6%	9.6%	35.2%
80 -100	10pcs (45g) 20%	13pcs (90g) 20%	2 PCs (10g) 4%	3 PCs (20g) 4.6%	16pcs (70g) 32%	18pcs (110g 27.7%	7 PCs (25g) 14%	14pcs 130g 21.5%	15 PCs (100g) 30%	17 PCs (480g) 26.2%	50pcs (250g 100%	65pcs (780g 100%
	1.3%	17.8%	3.6%	13.6%	15.7%	22.2%	20%	46.7%	16.3%	36.2%	13.8%	25.7%
Total	**78pcs 475g 21.5%**	**73pcs 355g 28.9%**	**56pcs 255g15. 4%**	**22pcs 145g 8.7%**	**102 735g 28%**	**81Pc 390g 32%**	**35pcs 345g 9.6%**	**30pcs 280g 11.9%**	**92 pcs 1.1 kg 25.3%**	**47 pcs (780g) 18.6%**	**363 2.9kg 100%**	**253 1.9kg 100%**

Table 28 shows that the vertical distribution of earthenware shards increased downward, and reached its quality between spit 3 and 5 (40-100 cm). At KB. II, the highest distribution is in spit 3 (40-60 cm) with 67.5%, followed by spit 5 (80-100 cm) 13.8% and spit 4 (60-80 cm) 9.6%. The lowest distribution is in spit 1 (0-20 cm) with 0.3% and spit 2 (20-40 cm) with 8.8%. At KB. III, on the other hand, the highest concentration is in spit 4 with 35.2%, followed by spit 5 (25.7%) and spit 3 (23.7%). The lowest distribution is in spit 2 (6.7%) and spit 1 (8.7%). Generally speaking, it can be said that level 3 to 5 (60-100 cm) is the main cultural level of Kota Batu. Similar distribution also can be seen to the export ceramics as discussed in chapter 4. In terms of fabric, fabric 3 dominates the overall collection by 28% at KB. II and 32% at KB. III. In contrast

with the River-bank site, more fabric 1 is present at the on-land site by 28.9% at KB. III and 21.5% at KB. II. This indicates their ability to resist the erosion processes as in contrast to the River-bank site. Less earthenware shards are found from level 2 and 1. This may indicate that they became less popular due to an increase competition from the export ceramics.

7.3.2.2 Decoration

Like the Terusan Kupang earthenware pottery, the Kota Batu pottery exhibits a variety of decorative motifs. However, the Kota Batu pottery did not share common decorative styles to the former. Less carved-paddle techniques have been observed, they were instead mostly dominated by impression styles. The other techniques were rather more varied, comprising patterns made by incision, stamping and carving. Another common type is plain, undecorated shards [see table 29].

The categories of decorated shards are as follows:

(a) Ribbed. Impressed cord-marked techniques. The ribs stand out in relief and are more or less parallel. Most of the ribs are 1-2 mm. wide and are found on vessel bodies, and sometimes on lids. Unlike the Terusan Kupang pottery, these motifs are common at Kota Batu applied either vertically, diagonally or horizontally. Similar to the Neolithic Niah-impressed cord-marked earthenware of Sarawak [Solheim, Harrisson, B & Wall, 1959 c: 168; See ill. 29 a & b; plates 50 (g, I, n, p & q; 51 (v, r & h)].

(b) Impressed patterns of the wavy edge of a cockle or other shells into the clay. This motif is not common at Terusan Kupang and the Sarawak sites. The ribs stand out in relief about 1 cm. apart [see plates 50 (m); 51 (u & x)].

Table 28: Numbers of decorated and plain earthenware shards found at Kota Batu:

TRENCH	PLAIN	DECORATED	TOTAL
SURFACE COLLECTIONS			
KB. A2	8 pcs (990g) 14%	49 pcs (410g) 86%	**57 pcs (1.4kg) 100%**
	1.2%	7%	**4.2%**
KB. A3	43 pcs (1.4kg) 52.4%	39 pcs (300g) 47.6%	**82 pcs (1.7kg) 100%**
	6.5%	5.5%	**6%**
KB. AA2	24 pcs (1.2kg) 23.8%	77 pcs (895g) 76.2%	**101 pcs (2.1kg) 100%**
	3.6%	11%	**7.4%**
KB. AA3	17 pcs (1kg) 30.4%	39 pcs (210g) 69.6%	**56 pcs (1.2kg) 100%**
	2.6%	5.5%	**4.1%**
TEST EXCAVATIONS			
KB. A3	141 pcs (2.4kg) 54.9%	116 pcs (935g) 45.1%	**257 pcs (3.3kg) 100%**
	21.3%	16.5%	**18.8%**
KB. AA2	114 pcs (1.4kg) 57.9%	83 pcs (510g) 42.1%	**197 pcs (2kg) 100%**
	17.2%	11.8%	**14.4%**
DRY-LAND EXCAVATIONS			
KB. II	211 pcs (1.8kg) 58.1%	152 pcs (1.1kg) 41.9%	**363 pcs (2.9kg) 100%**
	31.9%	21.6%	**26.6%**
KB. III	104 pcs (1kg) 41.1%	149 pcs (900g) 58.9%	**253 pcs (1.9kg) 100%**
	15.7%	21.2%	**18.5%**
TOTAL	**662 pcs (11.1kg)**	**704 pcs (5.4kg)**	**1,366 pcs (16.5kg)**
%	**45.5%**	**51.5%**	**100%**

(c) Impressed vertical, horizontal or oblique serration patterns. Found on the vessel bodies and sometimes on rims and shoulders. Some form as a border to floral design motifs [see plates 50 (b, c, o, r & k); 51 (ai, l, w, d,e, f & o)]. Not common at Terusan Kupang site or the Sarawak sites.

(d) Impressed combined both parallel dashes between bordering lines and meander patterns [see plate 51 (s)].

(e) Paddle-impressed 'S' shape or spiral motifs. The same patterns are impressed repeatedly all over the body [see plate 51 (a, n & t)].

(f) Paddle-impressed checked, crossed or triangular patterns. These consist of diamonds or squares with borders in relief [see plate 51 (I & j)]. Similar to Terusan Kupang [Omar, 1981], Tanjong Kubor [Solheim, 1965: 9] and Gua Sireh [Datan, 1993: 36].

(g) Impressed horizontal herring bone patterns. This pattern consists of alternate bands of diagonal lines running in the same direction bordered by a single intervening line [see plate 50 (h)]. Not as common as at Terusan Kupang or at Tanjong Kubor in Sarawak.

(h) Paddle-impressed all curvilinear motifs including circles and ovals.

(i) Paddle-impressed parallel arcs between horizontal lines [see plate 51 (c & p)]. Not as common as at Terusan Kupang or at Tanjong Kubor site of Sarawak.

(j) Small impressed dot designs on all over the vessel bodies [see plates 50 (j); 51 (b, z, bi & q)].

(k) Impressed wavy lines [see plate 51 (m)].

(l) Incised decoration of cross-hatching patterns, combed and wavy lines.

(m) Punctuation or sometimes combined punctuation and incision. The motifs are usually found on shoulder part and on bodies of vessels. One of the shards found was decorated with wavy incised lines and triangular punctuation on the shoulder. Others including shallow dots around the neck or rim.

(n) Discrete stamped of one or more motifs stamped separately over the vessel body. The most common motif comprises clusters of small diamonds or stripe motifs. The other motif including leaf decoration, floral and '8' shaped motifs.

(o) Others (miscellaneous, or too eroded to be recognised).

Most of the decorated shards found at Kota Batu consisted of (o) type (473 pieces, 67.2% and weight 3.2 kilograms). These shards are either too small to be identified or too eroded to be recognised. This is especially true of shards discovered during the excavations at both the river-bank and the dry-land sites. On the recognisable decorated shards, they were dominated by type (a) with 123 pieces, 17.5% and 1.3kg, followed by type (c) with 27 pieces, 3.8% and 215g, type (b and f) with 17 shards, 2.4% and 130 and 100 g, type (l) 14 pieces, 2% and 105g, type (n) 7 pieces, 1% and 40g, type (d & g) 6 pieces, 0.9% and 100g. and 30g, type (m) 4 pieces, 0.6% and 25g, type (h) 3 pieces, 0.4% and 65g, type (e, I & k) 2 pieces, 0.3% and 10g and 20g, and type (j) with 1 piece, 0.1% and 5g. Almost 90% of the decorated shards are of fabric 3 type and the remaining 10% of fabric 4 and 5 types. Fabric 1 and 2 are mostly in plain bodies and in certain cases with traces of black glazing of *damar* or resin.

7.3.2.3 Vessel Shapes

Like the Terusan Kupang pottery, the identifications of the Kota Batu vessel shapes are primarily made through the rim parts. Out of 1,366 pottery shards, only 258 pieces or 18.9% are from the rim parts and weight 5.1 kilograms. The other body forms include the body part 1,041 pieces or 76.2% and weight 9.6 kilograms, the base part 33 pieces, 2.4% and weight 1.2 kilogram and the lids/handle parts with 34 pieces, 2.5% and weights 750 grams. Attempts are also made to reconstruct the vessel forms through the lid and handle parts. Their classifications are as follows:

Vessels identified through rim forms:

(i) Standardized storage jars. Total collections are 127pieces or 49.2%. Diameters at lips between 5 and 14 cms and fabrics always number 4 and 5. Maximum and minimum thickness in between 9 mm. and 4 mm. Most of them are in plain colours: grey (7.5 YR N/6), dark grey (10 YR 4/1), brown (10 YR 5/3), very pale brown (10 YR 8/3) and reddish yellow (7.5 YR 7/8). Some decorative motifs are impression, punctuation or incision of wavy lines, triangular in bands, curvilinear motifs, dot marks and cross patterns at either on the rims or on the shoulders [see plates 51 (ci) & 52; illustration 33]. (ii) Cooking pot with everted, non-thickened rims and rounded lips. Total collections are 127 pieces or 49.2%. Rim diameters range from 9 to 14 cms. and fabrics always number 1 and 2 and some fabric 3. Most in plain colours and range from light brown (7.5 YR 6/4) to very pale brown (10 YR 8/3), reddish yellow (5 YR 6/6) and pink (7.5 YR 8/4) [see plate 50 (a & d); 52 ; illu. 30 & 31]. Some very rare design motifs include impressed horizontal herring and incised vertical lines from the rim to the base.

(iii) Vessels with a direct rim, presumed in smaller examples to be lids, in larger cases to be bowls [Bellwood & Omar, 1980]. Three different vessels were identified: a bowl, a saucer and 3 covered boxes. They account for 2% of the total rim collections. All in plain bodies of either brown (10 YR 5/3) or grey (7.5 YR N/6) and fabric number 4 and 5.

Vessels identified through phallic or knob handle or lid forms:

(iv) Small storage jars and cover boxes. Identified by the lid part which usually has knob or lotus bud handles and some with direct lids. 18 pieces or 53% are composed of small storage jars/pots, 14 pieces or 41.1% cover boxes and 2 pieces or 5.9% *jarlets* or double-spouted vessels. The small storage jars/pots are similar to those discovered on numerous ship wrecks in the Gulf of Thailand [for

example, see Charoenwongsa & Prishanchit, 1990: 45; Green & Harper, 1987: 61-62 & 1983: 14-15, 54; Green, Harper & Prishanchittara, 1981: 22, 26] or in Vietnam [for example, see Nezu Institute of Fine Arts, 1993: 24-41]. This may indicate the possibility of their connections, probably originating from these two countries and brought along with export ceramics as export commodities. They are mostly plain, undecorated bodies with colour from reddish yellow (7.5 YR 7/8) to very pale brown (10 YR 8/3) [see plates 50 (e & l); 53; illu. 32].

(v) Jarlets or double-spouted vessels. Identified through the handle part. Only 2 pieces or 5.9% were identified. They consisted of soft bodies of fabric 2 and plain grey bodies (7.5 YR N6/). Common at Terusan Kupang [Omar, 1981] and at Tanjung Kubor sites of Sarawak. Also common at prehistoric Niah caves of Sarawak, which Tom Harrisson believed to be locally evolved traditions before being diffused to the nearby regions [Harrisson, 1971; 1974]. Solheim [1981 b] believed that this is the true *Malay Pottery Tradition*.

(vi) The other types of body form are body and base parts. Most of them are either in small fragments or too eroded to be identified. This is especially true of the body parts, despite their large quantities among the other shard forms. They fall into the 5 fabric categories, mostly decorated (51.5%) and plain bodies (45.5%). The base part consisted of a variety of vessel shapes, cooking pots, jars, storage pots and bowls. Three particularly interesting pieces are from the base/foot parts of cooking stoves. Hard bodies of fabric number 5 and plain of brownish yellow (10 YR6/8) and grey (7.5 YR N6/). Similar to those found in Thailand as mentioned earlier [see plate 55 a & b].

(vii) Others: crucibles. Only 12 pieces or 0.2% were recovered and weights 1.04 kilograms. These were tube like moulds used for bronze casting of locally a made cannon, the *bedils*. Made from a mixture of clay, crushed sandstones and gravel and other materials, including charcoal and plant inclusions. The body is cover

by a mixture of black (10 YR 2/1) to reddish (10 YR 4/8) glaze of local resin, *damar*. Always soft bodies and the fabric type are number 1 [see plate 54 a & b].

Vessel types (i), (ii) and (iv) are very well distributed throughout Kota Batu, both at the river-bank and the dry-land sites. This indicates their importance in the daily life of the local communities. Cooking pots are an essential kitchen utensils for cooking, while jars and storage jars are essential for carrying water and to store food stuffs, and liquids. It is surprising though to see the limited amount of vessel type (iii), in particular that of bowls, plates and dishes - all important vessels to serve food. The lacks of these materials are perhaps due to the influx of export wares in the local markets from the fourteenth centuries onwards. Bowls, plates and dishes are among the largest export wares to be found at Kota Batu [see chapter 4]. The export of cooking pots, on the other hand, is absent both during my recent field works and from the previous archaeological records. This may encourage the production of certain earthenware vessels, such as cooking pots, while the stoppage of certain vessels, such as bowls, dishes, and plates. The production perhaps continued until the end of the nineteenth or early in the twentieth century, when iron pots began to be used as an important utilitarian vessel.

The discovery of crucibles at the dry-land site may indicate the existence of some kind of bronze making, especially cannons. Historically, Brunei was known as the leading producers of cannons and yet there is still no evidence of such industries found. One suggestion is that the industry was located somewhere in the river-bank site, where the commoners used to live. The industry was perhaps operated on a small scale, usually

done on family basis[10]. In the 1960's, one of the Brunei museum staff discovered at this site a similar fabric of crucible, it was however, used to make gold or silver wares [Osman, 1992: 48]. The recent discovery may indicate the existence of a some kind of craft specialization on the dry-land site of Kota Batu, perhaps a brass workshop to produce cannons or various other bronze objects. Until the late nineteenth or even in the early twentieth centuries, cannons and bronzes were among the materials used by certain members of the local societies in ceremonial contexts, as status symbols, and as a means of exchange [Brown, D.E., 1970: 66]. Perhaps the workshop was used to produce cannons and other brass objects for the royal orders. Apart from the crucibles, other material objects were also discovered at the site, including rusted metal and bronze objects, stone and wooden implements and a large lump of resin or *damar* in a porcelain bowl [see plate 32]. The *damar* gum was possibly used to provide a surface coating on the earthenware surface, as it is still practised today in some Bornean pottery-making traditions [Omar, 1981: 44]. The existence of a small stream very near to the site may also support such an assumption. The stream is very well look after, protected on its bank by hard iron wood or the *bulian* and shaped sandstone blocks. The stream is essential for the running of the workshop and perhaps for the drainage of waste products to the Brunei River.

In terms of dating, the Kota Batu earthenware pottery can be dated around the fourteenth to the seventeenth centuries A.D. The dating is based on the dating of the export ceramics, which has always been found in direct association with the earthenware.

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10 The industry is usually restricted to certain families and guilds as has been practised up to the present day of Kampong (village) Ujung Tanjung, near the capital. According to Blundell [1923: 86] the craftsmanship was traditional, having been handed down from generation to generation. According to McArthur report [1906] that brassware was the more extensive craft, numbering more than two hundred. However after 1906, the demand for weapons (cannons) declined, but the smiths proved adaptable and concentrated more on the production of cigarette cases, asthrays and finger bowls. Meanwhile, the manufacturing of cannons or *bedils* are usually done to order.

The earliest pottery is perhaps from fabric 1 and 2, although they continued to be produced up to the seventeenth century, as can be seen by their distribution throughout all levels at trench KB. II and III [see table 28]. It seems to be that there is some sort of connection between the Terusan Kupang pottery of fabric 2 with the Kota Batu pottery of fabric 3. This was shown by the similarity of certain design motifs, especially the paddle and impressed techniques. These similarities are perhaps due to the transfer of knowledge and ideas, either through migration, trade or intermarriage between these close neighbours. Fabrics 4 and 5, on the other hand, most probably originated from the mainland of Southeast Asia, in particular from China, Thailand and Vietnam. Technically, they were better than the first three fabrics, with hard, semi-stoneware body [see below for futher discussion]. Perhaps they were brought together with the other export wares as discussed in chapter 5 and 6 respectively. They might be exported especially to carters for the commoners, who required cheap vessels but which were technically much better than the local earthenware traditions; or perhaps used as containers for other export commodities and then reused for other serviceable functions. This is a common practise even today.

7.3.3 Pulau Chermin

Two methods of data collections were applied, surface collection and trial excavation [see chapter 4]. Collections were done along the island's coastal bank of about 50 metre stretch [see fig. 12]. Only a 1X1 meter trench was excavated and dug up to 60 cms. depth. A total of 58 pieces weighing 890 grams were recovered during the surface collections and a total of 22 pieces weighing 300 grams from the test-excavation [see table 30]. The excavated trench was badly disturbed with the presence of modern materials at all levels. The total ceramic collection represented less than 1% of Pulau Chermin ceramic distributions.

Table 29: Total earthenware shards discovered at Pulau Chermin

SITES	EARTHENWARES	EXPORT WARES	TOTAL
SURFACE COLLECTIONS	58 pcs (890g) 4.1%	1,364 pcs (41.7kg) 96%	1,422 pcs (42.5kg)
	72.5%	86.7%	86%
TEST EXCAVATION	22 pcs (300g) 9.5%	210 pcs (4.7kg) 90.5%	232 pcs (5kg)
	27.5%	13.3%	14%
TOTAL	**80 pcs (1.1 kg) 4.8%**	**1,574 pcs (46.4kg) 95.2%**	**1,654 pcs (47.5 kg)**

7.3.3.1 Fabric

Shard fragments were analyzed visually and by using a hand lens. Three types of fabric are identified. They are classified as follows:

(1) **Fabric 1**: A fabric with very soft and rough body, with a high percentage of pin-holes. A dark grey core (7.5 YR N4/) and grey (2.5 YR N5/), reddish yellow (7.5 YR 6/8), very pale brown (10 YR 7/4) or light reddish brown exterior (7.5 YR N4/). Temper is coarse and composed of quartz, sandstones, charcoal, plants and vegetables inclusions. Fire at very low temperature of below 500 degree Celsius. Probably locally made and fired in the open hearth.

(2) **Fabric 2**: A fabric fired to an even light brown throughout (7.5 YR 6/4). Smooth and mostly with decorated body. Temper can be seen to the naked eye and composed of sandy and mica inclusions. Similar to Kota Batu fabric 3.

(3) **Fabric 3**: A fabric with very hard body. A dark grey core (2.5 YR N5/) and a fine black or white tiny inclusions. Colour range from brown (10 YR 5/3) to reddish yellow (7.5 YR 7/8), light brown (7.5 YR 6/4), greyish brown (10 YR 5/2) and very pale brown (10 YR 8/3). Fired at a high temperature of above 700 degree Celsius. Perhaps late production than the other two fabrics.

Table 30: Fabric distribution of the Pulau Chermin earthenware shards

	FABRIC			TOTAL
	1	2	3	
Surface Collections	33 pcs. (500g) 56.9%	12 pcs (180g) 20.7%	13 pcs (200g) 22.4%	58 pcs (880g) 100%
	66%	70.6%	100%	72.5%
Test Excavation	17 pcs (260g) 77.3%	5 pcs (40g) 22.7%	0	22 pcs (300g) 100%
	34%	29.4%	0	27.5%
TOTAL	50 pcs (760 g)	17 pcs (220 g)	13 pcs (200 g)	80 pcs (1.1 kg)
	62.5%	21.3%	16.2%	100%

The table shows that fabric 1 dominate the overall collections by 62.5%, followed by fabric 2 (21.3%) and fabric 3 (16.2%). Fabric 1 also dominates the collections of both working categories, 56.9% in the surface collections and 77.3% for the test excavation. Their abundances is perhaps due to their being locally made and therefore readily accessible whenever they were required. Furthermore, their poor quality means that they were prone to damage or breakage. Any damaged or unwanted vessels were simply disposed and replaced by new vessels. These two factors were crucial factors in the vast accumulation of fabric 1 as archaeologically shown in the above table. Fabric 2 and 3 are without any doubt related to Kota Batu and therefore dated around the fourteenth to the late seventeenth centuries A.D. They might be part of Kota Batu's material supplies sent to the island [see below]. However, this assumption is just on the present available data which is not conclusive evidence. Therefore, more data is still required.

7.3.3.2 Decoration

The close link between Pulau Chermin and Kota Batu not only influenced the island's overall ceramic collections but also influenced the island's pottery decorative motifs as well. Like Kota Batu, the decorative patterns were dominated by the impression techniques. Other methods are rather more rare, comprising patterns made by incision.

However, plain, undecorated shards were the commonest type in the earthenware assemblage [see table 32].

Table 31: Distributions of decorative and plain earthenware shards from P. Chermin

	PLAIN	DECORATED	TOTAL
SURFACE COLLECTIONS	46 pcs (700 g) 79.3%	12 pcs (190 g) 20.7%	**58 pcs (890 g) 100%**
	68.7%	92.3%	**72.5%**
TEST EXCAVATION	21 pcs (290 g) 95.5%	1 pc (10 g) 4.5%	**22 pcs (300 g) 100%**
	31.3%	7.7%	**27.5%**
TOTAL	**67 pcs (990 g) 83.8%**	**13 pcs (200 g) 16.2%**	**80 pcs (1.19 kg) 100%**

The categories of Pulau Chermin decorative motifs are as follows:

(a) Ribbed. Similar to the Kota Batu decorative motifs of (a) type.

(b) Impressed patterns of the wavy edge of a cockle or other shells into the clay. Similar to the Kota Batu (b) type.

(c) Impressed wavy lines. Similar to the Kota Batu (k) type.

(d) Incised decoration of cross-hatching, combed and rectilinear motifs. Similar to the Kota Batu (l) type [see plate 56 (e)].

(e) Others. Miscellaneous or too eroded to be recognised.

Only 13 pieces or 16.2% of the shards were decorated and the other 50 pieces or 74.6% had plain bodies. The decorated shards consisted of type (a) with 4 pieces or 30.8%, followed by type (b and d) 3 pieces each, 23.1% or 46.2%, type (e) 2 pieces or 15.4% and type (c) 1 piece or 7.6%. All the decorated shards were from fabric 2 type, similar to fabric 3 of the Kota Batu pottery. On the other hand, plain, undecorated shards mostly consisted of fabric 1 and some in fabric 3. They mostly consisted of cooking pots in fabric 1 and jars in fabric 3. The simplicity in the cooking pots might be related to their urgent needs, which I will elaborate later on below.

7.3.3.3 Vessel types

The identifications of vessel types was made through the rim parts. A total of 41 rims were recovered or 51.3% (30 from surface collections and 11 from test excavation). The other body forms are body parts 37 pieces or 46.2% (26 from surface collections and 11 from test excavation) and base and knob parts 1 piece each or 2.5% from surface collections. The vessel types are as follows:

(i) Cooking pots with everted, non-thickened rims and rounded lips. Rim diameters range from 9 to 14 cms. and always fabric number 1. Total collection was 23 pieces or 56% and weights 360 grams (18 from surface collections and 5 from test excavation). All with plain undecorated bodies. Colour range from very pale brown (10 YR 7/4), brown (7.5 YR 5/4), light reddish brown (5 YR 6/4), dark grey (7.5 YR N4/) and yellow (10 YR 8/8) [see plates 56 (a, c, f & g; 57 (a)].

(ii) Standardized storage jars. Total collections were 18 pieces or 44% and weights 310 grams. Diameters at lips between 9 and 15 cms. and always fabric number 3. Most of them had plain undecorated bodies. Colour range from very pale brown (10 YR 8/3), brown (10 YR 5/3), grey (7.5 YR N6/) and reddish yellow (7.5 YR 7/8). Some of the decorative motifs are incised rectilinear and cross-hatch on the rim or shoulder parts [see plate 56 (e)].

Rims from type (i) vessels are the most common in the overall collections. This shows their popularity and importance among the local inhabitants. They were used for cooking and many still have traces of soot on their bodies and rims. On the other hand, vessels type (ii) were probably used mainly for storage and perhaps transport of commodities.

In summary, the Pulau Chermin earthenware pottery can be dated in between the fourteenth and the late seventeenth or early eighteenth centuries A.D. They were very

much related to the Kota Batu assemblage, in particular type (ii) and (iii) fabric vessels. These relationships are perhaps to do with their close links in their long standing history [see chapter 4]. The island was used as a fortress since in the early fourteenth century to safe guard the mainland, in particular Kota Batu. Pulau Chermin depended on its requirements from Kota Batu as much as Kota Batu depended on its security from the island. Among the materials that were sent to the island were ceramics. Export wares dominated the ceramic supplies, judging from their high quantities compared to the earthenwares [see table 30]. Export ceramics also dominate the Kota Batu ceramic collections as discussed earlier [see table 25]. Some earthenware vessels were also sent to the island but not as many as the export wares. This can be told by the similarity of some fabric (ii) and (iii) types with the Kota Batu's fabrics (i) and (ii). Apart from the mainland supplies, earthenware vessels may have also been produced locally on the island. This assumption was based on the difference of certain wares found on the island with those found at Kota Batu or at Terusan Kupang. The locally produced earthenwares are thought to be dated in the mid-seventeenth century, when the island was seized by the usurping Sultan Abdul Mubin and used as his headquarters against Bendahara Muhyiddin at Kota Batu [see chapter 4]. The civil war which lasted for twelve years had isolated the island from the mainland and prevented the island from getting its material supplies, including ceramics. This might have encouraged some of the islanders to make their own pottery, which showed differently in the fabric forms from any of the Bruneian sites. They were made in a simple and primitive ways, and always in the fabric (i) type. All the vessels were plain and most were without decoration [see plates 56 & 57]. These characteristics are an indication that they were made simply for the sake of necessity, not for pleasure or aesthetic appeal, let alone for exchange commodities. They were made primarily as a supplement to the scarcity of utilitarian vessels created after the twelve years of civil wars between the two royal houses [see below, 7.4.3.1.1; 7.5].

7.4 Petrological analysis

The objective of this study is to use some form of scientific method in the analysis of the Brunei earthenware traditions. This study is to use a petrological analysis method, which is now becoming popular in the discipline of archaeology. Unlike the traditional visual examination methods, this method is more precise, reliable and authoritative guidance in description of the material. The visual examination method is often the best way to start in the study of pottery, in particular when dealing with the study of form, function, stylistic, and technological level. The study however becomes more complex, especially in dealing with the sources of materials. In practise, there are very few materials for which the different sources can be distinguished by eye. Much of the material, however, require some sort of specialized analytical methods to deal with. This is the way the scientific method of analysis came into archaeology, usually borrowed from other disciplines, such as geology, biology and chemistry.

The scientific analysis of pottery fabrics began in the nineteenth century, however, it is only in the last decade that work of this type has been widely undertaken [Peacock, D.P.S., 1970]. The best and most valuable method of identifying and classifying the mineralogical composition of pottery pastes and relating these to their respective geological environments is through the use of the petrological microscope [Williams, 1979: 73]. The technique is borrowed from the geologist, whereby a thin section of a sample is taken from a potshard to determine the source of the material. It is made thin enough to transmit light and then, by means of petrological examination with a light microscope, it is usually possible to recognize specific minerals that may be characteristic of a specific source.

The use of petrological methods in the study of Brunei earthenware traditions is extremely important, in particular to determine their sources of origin. As far as the Brunei earthenwares are concerned, there is still minimal scientific study of this subject. Most of the previous study still uses the conventional method, which, although it is

helpful in many respects, it is not a reliable or authoritative guide in some other aspects. An example to this can be seen in the clay, the material which characterizes many aspects of the earthenwares. Visually, the clay itself may look the same, but often it is the inclusions, the particles of minerals or rock fragments, which may distinguish whether the materials are locally made or from foreign origins. It is hope that this study will answer some of the questions, such as whether the Brunei earthenware traditions are locally made, as most scholars have agreed, or whether they are also imported from foreign countries. These questions that will be discussed in my analysis below.

7.4.1 Kota Batu

Some thirty earthenwares from Kota Batu are analysed and represent the three main working categories of the river-bank sites, surface collections, test excavations and the dry-land excavations. These represent 2.2% of the whole total of Kota Batu's earthenware collections of 1,365 pieces [see table 25]. Seven samples or 23.3% are from fabric 1 or 3.3% out of 210 pieces of the whole total of fabric 1 [see table 27]. Four pieces are from the river-bank sites and three pieces from the on-land sites. Two samples or 6.7% are from fabric 2 or 1.1% out of 183 pieces of the whole total of fabric 2. All are from the river-bank sites. Some eleven samples are from fabric 3 or 36.7% or 2.8% out of 392 pieces from the whole total of fabric 3. Seven pieces are from the river-bank sites and four pieces from the on-land site. Three pieces are from fabric 4 or 10% or 1.1% out of 269 pieces from the whole total of fabric 4. Two pieces are from the river-bank sites and 1 piece from the on-land sites. As for fabric 5, five samples are analyse or 20% or 2% out from 311 pieces of fabric 5 [see table 27]. Three pieces are from the river-bank sites and two pieces from the on-land sites. The analysis is as follows.

7.4.1.1 Fabric 1:

(1) KB. A3. River-bank site, sample no. 8.

Visual analysis: A body part probably of a cooking pot. Very soft body, with many pin-holes throughout the body. Large inclusions can be seen by naked eye. Plain without any design pattern. Light brown colour (7.5 YR 6/4) [see plate 58 (b)].

Petrological analysis: Content a large amount of grog, crushed sandstones and quartz particles. The most distinctive feature of this sample is the presence of large amounts of charcoal and perhaps plant material contents. The only sample from Kota Batu to have such material content. Very similar to the Pulau Chermin samples of fabric 1 [see below].

(2) KB. AA2. River-bank site, sample no. 7.

Visual analysis: A rim of a cooking pot. Very soft body, with lots of pin-holes throughout the body. Inclusions can be seen by naked eye. Plain body without a design motif. Light brown colour (7.5 YR 6/4) [see plate 58 (a)].

Petrological analysis: large contents of grog, crushed sandstones and quartz particles. Also, the presence of some feldspar, mica, iron ore and clay pellet.

(3) KB. AA3. River-bank site, sample no. 11.

Visual analysis: A rim of a cooking pot. Very soft body, with lots of pin-holes throughout the body. Plain without any decoration. Sooth remain can be seen on the body. Inclusions can be seen, mostly consisting of large particles. Reddish yellow in colour (5 YR 7/6) [see plate 50 (a)].

Petrological analysis: The same as the above features.

(4) KB. A3. River-bank site, sample no. 12.

Visual analysis: A rim of a cooking pot. Very soft body, with lots of pin-holes throughout the body. Plain without any design motif. Inclusions can be seen with a naked eye. Very pale brown (10 YR 8/3) [see plate 59 (d)].

Petrological analysis: The same as the above distinctive features.

(5) KB. II. On-land site, sample no. 6.

Visual analysis: A rim of a cooking pot. Similar as the above distinctive features. Very pale brown (10 YR 8/3) [see plate 59 (h)].

Petrological analysis: The same as the above features.

(6) KB. III. On-land site, sample no. 16.

Visual analysis: A rim of a cooking pot. Sooth remain can be seen on the body. Very soft body. Pinkish colour (7.5 YR 8/4) [see plate 50 (d)].

Petrological analysis: The same characteristic feature as above.

(7) KB. II. On-land site, sample no. 20.

Visual analysis: A rim of a cooking pot. The same characteristic features as above. Yellowish in colour (10 YR 8/6) [see plate 59 (j)].

Petrological analysis: The same as above.

7.4.1.1.1 Comments on fabric 1:

Definitely local origins. All the mineral contents are geologically local sources [see chapter 1: 8-10]. Close affinities with the Pulau Chermin fabric 1 type, especially the first sample (8) [see below].

7.4.1.2 Fabric 2:

(1) KB. AA2. River-bank site, sample no. 17.

Visual analysis: A body part probably of a jar or a kendi. Slightly harder than fabric 1. Rough surface due to the presence of small sandy particles all over the body surface. Paddle-impressed of sea-shell like motifs of (b) type [see plate 50 (m)]. Reddish yellow (7.5 YR 7/8).

Petrological analysis: Mostly consisting of dense groundmass of tiny quartz and sandy particles, with some feldspar, mica, iron ore and clay pellets. Size of minerals range from 2 mm to 0.2 mm. For quartz, they range from 1 mm to 0.5 mm., feldspar 0.2 mm to 1.2

mm, sandstone from 0.8 to 2 mm, mica 0.4 mm, clay pellets 0.6 to 1.8 mm and iron ore from 0.2 to 2 mm.

(2) KB. A3. River-bank site, sample no. 13.

Visual analysis: A rim of a cooking pot. Plain body, with tiny sandy particles all over the body. 5 mm. thick. Brown in colour (7.5 YR 5/2) [see plate 59 (b)].

Petrological analysis: The same as the above distinctive features.

7.4.1.2.1 Comments on fabric 2:

Locally produced earthenware. Visually, slightly improved from the first fabric, with some design motifs and better shapes [see above]. In terms of mineralogy contents, better inclusions of refined substances. Perhaps dated slightly later than the former fabrics, which showed better craftsmanship and refined inclusions.

7.4.1.3 Fabric 3:

(1) KB. AA3. River-bank site, sample no. 3.

Visual analysis: A body part probably of a cooking pot. Thin body with 4 mm. thickness. Paddle- impressed design of ribbed motifs of (a) type [see plate 59 (c)]. Reddish yellow in colour (7.5 YR 7/6).

Petrological analysis: Mostly consist of tiny grains of quartz and sandy particles. Also the presence of feldspar, mica, iron ore and clay pellets. The size of mineral contents are similar to sample number 17 and 13 above.

(2) KB. AA2. River-bank site, sample no. 29.

Visual analysis: A body part probably of a cooking pot. Thin body, 4 mm. thickness. Paddle-impressed designs of ribbed motifs of (a) type [see plate 59 (a)]. Brownish colour (7.5 YR 5/4).

Petrological analysis: The same as the above distinctive features.

(3) KB. A2. River-bank site, sample no. 33.

Visual analysis: A body part probably of a cooking pot or a kendi. Thin body, 4 mm. thickness. Paddle-impressed design of wavy motifs [see plate 51 (m)]. Reddish yellow in colour (7.5 YR 6/6).

Petrological analysis: Almost the same characteristic features as above.

(4) KB. AA2. River-bank site, sample no. 38.

Visual analysis: A body part probably of a cooking pot or a kendi. Paddle-impressed designs of ribbed motifs of (a) type [see plate 59 (c)]. Thin body, 4 mm. thickness. Reddish yellow in colour (7.5 YR 6/6).

Petrological analysis: Exactly similar to the above features.

(5) KB. AA3. River-bank site, sample no. 42.

Visual analysis: A body part probably of a cooking pot or a kendi. Thin body, 4 mm. thickness. Paddle-impressed design of oblique serration patterns of (c) type [see plate 50 (k)]. Light reddish (5 YR 6/4) on the body surface and dark grey (Hue 7.5 YR N4) on the core.

Petrological analysis: The same distinctive features as the above.

(6) KB. AA3. River-bank site, sample no. 43.

Visual analysis: A body probably of a cooking pot or a kendi. Thin body, 4 mm. thickness. Paddle-impressed design of spiral motif between serration patterns of (c) types [see plate 50 (c)]. Light greyish body (7.5 YR 6/4) and a dark grey core (7.5 YR N4/).

Petrological analysis: The same as above.

(7) KB. AA3. River-bank site, sample no. 44.

Visual analysis: A body part probably of a cooking pot or a kendi. Thin body, 3 mm. thickness. Paddle-impressed design of oblique serration patterns with floral motifs in the centre of (c) type [see plate 50 (b)]. Reddish brown in colour (5 YR 5/4).

Petrological analysis: The same as above features.

(8) KB. III. On-land sites, sample no. 5i.

Visual analysis: A body of a jar. Paddle-impressed of oblique serration motifs of (b) type. Light reddish brown (5 YR 6/4).

Petrological analysis: Same distinctive appearances as above.

(9) KB. II. On-land sites, sample no. 21.

Visual analysis: A rim part of a cooking pot. Plain body, with small sandy particles all over the body. Reddish yellow (5 YR 6/6) [see plate 58 (c)].

Petrological analysis: consist of different mineral contents as the above samples. Composed of metamorphic rock, which include lava, pyroxene and epidode, apart from quartz particles. These minerals are not of local origin.

(10) KB. II. On-land sites, sample no. 31.

Visual analysis: A body part probably of a cooking pot or a kendi. Thin body, 4 mm. thickness. Paddle-impressed design of horizontal serration patterns of (c) type [see plate 50 (o)]. Reddish yellow in colour (5 YR 7/6).

Petrological analysis: mostly consist of tiny grains of quartz and sandy particles. Also the presence of feldspar, mica, iron ore and clay pellets.

(11) KB. III. On-land sites, sample no. 40.

Visual analysis: A body part perhaps of a cooking pot or a kendi. Thin body, 4 mm. thickness. Paddle-impressed of ribbed motifs of (a) type [see plate 50 (p)]. Pinkish on the body surface (7.5 YR 7/2) and dark grey on the core (2.5 YR N/4).

Petrological analysis: Same distinctive appearances as above.

7.4.1.3.1 Comments on fabric 3:

Of the 11 samples, only 1 shard is not associated with the local minerals. It is composed of metamorphic rock of lava, pyroxene and epidode. These types of minerals are totally absent in Brunei, which are mostly composed of sandstone, quartz, sand, shale, clay, and

a few limestone [see chapter 1: 8-9; fig. 3]. The shard is most probably from foreign origins, perhaps from Thailand, Vietnam, China or other neighbouring countries which have metamorphic or volcanic rock types. The other samples are all associated with local minerals, so they are perhaps locally manufactured. Visually, fabric 3 are more elaborate than the two previous fabrics, mostly with paddle-impressed design motifs, thin bodies and semi-stoneware bodies [see above]. The motifs are common in the Malay world, known as the *Malay-Bau Pottery Tradition* or the *Tanjung Kubur Pottery Tradition* as discussed previously. In terms of mineral contents, they are well-sorted, with a fine clay matrix. Very popular among the earthenwares in contrast with the other fabric types [see table 6]. Perhaps dated much later than the two previous fabrics, probably from the late fourteenth century onwards.

7.4.1.4 Fabric 4:

(1) KB. A3. River-bank site, sample no. 37.

Visual analysis: A body probably of a jar. 5 mm. thickness. Smooth body. Impressed design on the shoulders of diamond motifs of (f) type [see plate 60 (a)]. Very pale brown in colour (10 YR 8/4).

Petrological analysis: Mostly fine and dense groundmass of quartz and sandstone particles.

(2) KB. A3. River-bank sites, sample no. 1.

Visual analysis: A body probably of a jar. Thick body, 7 mm. thickness. Plain, with a semi-stoneware body. Large quantities of tiny sandy particles can be seen by naked eye [see plate 60 (g)]. Grey colour (10 YR 5/1).

Petrological analysis: Contents some metamorphic rock, which consist of lava, pyroxene and epidode. These minerals are definitely not of local origin. Other minerals include quartz, sandstone and feldspar.

(3) KB. III. On-land sites, sample no. 41.

Visual analysis: A body part of perhaps a jar or a cooking pot. 5 mm. thick. Rough surface, with paddle-impressed of meander patterns of (d) type [see plate 51 (s)]. Reddish yellow body (5 YR 6/6) and a pinkish grey core (5 YR 6/2).

Petrological analysis: Mostly fine grains and dense groundmass of quartz and sandy particles. Other mineral contents including mica, feldspar, iron ore and clay pellets.

7.4.1.4.1 Comments on fabric 4:

Of the three samples, only one shard is not related to the local minerals. This is composed of metamorphic rock of lava, paroxine and epidode. The two other samples are related to the local minerals of quartz and sandstone. The shard is definitely from foreign origins, either from Thailand, Vietnam, China or from neighbouring regions. The other two shards are perhaps locally manufactured, although the fabric is not related to Brunei. Technically, the shards are better than the three previous fabrics, with hard, semi-stoneware body [see above]. They also have fine clay matrix, with overall fabric that is moderately well-sorted. In terms of dating, this fabric is perhaps slightly later than the other fabrics, probably from the fifteenth century onwards.

7.4.1.5 Fabric 5:

(1) KB. AA2. River-bank sites, sample no. 2.

Visual analysis: A body part probably of a jar. A stoneware body. Rough body, with paddle-impressed design of spiral motifs between horizontal lines of (e) type [see plate 51 (a)]. Thick body, 7 mm. Yellowish brown in colour (10 YR 5/6).

Petrological analysis: Consists of small and fine grains of quartz and sandy particles. Another common minerals are feldspar, mica, iron ore and clay pellets.

(2) KB. AA3. River-bank sites, sample no. 4.

Visual analysis: A body part probably of a jar. Hard body of likes stonewares. 6 mm. thickness. Paddle-impressed dots of diamond shape motifs of (j) type [see plate 51 (z)]. Pinkish colour of 7.5 YR 8/4.

Petrological analysis: The mineral contents are almost similar to above.

(3) KB. AA3. River-bank site, sample no. 5.

Visual analysis: A lid cover of a kendi or a jarlet. Plain body. Pinkish grey, 7.5 YR 6/2 [see plate 50 (l); illustration 32].

Petrological analysis: Similar to above.

(4) KB. AA3. River-bank sites, sample no. 30.

Visual analysis: A lid of a cover box or a ewer. Plain body. Brown in colour, 7.5 YR 5/4 [see plate 50 (e)].

Petrological analysis: Quartz inclusions are moderate. Size range from 0.8 mm to 3 mm in length. Sandstones are mostly in sub-rounded in shape, size from 1.4 mm to 1.8 mm. Clay pellets are rounded in shape, size from 7mm to 2 mm. Rare biotite mica is present. Iron ore is also moderate. Rounded to sub-angular in shape. Size range from 0.2 mm to 3 mm.

(5) KB. AA3. A river-bank site, sample no. 39.

Visual analysis: A body of a jar. Carved-paddle design of horizontal two lines with oblique lines inside or 'ladder-like' motifs. Reddish yellow body (7.5 YR 7/1) and a light grey core (10 YR 7/1) [see plate 50 (f)].

Petrological analysis: The same as above mineral contents.

(6) KB. II. On-land sites, sample no. 2i.

Visual analysis: A body part of a jar. Paddle-impressed design of sea-shell like motifs. Dark grey colour, 7.5 YR N4/.

Petrological analysis: Mostly clay and fine sandstone and quartz.

(7) KB. III. On-land sites, sample no. 4i.

Visual analysis: A rim of a jar. Some design motif on the shoulders of stab-and-drag groove motifs. Reddish yellow (5 YR 6/6).

Petrological analysis: Content metamorphic rock minerals of lava, pyroxene and epidode. Also some quartz and sand stone particles.

7.4.1.5.1 Comments on fabric 5:

Mostly associated with local minerals of sandstone and quartz types. Only the last sample is not related to local minerals. It consisted of metamorphic rock. This shard is surely of the foreign origin perhaps from Thailand, Vietnam, China or from other neighbouring countries. The other samples are of local origin, based on the mineral contents, although the fabric type is not related to the local traditions. Visually, most of the shards are very similar to those found in Thailand or Vietnam, especially the two lids of samples (3) and (4). In comparison, the colour of the Thai wares is dark grey to light orange and from light grey 10YR 7/2 to yellowish brown 10YR 5/6 [Green, Harper & Intakosi, 1987: 61-2]. However, no mineralogical composition of pottery pastes is given. What can be said about Thailand's historic earthenware traditions is that most have little sand and organic content [Bhumadhon, 1994]. A petrological study of Thailand's earthenwares is therefore important in order to determine their distribution.

7.4.2 Terusan Kupang

Ten samples or 17.2% out of 58 earthenware shards are selected for the analysis. They represent the four trenches of TK. E, TK. G, TK. H and TK. J. They are composed of three fabric types of 1, 2 and 3 [see table 22 & 23]. As for fabric 1, only one sample is available for analysis and represents 10% out of the ten selected samples, or 5.6% out of 18 pieces of fabric 1. For fabric 2, five samples are analyse or 50% or 23.8% out of twenty-one pieces of fabric 2. And for fabric 3, four pieces are analyse or 40% of the

whole total of samples or 21.1% out of nineteen pieces of fabric 3. The analyses are as follows:

7.4.2.1 Fabric 1:

(1) TK. G, sample no. 3i.

Visual analysis: A rim of a cooking pot. Soft body, without any design. Sooth remains can be seen on the body. Inclusions can be seen by naked eye [see plate 49 (I)]. Reddish brown (5 YR 5/4).

Petrological analysis: The presence of grog and large particles of quartz and sandstone particles. Other material inclusions include mica, some traces of iron ore and clay pellets.

7.4.2.1.1 Comments on fabric 1:

Strongly believed to be of local origin. The material contents are associated with the local geological features of quartz, sandstones and gravel. Low fired, perhaps below 500 degree Celsius. Based on the visual [see above] and petrological analysis, the shard can be dated to the early period of Terusan Kupang, which is around the eight century or much earlier. The inclusions are simply crushed without further refinements.

7.4.2.2 Fabric 2:

(1) TK.G, sample no. 23.

Visual analysis: A body part probably of a cooking pot. Traces of sooth can be seen on the surface of the shard. Thin body, 4 mm. thickness. Semi-stoneware body. Paddle-impressed design of herring-bone motifs [see plate 49 (f)]. Greyish brown, 10 YR 5/2.

Petrological analysis: Mainly composed fine, dense groundmass of tiny quartz and sandy particles. Also present some mica, iron ore, feldspar and clay pellets.

(2) TK.G, sample no. 24.

Visual analysis: A body part of a jar or a cooking pot. 5 mm. thickness. Paddle decoration of triangles between bordering lines [see plate 49 (b); illustration 24 a & b]. Light grey colour 10 YR 7/2.

Petrological analysis: Similar to the above mineral contents.

(3) TK. E, sample no. 25.

Visual analysis: A body of a jar or cooking pot. 5 mm. thickness. Paddle decoration of curvilinear and semi- curvilinear ovals [see plate 49 (g)]. Light grey colour, 10 YR 7/2.

Petrological analysis: Content tiny particles of crushed quartz and sandstones similar to the previous materials. Also some mica, iron ore, feldspar and clay pellets.

(4) TK. G, sample no. 27.

Visual analysis: A body part probably of a jar or a cooking pot. Thick body, 9 mm. thickness. Hard body of stoneware body. Paddle decoration of triangular between bordering lines [see plate 49 (a)]. Light grey colour, 10 YR 7/2.

Petrological analysis: Almost similar distinctive features as the above samples.

(5) TK. G, sample no. 36.

Visual analysis: A body part probably of a jar or a cooking pot. 5-3 mm. thickness. Some visible inclusions can be seen on the body surface, composed of tiny sandy particles. Paddle decoration of triangles between bordering lines [see plate 49 (j)]. Very pale brown, 10 YR 7/3.

Petrological analysis: Consisted of tiny, dense groundmass of quartz and sandy particles. Similar to the previous samples as discussed above.

7.4.2.2.1 Comments on fabric 2:

All the mineral contents are associated with the local geological features of sandstone and quartz. Therefore the shards most probably of local origin, although the fabric might not be related to the local traditions.

7.4.2.3 Fabric 3:

(1) TK. E, sample no. 1i.

Visual analysis: A rim of a jar. Hard body equivalent to stonewares. No visible inclusions can be seen by naked eye. Stab-and-drag patterns on the shoulder [see plate 49 (d)]. White colour, 2.5 YR N8/.

Petrological analysis: Dense groundmass of tiny quartz and sandy particles like the mineral contents in fabric 2 discussed above. Other mineral contents include feldspar, some traces of iron ore and clay pellets.

(2) TK. H, sample no. 6i.

Visual analysis: A body probably of a jar. Stoneware body, probably fired above 500 degree Celsius. Stab-and-drag patterns of short, oblique lines [see plate 49 (l)]. Greyish brown, 10 YR 5/2.

Petrological analysis: Same characteristic features as the above samples.

(3) TK. E, sample no. 26.

Visual analysis: A rim part of a jar. Thick body, 9-6 mm. thickness. Paddle-impressed decoration of parallel arcs between horizontal lines [see plate 49 (e)]. Light grey body, 10 YR 7/2.

Petrological analysis: Tiny, dense groundmass of quartz and sandy particles. Similar to the above samples.

(4) TK. G, sample no. 34.

Visual analysis: A body probably of a jar. Hard stoneware body. Paddle-impressed decoration of discrete herring bone motifs [see plate 49 (c)]. Light grey, 10 YR 7/2.

Petrological analysis: Almost similar to the above samples.

7.4.2.3.1 Comments on fabric 3:

The overall fabric shows moderately well-sorted. The mineral contents and arrangements are almost the same fabric 2. Visually, not much difference can be seen in these two fabrics. This is especially true of the design motifs of paddle-impressed techniques, which show a continuation process. In terms of mineral contents, the shards are believed to be of local origin. All the materials are geologically associated with the local origins. Technically, however, the shards are most probably not related to the local traditions.

7.4.3 Pulau Chermin

Some ten samples or 1.3% out of 80 pieces of earthenware shards found at Pulau Chermin have been analysed. They represent the two working categories, surface collections and a test excavation. They came from the three fabric types 1, 2, and 3 [see table 30 & 31]. Eight samples came from fabric 1 or 80% of the total of analysed samples or 16% out of fifty pieces of fabric 1. As for fabric 2, only one piece is analysed or 10% or 5.9% out of seventeen pieces of fabric 2. And for fabric 3, only one piece is analysed or 10% or 7.7% out of thirteen pieces of fabric 3. The analyses is as follows.

7.4.3.1 Fabric 1:

(1) Surface collections, sample no. 9.

Visual analysis: A body part of a cooking pot. Very soft body with visible inclusions. Plain without any decoration. Two colours. Reddish yellow (7.5 YR 6/6) and grey (7.5 YR N5/) [see plates 56 (b); 57 (c)].

Petrological analysis: Mineral contents include grog, large particles of quartz and sandstone. Also the presence of large quantities of black substances of charcoal and perhaps plant materials (not rice husks).

(2) Surface collections, sample no. 10.

Visual analysis: A body part of a cooking pot. Very soft body, with visible inclusions. Plain body. Two colours, grey (2.5 YR N/5) and reddish yellow (7.5 YR 6/8) [see plate 56 (I)].

Petrological analysis: large quantities of grog, large particles of quartz and sandstones. Some mica, feldspar and clay pellets are also can be identified.

(3) Surface collections, sample no. 14.

Visual analysis: A rim part of a cooking pot. Very soft body, with visible large inclusions. Paddle impressed of unclear design motif. Two colours. The exterior body is light reddish brown (5 YR 6/4) and the interior body dark grey (7.5 YR N4/) [see plate 56 (a)].

Petrological analysis: Contains large quantities of charcoal and plant materials. Also present is grog, large particles of quartz and sandstone. Similar to number (1) above.

(4) Surface collections, sample no. 15.

Visual analysis: A body part of a cooking pot. Similar features as the above samples. Two colours can be seen. Yellowish at the exterior (10 YR 8/6) and dark grey at the interior (7.5 YR N4/) [see plate 57 (b)].

Petrological analysis: Very much as sample number 9 and 14.

(5) Surface collections, sample no. 19.

Visual analysis: A rim of a cooking pot. Very soft body, with visible large inclusions. Lot of pin holes all over the body. Plain body, with brown in colour (7.5 YR 5/4) [see plate 56 (g)].

Petrological analysis: Almost similar to the previous samples of 9, 14 and 15 above.

(6) Surface collections, sample no. 22.

Visual analysis: A rim of a cooking pot. Similar to the above samples. Two colours, grey at the exterior body (2.5 YR N5/) and yellow at the interior body (10 YR 8/8) [see plate 56 (c).

Petrological analysis: Similar to samples no. 9, 14, 15 and 19 above.

(7) Excavation, sample no. 32.

Visual analysis: A body part of a cooking pot. A similar distinctive feature to the previous shards. Yellow colour, 10 YR 8/6 [see plate 56 (d)].

Petrological analysis: Large particles of grog, crushed quartz and sandstone particles. Also present some traces of mica, iron ore and clay pellets. Similar to 10 above.

(8) Excavation, sample no. 18.

Visual analysis: A rim part of a cooking pot. Similar to the above samples. Very pale brown, 10 YR 7/4 [see plates 56 (f); 57 (d)].

Petrological analysis: Similar to sample no. 10 and 32 above.

7.4.3.1.1 Comments on fabric 1:

All mineral contents are very related to the local origins. Definitely locally made, either from Kota Batu or the island itself. Two distinguishable material contents can be identified, which may be able to determine their sources of origins. The first samples consisted of large particles of grog, quartz and sandstone, and the others consisted of just a small number of these minerals, but mostly consisted of charcoal and plant inclusions. There are three samples in this first category, number (10), (18) and (32). The second category consisted of five samples, number (9), (14), (15), (19) and (22). The former category is probably from Kota Batu, as shown by the similarity of their mineral contents [see Kota Batu's fabric 1 above]. They were among the materials sent to the island as a supplied item from the mainland [see chapter 4 and above]. The second category is most probably locally made vessels, made possibly after the civil wars had isolated the island

for more than twelve years [ibid]. They were made as a supplement to the limited vessels resulting from the blockage from the mainland. The hardship created by this prolonged war are shown by the way the pottery was made, which showed poor in quality and crude craftsmanship. They also were lacking in tempering materials and were just fired in the bonfires. All of this is shown in the petrological analysis, which showed limited tempering minerals, and the presence of many charcoal and some plant inclusions.

7.4.3.2 Fabric 2:

(1) Surface collections, sample no. 35.

Visual analysis: A rim of a jar. Smooth semi-stoneware body. Incised design on the shoulder of cross-hatching motifs. Very pale brown, 10 YR 8/4 [see plate 56 (e)].

Petrological analysis: Medium size mineral inclusions of quartz and sandstone. Other minerals include mica, feldspar, iron ore and clay pellets.

7.4.3.2.1 Comments on fabric 2:

Probably of local origin, due to the presence of local minerals of quartz, sandstone and others. Nevertheless, these minerals are universal and common throughout the Mainland Southeast Asia. Visually, the fabric is not related to the local traditions. Related to the Kota Batu fabric 4 type. Perhaps one of the materials sent to the island as supplied items from the mainland.

7.4.3.3 Fabric 3:

(1) Surface collections, sample no. 28.

Visual analysis: A spout of a ewer or a kendi. Hard semi-stoneware body. Smooth surface, without any decoration. Light brown, 7.5 YR 6/4 [see plate 56 (h); illustration 34].

Petrological analysis: Fine inclusions of groundmass quartz and sandstone particles.

7.4.3.3.1 Comments on fabric 3:

The shard is most probably of foreign origin, although the minerals are associated with the local origins. Most probably from the Mainland Southeast Asia of Thailand or Vietnam or China. Related to the Kota Batu fabric 5.

7.5 General comments on the Kota Batu, Terusan Kupang and Pulau Chermin fabrics:

Generally speaking, only 3 samples of the Kota Batu fabrics are of foreign origin, based on the mineral contents in the clay. They came from three different fabrics of fabric 3 (sample 9), fabric 4 (sample 2), and fabric 5 (sample 7). The other 27 samples are mostly related to local minerals, although some of the shards are not related to the local origins. This usually applies to shards of fabric 4 and 5. These are hard bodied earthenwares, which mostly resemble those discovered in the Gulf of Thailand or Vietnam as discussed previously in this chapter. Local earthenware traditions are probably not up to this technical level, based on the previous observations on the local earthenware traditions by McArthur [1904], Moore [1964], Evans [1955], Alman [1960], Morrisson [1955], and Freeman [1955]. The highest level local potteries could reach was perhaps up to fabric 3. However, even fabric 3 is not always associated with the local traditions, as shown by sample (9), although the other samples consisted of local rock minerals. Visually, not much information can be obtained in determining their sources. Carved-paddle techniques are common throughout the Malay World, and even to the southern Philippines, southern and northern Thailand.

Fabric 1 and 2 are without any doubt associated with local traditions. They are usually simple earthenware, with few design motifs and very soft bodies. Perhaps dated earlier than the three previous fabrics.

On the Terusan Kupang samples, they were generally associated with the local minerals of sandstone. The site is located at two main rock formations of Belait and Setap

Formations. The former is composed of parent coarse sandstone, which formed into colluvium and sand. Another is the Setap Formation, which consisted of shale and clay, with sandstone and siltstone [see chapter 1: 8-10; fig. 3]. All these minerals are present in the analysis samples, which strongly suggest local origins. Technically, however, only fabric 1 and perhaps fabric 2 are related to the local traditions, while fabric 3 are more related to foreign origin [see above]. Visually, most of fabric 3 vessels are also very similar to those discovered on the Mainland Southeast Asia, notably in Thailand, Vietnam and China. This is particularly true of the jars, which are elaborate in form and style. In this circumstance, a comparative study of the pottery of Mainland Southeast Asia, including the Malay world is important. So far little is known about the mineralogy of these foreign potteries.

Meanwhile, Matussin Omar [1981: 71-2] has observed that the Terusan Kupang potteries have shown some similarities with those of the Tanjung Kubur of Sarawak and Tung Kwu samples from Hong Kong. They shared common dense groundmass of tiny quartz particles. Minor variations in the density of the quartz groundmass are sometimes visible, but no coherent pattern is visible. He believed that this shared identification is extremely homogeneous of the Terusan Kupang pottery in terms of design and technique of manufacture, and its distribution includes coastal northern Borneo, Malaya, and possibly Hong Kong. He believes these distributions are due to a trade mechanism of both Borneo and Chinese merchants. On this matter, more analyses is still required, involving samples from the Tanjung Kubur, Johore, Sumatra, southern Philippines, Thailand and Hong Kong, where paddle-impressed potteries of the so-called *Malay-Bau Pottery Tradition* or *Tanjung Kubur Pottery Tradition* are known to have existed. Without these comparative studies, it is difficult to determine their origins, whether they were locally produced or foreign imports. The origins are not necessarily in Borneo, as previously suggested, but it might originate from these regions, where their pottery traditions have developed since the prehistoric time.

The Pulau Chermin samples have proved to be a very interesting despite the analysis of only 10 samples. Unlike the Terusan Kupang and Kota Batu sites, the island samples have shown three different sources of origin, based on the mineralogy present in each sample. Of the local wares, they can be identified as two types, from the mainland and locally manufactured earthenwares. These were always in the fabric 1 type. Fabric 2 and 3 are probably associated with foreign origins, despite the mineral content being typical to local origin. They are part of export materials sent to Brunei, in addition to export ceramics as been discussed in chapter 5 and 6 respectively. Nevertheless, they were sent to the island via Kota Batu, not by direct means like Terusan Kupang and Kota Batu. Therefore, the fabric and mineral content are related to Kota Batu as already discussed earlier in this chapter.

The petrological studies have provided some identification in the determination of the mineral sources. This is particularly useful in the tracing of foreign minerals which are absent in the local geological features. Nevertheless, only Brunei samples are available in this present study, which hardly help in the identification of pottery distributions. This is due to an absence of any Southeast Asian potteries in my analysis, and also an absence of references on the Southeast Asian petrological analysis. In these circumstances, comparative studies of Southeast Asian pottery are essential in order to trace their sources of origins.

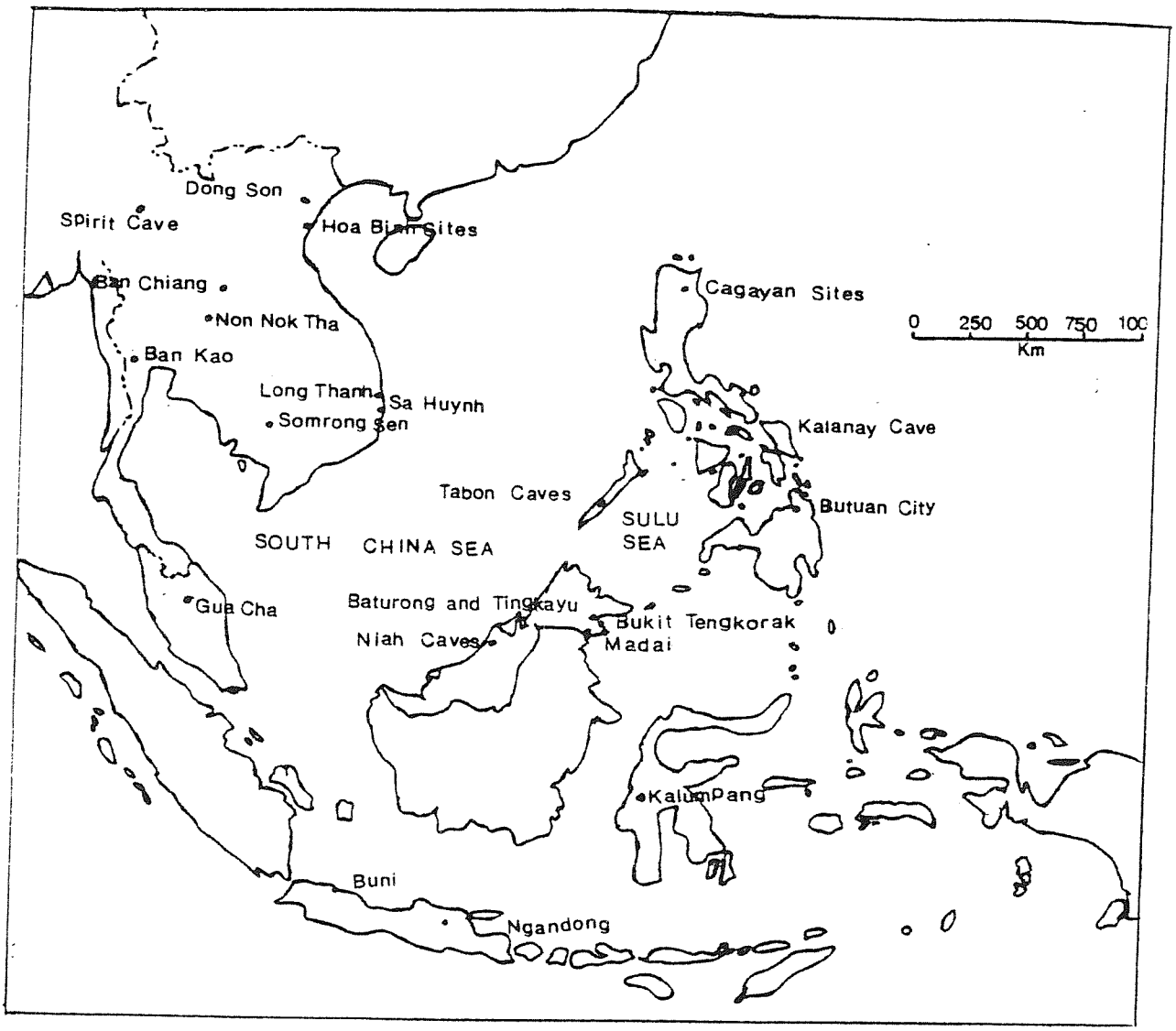

Figure 20: Map of Mainland and Island of Southeast Asia showing major Neolithic, Metal and Protohistoric sites mentioned in this study.

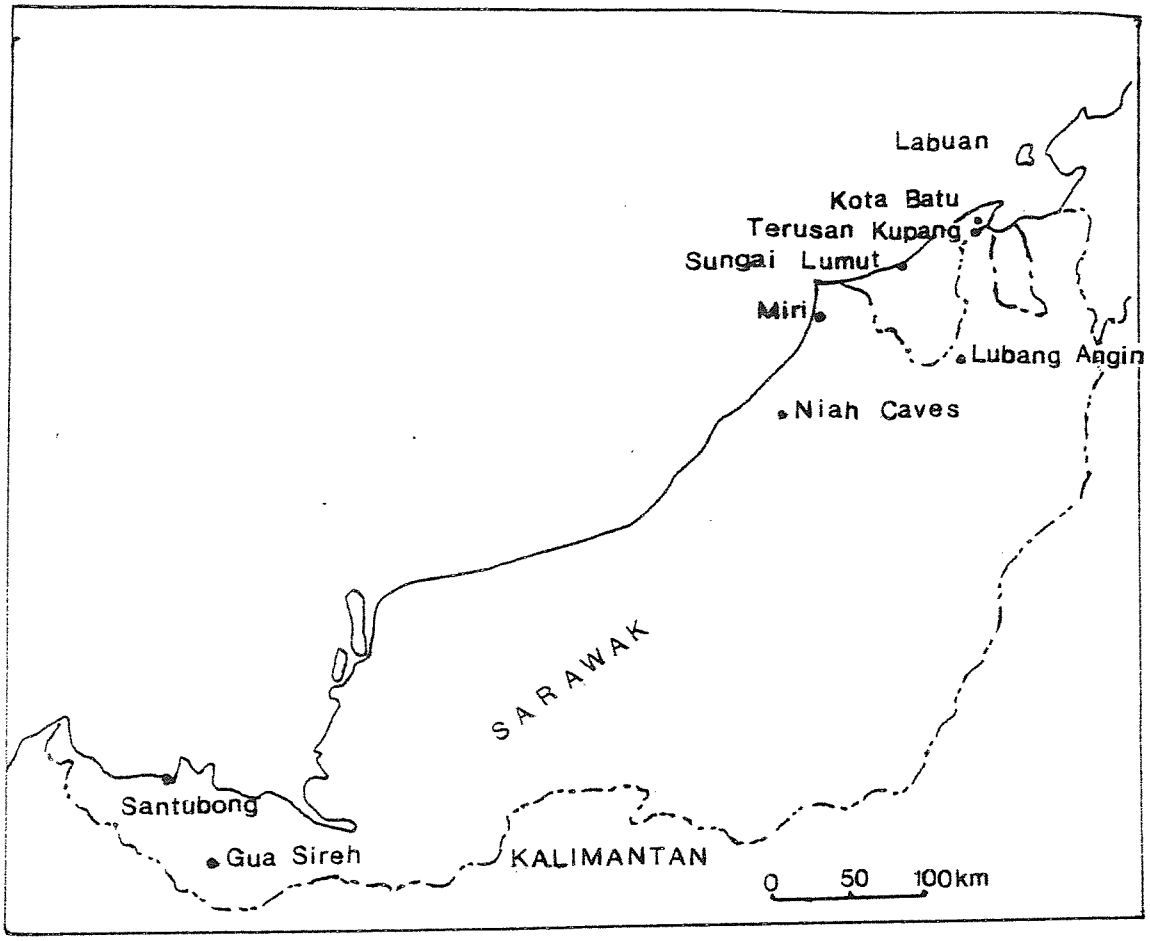

Figure 21: Map of Sarawak and Brunei showing major prehistoric and protohistoric sites mentioned in this study.

CHAPTER 9

SUMMARY AND CONCLUSIONS

The general conclusion that can be drawn from this study is the importance of archaeology in the understanding and reconstruction of Brunei's early history. This is especially true for the period prior to European contact in the sixteenth century as there are few written documents about the country. This is the period when Brunei's history is still dark and uncertain. The earlier Indian, Arab and Chinese written sources are fragmentary and often add to the confusion as, for example, in the identification of places or people's names in the Southeast Asian context. In these documents the name Brunei does not exist and only came into use as recently as the last century or so. Before that time different names were given based on individual terminologies and these were interchangeable. The Europeans spell it differently, for example, Bruni, Brunai, Brune, Borneo, Borney, Borne, and Burni. According to Arab sources it was known as Barni and in Javanese sources as Buruneng. The Chinese called it P'o-lo, Poli, P'o-ni, Wen-lai and Bun-lai. There are still arguments on the terminology, especially in dealing with Chinese sources.

Archaeology is not always an easy task in Brunei. This is partly due to its late development in contrast with her neighbouring countries in Southeast Asia, and partly due to an absence of monumental architectures or urban centres that could help in the reconstruction of Brunei's early history. This is not to say that Brunei did not have a centre of civilization. Most of the architecture of Brunei was traditionally constructed in perishable materials like wood, bamboo and palm leaf, which hardly left any traces in the archaeological records. Furthermore, most of the city's dwellings were located along the river bank, creating difficulties in tracing their existence. Nevertheless, Brunei was an important city and port of call in Southeast Asia. In 1521, the city was said to have supported a population of 25,000 families [Pigafetta, 1874], roughly an equivalent to 162,000 people. Some scholars, however, argued with this estimation and proposed

around 50,000 people as the most appropriate population [Reid, 1993: 70]. This population is still considered large for a country which even now has less than 400,000 people.

Something important must have encouraged a concentration of people towards Brunei's city, and at the same time attracted foreign traders to its port. As discussed in chapter 2, the main reason for Brunei's success was primarily its richness in natural and jungle resources, such as camphor, spices, birds' nest, tortoise shells, and bees' wax. Brunei was fortunate enough to have these valuables and without them it would not have been such an important location as it was situated a long way from the bustling Melaka Strait. The existence of a favourable wind system in Southeast Asia also encouraged the development of early shippings to the region as early as the first century A.D. As a result, Southeast Asia became an important passage way linking India in the west and China in the east. This contributed to the growth of entrepots and ports along the passage way, and eventually led to the development of city-states. The availability of exotic products and the presence of foreign traders in Brunei contributed to her success and revival as an important city-state in Southeast Asia.

Evidence from these early trade networks are enormous, the most important being the ceramic remains. Many other items were used in trade transactions, such as silk, lacquer wares, tea, and cotton. However, all these items perished due to the country's harsh, humid tropical climate. Even though ceramics are breakable, in fragments they are virtually indestructible. So ceramics are there to be found, ready to be explored and studied. Since they are among the largest single artifacts available and the least to be studied, I have taken the opportunity to make use of them as my archaeological source in studying Brunei's early history, socially and economically. Indeed, as the study has shown, ceramics provide a wide variety of information when placed within the social and economic perspective. They provide very strong evidence based on typological criteria of the dating of Brunei's main archaeological sites as shown at Terusan Kupang, Kota

Batu and Pulau Chermin. Similarly, the study of ceramics, their types, shapes and forms have provided vital information about the nature of the social and cultural life that once existed at these sites. Ceramic remains also reflect the extent of trade relationships that existed between their countries of origin on one hand and the countries who imported them as trade ceramics on the other. As the study has shown, Brunei also took an active role in international commerce since the prehistoric times, not only with China as was widely believed, but also with other nationalities within the Southeast Asian regions and beyond. Therefore, the contribution of ceramics in Brunei's archaeo-historical evidence cannot be denied as an invaluable historical source while other materials have perished due to the country's hot and humid tropical climate.

In order to understand Brunei's early history, one needs to understand the sequence of history in Southeast Asia. As discussed in this study, these regions had close networks, and are very much related in their long standing history. This connection had existed since the prehistoric time, when the region was connected by a land mass created at the height of the last ice age thousands of years ago. This land mass linked mainland China with Taiwan and the Malay Peninsula with Sumatra, Borneo, and Java. The forefathers of the Southeast Asian societies were believed to have migrated down from the highlands of mainland China to the broad shoreline of this exposed shelf. These migrants are believed to be the world's first 'boat people', the first people to cross a body of shallow water and settle on new land. As they moved along, they brought with them new ideas and technology, which were eventually transferred into the local culture. It is therefore not surprising to see a common and shared cultural identity found both in the Mainland and Island Southeast Asia, either in terms of archaeological remains, physical appearances or languages. These shared cultural identities can be seen in the earthenware traditions as discussed in chapter 7. Earthenwares are among the largest artifacts that have survived as archaeological remains throughout the region. Other material cultures are lacking, although the contribution made by a few Don-son drums is also very important.

As Southeast Asia entered into the proto-historic period, the region experienced further great changes, socially and economically. On the Mainland, despite being partitioned by mountains, they continued to maintain their cultural contacts through the great rivers of Mekong, Chao Phraya and Irrawaddy. Similarly, in the Island of Southeast Asia, societies continued to maintain their closeness through the surrounding water and by their proximity to the Mainland and to one another. Therefore, contact between societies continued to be maintained as in the prehistoric past. Contact became more frequent and easier, especially after the evolution of shipping technology during the early century A.D. [Manguin, 1980, 1993].

As Southeast Asian societies became more complex, demand for luxury and foreign items became more popular. This contributed further to the scale of Southeast Asian trade networks as never experienced before. Archaeologically, these events are clearer, and are shown by the enormous amount of Oriental trade ceramics of Chinese, Thai and Vietnamese types found scattered throughout the Southeast Asian regions. Evidence from these trade networks are extensively discussed in chapter 5 and 6 respectively. Brunei also experienced this economic boom, demonstrated by the richness of Oriental ceramics found at Kota Batu, Terusan Kupang and Pulau Chermin, as discussed in chapter 4. These ceramics show Brunei's active involvement in the internal affairs of the region. Without such archaeological evidence, this active participation could not be found, mainly because no such accounts have ever been recorded in Brunei's history. Therefore, it could be said that this study throws some light on the uncertainty that surrounds Brunei's past.

Although the 1995 excavations and surface collections were completed in a short period of time, the evidence obtained is of considerable importance. A few conclusions can be drawn from the features of these three sites, which represent two different periods and functional roles. On the Terusan Kupang site, we see a possible habitation site, demonstrated by the huge accumulation of ceramic shards of both export and local types.

The evidence of wooden poles and other domestic refuse also supports such an assumption. Based on radiocarbon dating, the site was dated from the eight century or earlier [Omar, 1981]. During the early phase of Terusan Kupang, earthenware pottery played an important part in the daily life of the local society, before it began to face severe competition from the export ceramics during the late phase of the tenth to the thirteenth centuries A.D.

Terusan Kupang is one of the earliest sites in Brunei, based on the radiocarbon dating and the typology of export ceramics. It could be suggested that the site was once important in Brunei and perhaps one of their earliest ports during those times. However, as time progressed, the site began to lose its strategic and economic interests. This contributed to its abandonment in favour of a new place, Kota Batu. Kota Batu is without any doubt one of most important sites in Brunei and is more strategically located than Terusan Kupang. It became the new administrative and population centre of Brunei. Trade with the outside world continued to increase, archaeologically shown by the evidence of large quantities of Oriental trade ceramics of Chinese, Thai or Vietnamese wares. Meanwhile, earthenware traditions continued to be practised as shown by their existence along sides the export ceramics. However, their popularity began to diminish due to the influx and superiority of export ceramics. Only certain earthenware potteries were produced, such as cooking pots, which were limited among the export wares.

Unlike the Terusan Kupang and Kota Batu sites, Pulau Chermin only functioned as a fortress or defensive station for Kota Batu. The island was too small for permanent settlements. The land was scare and rough, and prone to the monsoon winds. Nevertheless, its strategic location at the upper part of Brunei River and Brunei Bay made it ideal for defensive purposes. It has more connections with Kota Batu than Terusan Kupang. Geographically, the island is more closer to Kota Batu than to Terusan Kupang. Furthermore, the ceramic assemblage is more the least similar to the Kota Batu than the Terusan Kupang assemblages. The dating is therefore close to Kota Batu, from the

fourteenth to the seventeenth centuries A.D. However, some of the earthenware traditions are totally different from any of the Bruneian sites and showed a crudeness in their quality and were finished poorly. These potteries were perhaps developed independently on the island, most probably by the followers of Sultan Abdul Mubin in the mid-seventeenth century [see chapter 4 & 7]. They were forced to make their own potteries because the prolonged civil wars had isolated them from the mainland. They were prevented from receiving regular supplies of food and materials from the mainland, and at the same time were prevented from going to the mainland to collect their supplies. This was a good strategy undertaken by the mainland rivals and within twelve years they had won the war. The island was recaptured and the king and his followers were killed by Bendahara Muhyiddin and his followers.

The civil war between the royal families is considered a turning point in the decline of Brunei influence and power in Southeast Asia. In combination with other factors, such as piracy, the Spaniard attacks and anarchy, contributed to Kota Batu's downfall and abandonment in the late seventeenth century in favour of a new place down the Brunei River, to the present day the capital, Bandar Seri Begawan. This movement shows how once again the history of the country is repeated like the movement from Terusan Kupang to Kota Batu some 500 years before. However, the new capital brought many changes to the history of Brunei. Major developments took place at a faster rate than before. Trade with the outside world continued to be maintained, but with further transformation. As in the past, the availability of natural resources were very important and contributed almost half of Brunei's exchange commodities. Now its contribution is even more important being about 90% of the country's revenue. The resources are now more concentrated towards the trading of natural gas and offshore oil, which according to Gerald H. Krausse [1995: 382] has accumulated more wealth than in the past. Meanwhile, relations with her Southeast Asian neighbours have been maintained and in 1984 Brunei joined the Association of Southeast Asian Nations (ASEAN), which includes Brunei Darussalam, Indonesia, Malaysia, the Philippines, Thailand and

Vietnam[1]. This association is indeed a reflection of past tradition, which existed among the Southeast Asian countries as discussed before.

The study of Terusan Kupang, Kota Batu and Pulau Chermin has thrown some light on an obscure portion of Brunei history, and the result fits well with the problematical historical references to the locality called P'o-ni in Chinese records. However, the study only presents a modest contribution based on presently available data in the field of ceramics typological study. The study is therefore far from complete and is in fact a starting point for more serious and scholarly research. Apart from the on-land sites, which still require more intensive exploration, the importance of underwater archaeology cannot simply be ignored. Underwater archaeology is now becoming an important archeological discipline in other Southeast Asian countries and numerous shipwreck sites have been discovered as discussed in chapter 3. Brunei is now beginning to focus on this discipline and it will not be surprising to see in the near future the discovery of important shipwrecks as have been encountered in the neighbouring regions in Southeast Asia as Brunei at one time played an active role in the maritime activities of the region. This will open up more archaeological research and will assist in the study of the country's historical past.

In the meantime, it is hoped that this study gives us some understanding of the processes of change and developments in Brunei before written sources became available in the sixteenth century. It is hoped that this study will encourage more archaeological effort and research in this subject in the near future. It is also hoped that more scholars will come forward and collaborate in studying this abundance but least studied materials. Unless some very interesting and important archaeological findings are to be found in Brunei, ceramics will remain the country's main source of archaeological evidence.

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1 Mynmar (Burma) and Laos became the newest member of ASEAN when both countries joint the Association in July 1997.

Apart from the use of conventional methods, the application of scientific methods of analysis are also very important. As this study has shown in chapter 7, the application of some sort of scientific methods are vital, especially when dealing with common materials found over very wide areas. This is especially true in the study of earthenwares, where their typologies and origins are dubious. Comparative studies are also vital, especially in dealing with the various types Southeast Asian earthenware traditions, which showed many common similarities, either in forms, shapes, colours and design patterns. Visits to kiln sites are also important, as well as a representative collection of samples of the Southeast Asian earthenware traditions for comparison and close reference. Only by such efforts are archaeologists able to determine precisely the origins of material sources and hence determine the pattern of trade networks.

As Southeast Asia shared many common cultural identities, it is therefore vital for Southeast Asian archaeologists to share their ideas and collaborate in resolving the various arguments, such those dealing with earthenware traditions. Constant interactions are therefore vital, such as round table discussions and seminars. Since the formation of ASEAN, some programmes towards this objective have already been organised, such as the Intra-ASEAN Workshop on Archaeology and Conservation from 1983 to 1988. It was a rational workshop and every member country was hosting a workshop and brought forward the material cultures which were important in their respective countries. However, since then, the programmes have virtually come to an end, without any further follow-up. Meanwhile, SPAFA, the Southeast Asian Regional Centre for Archaeology and Fine Arts, plays an important role towards these objectives. However, the body has an insufficient budget and so their contribution is still very marginal. It is hoped that in the near future either of these two bodies will organise a forum to discuss the issue of Southeast Asian pottery traditions. So far this has not been discussed despite their importance and wide distribution throughout the Southeast Asian countries. In contrast with the Oriental trade ceramics, earthenwares will remain a difficulty, although some positive signs have already been seen in the last two decades or so.

Without doubt, the role of ceramics as Brunei's main archaeological evidence is still and will remain very important for many years to come. The question now, is should ceramics alone play a leading part in the making of the country's past legacy? The answer is definitely no as there is other archaeological evidence that has been discovered in Brunei, albeit in smaller numbers. It is therefore high time for local archaeologists to look for more archaeological evidence in order to support the country's lack of historical records. It is only by doing this that we can draw a clearer picture of Brunei's past.

Apart from archaeological evidence, scholars also need to look at various other aspects, such as cultural traditions, languages, and customs. It should be stressed here that among the contemporary local wedding ceremonies and royal protocols, there are still some traces of Hindu cultural element mixed with the local traditions [see chapter 2]. The evidence from these cultural blends stresses the existence of some cultural links long before the Chinese and European traders arrived from the late tenth century onwards. It is possible that this study will answer many more questions to which ceramics are unable to contribute, in particular for the period beyond the late tenth century when export ceramics were only just making their mark in the international markets.

The study of local handicrafts and their relation with other traditions in the regions is also essentially important, especially in studying the design motifs, which are known to have some similarities with other countries within the region. This can be seen especially on some of Brunei's handicraft designs motifs, such as cloth weaving and tomb stones, which have shown some similarities with the older known traditional design motifs such as the *Dong Son* bronze drums of southern Vietnam [see chapter 6]. I have also encountered many similarities between the Brunei and Chinese design motifs, such as the motifs on many Chinese Islamic grave stones, like Cheng Ho, in Quanzhou, China and Makam Sultan Bolkiah, the fifth Sultan of Brunei. Some of the similarities that can be seen are spinal, twine double rings, lotus pistils and lotus petals. Also the pointed-bow top and tenon bottom can be seen on most of the gravestones [Dasheng, 1991: 166]. In

Brunei, these designs are believed to be locally invented as the so-called *aying mulih* and *pucok rebong*. Until now, these similarities were not widely known in Brunei due to lack of interest in this subject. A rare study by Chen Da-sheng [1992] of a tombstone found in Brunei believed to be owned by the Maharaja of Brunei [Jibah & Hasan, 1987] has revealed that the tombstone was made and engraved in Qunazhou in China in about 1310 and then shipped to Brunei. These shared design motifs demonstrate that close links between Brunei, China and other civilizations had already been established. Important evidence might be obtained if more effort was given to these less fancy but more informative materials.

Therefore, Brunei's archaeology faces challenging tasks in the years to come. The absence of monumental architecture remains like in Indonesia, Thailand, Kampuchea or Peninsular Malaysia should not lead us to think that Brunei's archaeology is static and cannot go beyond the present day achievements. As discussed above, Brunei also has many other important resources, which may not be as impressive as those in her neighbouring countries in Southeast Asia, but which provide a very good form of archaeological evidence. It is high time that scholars, not just in archaeology, but also in other related disciplines such as historians, art historians, anthropologists and linguistics collaborate in studying Brunei's past heritage. It is also very important that more archive research is undertaken involving not only the Chinese and Europeans as is normally practised, but also other nationalities, such as the Malays and Indonesians in the Malay world, the Indian sources from the Indian subcontinent and the Arabs from the Arabs world. It is only by such collective effort that the past history of Brunei can be resolved and a much better understanding of Brunei's past can be drawn.

BIBLIOGRAPHY

Abdul Rahman, Hj. Abd. Karim, Haji, 1988. "Kedudukan dan Penghasilan Brunei berjaya menjadikan sebagai salah sebuah pusat perdagangan di Asia Tenggara sehingga abad ke 19", *Journal Brunei Historical Society*, vol. 1: 34-44.

-------, 1991. "The Southeast Asian Silk route of the sea: A study of the route to Brunei". In: *leaflet of special exhibition in conjunction with the visit of the participants of the Integral study of the silk Route, Routes of Dialogue project to Brunei Darussalam on 27-31 January 1991*, P. 2-9.

Abdul Rahman, Nik Hassan, 1991. "Port and Polity of the Malay Peninsula and Sumatra (5th-14th Centuries A.D." In: *International Seminar Harbour Cities Along the Silk Road*, Surabaya, Indonesia.

Abdul Rahman , Nik Hassan & Mohd. Kamaruzzaman, 1985. 'The Probable Location of the Port-Kingdom of Chieh-Cha and Is Monumentak Remains'. In: *Research Conference on Early Southeast Asia*, Bangkok and Nakhon Pathom.

Abdullah, Muhammad Hadi, 1995. "Orang Cina di Brunei", *Seminar Sejarah Brunei II*, Pusat Sejarah, B.S.B., Brunei.

Addis, J., 1975-77. 'A Visit to Ching-te-Chen', *Transaction of the Oriental Society*, Vol. 41.

Adhyatman, S. & Lammers, C., 1971. *Tempayan-Martavans in Indonesia, Himpunan Keramik*, Jakarta.

Aikens, C. M. & Higuchi, T., 1981. *Prehistory Japan*. Academic Press, New York.

Alman, John, H., 1960. "Bajau pottery", *SMJ*, vol. IX, no. 15-6: 583-602.

-------, 1960. 'Dusun Pottery', *SMJ*, Vol. IX, no. 15-6: 565-582.

Alexandra & Choo, Avieropoulou, 1986. *Report on the Excavation at Fort Canning Hill, ingapore*, National Museum Singapore.

Ambary, Hassan Muarif, 1985. "Found of Local Pottery from Archaeological Sites in Indonesia", In: *SPAFA Final Report, Technical Workshop on Ceramics*, Bangkok and Chiang Mai, Thailand: 183-91.

-------, 1991. "The role of several major Harbours in Sumatra", In: *International Seminar Harbour Along The Silk Roads, Surabaya, Indonesia, 9-14 January, 1991.*

Andaya, B.W., 1992. "Religious Developments in Southeast Asia, 1500-1800", In: *The Cambridge History of Southeast Asia: From Early Times to c. 1800*, (ed): Tarling, Nicholas, Cambridge University Press.

Andaya B.W. & Andaya, L.Y., 1982. *A History of Malaysia*, Macmillan Asian Histories Series, Hong Kong.

Aoyagi, Y, 1991. "Trade ceramics discovered in Southeast Asia", Institute of Asian Culture, Sophia University, Japan. In: *Quanzhou International Seminar*.

-------, 1992. "Asian trade ceramics in the Philippines, ninth to the sixteenth centuries", *JSAS*, No. 10: 144-78.

Aoyagi, Y.; Hasebe, G., 1992. "The trend of Vietnamese ceramics in the history of ceramic trade with particular reference to the Islands of Southeast Asia', *Journal of East-West Maritime Relations, vol. 2:*1-17.

Aoyagi, Y, Hasebe, G, Morimoto, A & Ogawa, H, 1992. "Archaeological research of old kiln sites in Vietnam - preliminary report", *Journal of East-West Maritime Relations*, vol. 2: 19-28.

Ardika, I.W. & Bellwood, P., 1991. "Sembiran: The beginnings of Indian contact with Bali", *Antiquity*, 65: 221-32.

Ave, J. & King, V.T., 1986. *Borneo: The People of the Weeping Forest: Tradition and Changes in Borneo*, Leiden: National Museum of Ethnology.

Ayers, John, 1991. "Chinese Ceramics". In: *Ceramics of the World: an illustrated History*, (ed.) Camusso, L. & Bortone, S., Macdonald & Co. (Publishers) Ltd. London: 284-353.

Banks, E., Dec. 1947. "Ancient Times in Borneo", *JMBRAS,* vol. 20, Pt. 2: 26-34.

Beamish, H.H., 1954-55. "The animals on Ming trade porcelain", *FMJ*, vol. I&II: 53-63.

Bellwood, Peter, 1985. *The Prehistory of Indo-Malaysian Archipelago*, North Ryde, NSW: Academic Press.

-------, 1988. *Archaeological Research in South-eastern Sabah,* Kota Kinabalu: Sabah Museum Monograph Vol. 2.

-------, 1992 a. "The prehistory of Borneo", *Borneo Research Bulletin*, vol. 24: 7-16.

-------, 1992 b. "Southeast Asia before history". In: *The Cambridge History of Southeast Asia:* vol. 1: 55-136, ed. Tarling, N., Cambridge University Press.

-------, 1993. "Cultural and biological differentiation in Peninsula Malaysia: the last 10,000 years", *Asian Perspectives*, vol. 32, no. 1.

Bellwood, Peter & Datan, Ipoi, 1993. "Recent research at Gua Sireh (Serian) and Lubang Angin (Gunung Mulu National Park), Sarawak", *SMJ*, vol. XLIV, no. 65: 93-111.

Bellwood, P. & Koon, P., 1989. "Lapita Colonists Leave Boats Unburned", *Antiquity* 240: 613-22.

Bellwood, Peter & Omar, Matussin, 1980. "Trade Patterns and Political developments in Brunei and adjacent areas, AD. 700-1500", *BMJ,* vol. 4 no.4, 1980, P. 155-179.

Bell, P. & Wright, D., 1994. *Field Guide: Rocks & Minerals*, Chancellor Press, London.

Bhumadhon, P., 1994. "A study of pottery sherds with impressed design from early historic sites in Central Thailand", *Journal of southeast Asian Archaeology*, no. 14: 26-38. Trns: Yokokura, Masayuki.

Blair & Robertson. Expedition to Borneo, Jolo and Mindanao. In: *The Philippine Islands 1493- 1893. Vol. 4, 1576-1582*, P. 148-330. Cleveland, Ohio, A.H. Clark, 1903-9, 55 vols.

-------.Translator. First voyage around the world. In: *The Philippines* Islands 1493-1898. *Vol. 33 & 34 1519-1522.* Cleveland, Ohio, A.H. Clark, 1903-9, 55 vols. Includes Pigafetta's account of his visit to Brunei in 1521.

Blundell, Peter, 1923. *City of many waters.* Arrowsmith, New York, 1923 as: on the fringe of Eastern Seas: the City of many Waters.

Boardman, John, 1991. "The Near East, Egypt and the Mediterranean". In: *Ceramics of the World: an illustrated History*. ed. Camusso, L. & Bortone, S., Macdonald & Co. (Publishers) Ltd. London: 10-35.

-------, 1991. "Greek Vases". In: *Ceramics of the world: an illustrated History*. ed. Camusso, L. & Bortone, S., Macdonald & Co. (Publishers) Ltd. London: 36-87.

Braddel, R., 1949. "P'o-li in Borneo", *SMJ*, vol V: 5-9.

-------, 1949. "A note on Sambas and Borneo", *JMBRAS*, vol. XXII Pt. 4: 1-15.

Brown, C.C., 1972. "An early account of Brunei by Sun Lien", *BMJ*, vol.2 no.4: 5-9.

-------, 1974 a. "Some Ming regulation on the provisions for tributary delegations', *BMJ*, vol. 2 no. 3: 230-231.

-------, 1974 b. "Two Ming texts concerning King Ma-Na-Je-Chia-Na of P'o-ni', *BMJ*, vol. 2, no. 3: 222-229.

-------, 1978. "The Eastern Ocean in the Yung-Lo Ta-Tien", *BMJ*, vol. 4 no. 2: 46-58.

Brown, D.E., 1970. *Brunei: The Structure and History of a Bornean Malay Sultanate*, BSB, Brunei Museum, 235P. Brunei Museum Journal monograph series vol. 2, no. 3.

-------, 1971. "Brunei and the Bajau", *Borneo Research Bulletin.*

Brown, Dale M., 1995 (series ed.), *Southeast Asia: A Past Regained*, Time-Life Books, Alexandria, Virgina.

Brown, Roxanna, 1975. "Preliminary report of the Koh Khram Sunken Ship", *Oriental Art*, vol. XXI, no. 4: 356-70.

-------, 1988. *The Ceramics of Southeast Asia Their Dating and Identification*, second edition, Oxford University Press, Singapore.

Brunei Museum, 1988. *Report on Archaeological Excavation, Conservation and Survey Workshop at Kota Batu, June 1988,* BSB, Brunei Museum.

-------, 1989. *Report on the 6th Intra-ASEAN Archaeological Excavation and Conservation Workshop, Kota Batu, Brunei Darussalam, Oct-Nov,1989.* BSB, Brunei Museum.

-------, *Report of the SPAFA Workshop on the Identification of Trade Ceramics,* 4-18 December, 1994. BSB, Brunei Museum.

Brunei Museum Report: 1965-1970, 1971. Brunei Museum.

Carey, T.F., 1933. 'Two Early Muslims Tombs at Brunei', *JMBRAS*, vol. XI, no. 2.

Carroll, John S., 1982. "Brunei in the Boxer Codex", *JMBRAS*, vol. 55 Pt 2: 1-25.

Carswell, J., 1985. *Blue-and-White: Chinese Porcelain and its Impact on the Western World,* Congress Printing Co., The United States of America.

Chang, Kwang-Chih, 1977. *The Archaeology of Ancient China*, 3rd. ed. Yale University Press, new Haven and London.

Chan Cheung, 1967. "The smuggling trade between China and Southeast Asia during the Ming Dynasty". In: Drake, F.S., *Symposium on Southern China Southeast Asia and The Hong Kong Region. Historical, Archaeological and Linguistic studies*, Hong Kong Press University: 223-27.

Charoenwongsa, Pisit & Prishnchit, Sayan (ed), 1990. *Underwater Archaeology in Thailand II: Ceramics from the Gulf of Thailand,* Samaphan Published Co. Ltd, Bangkok.

Cheng, Da-Sheng, 1984. *Islamic inscription in Quanzhon (Zaitun)*. Nangxia People's Publishing House, Fujian People's Publishing House, China.

-------, 1991. "Synthetical study program on the Islamic inscriptions on the southeast Coastland of China', PP. 159-182. In: *China and the maritime silk route, UNESCO Quanzhou International Seminar on China and the maritime routes of the silk road.* Fujian people's Publishing House, China.

-------, 1992. "A Brunei Sultan in the early 14th century: Study of an Arabic gravestone". *JSEAS*, 23 (1): 1-13.

Chin, Lucas, 1977. "Trade Pottery discovered in Sarawak from 1948 to 1976", *SMJ,* vol. 25, no. 46: 1-8.

-------, 1986. *Ceramics in the Sarawak Museum*. Lee Ming Press, Kuching.

-------, 1987. *Cultural Heritage of Sarawak,* Sarawak Museum, Kuching.

Chiong, Lionel T., 1974. "The Present Methods of Pottery Manufacture in Daro, Dumaguete City, Philippines: A Tribute of the Past", In: *First Regional Seminar on Southeast Asian Prehistory and Archaeology*, National Museum of the Philippines, Manila: 67-83.

Chiu Ling - Yeong, 1967. "The Ming Shih-lu New Studies on South-East Asia', In: Drake, F.S., *Symposium on Southern China Southeast Asia and the Hong Kong Region, Historical, Archaeological and Linguistic Studies*, Hong Kong University Press: 212-213.

Christie, J.W, 1985. "On Po-ni : The Santubong sites of Sarawak", *SMJ*, vol. XXXIV, no. 55 (New ser): 77-89.

Cleary, M. & Eaton, P., 1995. *Borneo Change and Development*, Oxford University Press.

Coedes, G, 1971. *The Indanized states of Southeast Asia*. The University Press of Hawaii, Honolulu.

Cole, Fay-Cooper, 1912. *Chinese pottery in the Philippines*, Chiacago, USA.

Cooper, R., 1992, 'Forecasting and understanding local weather in Brunei Darussalam', *BMJ*: 88-98.

Cort, L.A., 1994. 'In Search of Ceramics in Vietnam', *Asian Art and Culture*.

Crawford, John, 1925. "Account of Borneo proper", *Asiatic Journal*, vol. 20 no. 117: 289-94.

Crisswell, C.N., 1972. 'Some historical aspects of local and sovereign rights in the 19th century Brunei', *Journal of Oriental Studies* 10 (1) P: 56-61.

Damit, A.M.Y. 1989. *The Writings and Readings of Silsilah Raja-Raja Brunei*, (unpublished), M.A. Thesis, University of Kent.

Datan, Ipoi, 1993. "Archaeological Excavations at Gua Sireh (Serian) and Lubang Angin (Gunung Mulu National Park), Sarawak, Malaysia", *SMJ*, Special Monograph, no. 6.

-------, 1994. Personal communication.

Directorate for Protection and Development of Historical and Archaeological Heritage, 1988.*Catalogue of Sites, Monuments and Artifacts of Banten*, Jakarta.

Evangelista, Alfredo, 1985. "Trade ceramics recovered from sunken wrecks in Philippine waters", In: *SPAFA Final Report, Technical Workshop on Ceramics*, Bangkok and Chiang Mai, Thailand: 197-201.

Evans, Ivor, H.N, 1955. "Bajau Pottery", *SMJ*, vol. VI, no. 5: 297-302.

Fagan, B.M., 1991. *In the Beginning: an introduction to Archaeology*. 7th. edition, Harper Collins Publishers.

-------, 1992. *People of the Earth: an introduction of World Prehistory*. 7th. edition, Harper Collins Publishers.

-------, 1996. *The Oxford Companion To Archaeology*, (ed.), Oxford University Press, New York, Oxford.

Fisher, C.A., 1964. *Southeast Asia: A Social, Economic and Political Geography*, Methuen and Co., London.

Flenley, J., 1988. 'Palynological evidence for land use changes in Southeast Asia', *Journal of Biogeography*.

Forrest, T., 1780. *A Voyage to New Guinea and the Moluccas, 1774-1776*, 2nd ed., London; 1969; reprinted *BMJ*, vol. 4, no. 2, 1978.

Fox, R.B., 1970. *The Tabon Caves: Archaeological Explorations and Excavations on Palawan Island, Philippines*, National Museum, Manila.

Franke, W, & Ch'en, T'ieh-fan, 1973. "A Chinese tomb inscription of A.D. 1264, discovered recently in Brunei - a preliminary report. *BMJ*, vol. no. 3 no. 1: 91-9.

Franke W, 1991. "China, Overseas communications with Southeast Asia as reflected in Chinese epigraphic materials 1264-1800, P. 309-322. In: *China and Maritime Silk Route, UNESCO Quanzhou International Seminar on China and the Maritime Routes of the Silk Roads*. Fujian People's Publishing House, China.

Freeman, J.D., 1957. 'Iban Pottery', *SMJ*, Vol. VIII, No. 5 (25): 153-176.

Garner, Sir Harry, 1970. *Oriental Blue and White*, Faber & Faber, London.

Gibson-Hill C.A., 1955. "Johore Lama and other ancient sites", *JMBRAS*, vol. 28, no. 170: 126-197.

Glover, I.C., 1990. *Early Trade between India and Southeast Asia*, 2nd. ed., University of Hull, Centre for Southeast Asian studies.

Godden, Geoffrey, 1994. In: *Sotheby's Concise Encyclopaedia of Porcelain*, Gen. ed. Battie, D., Conran Octopus Ltd. London: 49-68.

Gompertz, G.St.G.M., 1958. *Chinese Celadons Wares*, Faber & Faber, London.

Gould, S.B. & Bampfylde, C.A., 1989. *A History of Sarawak Under its Two White Rajahs 1839- 1908*, Oxford University Press.

Gowlett, John A., 1992. *Ascent to Civilization: The Archaeology of Early Humans*, MaGraw-Hill Publication, Slovenia. 2nd. edition.

Green, Jeremy & Harper, Rosemary,1983. *The Excavation of the Pattaya wreck site and survey of three other sites, Thailand,1982,* Australian Institute for Maritime Archaeology Special Publication, no. 1.

-------, 1987. "The Maritime Archaeology of shipwrecks and Ceramics in Southeast Asia, the Maritime connection", Australian Institute for Maritime Archaeology special Publication, no. 4.

Green, J., Harper, R. & Prishanchittara, S., 1981. *The Excavation of the Ko Kradat Wrecksite, Thailand, 1979-80*, Department of Maritime Archaeology, Western Australian Museum, Special Publication.

Green, J., Harper, R. & Intakosi, V., 1987. "The Ko Si Chang Three Shipwreck Excavation, 1986', *Australian Institute for Maritime Archaeology*, Special Publication, no. 4.

Griffing, R.P., 1963. "Early Borneo Export wares", *SMJ*, vol. XI: 174-6.

Groeneveledt W.P., 1960. *Historical Notes on Indonesia and Malaya Compiled from Chinese Sources*. C.V. Bhratara, Djakarta.

Gungwu, Wang, 1958. The Nahai Trade, *JMBRAS*, 31 (2): 1-135.

-------, 1959. *A Short History of the Nanyang Chinese*, Eastern Universities Press Ltd., Singapore.

-------, 1968. "Early Ming Relations With Southeast Asia", In: *A Background Essay, Reproduced by Permission of the Publishers from Chinese World Order*, (ed): Fairbank, John K., Harvard University Press.

Guy, John S., 1986 a. *Oriental Trade Ceramics in Southeast Asia 9th to 16th Centuries*, Oxford University press, Singapore.

-------, 1986 b. "Vietnamese Ceramic and Cultural Identity: Evidence from the Ly and Rran Dynasties", In: *Southeast Asia in the 9th to 14th Centuries*, (ed) Marr, David G. & Milner, A.C., Research School of Pacific Studies, Australian National University & Institute of Southeast Asian Studies, Singapore, P: 255-270.

-------, 1989. *Ceramic Traditions of Southeast Asia*, Oxford University Press, Singapore.

Hadimuljono, 1985. "Some notes on Thai Ceramics Discovered in South Sulawesi, Indonesia", In: *SPAFA Final Report, Technical Workshop on Ceramics*, Bangkok and Chiang Mai, Thailand: 243-6.

Hall, K.R, 1985. "The opening of the Malay world to European trade in the 16th century", *JMBRAS*, vol. 58 Pt.2: 85-106.

--------, 1982. "The `Indianization' of Funan : An economic history of Southeast Asia', First state", *JSEAS*, vol. XIII, no. 2: 81-106.

--------, 1981. "The expansion of Maritime trade in the Indian Ocean and its impact upon early state development in the Malay World", *RIMA*, vol. 5, no. 2: 108-135.

--------, 1981. "Trade and state craft in the Western Archipelago at the European age", *JMBRAS*, vol. LIV, pt. 1: 21-47.

-------, 1992. 'Economic History of Early Southeast Asia'. In: *The Cambridge History of Southeast Asia: Vol. 1*: 183-275, (ed). Tarling, N., Cambridge University Press.

Hall, K.R. & Whitmore, John K., 1976. "Southeast Asian Trade and the Isthmian Struggle, 1000- 1200 A.D.", *Explorations in Early Southeast Asian History: The Origins of Southeast Asian Statecraft*, (ed): Hall, Kenneth R. & Whitmore, John K., Michigan Papers on South and Southeast Asia, no. 11.

Harrison, Brian, 1954. *Southeast Asia: a short history*, London, Macmillan & co. Ltd.

Harrisson, Tom,1949. "Gold and Indian Influence in West Borneo", *JMBRAS*, vol. XXII, no. 4: 33-110.

-------, 1955 a. "Ceramics penetrating Borneo," *SMJ*, vol. VI: 549-560.

--------, 1955 b. "The distribution and General character of native pottery in Borneo," *SMJ*, vol. VI.

-------, 1955 c. 'Indian Pioneers in Borneo: 500 A.D.', *SMJ*, vol. VI: 511-17.

-------, 1958. "The Ming Gap and Kota Batu, Brunei", *SMJ*, vol. VIII, no. 11: 273-8.

-------, 1959. "Export wares found in west Borneo", *Oriental Art*, Vol. 5: 1-12.

-------, 1961. "Trade Porcelain and Stoneware in Southeast Asia (including Borneo)", *SMJ*, vol. X: 222-6.

-------, 1967 a. "East Malaysia and Brunei", *Asian Perspectives*, Vol. 10: 85-92.

-------, 1967 b. "Recent archaeological discoveries in East Malaysia and Brunei", *JMBRAS*, vol. 40 Pt. 1: 140-8.

-------, 1968 a. "T'ang and Sung in the Delta", *The Straits times annual,* P: 70-73.

-------, 1968 b. "Recent archaeological research in Malaysia 1965: East Malaysia (and Brunei)", *JMBRAS*, vol. 41 no. 1: 180-2.

-------, 1969 a. "The Golden hoard of Limbang", *BMJ*, vol. 1, no. 1: 57-71.

-------, 1969 b. "Brunei cannon: their role in Southeast Asia (1400-1900 AD)", *BMJ* vol. 1 no.1: 94-118.

-------, 1970 a. "The siege of Pulau Chermin". *BMJ*, vol. 2 no. 1: 198-207.

-------, 1970 b. "The prehistory of Borneo", *Asian Perspectives*, vol. 13: 17-45.

-------, 1970 c. *The Malays of South West Sarawak before Malaysia*, Macmillan, London.

-------, 1971 a. "Deep level carbon dates from Kota Batu, Brunei (858 BC to 1300 AD)", *BMJ*, vol. 2 no. 3: 96-107.

--------, 1971 b. "Prehistoric double-spouted vessels excavated from Niah Caves, Borneo". *JMBRAS*, vol. XLIV, Pt. 2: 35-78.

-------, 1971/72. "Borneo archaeology, past and future", *SSJ*, Vol.6, no.1: 27-37.

-------, 1972. "Further C-14 dates from Brunei", *BMJ* vol. 2 no. 4: 209-218.

-------, 1974 a. "Carbon-14 dates from Kota Batu, Brunei, Borneo", *Asian Perspectives*, vol. 16 no. 2: 197-200.

-------, 1974 b. *Prehistoric wood from Brunei, Borneo*. Bandar Seri Begawan, Brunei Museum, Brunei Museum Journal monograph no. 2.

--------, 1976. "Brunei', two (or more) capitals and other ancient centres: an archaeological Perspective", *BMJ,* vol. 3 no. 4: 77-86.

Harrisson, Tom & Barbara, 1956. "Kota Batu in Brunei (introductory report)", *SMJ.* Vol. 7 no. 8: 283-319.

-------, 1969-70. *The Prehistory of Sabah*, Sabah Society Journal, K.K., Sabah, vol. IV.

Harrisson, T & O'Connor, S.J, 1967. 'The 'Tantric shrine' excavated at Santubong', *SMJ*, XV: 201-222.

-------, 1968. "The prehistoric iron industry in the Sarawak river delta: evidence by association, *SMJ.* New ser, vol. 16, no. 32-33: 1-54.

-------, 1969. 'Gold in west Borneo', *SMJ*, XVII: 1-66.

Harrisson, T & Zainie, Carla, 1967. "Early Chinese stonewares excavated in Sarawak', *SMJ*, vol. XV, no. 30-31: 30-90.

Harrisson, Barbara,1956. *"Song excavation", SMJ*, new ser. vol. 7, no. 7-9, 1956: 153-165.

--------, 1970. "A classification of archaeological trade ceramics from Kota Batu", *BMJ*, Vol. 2 no. 1: 114-188.

--------, 1972. *The ceramic Gallery of the Brunei Museum at Kota Batu: an introduction to the history of trade ceramics.* BSB, Brunei Museum, Brunei Museum special publication no. 3.

--------, 1975. "Brown spouted jars, a fact of ceramics history in Borneo view", *BMJ,* vol. 3 no. 3: 186-200.

-------, 1979. *Swatow*, Gemeentelijk Museum Het Princessehof, Leeuwarden, The Neatherlands.

-------, 1986. *Pusaka, heirloom jars of Borneo.* Singapore.

-------, 1995. *Later Ceramics in Southeast Asia: 16th to 20th centuries*, Oxford in Asia Studies in Ceramics.

Harrisson., Barbara & Sharifuddin, P.M., 1969. "Sungai Lumut: a 15th century burial ground", *BMJ,* vol. 1 no. 1: 24-56.

Hasebe, Gakuji, 1983. "The Khmer Ceramics", In: *Southeast Asian Ceramics From the Collection of Mr. & Mrs. Ardrew M. Drik*, Tokyo, Japan.

-------, 1983. "The Thai Ceramics", In: *Southeast Asian Ceramics From the Collection of Mr. & Mrs. Ardrew M. Drik*, Tokyo, Japan.

Hassan, Haji, Ali, 1988. *Elementary Geography for Brunei Darussalam*, Dewan Bahasa dan Pustaka, BSB. Brunei.

Hassan, Haji, Z., 1992. 'Pengalu dan Padian: Suatu Tinjuan Perdagangan di Brunei', *Pusaka*, Jabatan Pusat Sejarah, Brunei Darussalam: 34-51.

Heng, Leong Sau., 1977. "Ancient finds from Kampong Jenderam Hilir", *Malaysia in History*, 20 (2): 38-47.

-------, 1991. "Ancient Trading Centres in the Malay Peninsula", *International Seminar Harbour Cities Along the Silk Roads*, Surabaya, Indonesia.

Hipkins, James R., 1971. "The history of the Chinese settlement of Borneo", *SMJ*, vol. XIX: 109-154.

Hiram, W. Woodward Jr., 1978. "The dating of Sukothai and Sawankhalok ceramics: some considerations", *JSS*, vol. 66, pt. 1-7.

Hirth, F. & Rockhill, W.W., 1970. *Chau Ju-Kua: His work on the Chinese and Arab trade in the twelfth and thirteenth centuries, entitled Chu Fan-Chi*. Ch'eng-Wen Publishing Company, Taipei.

Hoanh, Tang Ba, 1993. "Chu Dau Ceramics", *Bao Tang Tinh Hai Hung*, Vietnam.

Hobson, R.L. & Hetherington, A.L., 1982. *The Art of the Chinese Potter: an illustrated survey*, Dover Publications, Inc. New York.

Ho, Chuimei, 1988. *Minnan Blue-and-White Wares: an archaeological survey of kiln site of the 16th-19th centuries in southern Fujian, China*, BAR International Series 428.

-------, 1991. 'Chinese Presence in Southern Thailand before 1500 A.D. from Archaeological Evidence', In: *China and the Maritime Silk Route, UNESCO Quanzhou International Seminar*, Fujian People's Publishing House. P: 289:307.

Horton, A.V.M., 1995. *A New Sketch of the History of Negara Brunei Darussalam*, Hither Green Lane, Worcestershire, England.

Hsu Yun, Ts'iao, 1976. "Notes relating to Admiral Cheng Ho's expedition", *JMBRAS*, vol. 49 Pt. 1: 134-140.

-------, 1965. 'Chinese sources for the Historical Geography of Southeast Asia', *Journal of Southeast Asian Researchers*, vol. 1: 93-105.

-------, 1967. "The contribution of the Chinese sources to the ancient history of Southeast Asia", *Journal of Southeast Asian Researchers*, vol. 3: 9-15.

Hughes-Hallett, H.R., 1940. "A sketch of the History of Brunei", *JMBRAS*, vol. XVIII, Pt. II: 23-42. Reprinted: *BMJ*, 1981, vol. 5 no. 1: 1-18.

Hughes-Stanton, P. & Kerr, R., 1981. *Kiln Sites of Ancient China: an exhibition lent by the Peoples' Republic of China,* Balding & Mansell, London & Wisbech.

Hussainmiya, B.A., 1993. "Digging up the past: a review of archaeological findings in Brunei Darussalam", In: *Essays on modern Brunei history.* P. 137-176. BSB, University Brunei Darussalam.

Hutterer, K., 1973. *An Archaeological Picture of a Pre-Spanish Cebuano Community*, University of San Charlos, Cebu City.

Ibrahim, Abd. Latif, Haji, 1993. "Trade, Islam and the expansion of Brunei Sultanate", *Janang; Warta Akademi Pengajian Brunei, University Brunei Darussalam, Negara Brunei Darussalam,* vol. 1: 23-133.

Ibrahim, Yahya, Haji, 1969. 'Sejarah Ringkas Kemasukan Agama Islam ke Brunei', *JEUB*, vol. 24, Brunei.

Intakosai, Vidya, 1974. "Painted Pottery at Ban-Chieng, Northeast Thailand", In: *First Regional Seminar on Southeast Asian Prehistory and Archaeology 1972,* National Museum of the Philippines, Manila: 44-7.

Jaafar, Z. & Asaruddin, S., 199?. "Functional archaeological Pottery Analysis from Malaysia, In: *SPAFA Workshop on Pottery Analysis*, Bangkok, Thailand.

Jamil, P., 1977. "Islam in Brunei", *BMJ*, 4 (1): 35-42.

-------, 1982. 'Chiri Gelaran Di Brunei', *Ikhtisar Budaya*, Dewan Bahasa dan Pustaka, Brunei.

-------, 1990 a. *Tarsilah Brunei: Sejarah Awal dan Perkembangan Islam*. Jabatan Pusat Sejarah, Kementerian Kebudayaan Belia dan Sukan, BSB. Negara Brunei Darussalam.

-------, 1990 b. *Latar Belakang Sejarah Brunei*, Jabatan Pusat Sejarah, Kementerian Kebudayaan Belia dan Sukan, BSB. Negara Brunei Darussalam.

--------, 1992. "Sultan Sharif Ali", *Journal Darussalam* Pusat Sejarah, Bil. I: 6-33.

Jao Tsung-I, 1967. "Some place-names in the south seas in the Yung-lo Ta-Tien", In : *Symposium on Southern China South-east Asia and the Hongkong Region. Historical, Archaeological and Linguistic Studies*, Hong Kong University Press: 191-7.

Jaffar, Said, Haji, 1995. Personal communication.

Jenyns, Soame, 1988. *Ming Pottery and Porcelain*, Faber and Faber, London.

Jibah, Haji, Matassim, 1982. "A note of old tombstones found in Brunei", *BMJ*, p: 27-50.

Jibah, Haji, Matassim, Jibah & Hassan, Suhaili, 1987. "Tomb of Mahraja Brunei", *BMJ*, vol. 6 no. 3: 10-15.

Junggal, Haji, 1994. Interview.

Kaboy, T., 1967. 'Ceramics and their uses among the coastal Melanaus', *SMJ*, vol. XV, no. 30-1.

Kao, Maychíng, 1987. 'Foreward', In: *The Art of the Song Potter*, The Art Gallery, The Chinese University of Hong Kong: 5-6.

Kasetsiri, C., 1992. 'Ayudhya: Capital-Port of Siam and its 'Chinese Connection' in the 14th. and 15th. centuries', *Journal of the Siam Society*, vol. 80, part 1: 75-9.

Ken, W.L.,1960. "The trade of Singapore 1819-69", *JMBRAS*, vol. 33, Pt. 4, no. 192.

Krahl, R., 1986. *Chinese Ceramics in the Topkapi Saray Museum Istanbul: A Complete Catalogue - 1: Yuan and Ming Dynasty*, Sotheby's Publications.

Krausse, Gerald H., 1995. "Brunei and the Sea: Transformation of a Maritime State", In: *From Buckfast to Borneo*, King, Victor T. & Horton, A.V.M. (ed): 363-386.

Lach, D.F., 1965. *Asia in the Making of Europe: The Century of Discovery*, Vol. 1, book 2, The University of Chicago Press.

Lai, L.Y., 1996. Personal Communication.

Lamb, Alastair, 1961. "Research at Pengkalan Bujang: a preliminary report", *FMJ*, vol. 6: 21-37.

-------, 1964. "Takuapa: The probable site of a preMalaccan entrepot in the Malay peninsula", In: *Malayan and Indonesian Studies*, Bastin, J. & Roolvink, R. (ed.), London. P: 6-86.

Lammers, C., 1974. *Annamese Ceramics in the Museum Pusat*, Himpunan Keramik, Indonesia.

Lang, Gordon, 1994. "The discovery of Porcelain". In: *Sotheby's concise Encyclopedia of porcelain*, (ed) Battie, David, Conran Octopus Ltd. London: 15-40.

Lane, A., 1971. *Later Islamic Pottery*, Faber & Faber.

Lapian, A.B., 1981. 'Navigation in the Srivijaya period', In: *Studies on Srivijaya*, National Research Centre of Archaeology Jakarta: 71-8.

Leaker, David, 1990. *Brunei: the Modern Southeast Asian Islamic Sultanate*, Forum, Kuala Lumpur.

Levathes, L., 1994. *When China Ruled the Seas*, Oxford University Press, New York.

Liang-Yu, L., 1991. *A Survey of Chinese Ceramics Vol. 2: Sung Wares*, Aries Gemini Publishing Ltd.

Lim, Aurora Roxas, 1987. *The evidence of Ceramics as an aid in understanding the pattern of trade in the Philippines and Southeast Asia*, Institute of Asian Studies, Chulalaongkorn University.

Locsin, L. & C.Y., 1967. *Oriental Ceramics Discovered in the Philippines*, Tokyo: Tuttle.

Low, Hugh, 1880. "Selisilah (Book of Descent) of the Rajahs of Brunei', *JMBRAS*, no. 5: 1-8.

Maidin, H.H., 1994. 'Penyelidikan di Pulau Jai-Jai', Report file, Archaeology Section, Brunei Museum.

Majul, C.A., 1973. *Muslims in the Philippines*, The University of the Philippines Press, (2nd ed), Quezon City.

Manguin, Pierre-Yues, 1980. "The Southeast Asian ship: an historical approach", *JSEAS*, P:266-76.

-------, 1993. "Dunia Perkapalan Melayu dalam perdagangan pra-Eropah: penyelidikan terbaru", In: *Tamadun Melayu*, vol. 1, Dewan Bahasa dan Pustaka, Kuala Lumpur: 174-87.

Marryat, F.S., 1848. *Borneo and the Indian Archipelago*, Longman, Brown, Green, and Longmans, London.

Martin, J., 1986. 'The Use of Ceramics in the Dating of Trading Sites- With Particular Reference to Pulau Tioman,' In: *Ships and Sunken Treasure*, Kuala Lumpur, Malaysia, P: 141-158.

Marx, R. F. & Marx, J., 1993. *The Search for Sunken Treasure: Exploring the World's Great Shipwrecks*, Swan Hill Press, England.

Maveety, P., 1980-81. *Ceramics of Thailand*, Stanford University Museum of Art, United States of America.

McArthur, M.S.H., 1904. *Report on Brunei in 1904*, In: Horton, A.V.M., Introduced and Annoted, Ohio University, Monographs in International Studies, Southeast Asia Series, no. 74, 1987.

McBain, A.Y., 1979. 'Sukothai and Sawankhalok Ceramics', *BMJ*, Vol. 4 (3): 78-99.

McKinnon, E.E., 1979. "A note of the discovery of spurmarked Yueh type sherds at Bukit Seguntang, Palembang", *JMBRAS*, 52 ii: 41-8.

-------, 1984. *Kota Cina: Its Context and Meaning in the Trade of Southeast Asia in the 12th to 14th Centuries*, Ph.D., Cornell University.

McPherson, Kenneth, 1993. *The Indian Ocean: A History of People and the Sea*, Oxford University Press.

Meacham, A., 1975. 'Tung Kwu, Phase 4', *Journal of the Hong Kong Archaeological Society*, VI: 55-6.

Medley, Margaret, 1972. *A handbook of Chinese Art*, Graham Brash, Singapore.

-------, 1976. *The Chinese Potter: a practical history of Chinese Ceramics.*, Phaidon, Oxford.

-------, 1974. *Yuan Porcelain and Stoneware*, Faber & Faber, London.

Medway, L., 1962. "Archaeological notes from Tioman, Pahang", *FMJ*, vol. VIII: 55-63.

Mellaart, J., 1975. *The Earlier Civilizations of the Near East*, Thames & Hudson, London.

Mills, J.V., 1974. "Arab and Chinese navigators in Malaysian waters in about A.D. 1500", *JMBRAS*, vol. XLVII Pt. 2: 1-82.

Miksic, John, N., 1985. "The Distribution of Thai Ceramics in Indonesia and Trading Patterns of the fifteenth century", In: *SPAFA Final Report, Technical Workshop on Ceramics*, Bangkok and Chiang Mai, Thailand: 337-56.

Ming Shi Chapter 325, Description 213, Foreign countries 6th, translated by Prof. Liu Ying Sheng.

Minben, H., 1987. In: *The Art of the Song Potter*, The Art Gallery, The Chinese University of Hong Kong.

Misugi, T., 1991. "Changing current of Chinese export Porcelain : from celadon to blue-and-white", In: *Seminar of the Integral study of the Silk Roads of Dialogue* 21-22 Jun, 1991, Bangkok, Thailand.

Mohammad bin Pengiran Hj Abd.Rahman, Pengiran Haji, 1992. *Islam di Brunei Darussalam*, Dewan Basaha dan Pustaka Brunei, Kementerian Kebudayaan, Belia dan Sukan, Brunei Darussalam.

Moore, Eine, 1966. "Earthenware from a Sabah cave (Tapadong)", *SMJ*, new ser., vol. 14, no. 28-29: 291-307.

-------, 1970. "A suggested classification of stonewares of Martabani type", *SMJ*, new. ser., Vol. 18, no. 36-37: 1-28.

-------, 1964. "Sarawak Malay Pottery", *SMJ*, vol. XI, no. 23-4: 533.

Morimoto, Asako, 1993. "Vietnamese Trade Ceramics - a study based on Archaeological data from Japan", *JSAS*, Tokyo: 47-73.

Morrison, Alastair, 1955. "Murut Pottery", *SMJ*, vol. VI, no. 5: 295-6.

Neave-Hill, 1975. *Chinese Ceramics*, John Bartholomew & Son Ltd., Edinburgh & London.

Nezu Institute of Fine Arts, 1993. *Nanban and Shimamono: Exported Southeast Asian Ceramics for Japan, 16th-17th century*, Tokyo.

Nicholl, R., 1975. *European Sources for the history of the Sultanate of Brunei in the 16th century*, BSB. Brunei Museum.

-------, 1975. "Notes on the early toponymy of Brunei", *BMJ* vol. 3 no. 3: 123-130.

-------, 1979. "Brunei and Camphor", *BMJ*, vol. 4, no. 3: 52-74.

-------, 1980. "Brunei rediscovered: a survey of early times", *BMJ*, vol. 4 no. 4: 217-37.

-------, 1984 a. "A note of on P'o-ni and its location", *BMJ*, vol. 5 no. 4: 4-5.

-------, 1984 b. "The tomb of Maharaja Kana of Brunei at Nanking", *BMJ*, vol. 5 no. 4: 35-45.

-------,1989. "An age of vicissitude in Brunei 1225-1425", *BMJ* vol. 7, no. 1: 7-21.

Noakes, J.L., 1949. "Celadon of the Sarawak coast", *SMJ*, vol. V, no. 16: 25-37.

O'Connor, S.J. & Harrisson, T., 1964. "Western Peninsular Thailand and West Sarawak: ceramic and statuary comparisons', *SMJ*, new ser. vol. 11, no. 23-24: 562-566.

Omar, Matussin, 1975. "A preliminary account of surface finds from Tanjong Batu Beach, Muara", *BMJ* vol. 3 no. 3: 158-174.

-------, 1978. 'Distributions of Chinese and Siamese Ceramic in Brunei', *BMJ*, vol. 4 (2): 59-66.

-------, 1979. "Radio-Carbon dates for Kupang and Sungai Lumut. Brunei', *BMJ*, vol. 4 no. 3: 75-77.

-------, 1981. *Archaeological excavations in Protohistoric Brunei*, BSB., Brunei Museum special publication no. 15.

-------, 1983. "A note on the stonewall and earthen causeway at Kota Batu", *BMJ* vol. 5 no. 3: 27-50.

Omar, Matussin & Sharifuddin, P.M.,1978. "Distributions of Chinese & Siamese Ceramics in Brunei", *BMJ*, vol. 4 no. 2, 1978: 59-66.

-------, 1976. "The Stone Age in Brunei", *BMJ*, vol. 3 no. 4: 127-141.

Omori, Kazuo, 1983. "The Vietnamese Ceramics", In: *Southeast Asian Ceramics From the Collection of Mr. & Mrs. Ardrew M. Drzik*, Tokyo, Japan.

Ongkili, James, P., 1972. "Pre-Western Brunei, Sarawak and Sabah', *SMJ*, vol. 20 no. 40/41: 1-20.

Orton, C., Tyers, P. & Vince, A., 1993. *Pottery in Archaeology*, Cambridge University Press.

Osman, Karim, Pengiran, 1991. "Notes on a Blue-and-White sherd (with Arabic Inscription) found at Kota Batu archaeological site", *BMJ*, vol. 7 no. 3: 10-25.

--------, 1992. "A report on archaeological excavation and exploration on Pulau Terindak and its surrounding area", *BMJ*. Vol, 7, no. 4: 18-48.

--------, 1993. "Further notes on a Chinese tomb inscription of A.D. 1264, *BMJ*.

Peacock, D.P.S., 1970. 'The Scientific analysis of ancient Ceramics: A Review', *World Archaeology 1*, P: 375-387.

Peacock, B.A.V., 1959. 'A Short Description of Malayan Prehistoric Pottery', *Asian Perspectives*, 121: 156.

People's Daily Beijing, China, 25 Dec. 1983. "The visit of the `King of Brunei' to Emperor Yung Lo of China: contemporary and ancient accounts", *JMBRAS*, vol. LVII Pt. I, 1984: 1-11. Translated by Mr. Su Cheng Yee.

Peralta, Jesus, 1985. "Prehistoric Pottery: The Philippine Pattern", In: *SPAFA Final Report, Technical Workshop on Ceramics,* Bangkok and Chiang Mai, Thailand: 225-36.

Pigafetta, Antonio, 1874. Account of Magellan's voyage. In: *The first voyage round the world by Magellan.* (Ed. Lord Stanley of Alderley), New York: B. Franklin (1963 reprint of the Hakluyt society edition).

Pope, John, 1958. "Marks on Chinese ceramics excavated in Brunei and Sarawak", *SMJ*, vol. 8 no. 11: 267-272.

-------, 19? , "Beginnings of the Pottery Trade as recorded in early Chinese texts",

Purcell, O.W.W.S., 1951. *The Chinese in Southeast Asia*, London.

Quazi, Abd.Halim, 1992. "Geological resources', *Singapore Journal of Tropical Geography*, vol. 13, no. 1: 38-58.

Reid, Anthony, 1980. "The structure of cities in S.E Asia, 15th to 17th centuries, *JSEAS*, vol. XI, no. 2: 235-50.

-------, 1988. *Southeast Asia in the age of Commerce 1450-1680, vol. one: The Lands below the winds*, Yale University Press.

-------, 1992. "Economic and Social Change, 1400-1800", In: *The Cambridge History of Southeast Asia: From Early Times to c. 1800*, (ed): Tarling, Nicholas, Cambridge University Press.

-------, 1993. *Southeast Asia in the Age of Commerce 1450-1680, vol. two*, Yale University Press, New Haven and London.

Renfrew, Colin & Bahn, Paul, 1996 (2nd. ed.). *Archaeology: Theories, Methods and Practise*, Thames and Hudson.

Ridho, A., 1979. "Daftar Keramik Asing yang didapati di Sumatra mengikut kartu De Flines", In: *Pra-Seminar Penelitian Srivijaya,* PPPN (Jakarta), P: 105-18.

Rinaldi, M., 1989. *Kraak Porcelain: A Moment in the History of Trade*, Bamboo Publishing Ltd., London.

Ronbinson, N.V., 1985. 'Sino-Thai Ceramics', *Journal of the Siam Society*, vol. 73, parts: 1 & 2: 113-131.

Ronquillo, W.P., 1989. 'Archaeology in the Philippines', In: *Report on the 6th Intra-ASEAN Archaeological and Conservation Workshop*, Kota Batu, Brunei Darussalam.

Rooney, Dawn F., 19?. "Khmer Ceramics and Chinese Influences", In: *Southeast Asia & China: Art Interaction & Commerce*, (ed) Scott, Rosemary & Guy, John, Colloquies on Art & Archaeology in Asia no. 17, Percival David Foundation of Chinese Art.

-------, 1984. *Khmer Ceramics*, Oxford University Press, Singapore.

-------, 1987. *Folk Pottery in Southeast Asia*, Oxford University Press, Singapore.

-------, 1989. 'The Fish Motif in Sukothai Ceramics', *Oriental Art*, vol. xxxv, no. 1.

Roth, H.L., 1896. *The Natives of Sarawak & British North Borneo*, London: Truslove and Hanson.

Sakuma, S., 1989. "Prohibition of Overseas Trade and its influence on International relations in the early reign of the Ming Dynasty", *Journal of East-West Maritime Relations*, Tokyo, vol. 1: 31-46.

Sarawak Museum, 1985. *Iban Pottery*, Kuching, P: 15.

-------, 1988. *Sarawak in the Museum*, Kuching.

Sato, M., 1981. *Chinese Ceramics: A Short History*, Weather Hill/Heibonsha, New York & Tokyo.

Saunders, Graham, 1994. *A History of Brunei*, Oxford University Press, Kuala Lumpur.

Scheans, D.J., 1977. *Filipino Market Potteries*, National Museum Monograph no. 3, Manila, Philippines.

Shaer Awang Semaun, no: 00056, Dewan Bahasa dan Pustaka, Brunei.

Sharifuddin, P.M., 1973. 'Museum Development in Brunei, Borneo', *BMJ*, vol. 3, no. 1, P: 51-61.

Sharifuddin, P.M. & Ibrahim, Abd. Latif, Haji, 1974. "The genealogical tablet (Batu Tersilah) of the Sultans of Brunei", *BMJ*, vol. 3 no. 2: 253-64.

Shari, Ahmad, Haji, 1995. Personal communication.

Shaw, J.C., 1987. *Introducing Thai Ceramics, Burmese and Khmer*, Craftsman Press Thailand.

Shepard, Ann O., 1954. *Ceramics for the Archaeologist*, Carnegie Institution of Washington, Washington, D.C.

Sieveking, G. de. G., 1954. 'Excavations at Gua Cha, Kelantan, *Federal Museum Journal*, P: 75-138.

Singh, D.S. R., 1991. *Brunei 1839-1983: The Problems of Political Survival*, Oxford University Press, Singapore.

Singh, S., 1980. 'The Coinage of the Sultanate of Brunei 1400-1980', *BMJ*, Vol. 4, no. 4.

Sinopoli, C.M., 1991. *Approaches to Archaeological Ceramics*, Plenum Press, New York.

Soegondho, Santoso, 1995. *Earthenware Traditions in Indonesia from Prehistory until the Present*, Ceramic Society of Indonesia, P.T. Dian Rakyat, Jakarta.

Soejono, R.P., 1985. "Remarks on Prehistoric Pottery in Indonesia", In: *SPAFA Final Report, Technical Workshop on Ceramics,* Bangkok and Chiang Mai, Thailand: 357-60.

Solheim, Wilhelm G., 1957. "Borneo", *Asia Perspectives*, vol. 1, no. 1-2: 93-100.

-------, 1959 a. "Further notes on the Kalanay Pottery Complex in the Philippines", *Asian Perspectives*, vol. III, no. 2: 157-166.

-------, 1959 b. "Sa-huynh-related Pottery in Southeast Asia", *Asian Perspectives*, vol. III, no. 2: 177-188.

-------, 1961. "Archaeology in Borneo", *Archaeology*, vol. 14 no. 1: 23-30.

-------, 1965 a. "The Pre history pottery at Tanjong Kubor, Santubong", *SMJ*, new ser. vol. 12, no. 26: 1-62.

-------, 1965 b. "The Functions of Pottery in Southeast Asia: From the Present to the Past", In: *Ceramics and Man* (ed) Frederick R. Matson, Methuen & Co. Ltd, London.

-------, 1973 a. "Borneo archaeology, past and future", *SSJ*, vol. 6, no. 1: 27-37.

-------, 1981 a. 'Chinese and Southeast Asian Art Styles and Their Relationship', *Asian Perspectives*, Vol. XXV, No. 1: 111-120.

-------, 1981 b. "Notes on 'Malay' Pottery in East Malaysia and neighbouring areas", *SMJ*, new. ser.

-------, 1982-83. "Chinese and Southeast Asian art styles and their relationship", *Asian Perspectives*, XXV (1): 111-21.

-------, 1990. "Earthenware Pottery, the T'ai and the Malay', *Asian Perspectives*, XXIX (1): 25-36.

-------, 1996. "The Nusanto and North-South Dispersals", In: Indo-Pacific Prehistory: The Chiang Mai Papers, vol. 2, (ed) Glover, Ian c. & Bellwood, Peter, *Bulletin of the Indo-Pacific Prehistory association*: 101-9.

Solheim, W.G. , Harrisson, B. & Wall, L., 1959 c. "Niah 'three colour ware' and related prehistoric Pottery", *Asian Perspectives,* vol. III, no. 2: 167: 76. Reprinted: *SMJ.*, 1961, Vol. X: 227-237.

Southeast Asian Ceramic Society, 1978. *Chinese Blue and white Ceramics*, Arts Orientalist, Singapore.

Spinks, C.N., 1959. "Siam and the Pottery trade of Asia", *The Siam Society Journal*, vol. III: 247-315.

-------, 1965. *The Ceramic Wares of Siam*, The Siam Society, Bangkok.

Stewart, M.B., 1986. *A Geography of Negara Brunei Darussalam*, BSB. Dewan Bahasa dan Pustaka, BSB.

St. John, H., 1969. *The Indian Archipelago: Its History and Present State*, London, Vol. 1, Longman, London.

Su Chung-Jen, 1967. "Places in Southeast Asia, the Middle East and Africa visited by Cheng Ho and his companions (A.D. 1405-1433)', In : *Symposium on Southern China Southeast Asia and the Hong Kong region, Historical, Archaeological and Linguistic Studies*, Hong Kong University press, P: 198-211.

Sulimen, Satyawati, 1981. 'Research on Srivijaya History and Art History', In: *Studies on Srivijaya*, National Research Centre of Archaeology, Jakarta: 53-70.

Sullivan, M., 1960-61. "Notes on Chinese Export wares in Southeast Asia", *Transactions of the Oriental Ceramic Society,* London.

-------, 1973. *The Arts of China*, Thames and Hudson, London.

-------, 1984. *The Arts of China*, University of California Press, (third ed.).

Sutlive, Vincent & Chin, Lucas, 1987. "Archaeology and anthropology in E. Malaysia and Brunei", *JSEAS,* vol. 18 no. 2: 182-204.

Sweeny, Amin, 1968. 'Silsilah Raja-Raja Berunai, *JMBRAS*, vol. 41 no. 2: 1-82.

Tagai, H., 1984. *Japanese Ceramics*, Hoikusha Publishing Co. Ltd, Osaka, Japan. (7th. ed). Trn: Clark, J.

Taha, Adi Haji, 1985. The Excavation of the Rockshelter of gua Cha, Ulu Kelantan, West Malaysia, *FMJ*, vol. 30, Kuala Lumpur.

-------, 1987. 'Archaeology in Peninsular Malaysia: Past and Present', *JSAS*, P: 205-12.

Tan, Ha Van, 1984-85. "Prehistoric Pottery in Vietnam and its relationships with Southeast Asia", *Asian Perspectives*, vol. XXVI, no. I: 135-46.

Tarling, N., 1992. *The Cambridge History of Southeast Asia, vol. one from Early Times to c 1800*, Cambridge University Press.

Tate, R.B.,1971. "Radio-carbon ages from quaternary terraces, Prehistory in Brunei", *BMJ*, vol. 1-2, no. 3: 108-123.

-------, 1974. "Paleo-environmental studies in Brunei", *BMJ*, vol. 3 no. 2: 285-305.

Te-k'un, C., 1969. *Archaeology in Sarawak*. Cambridge. W. Heffer.

-------, 1972. "The study of ceramics in Southeast Asia", *The Journal of the Institute of Chinese Studies*, vol.V no. 2.

Teixeira, Manuel, 1962. "Early Portuguese and Spanish Contacts with Borneo". In: *International Association of Historians of Asia, 2nd Beiennial conference*, Taipei, P: 485-526. Taiwan, International Association of Historians of Asia, 1962, 826 P.

Thiel, Barbara, 1984-85. "Austronesian Origins and Expansion: the Philippine Archaeological Data", *Asian Perspectives*, vol. XXVI, no. 1: 120-29.

Tibbetts, G.R., 1957. "Early Muslim traders in Southeast Asia", *JMBRAS*, vol. 30, Pt. 1 no. 177: 1-47.

-------, 1979. *A Study of the Arabic Texts Containing Material on Southeast Asia*, Oriental Translation Fund, New Series Vol. XLIV, E.J. Brill/Leiden & London.

To, K.K., 1996. Personal Communication.

Toon, W.T., 1985. 'Notes on Bornean Camphor imported into China', *BMJ*, P: 1-31.

Vainker, S.J., 1991. *Chinese Pottery and Porcelain: From Prehistory to the Present*, British Museum Press.

Vidal-Naquet, P., 1987. (ed) *The Harper Atlas of World History*, Harper & Row, Publishers, New York.

Vlekke, Bernard H.M., 1945. *Nusantara a History of the East Indian Archipelago*, Harvard University Press, Cambridge, Massachusetts.

Volker, T., 1954. *Porcelain and the Dutch East India Company,* Leiden, E.J. Bill.

Wall, Cindsay, 1962. "Earthenwares: Prehistoric Pottery Common to Sarawak and Malaya", *SMJ*, new ser. vol. 10, no. 19-20: 417-427.

-------, 1970. "China and South-east Asia 1402-1424", *Studies in the social History of China and Southeast Asia*, Cambridge university Press, P: 375-401.

Wells, Tony, 1995. *Shipwrecks & Sunken Treasure in Southeast Asia,* Times Editions Pte. Ltd., Singapore.

Wheatley, P., 1959. "Geographical Notes on some commodities involved in Sung Maritime Trade", *JMBRAS*, vol. 32, Pt. 2.

-------, 1961. *The Golden Khersonese*, Kuala Lumpur.

Whitehouse, David & Ruth, 1975. *Archaeological Atlas of the World,* Thames and Hudson, London.

Wibisono, N.H., 1993. 'Vietnamese Ceramics from Archaeological Site in Indonesia', *JSAS*, no. 11:137-45.

Williams, D.F., 1979. 'Ceramic Petrology and the Archaeologist'. In: *Pottery and the Archaeologist*, Institute of Archaeology, no. 4. P: 73-6.

Wilson, C.A.M., 1994. *A Cargo of Spice - or - Exploring Borneo*, The Redcliffe Press, London.

Wolters, O.W.,1967. *Early Indonesian Commerce, a study of the origins of Srivijaya*, Cornell University Press, Ithaca, New York.

-------, 1970. *The Fall of Srivijaya in Malay* History, Lund Humphries Publishers Ltd., London. (Trn): Hui, Toh Kim & Khaira, Ranjeet Kaur, *Kejatuhan Srivijaya dalam sejarah Melayu*, 1990, Dewan Bahasa & Pustaka, K. L.

Yap, L., 1989. 'Singapore National Museum and Archaeology,' In: *Report on the 6th Intra-ASEAN Archaeological Excavation and Conservation Workshop*, Kota Batu, Brunei Darussalam.

Yap, Y. & Cotterell, 1975. *The Early Civilization of China*, Book Club Associates Limited London.

-------, 1977. *Chinese Civilization from the Ming Revival to Chairman Mao*, Book Club Associates London.

Yatim, Othman Mohd., 1978. *Oriental Ceramic Finds in West Malaysia: A Study of their Distributions and Typology*, (unpublished) M.A. Thesis, University Durham.

-------, 1981 a. *Tembikar China berunsur Islam Dalam Koleksi Muzium Negara*, Muzium Negara, Jabatan Muzium, Kuala Lumpur.

-------, 1981 b. *Penggunan Tembikar dalam masyarakat Malaysia*, Jabatan Muzium, Kuala Lumpur.

-------,1982. "A Summary of trade Ceramics discovered in Malaysia", *Purba*: 146- 61.

Yingsheng, L. & Osman, K. Pengiran, 1991. 'A Study on Two Ming Descriptions of Brunei in the Ming Period', In: *Seminar of The Silk Route*, University Brunei Darussalam.

Yu, Wu Zong, 1995. 'Bahan-bahan Brunei dalam sumber China', In: *Seminar Sejarah Brunei*, Pusat Sejarah, Kementerian Kebudayaan Belia dan Sukan, Brunei Darussalam.

Yulin, Luo, 1987. 'The Art of Song Ceramics', In: *The Art of the Song Potter*, The Art Gallery, The Chinese University of Hong Kong: 14-9.

Zhiyan, L., 1993. 'Chinese Old Kiln Sites of Trade Ceramics', *The Journal of Sophia Asian studies*, Sophia University, no.11: 147-61.

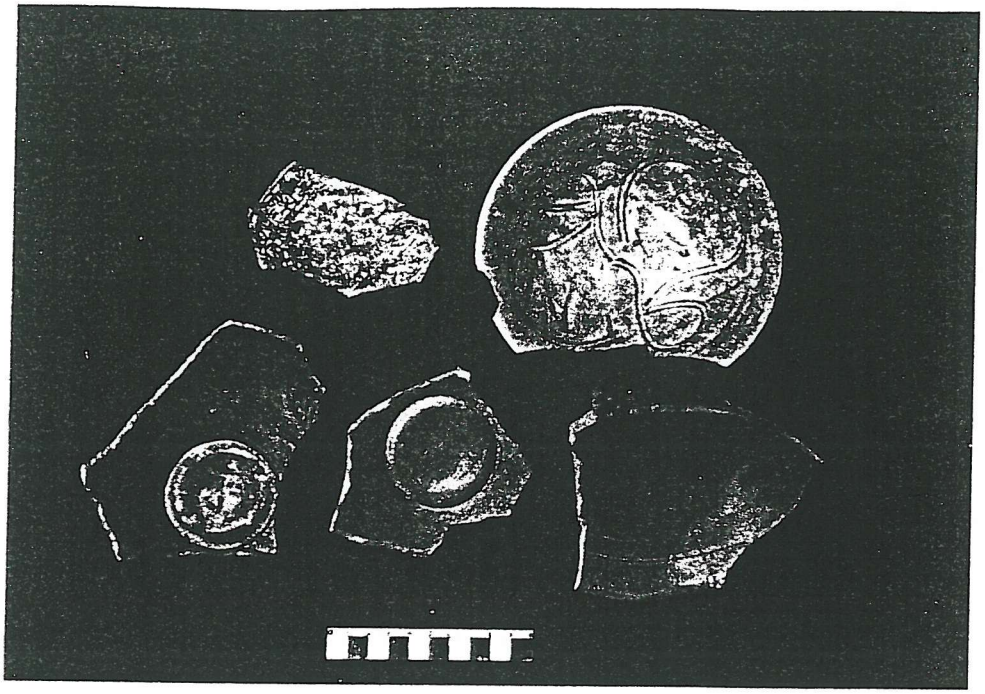


Plate 1: Yueh shards from Terusan Kupang. A variety of colour from yellowish-green to greyish-green to whitish glaze. Two of the bowls are decorated with incised whirls. Late T'ang to Sung periods from the tenth to thirteenth centuries A.D.

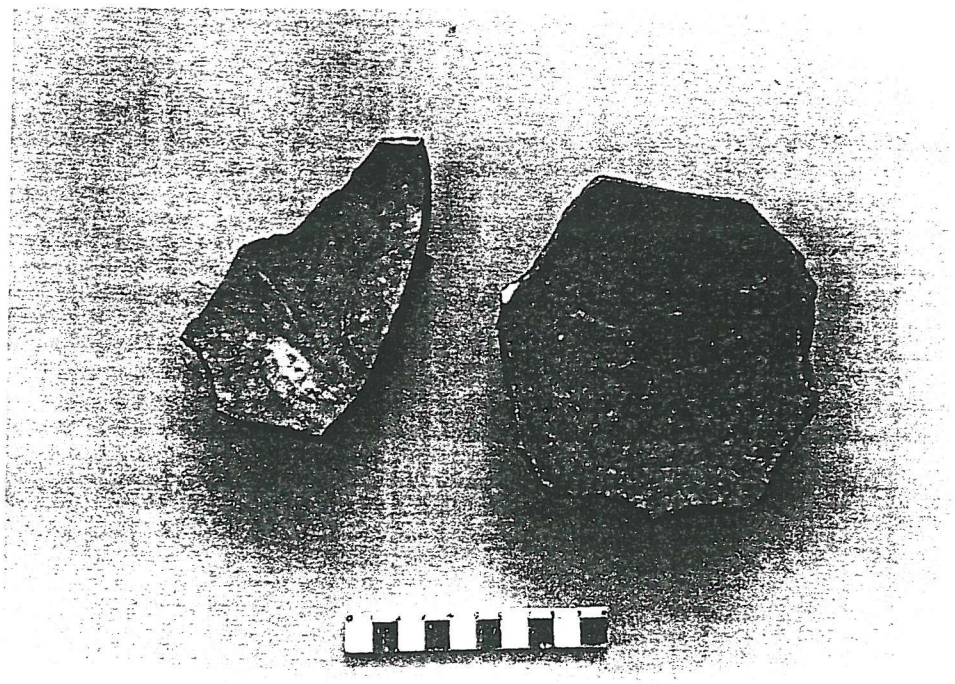


Plate 2: Yueh shards from Terusan Kupang. Bowl types, with light-greenish glaze. One of the shard is decorated with incised swirls. Sung period.

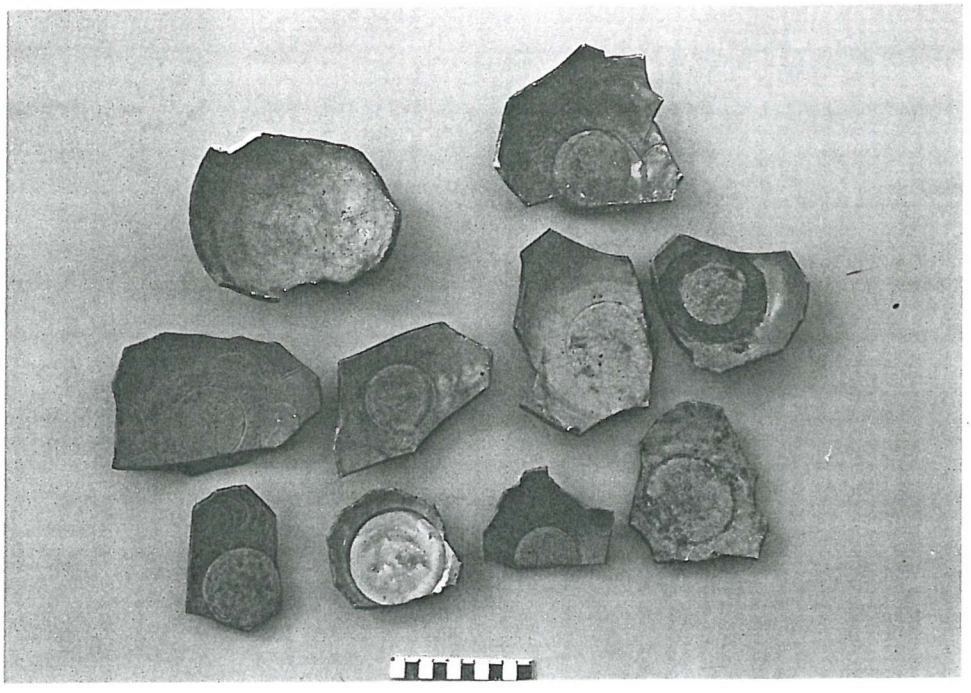


Plate 3: Fragment of Yueh bowls from Terusan Kupang. A variety of colour from yellowish-green to grayish-green to whitish-green glaze. Five of the shards are decorated with combed and incised swirls. Sung period.

Plate 4: Lung-Chuan shards from Kota Batu. Rim parts of big and small bowls, a dish and a plate. The glazes are from olive-green to brownish-green. Ming period of the fifteenth century A.D.

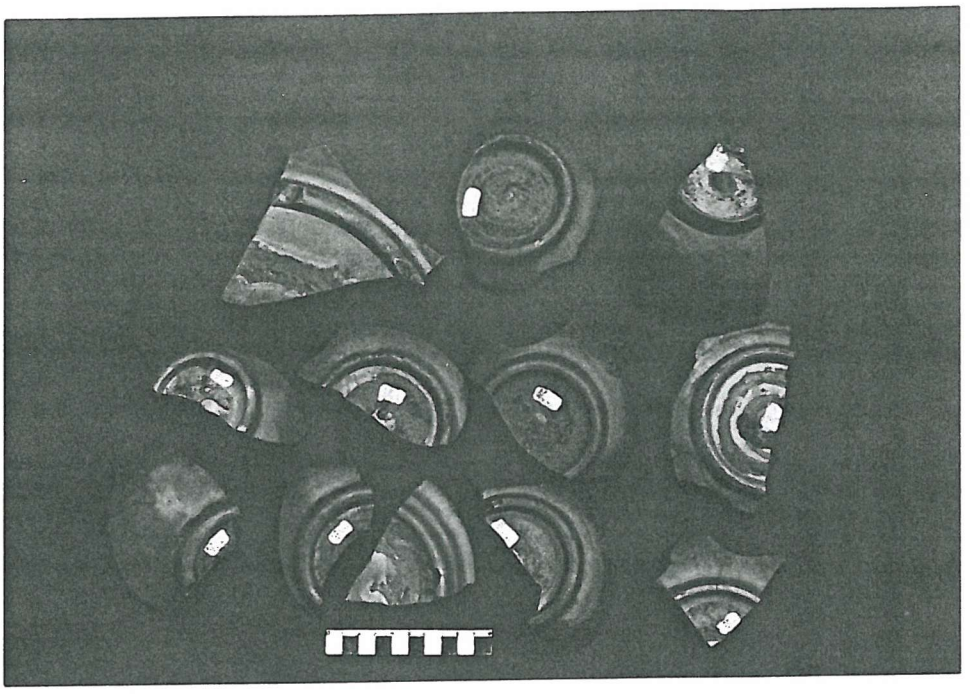


Plate 5: Lung-Chuan fragments from Kota Batu. The reddish brown-burn mark bases are due to oxidation of the iron in the clay just at the end of the firing process that have left the unglazed portions of the wares a scorched red colour. Ming Dynasty of the fifteenth century.

Plate 6: Lung-Chuan shards from Terusan Kupang. The glazes are from jade-green to brownish-green. One of the shards is decorated with a pair of fish rotating round a conceptual centre of a bowl and one piece with incised line swirls. Sung period.

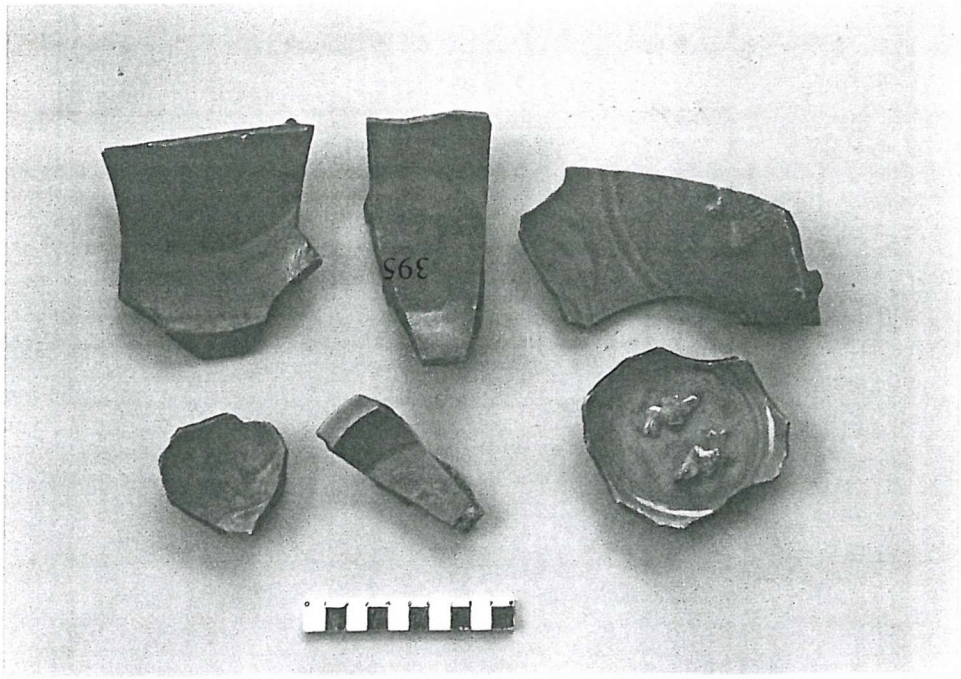


Plate 7: Lung-Chuan fragments from Terusan Kupang. Two of the shards are decorated with moulded designs of a pair of fish and a dragon. Sung period of the twelfth to thirteenth centuries A.D.

Plate 8: Celadon Types from Terusan Kupang. Olive-green to grayish-green. Two of the bowls are with unglazed ring marks at the centre of their bases, left after the piling-up of wares during firing processes. Sung period of the thirteenth century.

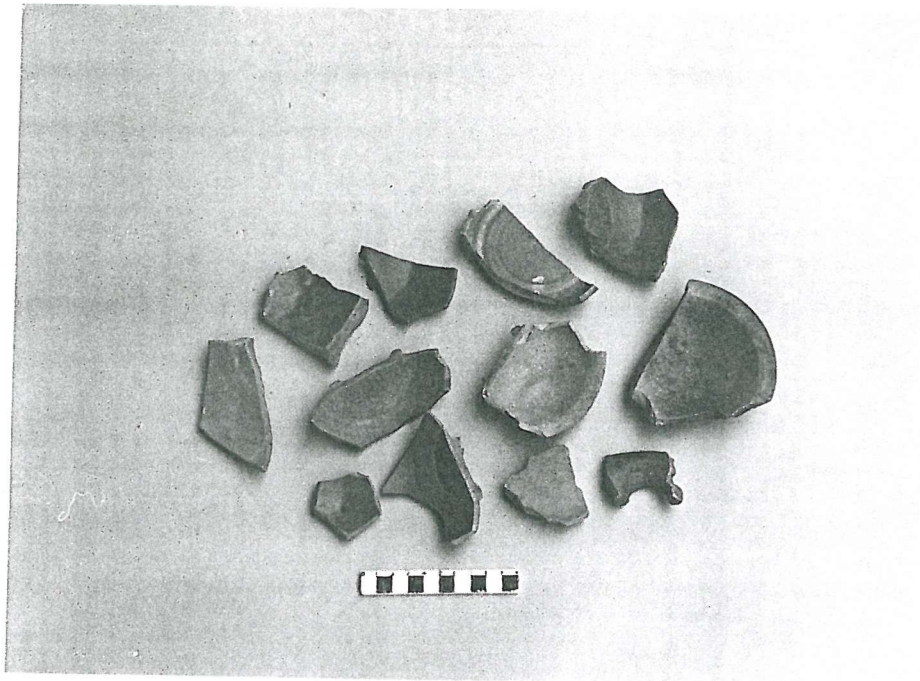


Plate 9: Celadon Types from Kampong Delitan near to Kota Batu. Light-green to brownish and to yellowish-green. Ming period of the fourteenth and fifteenth centuries A.D.

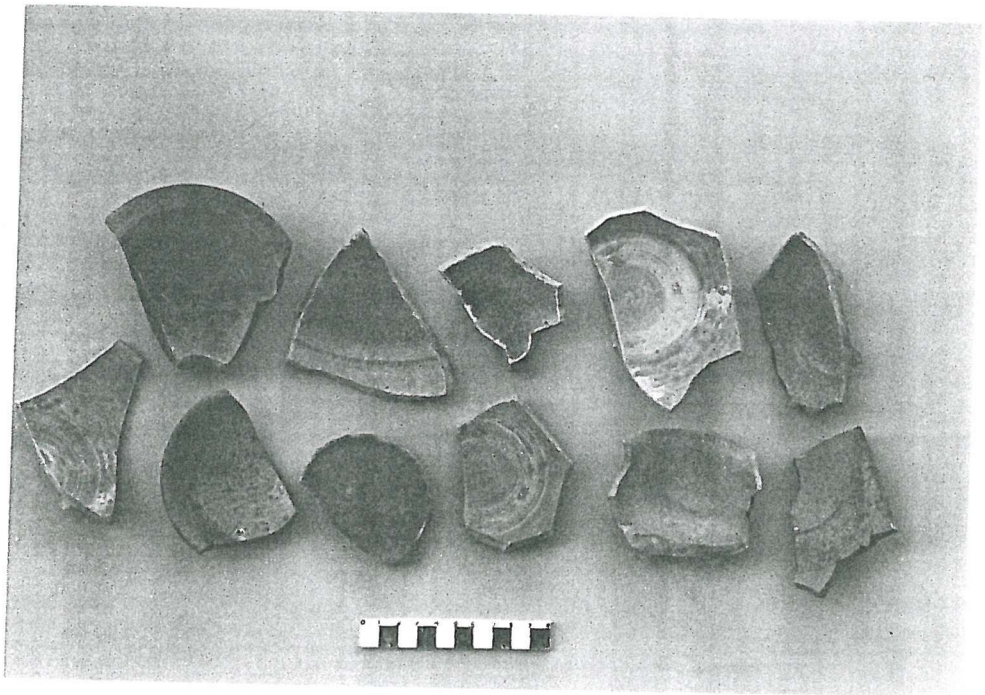


Plate 10: Celadon types from Kota Batu. Small and big bowls and dishes. Coarse bodies, with cracked and eroded glazes. Ming period of the fourteenth and fifteenth centuries A.D.

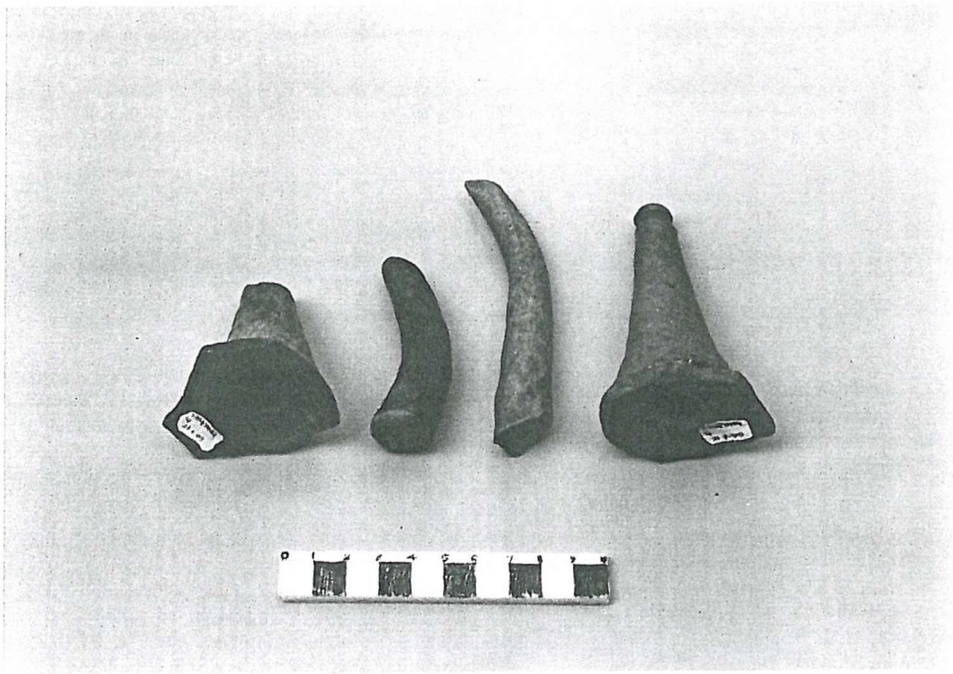


Plate 11: Spouts of *kendis* and ewers from Terusan Kupang. Celadon types and dated Sung period of the eleventh to thirteenth centuries A.D.

Plate 12: A Black-and-brown-glazed or Temmoku ware from Kota Batu. Ming period of the fifteenth to sixteenth centuries A.D.

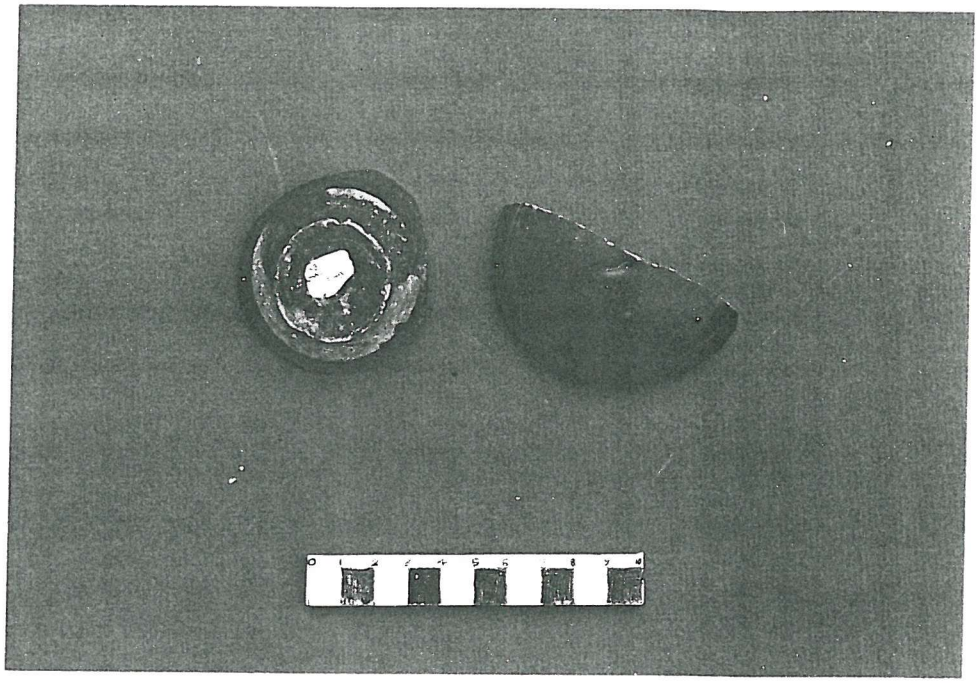


Plate 13: Black-and Brown-glazed or temmoku shards from Kota Batu. Dated Ming period of the fifteenth to sixteenth centuries A.D.

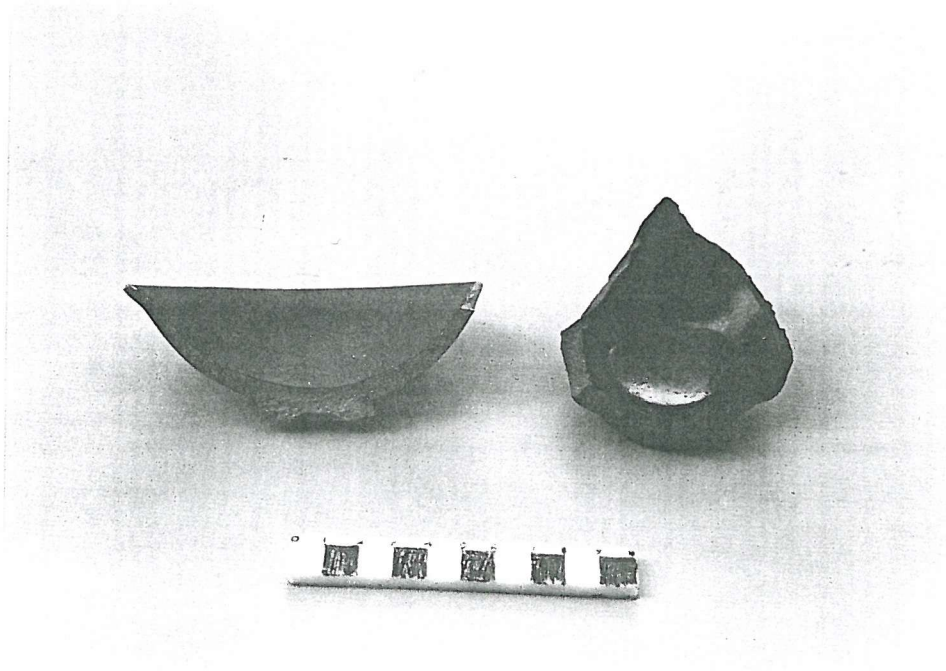


Plate 14: Black-and Brown-glazed shards from Kota Batu. Ming period of the fifteenth to sixteenth centuries A.D.

Plate 15: Rims of stoneware shards from KB. AA3, Kota Batu. The maximum diameter is 11 cm and the minimum is 3.5 cm. The complete rim is measured 9.5 cm and weight 1 kg. The glazes are from black to brownish. Dated from the fourteenth to sixteenth centuries A.D.

Plate 16: Lug-handles of stoneware jars from KB. AA3, Kota Batu. Mostly from China and dated from the fourteenth to sixteenth centuries A.D.

Plate 17: Lug-handles of stoneware jars from KB. A2 and A3, Kota Batu. Some of the shards are with fine glazes, while others are roughly potted with unglazed bodies. Dated from the fourteenth to seventeenth centuries A.D.

Plate 18: Body parts of stoneware jars from KB. AA3, Kota Batu. Maximum thickness 1.2 cm and minimum 6mm. One of the shards is smoothed into handy disc shape used most probably for games.

Plate 19: Rims of stoneware jars from Pulau Chermin. Coarse bodies and mostly decorated with incised parallel and wavy lines. Their sources are from China, some from Thailand and Vietnam. Dated from the fourteenth to seventeenth centuries A.D.

Plate 20: Bases of stoneware jars from KB. AA3, Kota Batu. The maximum diameter is 13 cm and the minimum is 8 cm. All coarse jars and mostly plain without any decoration motifs.

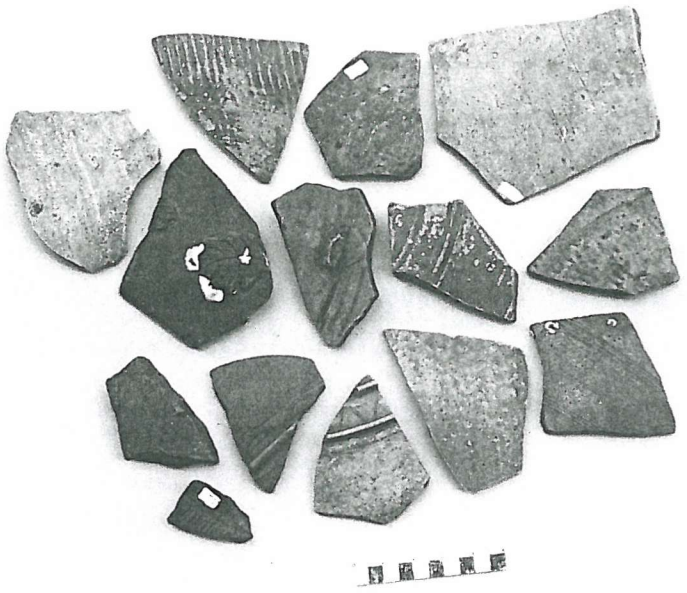


Plate 21: Body part of stoneware jars from KB. A2 and AA2, Kota Batu. Some of the shards are decorated with stamped leaf design motifs, while others are decorated with incised parallel and wavy lines. The maximum thickness is 1.2 cm and the minimum is 4 mm.

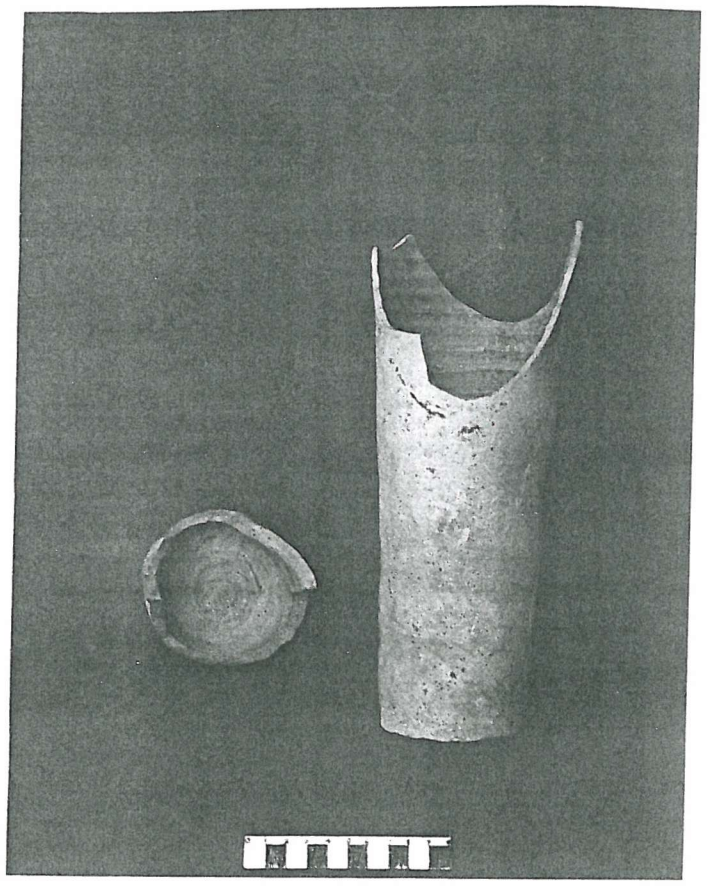
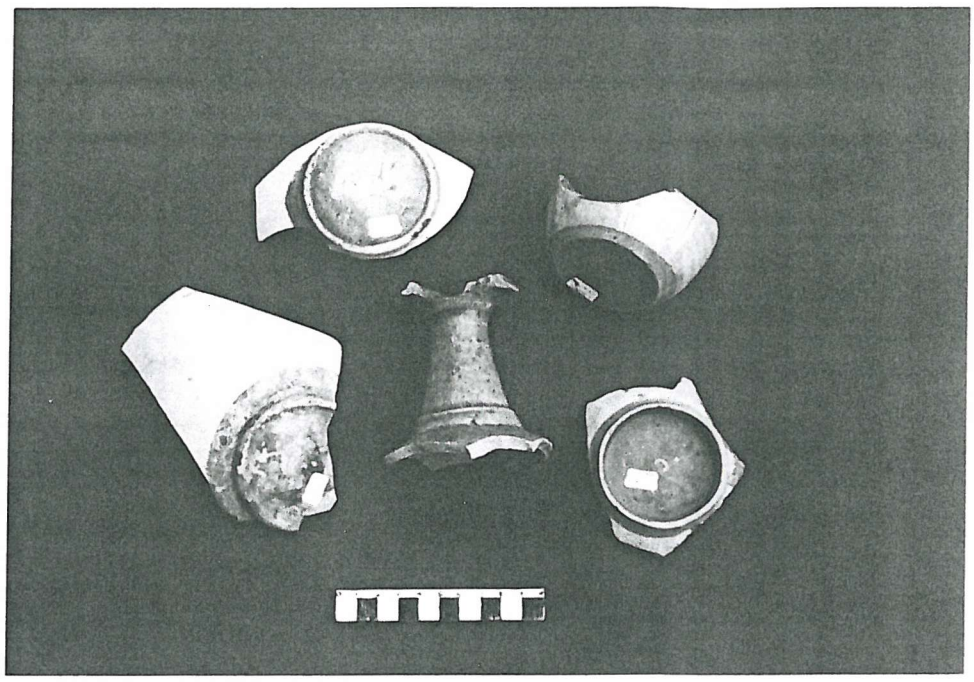


Plate 22: Cylinder bottles or jars from Kampong Junjongan, near to Terusan Kupang. Probably from Vietnam and dated from the thirteenth century onwards.



Plates 23: *Chieng-pai* from Terusan Kupang. Bowls, a cover-box and a bottle or a kendi. The whites are bright, with clear shiny glazes. Sung period of the eleventh to thirteenth centuries A.D.

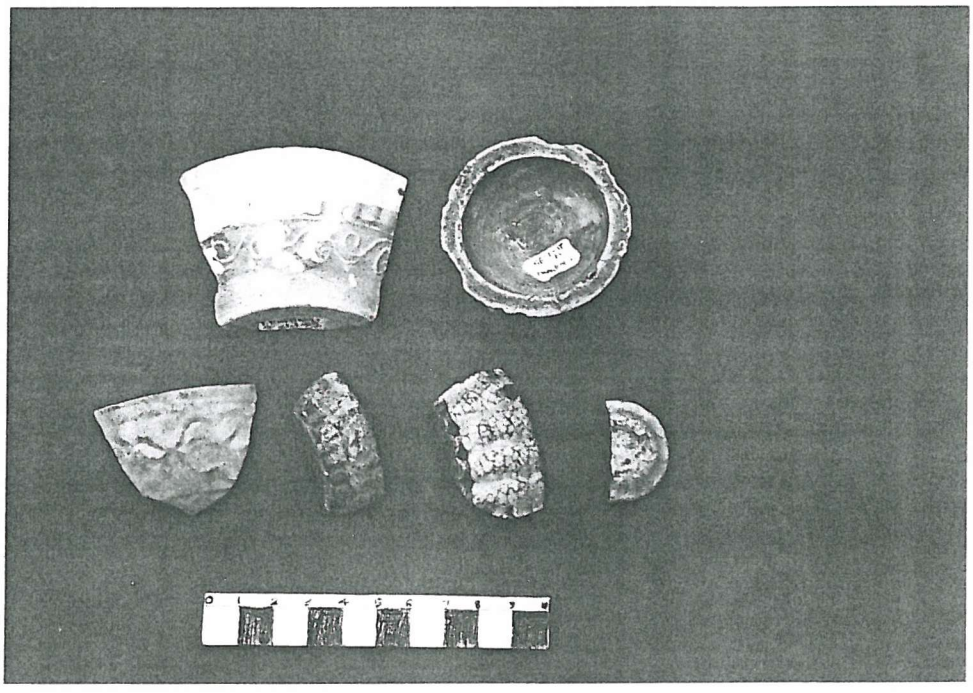


Plate 24: *Chieng-pai* shards from Terusan Kupang. Mostly consisted of cover-boxes, with moulded, ribbed design motifs. A variety of glazes from shiny ivory to greenish-white colours. Dated Sung period from the eleventh to thirteenth centuries A.D.

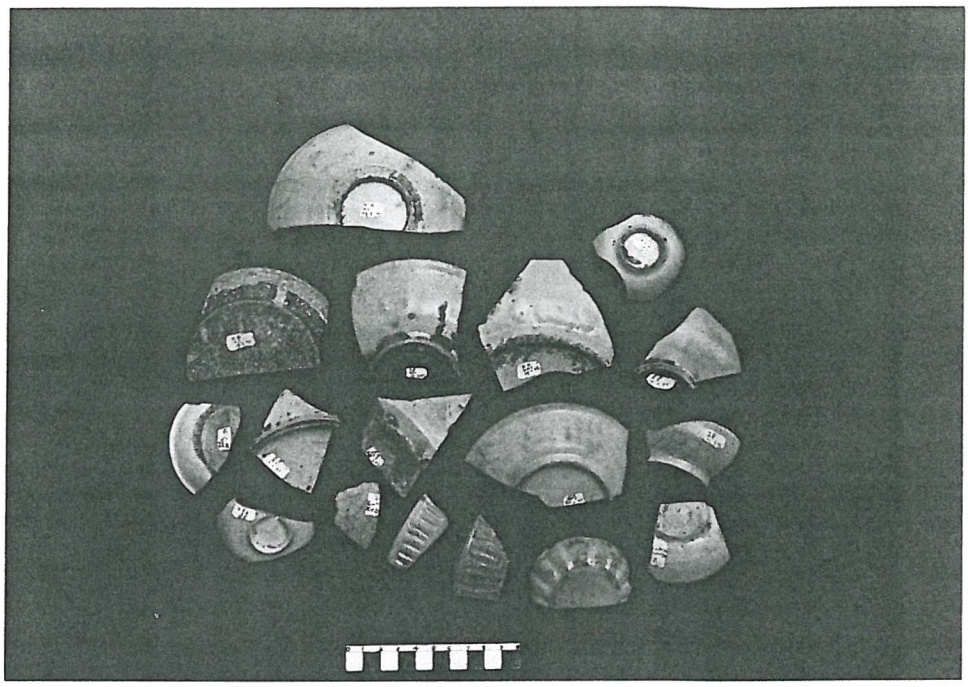


Plate 25: White shards from KB. A2, A3, AA2 and AA3, Kota Batu. Dishes, plates, bowls, saucers and cover-boxes. Three of the shards have sandy girts adhered to their bases, similar to the *Swatow* Blue-and-White types. Three of the cover-boxes are moulded designs with ribbed motifs, probably from De-hua kiln centre of Fujian.Ming period from the fifteenth to sixteenth centuries A.D.

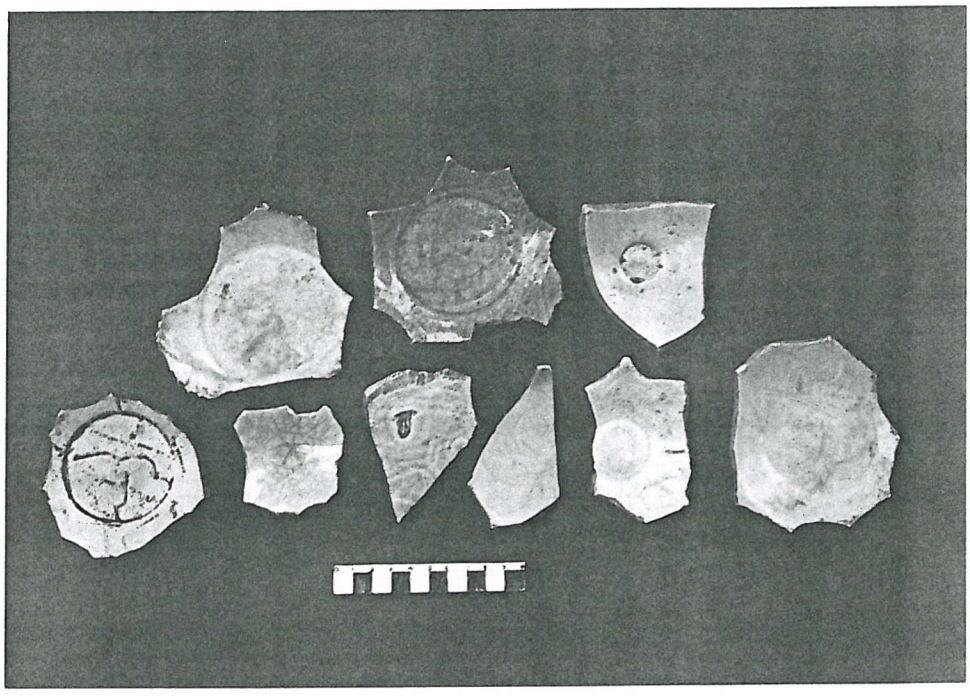


Plate 26: White wares from Terusan Kupang. Consisting of large and small bowls. Mostly originated from the southern Chinese coastal provinces of Fujian, Guangdong and Zhejiang. Dated from the eleventh to thirteenth centuries A.D.

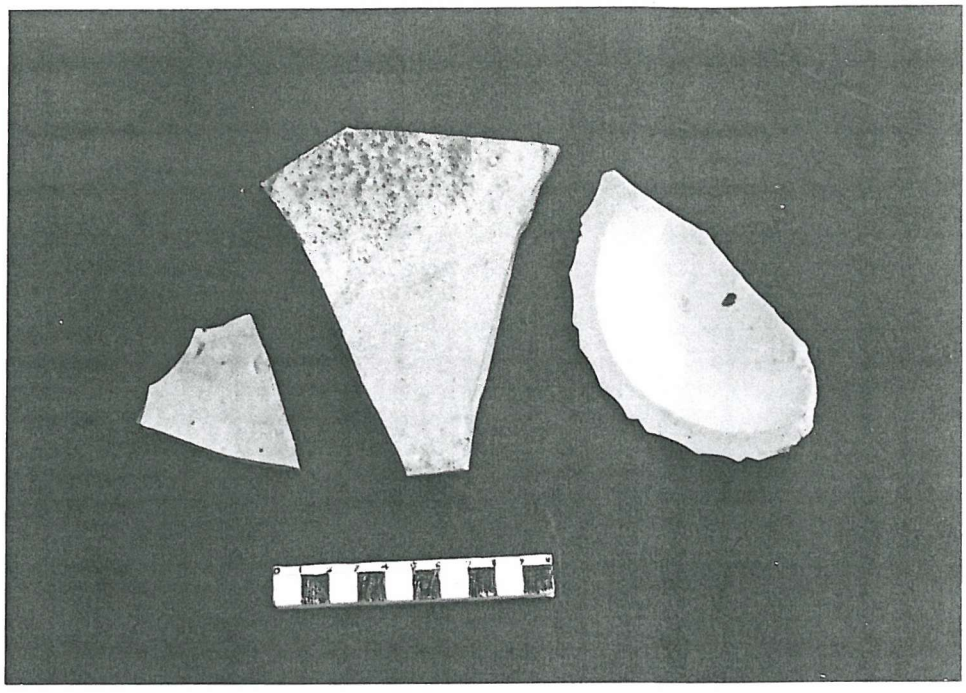


Plate 27: White wares from KB. III, Kota Batu. Spit IV (60-80 cm). Two large dishes and a plate with a foliate rim. A.D.The large dish has sandy grits adhered to its base, similar to the *Swatow* Blue-and-White types. Ming period of the fifteenth to sixteenth centuries

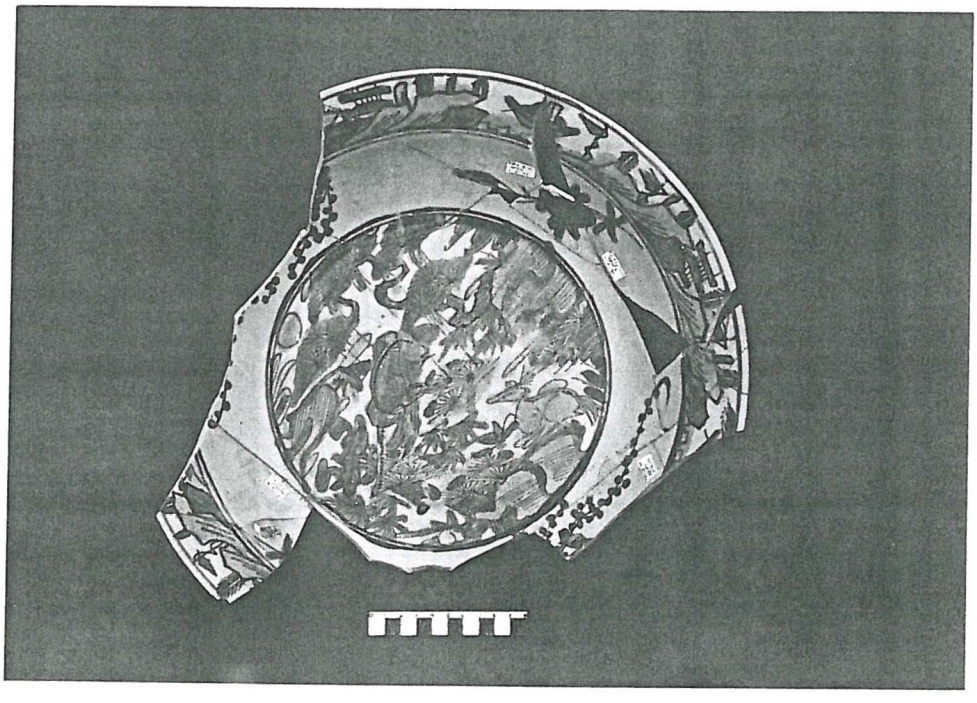


Plate 28: A *Swatow* Blue-and-White from KB. II, Kota Batu. Spit III (40-60 cm). Natural environment motifs of a deer and vegetation on the central body, a bird and fruits on its cavetto and temples and mountain scenery on the rim. Ming period late fifteenth or early sixteenth centuries A.D. Rim diameter: 28 cms. and base diameter: 17 cms.

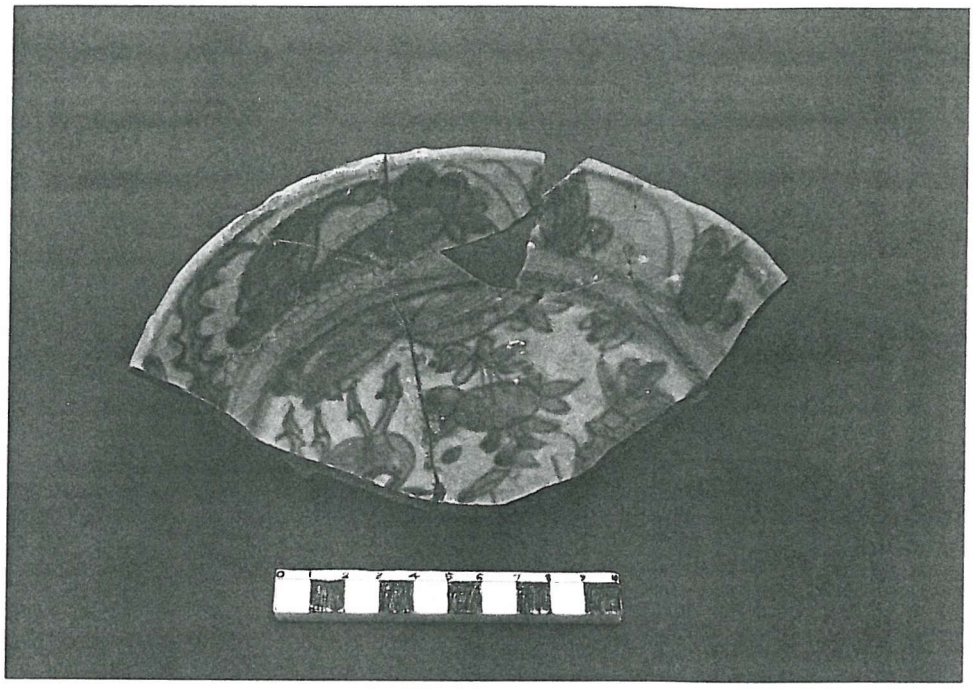


Plate 29: A *Swatow* Blue-and-White dish from KB. III, Kota Batu. Spit IV (60-80 cm). Natural environment motifs of a deer, floral and ducks on the central body and the rim. Ming period of the sixteenth to seventeenth centuries A.D. Rim diameter: 11 cm and base: 5.5 cm.

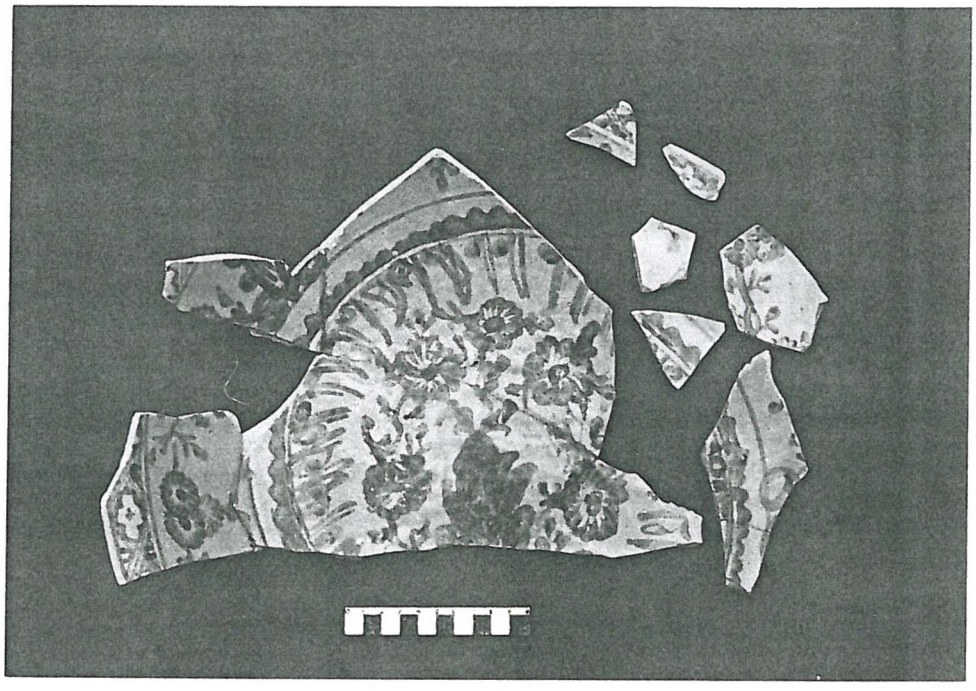


Plate 30: A *Swatow* Blue-and-White dish type from KB. III, Kota Batu. Spit IV (60-80 cm). Floral design patterns of chrysanthemum flowers. Ming period of the sixteenth to seventeenth centuries A.D.

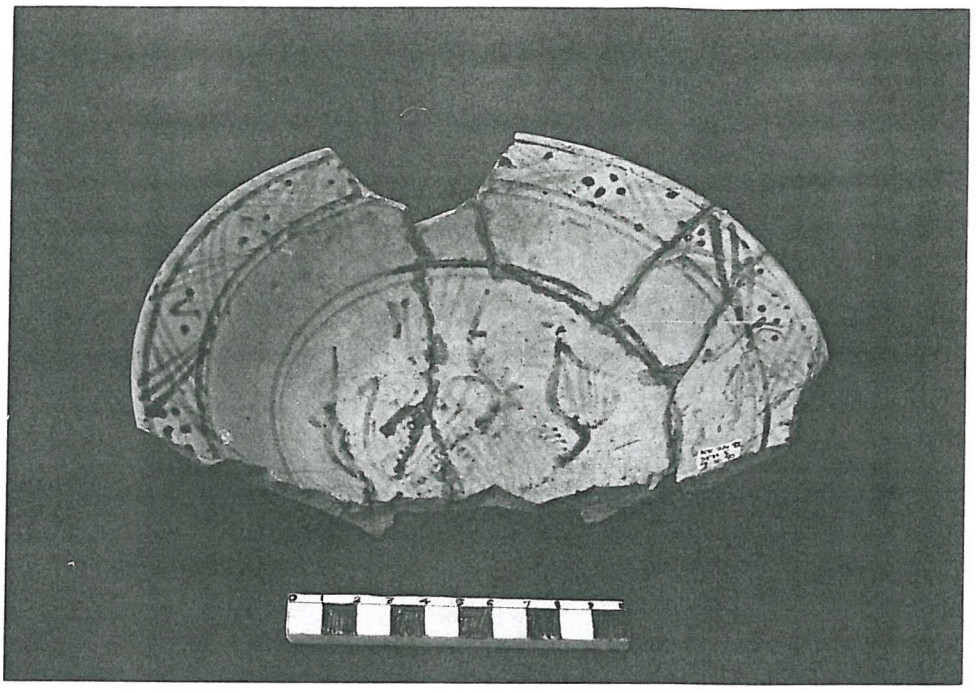


Plate 31: A *Swatow* dish of Blue-and-White type. Found at KB. II, Kota Batu, at spit III (75 cm). The central decoration is drawn with a qilin, Chinese mythological beasts and a geometrical design motifs on the rim. Ming period of the sixteenth to seventeenth centuries A.D. Rim diameter: 11 cm. and base: 5 cm.

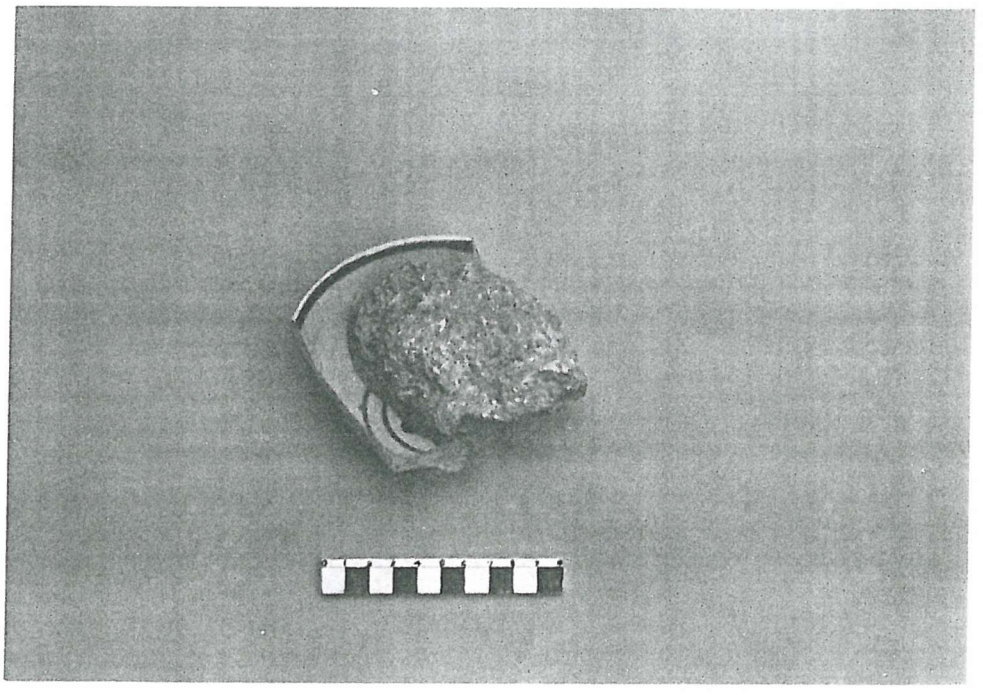


Plate 32: A Blue-and-White bowl from at KB. II, Kota Batu. Content a big lump of *damar* or resin, probably used for coating. Found along side this bowl are crucibles, believed were used to make local cannon, *bedils*. The crucibles are coated with a high percentage of damar on their bodies.

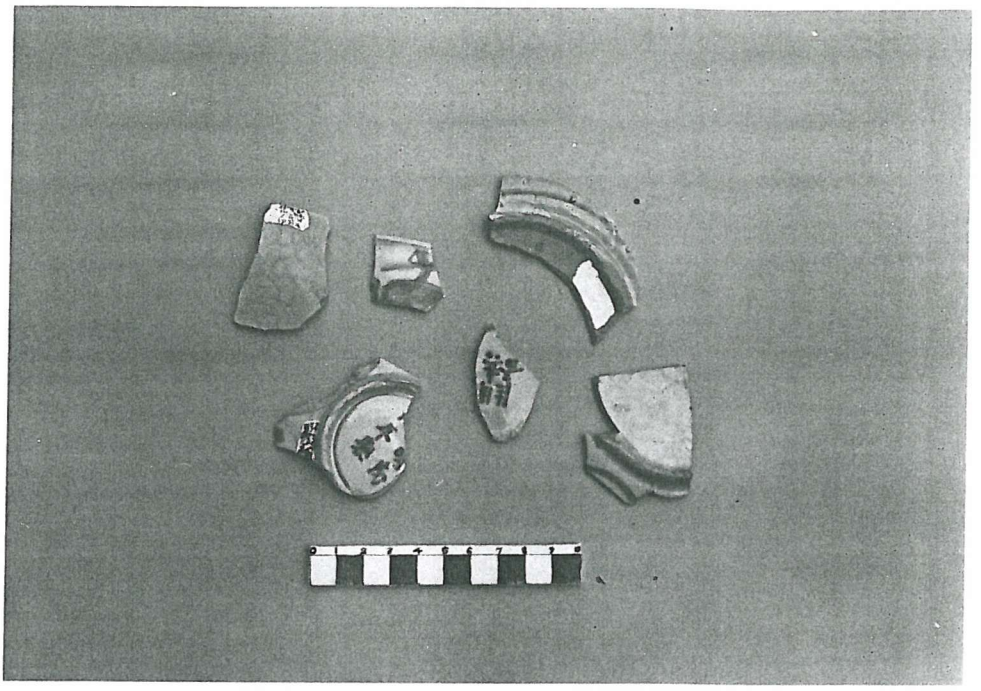


Plate 33: Some of the Blue-and-White shards from KB. III, Kota Batu. Found at different spits from 20 to 100 cm. A.D.Two of the shards are written with Chinese characters, with one piece readable 'Emperor Cheng Hua (1465-1487)- bottom left. Ming period from the fifteenth to sixteenth centuries

Plate 34: Blue-and-White shards from KB. III, Kota Batu. Found at different depth from 20-100 cm. Dated Ming period from the fifteenth to early seventeenth centuries A.D.

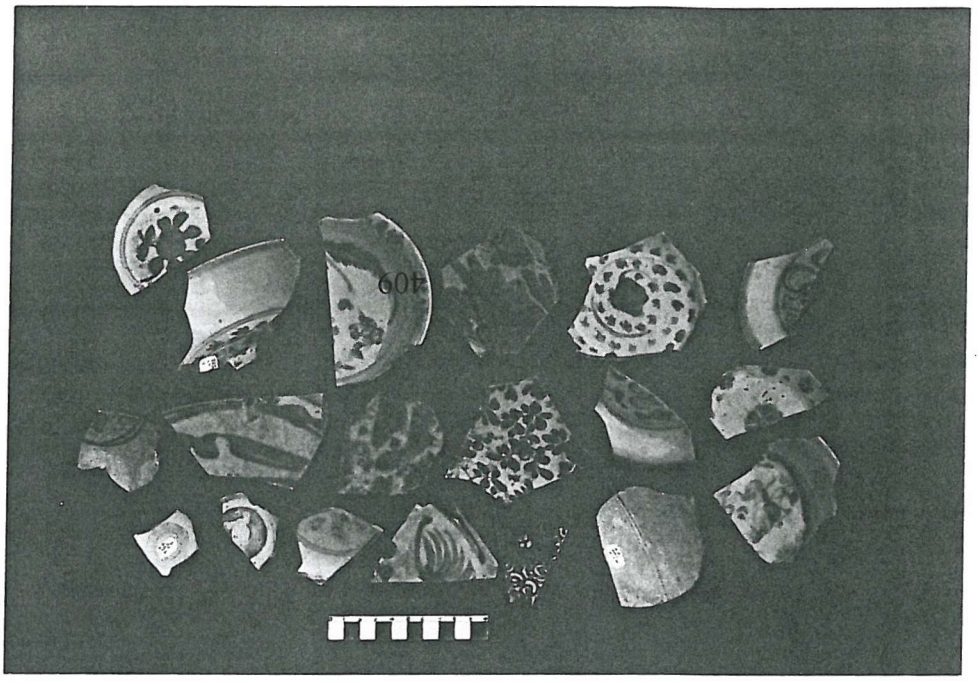


Plate 35: Blue-and-White shards from the river-bank site, Kota Batu. One piece of the shard is dated early Ch'ing period of the mid seventeenth century (a middle row, fourth from left). The rest of the shards are dated Ming period from the fifteenth to sixteenth centuries A.D.

Plate 36: Blue-and-White shards from Pulau Chermin. Dated Ming and early Ch'ing periods from the fifteenth to mid seventeenth centuries A.D.

Plate 37: Blue-and-White shards from Pulau Chermin. Ming to early Ch'ing period of the fifteenth to mid-seventeenth centuries A.D.

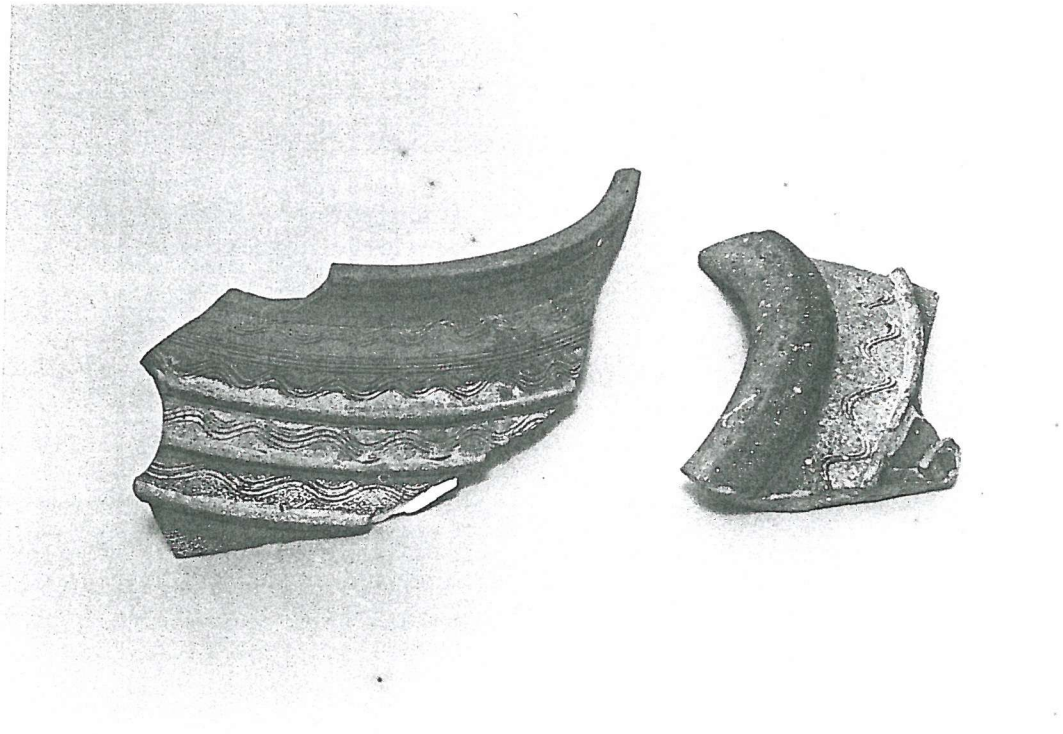


Plate 38: A Khmer stoneware jar from Kota Batu. Incised wavy lines on the shoulder, a typical in Khmer design motifs. Dated thirteenth century A.D.

Plate39: Sukothai shards of bowls and plates types from Kota Batu. Gray bodies and under painted decoration with fish and floral motives. All shards have spur support marks at the central bodies. Dated fifteenth century A.D.

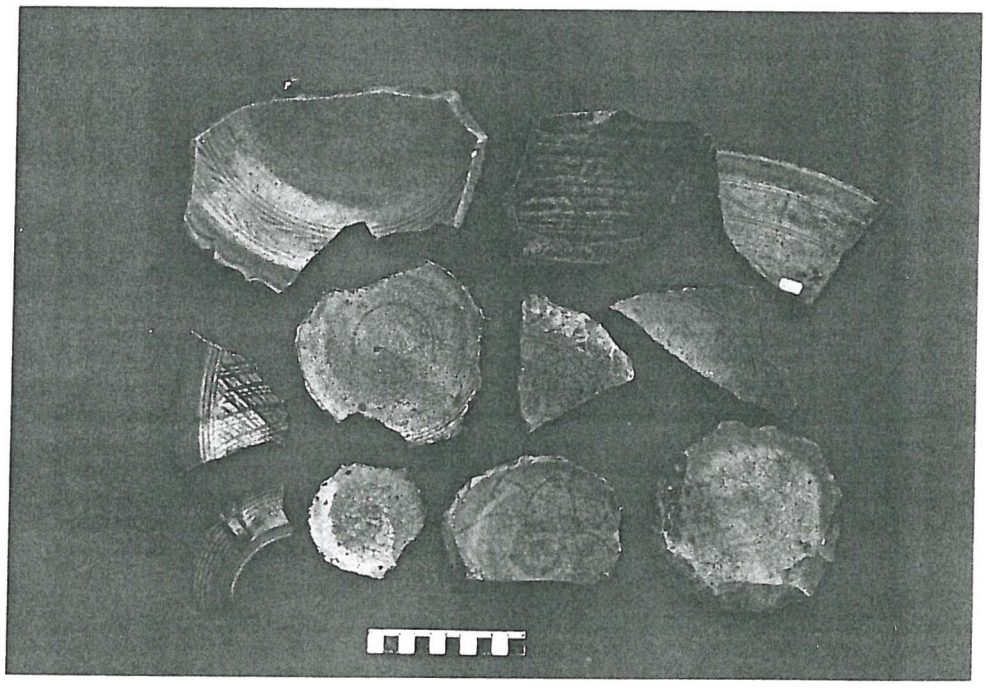


Plate 40: Sawankhalok celadon shards from Kota Batu. Large and small bowls and *kendis* shapes. Various designs of incised floral motifs, floral scrolls and cross-hatch motifs. Dated from the fifteenth to sixteenth centuries A.D.

Plate 41: Sawankhalok celadons from Kampong Delitan, near to Kota Batu. Consisting of small and large bowls and dishes. One of the shard is designed with a floral motif of rosette flower. The central base is thick glazed, with glassy and has an egg-shell like texture. Dated from the fifteenth to sixteenth centuries A.D.

Plate 42: A sawankhalok celadon bowl found at Kota Batu in 1981. A carved body with an everted rim. Concentric rings around the interior lower portions of the bowl. Dated from the fifteenth to sixteenth centuries A.D.

Plate 43: Sawankhalok iron-glazed shards from Kota Batu. Consisting of cover-boxes of either from the lid or body forms. Dated from the fifteenth to sixteenth centuries A.D.

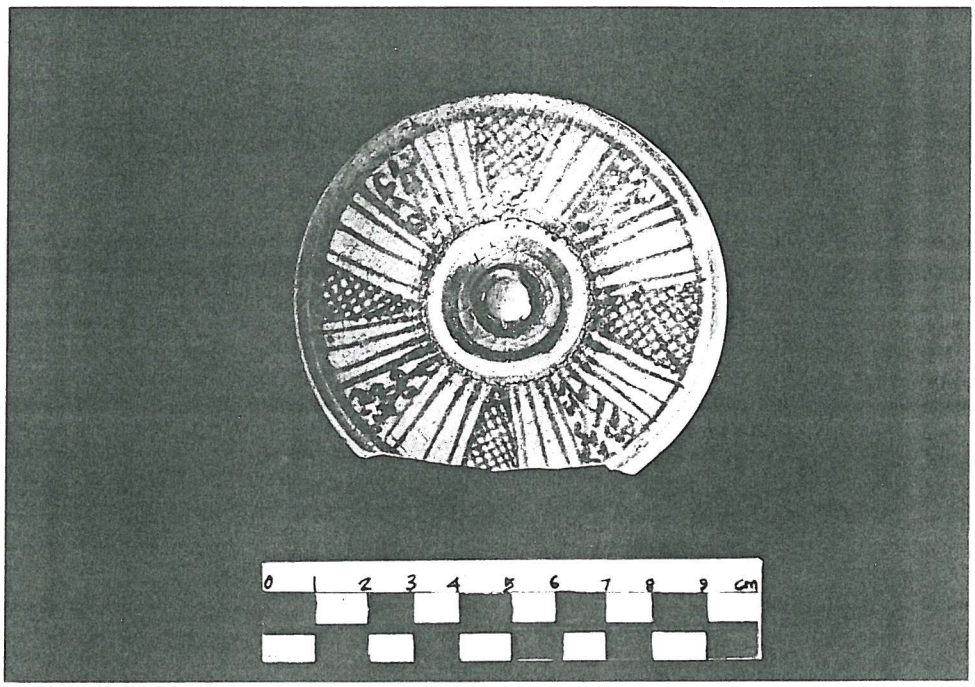


Plate 44: A lid of a cover-box of a Sawankhalok iron-glazed type. Found at Kota Batu and dated from the fifteenth to sixteenth centuries A.D.

Plate 45: Sawankhalok iron-glazed shards of cover-boxes and bowls type found at Kampong Delitan, near to Kota Batu. Dated from the fifteenth to sixteenth centuries A.D.

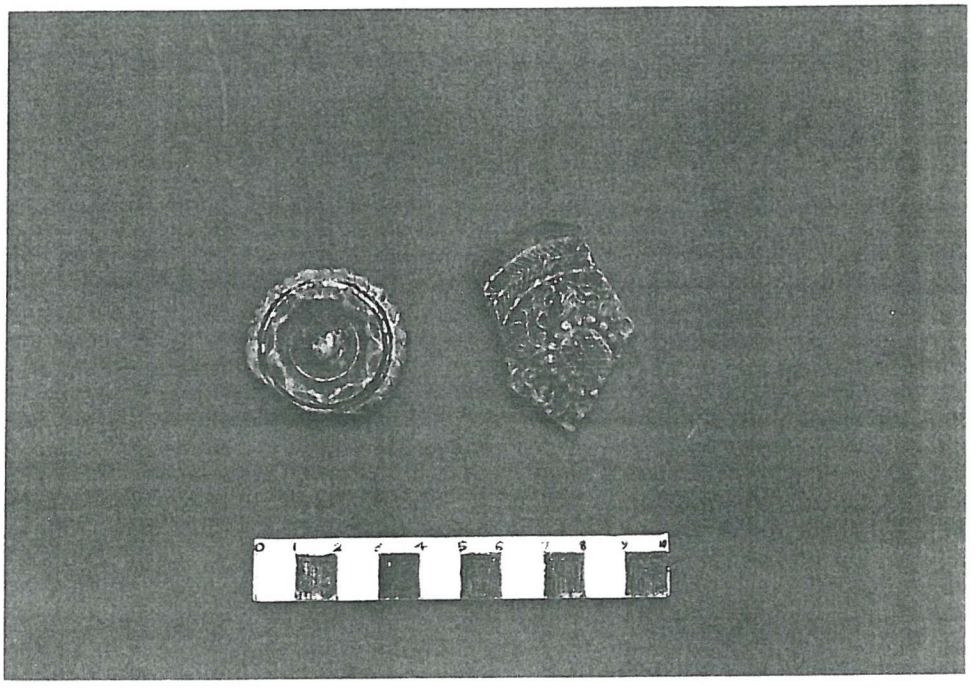


Plate 46: Sawankhalok incised-biscuited shards from Kota Batu. Lids of cover-boxes, with floral and line scrolls design motifs. Dated from the fifteenth to the sixteenth centuries A.D.

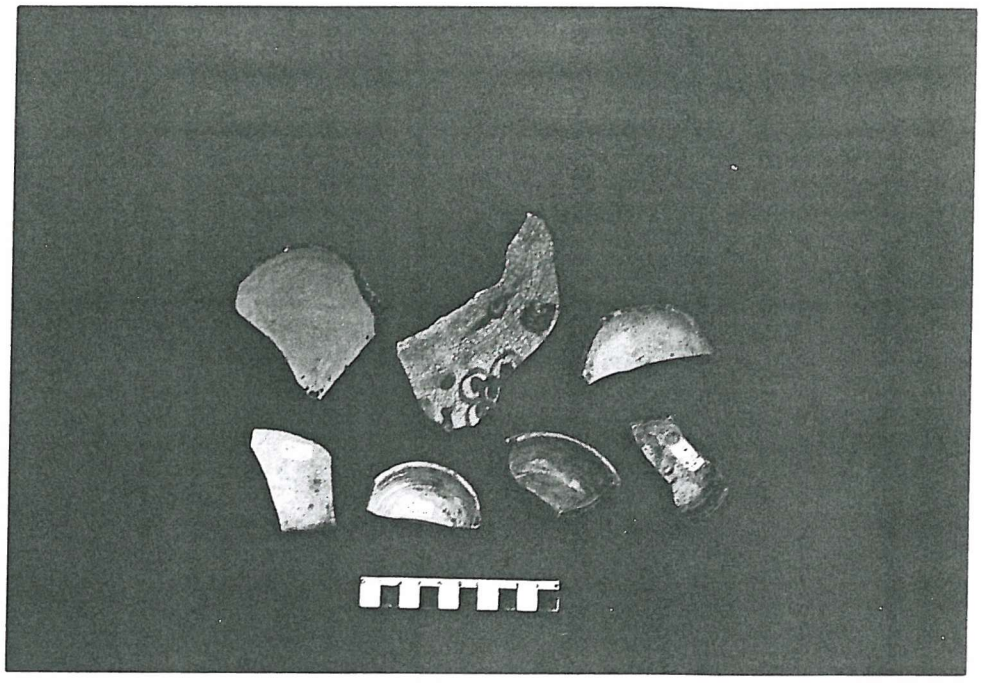


Plate 47: Vietnamese Blue-and-White shards found at Kota Batu. Consisted of cover-boxes, bowls and a jar. Dated from the fifteenth to the sixteenth centuries A.D.

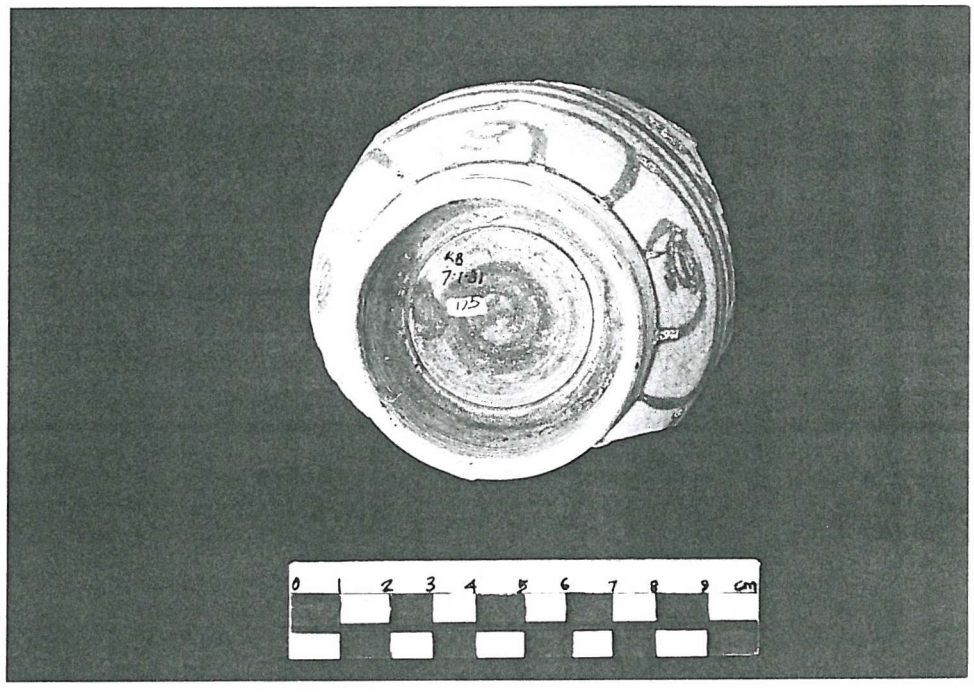


Plate 48: A Vietnamese Blue-and-White deep bowl with a high rounded foot ring. White, chalky crackles glaze and with chocolate coloured unglazed base. Dark blue underglaze painting, with lotus petal design motifs radiating from footring with horizontal concentric circles above. Found at Kota Batu in 1981 and dated fifteenth century A.D.

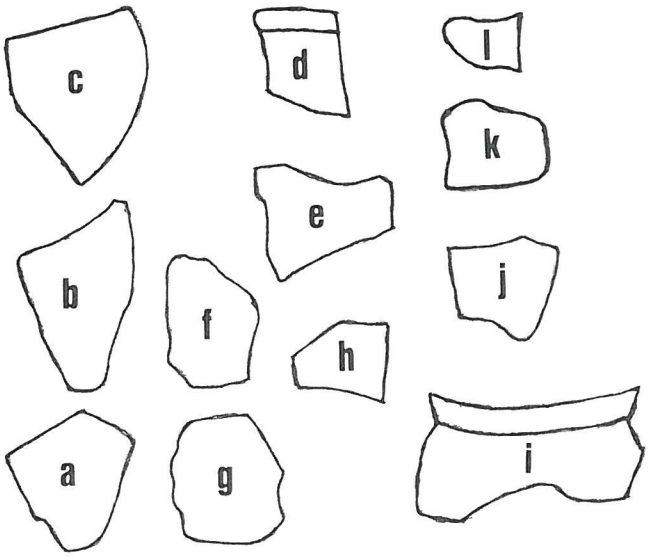


Plate 49: Earthenwares from Terusan Kupang. Various design motifs and fabrics: Impressed triangles between bordering lines (a, b & j); parallel arcs between horizontal lines (e & f); herring bone or the pine tree patterns (c); meander patterns (h & k); curivilinear/double circle motifs (g); stab- and- drag pattern (d & l), and a plain rim of a cooking pot (I).

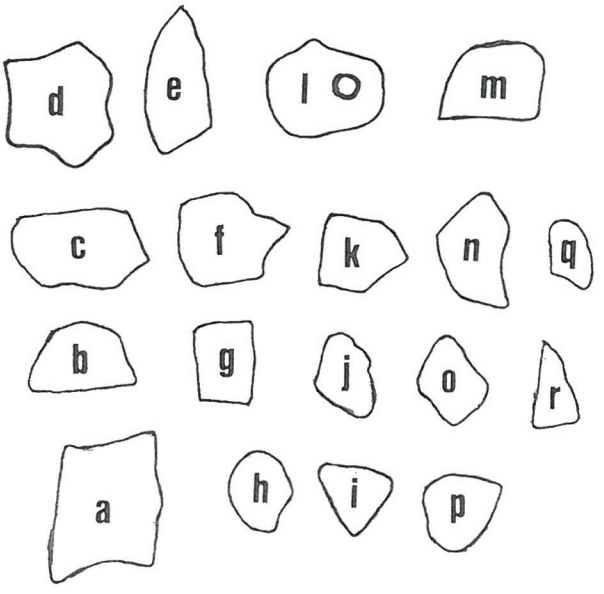
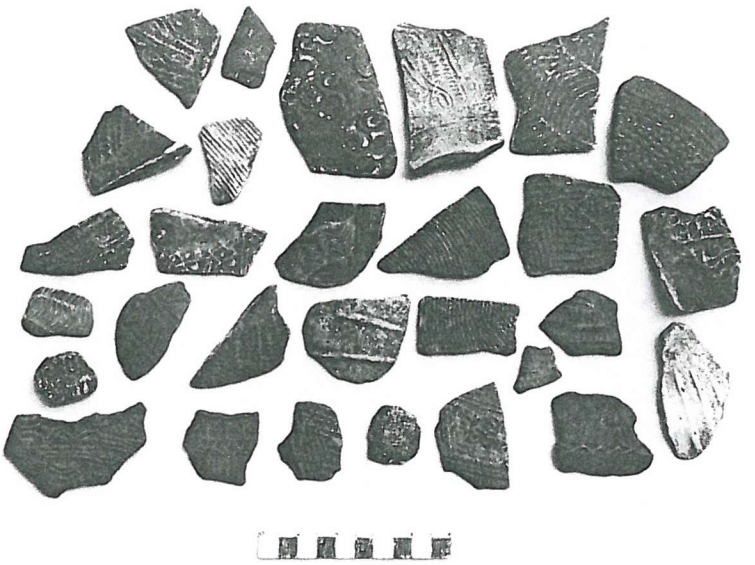


Plate 50: Earthenwares from Kota Batu. Various design motifs and fabric types. Paddle-impressed ribbed motifs (g, l, n, p & q); wavy edge of a cockle or other shells impressed motifs (m); impressed vertical, horizontal or oblique serration patterns (b, c, k, o & r), small impressed dot design all over the body (j); impressed spiral motifs between horizontal, serration line patterns (c); impressed herring bone patterns (h); plain rim parts of cooking pots (a & d), and plain lid parts of a cover-box and a kendi (e & l).



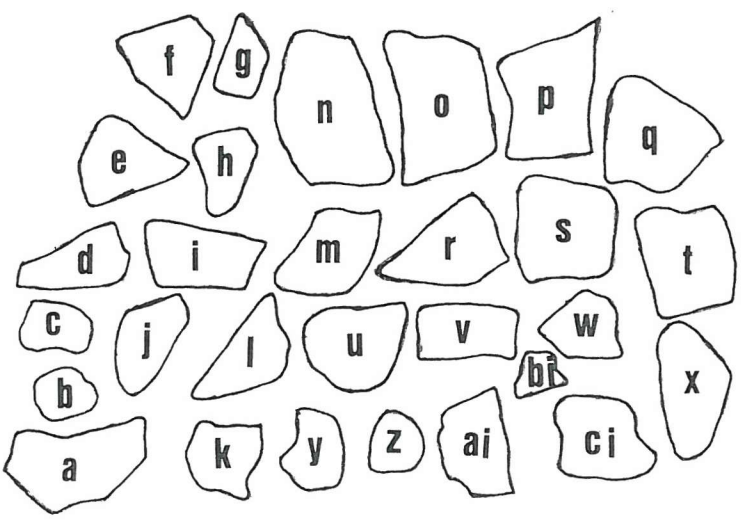


Plate 51: Earthenwares from Kota Batu with various fabrics and design motifs. Paddle-impressed ribbed motifs (h, r, & v); wavy edge of cockle or shells like motifs (u & x); impressed vertical, horizontal or oblique serration patterns (d, e, f, l, n, w & ai); impressed triangles between bordering lines (I & j); impressed parallel arcs between horizontal lines (c & p), small impressed dots all over the body (b, q, z & bi); impressed meander patterns (s); impressed spiral motifs between horizontal lines (a, n & t); impressed wavy lines (m), and punctuation motifs (ci).

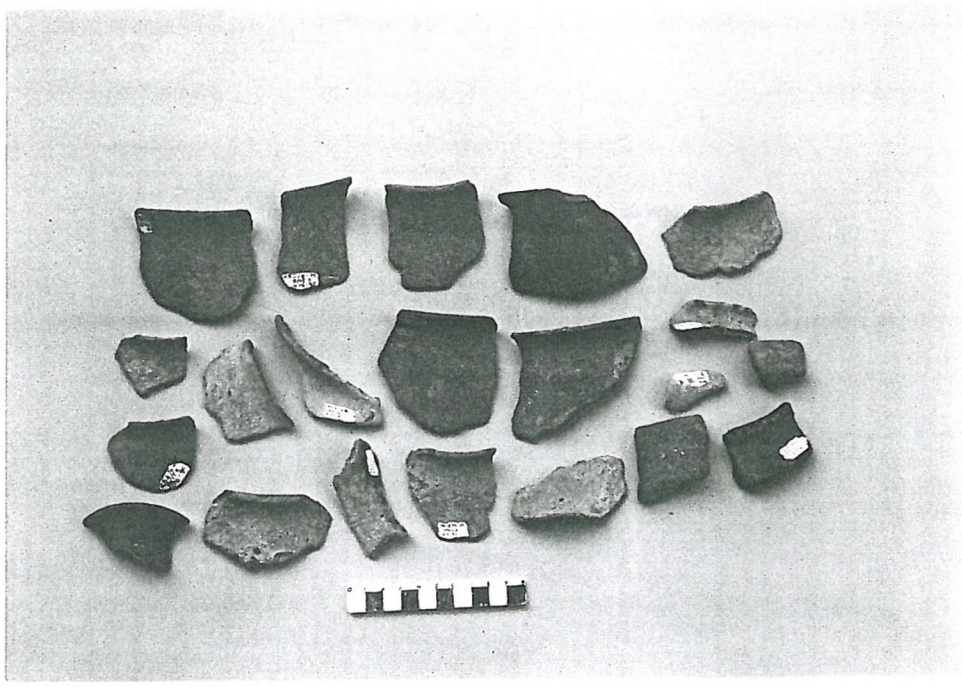


Plate 52: Earthenwares from Kota Batu showing the rim parts of jars and cooking pots. Thin body walls, mostly with everted rims. Plain bodies, colour range from gray to dark gray to brown, very pale brown to reddish yellow.

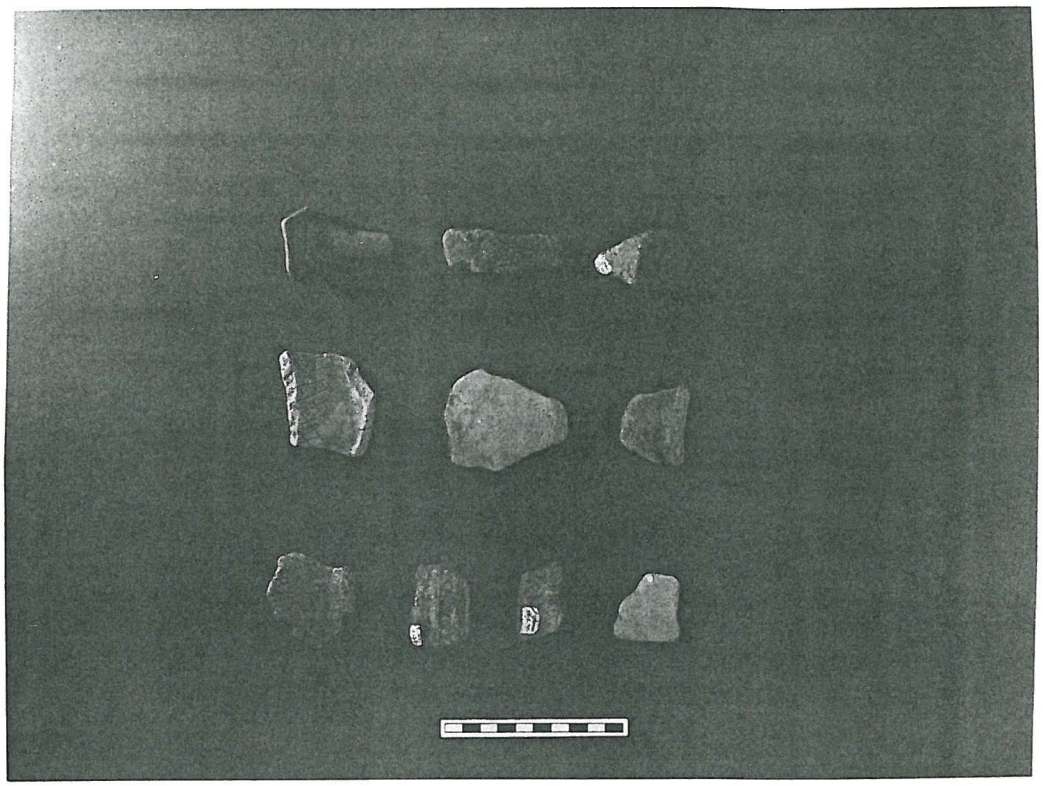
Plate 53: Various types of knobs and handles of earthenware vessels found at Kota Batu. Hard bodies of fabric 4 and 5. Some of these knobs are resembled to those discovered in the Gulf of Thailand and Vietnam.

Plate 54 a: Earthenware crucibles from KB. II and III, Kota Batu. Very soft bodies and coated with resin or *damar*. Very large inclusions, which composed of charcoal, plant inclusions and crushed quartz and sandstones.

Plate 54 b: The same type of crucibles showing the interior body. Tube-like moulds and most probably used to make local cannons, *bedils*. Dated around the fifteenth century onwards.

Plate 55 a: A foot of an earthenware stove found at Kota Batu. Very hard body of fabric 5 type. Similar to those discovered in the Gulf of Thailand. Dated from the fifteenth century onwards.

Plate 55 b: A foot of an earthenware stove and feet of earthenware basins. Found at the river-bank site of Kota Batu. Hard bodies of fabric 4 and 5 types.



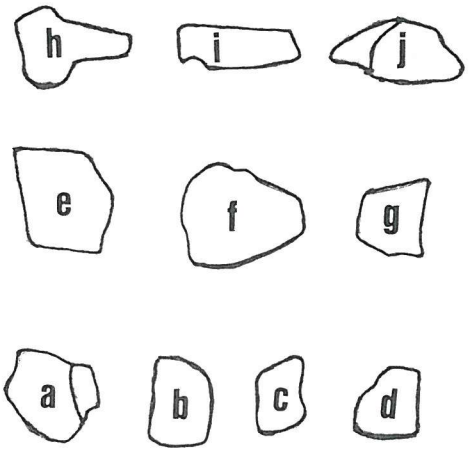
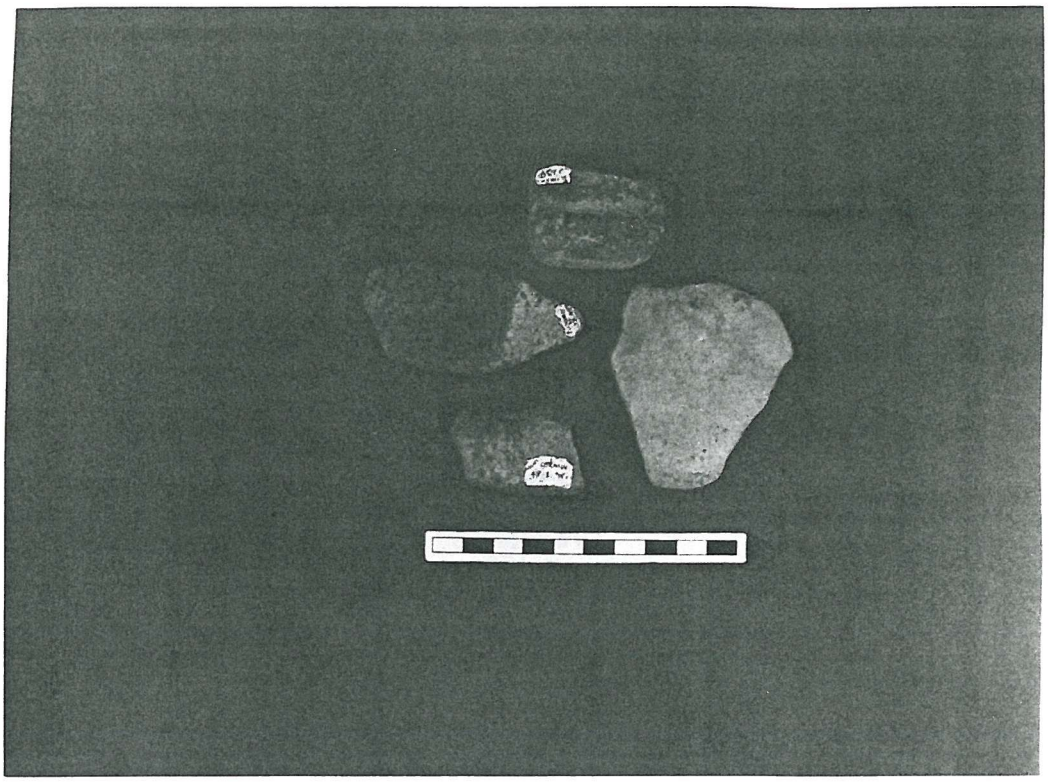


Plate 56: Earthenwares from Pulau Chermin. Mostly cooking pots, which composed of fabric 1 type (a, b, c, d, f, g, i & j). The other types are a knob of a ewer (h) - fabric 2, and a rim of a jar (e)- fabric 3.



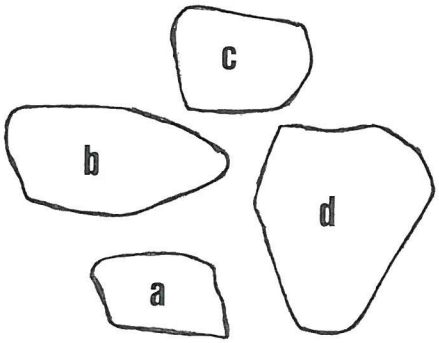


Plate 57: Earthenwares from Pulau Chermin. All shards are from cooking pots of fabric 1 type.

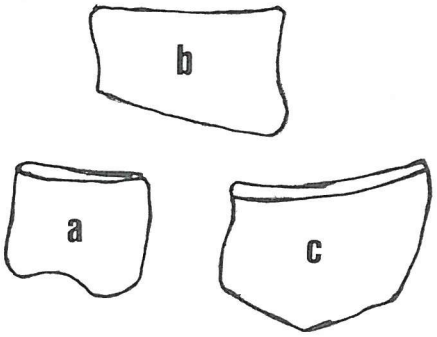


Plate 58: Rim parts of earthenware cooking pots found at Kota Batu. Two fabric types: shards (a) and (b) are fabric 1 and shard (c) fabric 2. Plain bodies, colour range from light brown to reddish yellow.

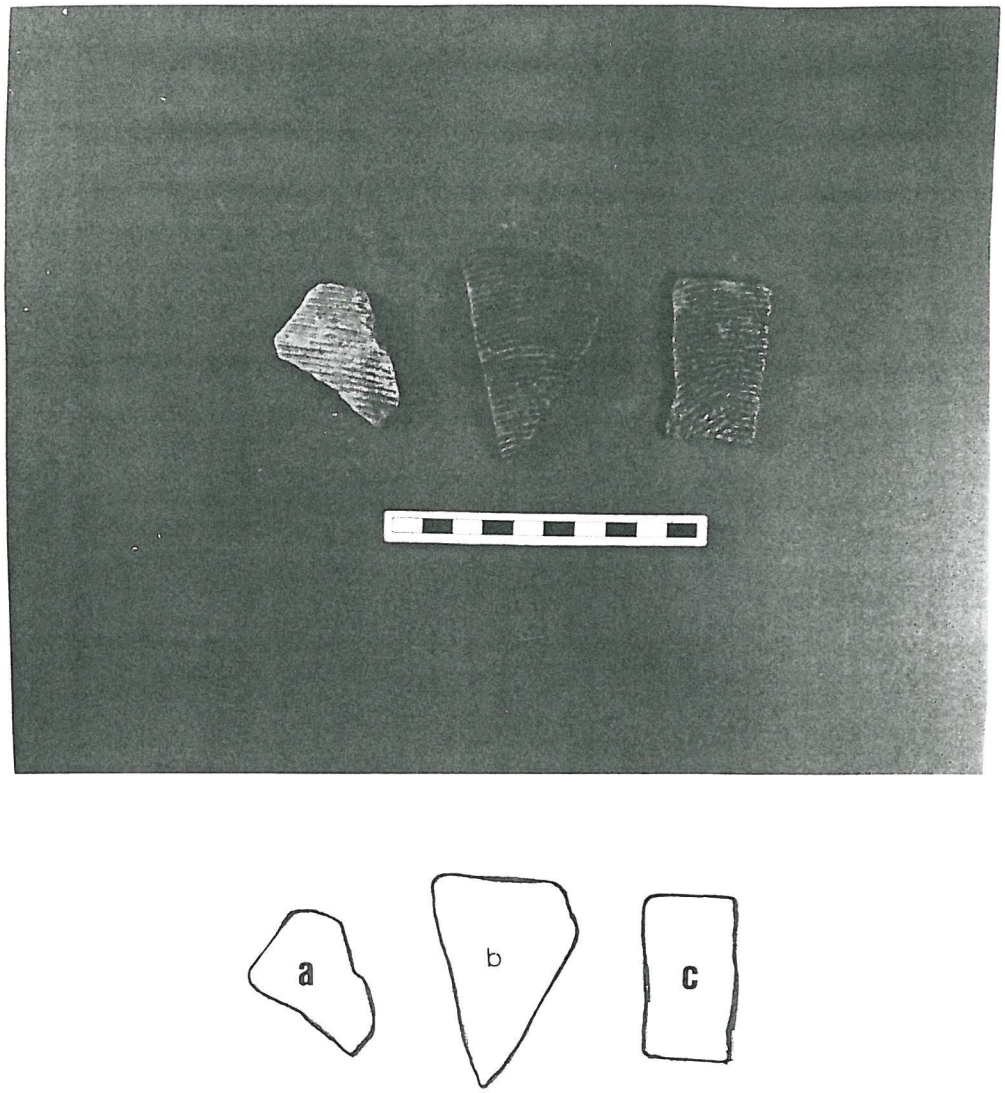
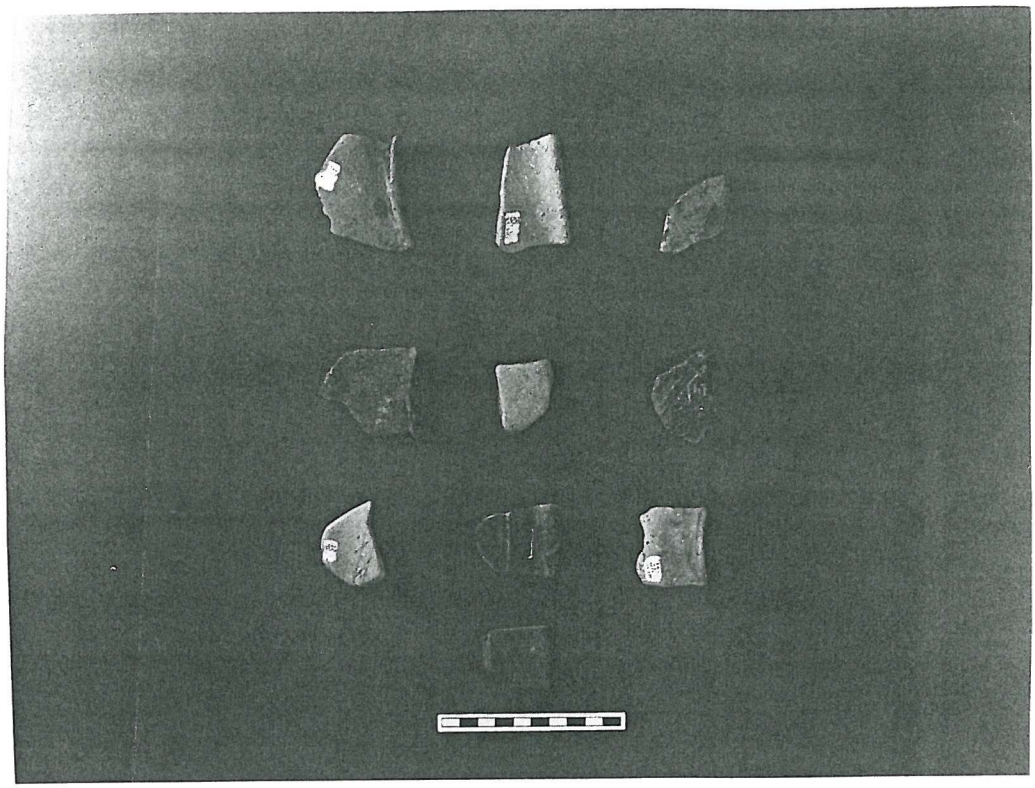


Plate 59: Body parts of earthenware cooking pots or kendis found at the river-bank site of KB. AA2, Kota Batu. All shards are with impressed ribbed design motifs and fabric 3 type.



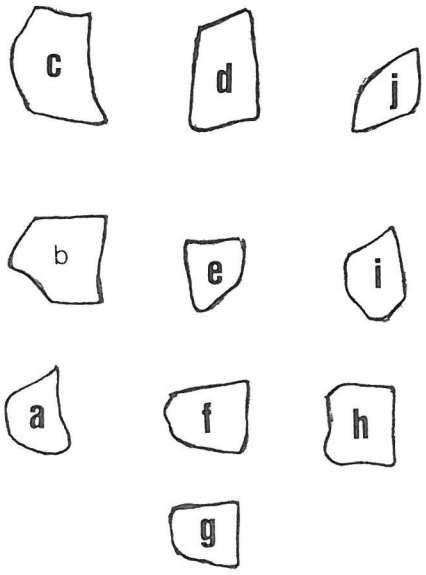


Plate 60: Earthenware from Kota Batu. Various shapes and fabric type: cooking pots of fabric 1 and 2 (b, c, d, e, j, h & I), and jars of fabric 4 and 5 (f and g).

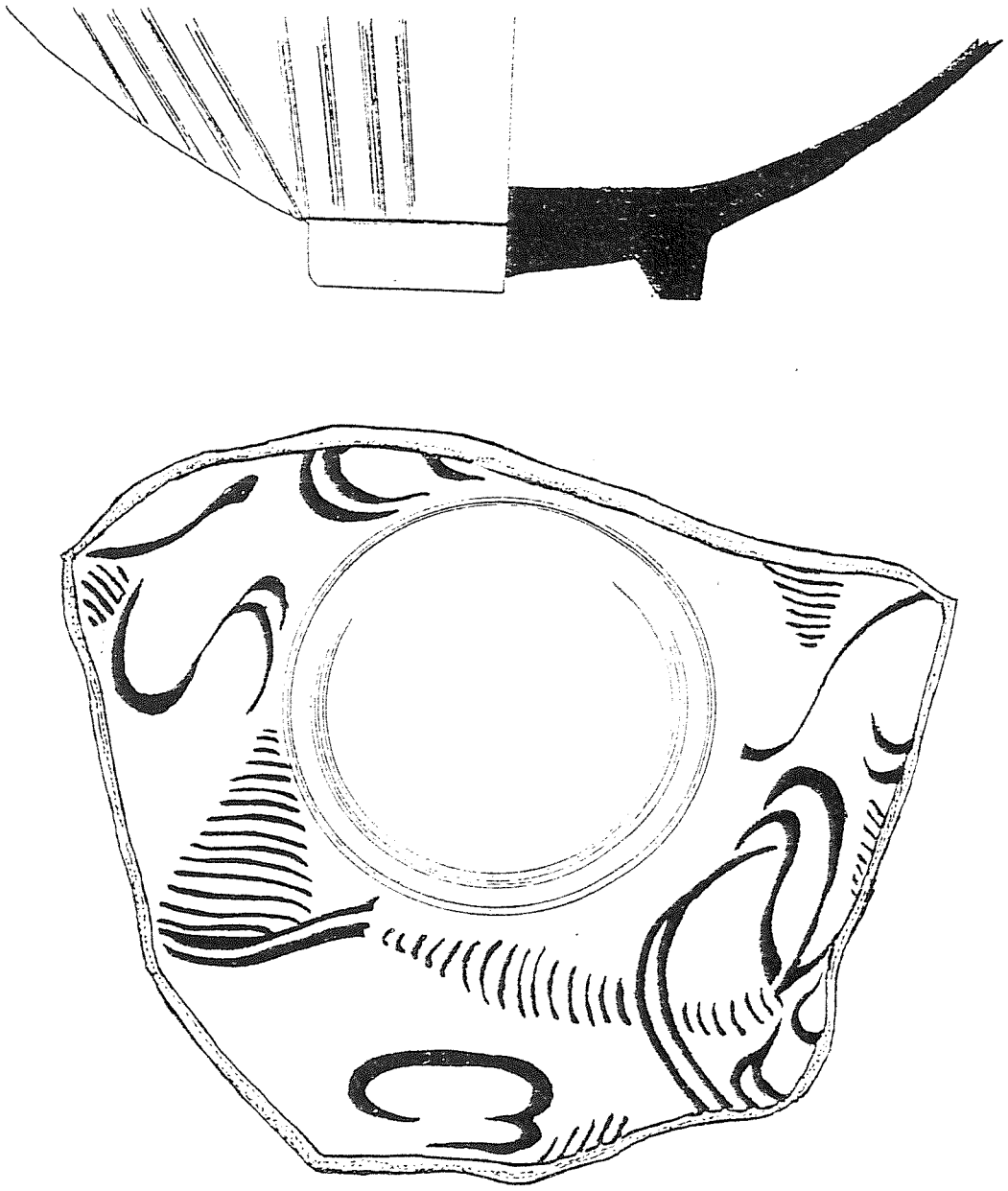


Illustration 1: A Yueh bowl found at Terusan Kupang. Incised decoration at the exterior and combed and incised swirls at the interior.

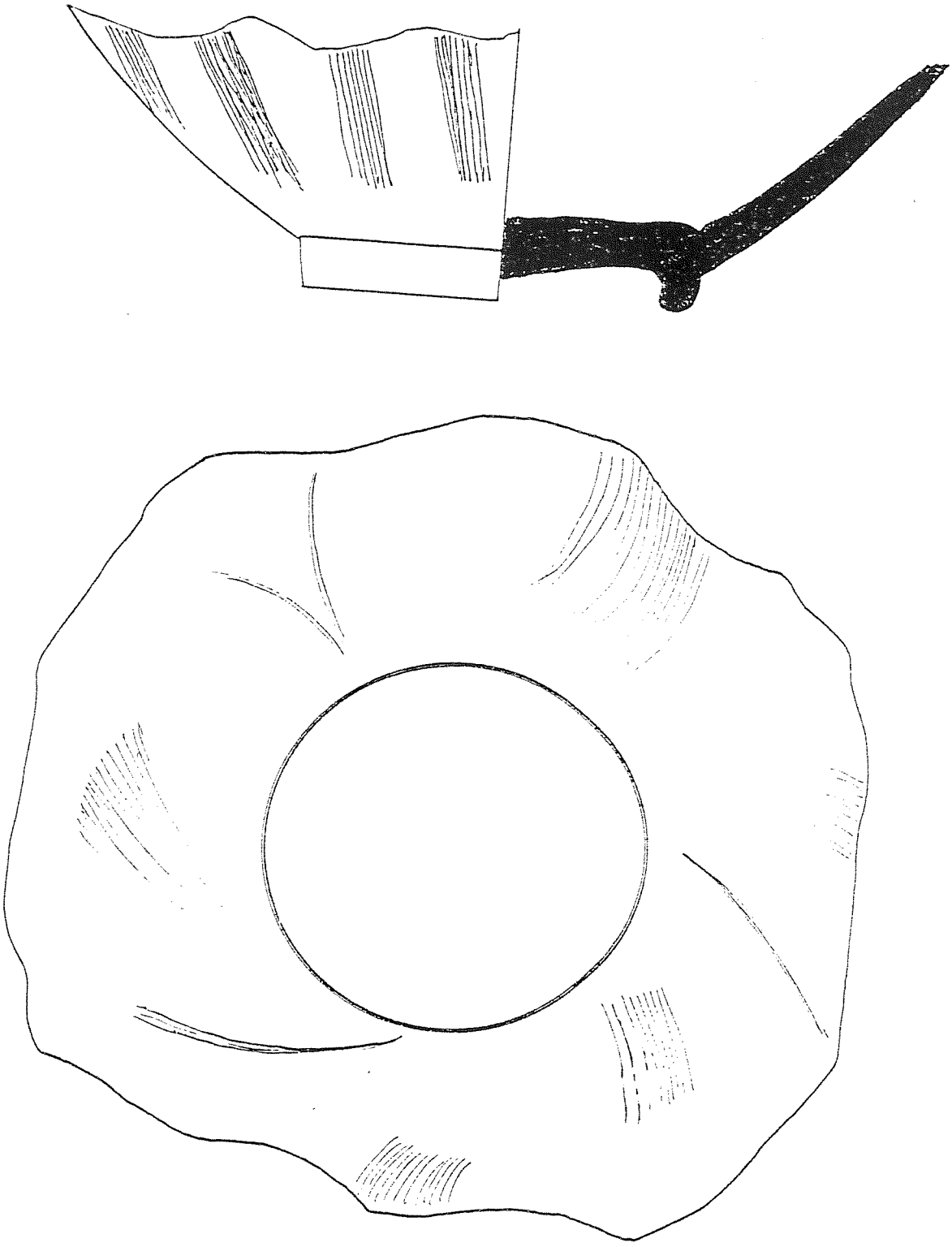


Illustration 2: A Yueh bowl found at Terusan Kupang. Incised lines design at the exterior and combed and incised swirls at the interior.

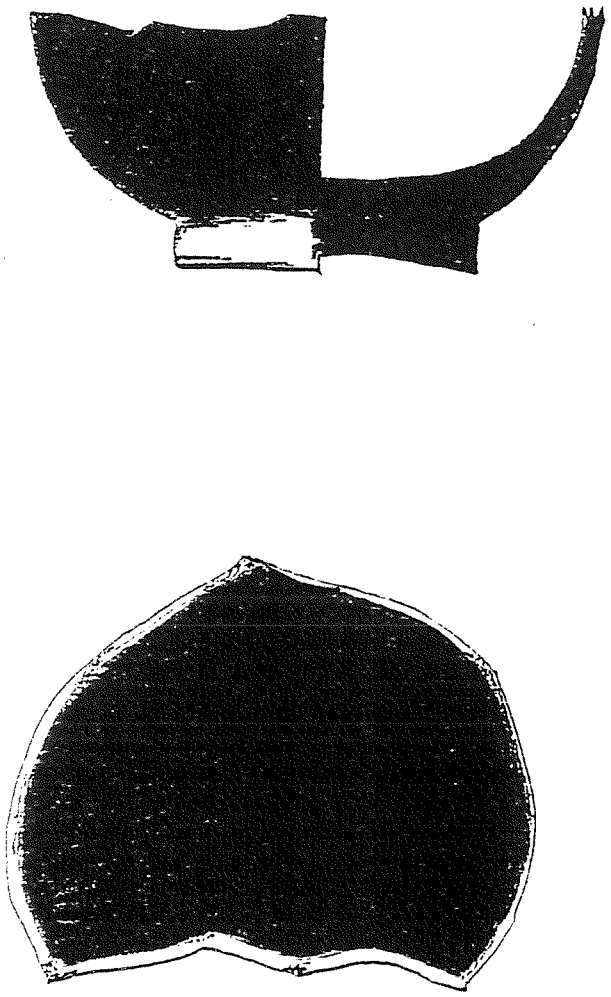


Illustration 3: A black-and-Brown-glazed or temmoku small bowl found at Kota Batu.

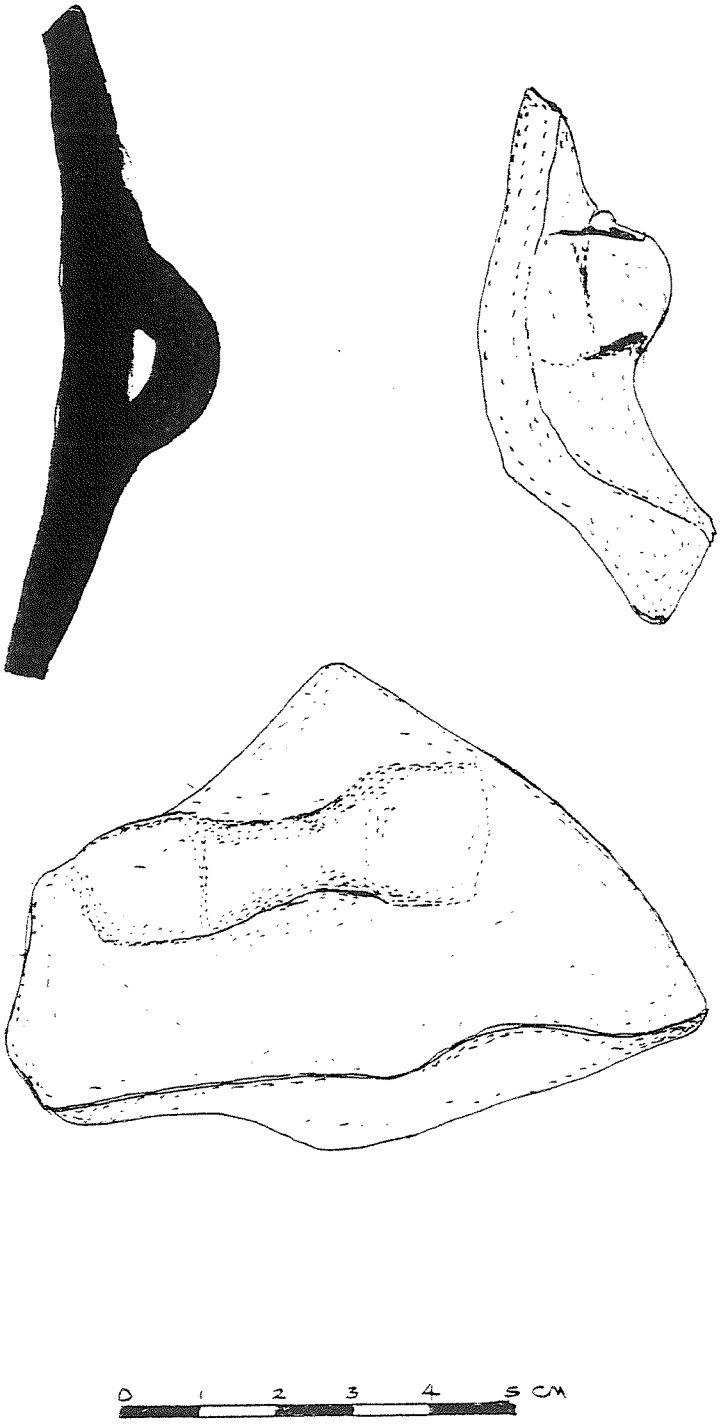


Illustration 4: A lug-handle of a stoneware jar found at Pulau Chermin.

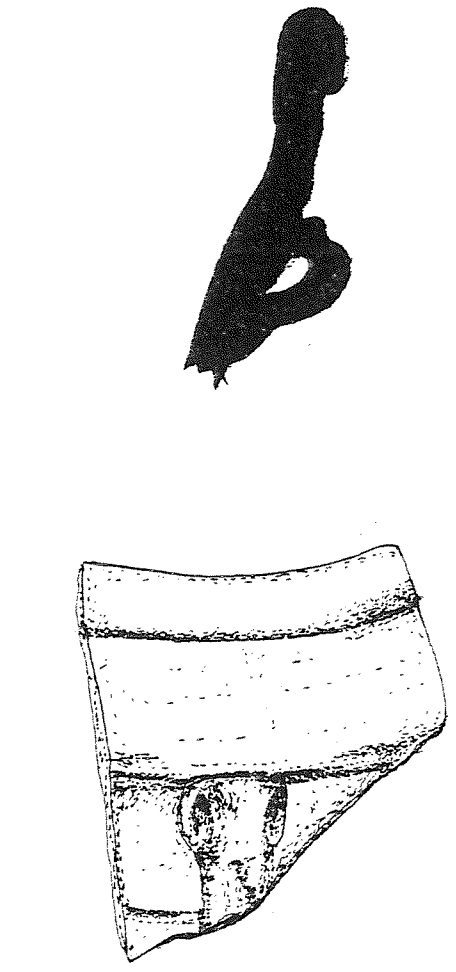


Illustration 5: A lug-handle of a stoneware jar found at Pulau Chermin.

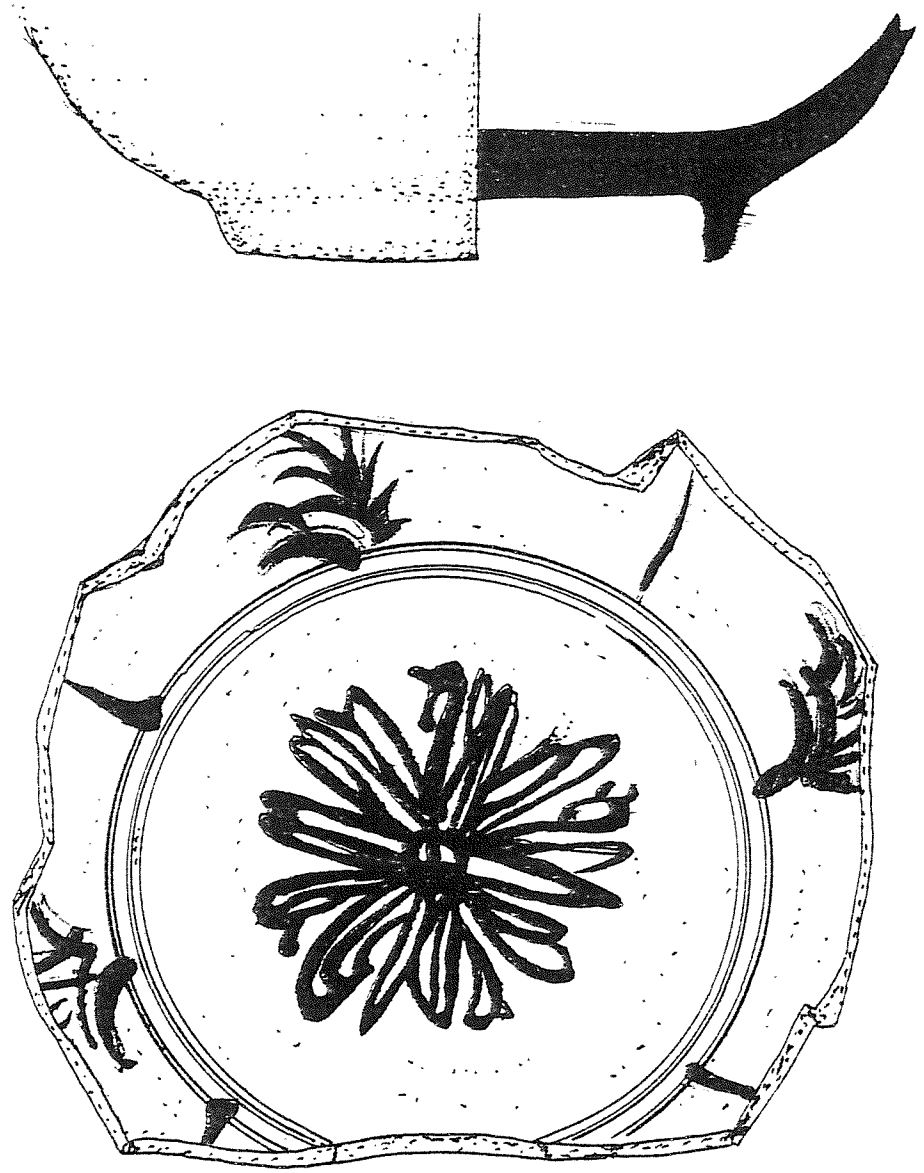


Illustration 6: A Blue-and-white bowl found at KB. AA3, Kota Batu. The central decoration is decorated with Sanskrit 'vijra' or thunderbolt. Ming Dynasty of the fifteenth to sixteenth centuries A.D.

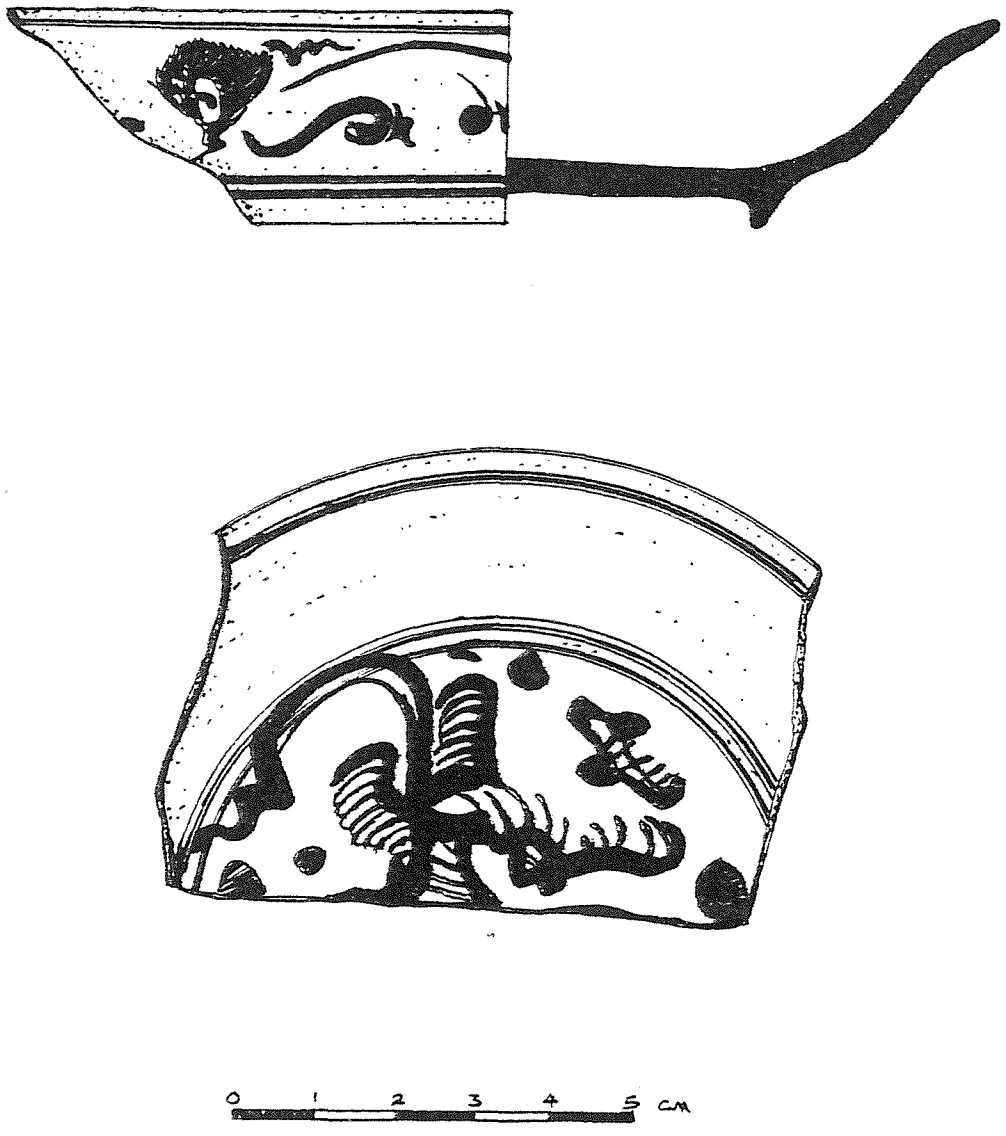


Illustration 7: A Blue-and-White found at KB. AA3, Kota Batu. The exterior body is drawn with a lotus scroll and the interior is drawnwith qilin with scrolls. Ming Dynasty of the fifteenth to the sixteenth centuries A.D.

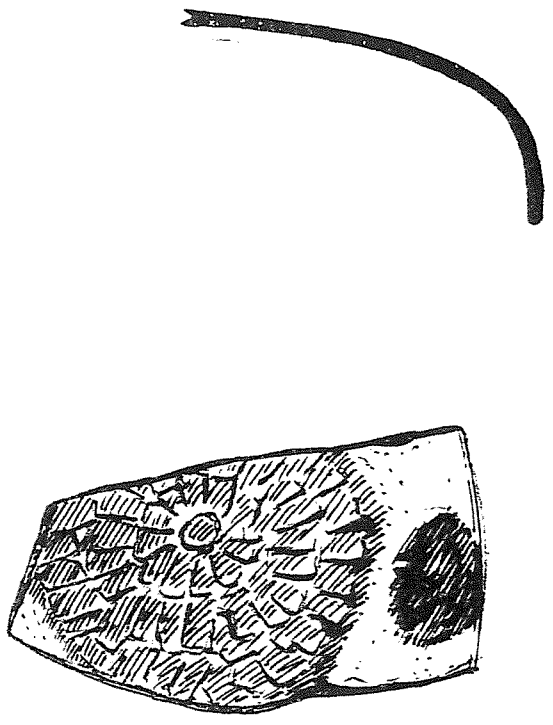


Illustration 8: A Blue-and-White lid of a cover-box. Thin body and decorated with a floral scroll. Ming period of the fifteenth to the sixteenth centuries A.D.

Illustration 9: A Blue-and-White bowl found at Kota Batu. The central decoration is drawn with floral motifs with two concentric lines. Ming period of the fifteenth to sixteenth centuries A.D.

Illustration 10: A Blue-and-White lid of a cover-box or a bottle. Found at KB. A2, Kota Batu. Decorated with floral motifs. Ming period of the fifteenth to the sixteenth centuries A.D.

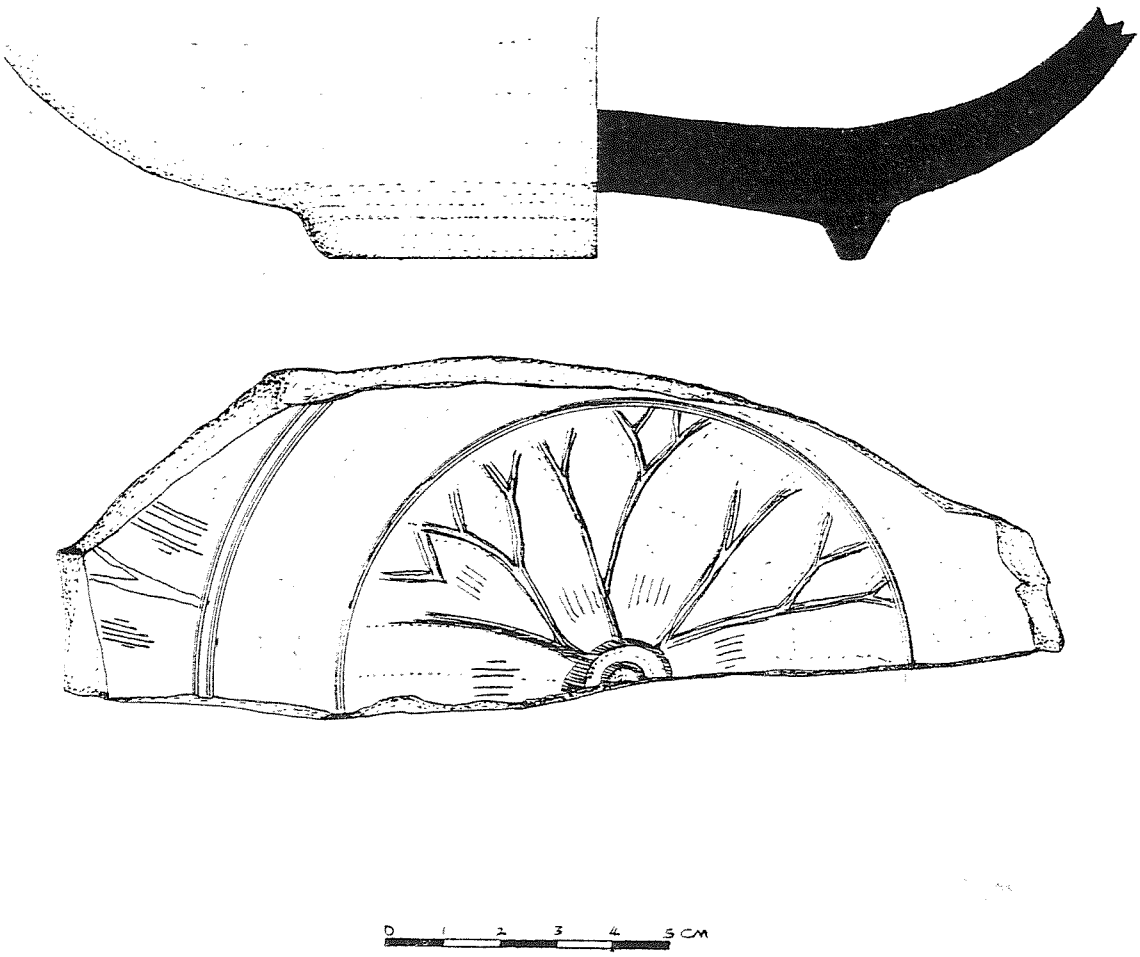


Illustration 11: Part of a large bowl of a Sawankhalok celadon found at KB. A3, Kota Batu. Plain at the exterior and floral motif at the interior body. Dated from the fifteenth to the sixteenth centuries A.D.

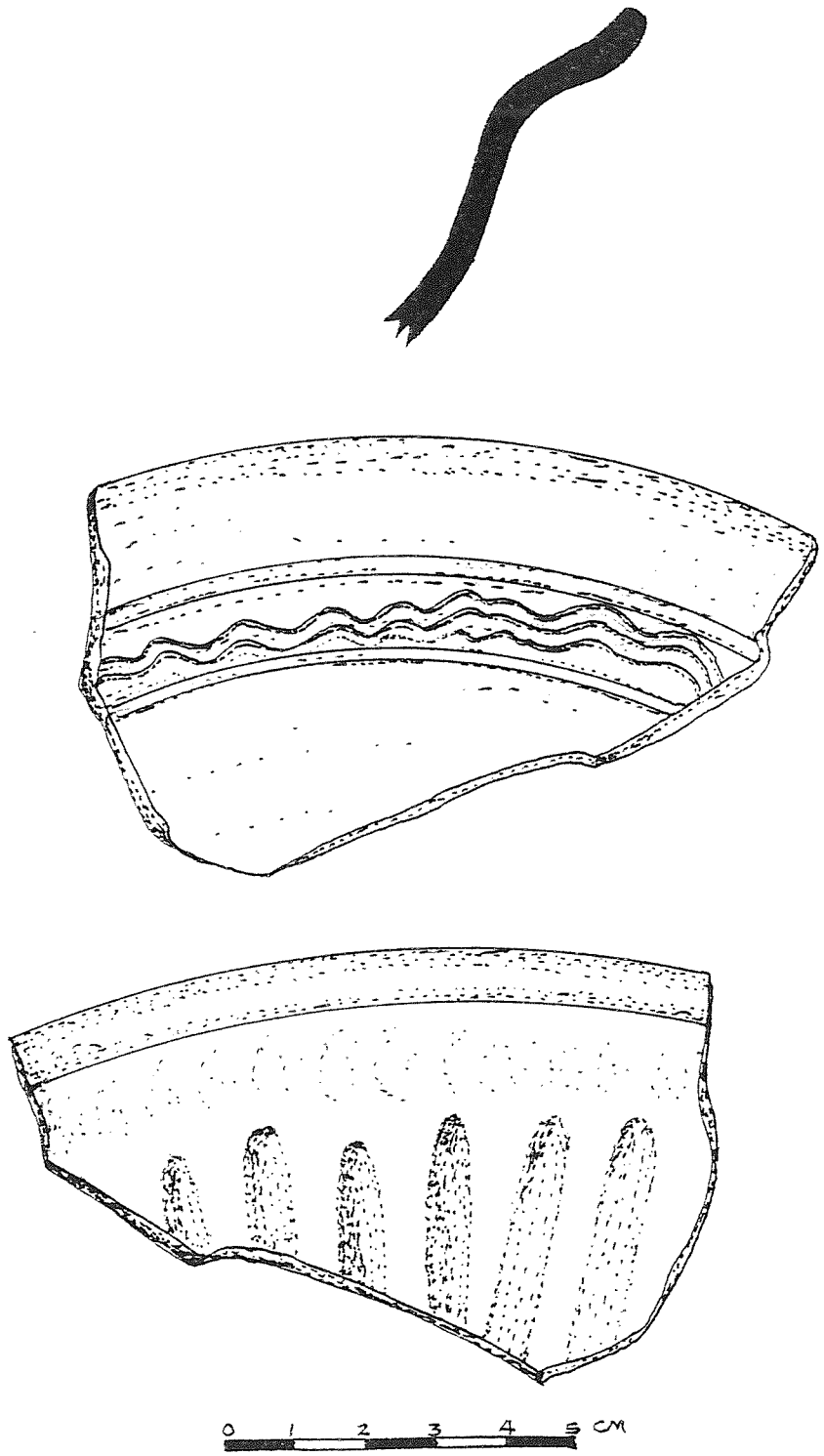


Illustration 12: Part of a Sawankhalok celadon dish found at KB. AA2, Kota Batu. Incised ribbed lines at the exterior body and incised line scrolls at the interior. Dated from the fifteenth to the sixteenth centuries A.D.

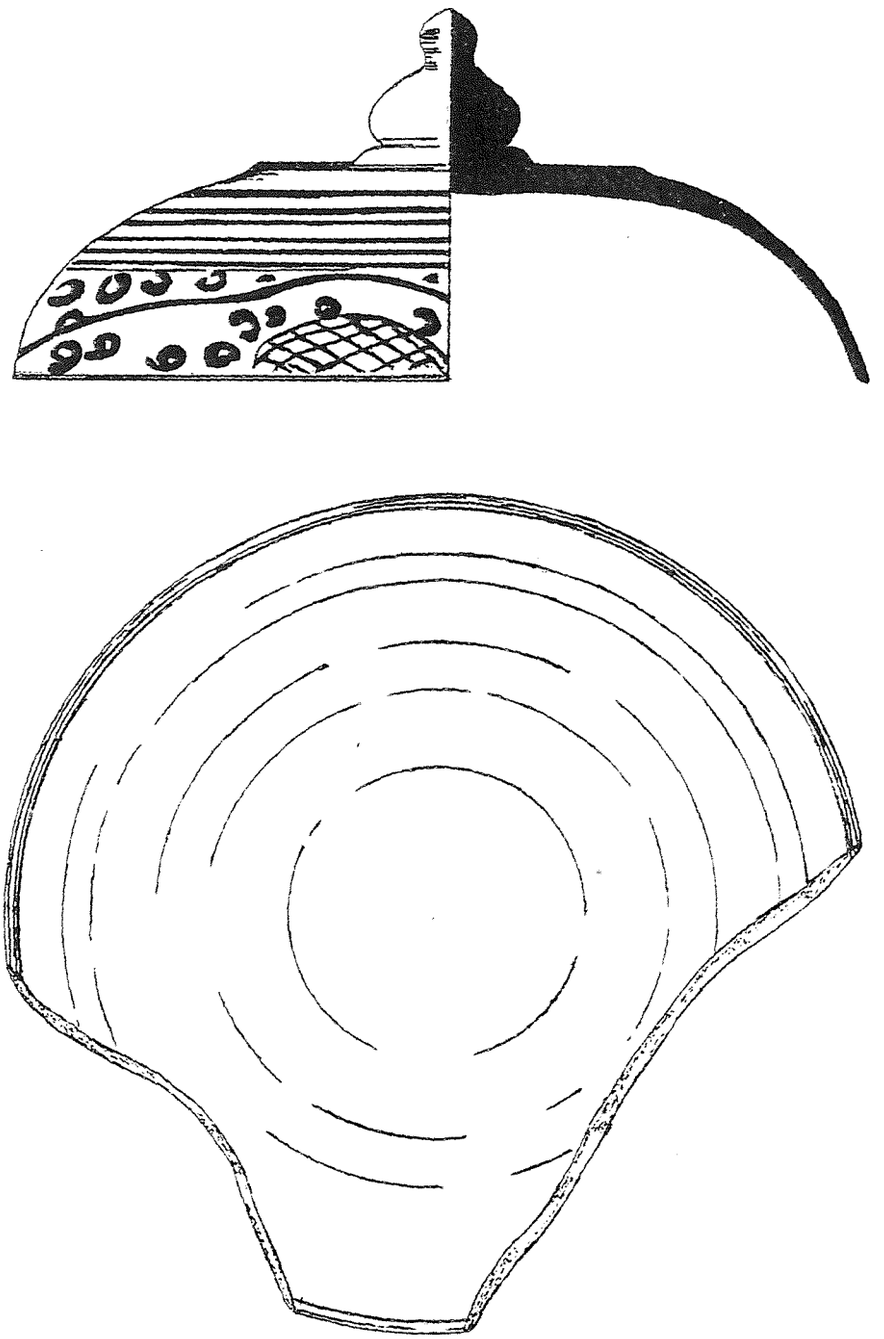
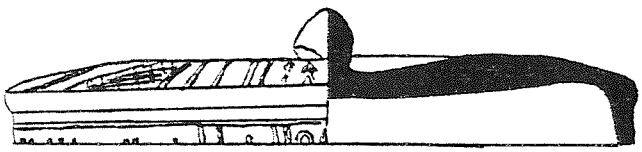


Illustration 13: A lid of lotus-bud shape of a Sawankhalok underglazed iron-black cover-box. Found at Kota Batu in 1981 and dated fifteenth century A.D. Height 7 cm, diameter 12 cm and thickness 1-2 mm.



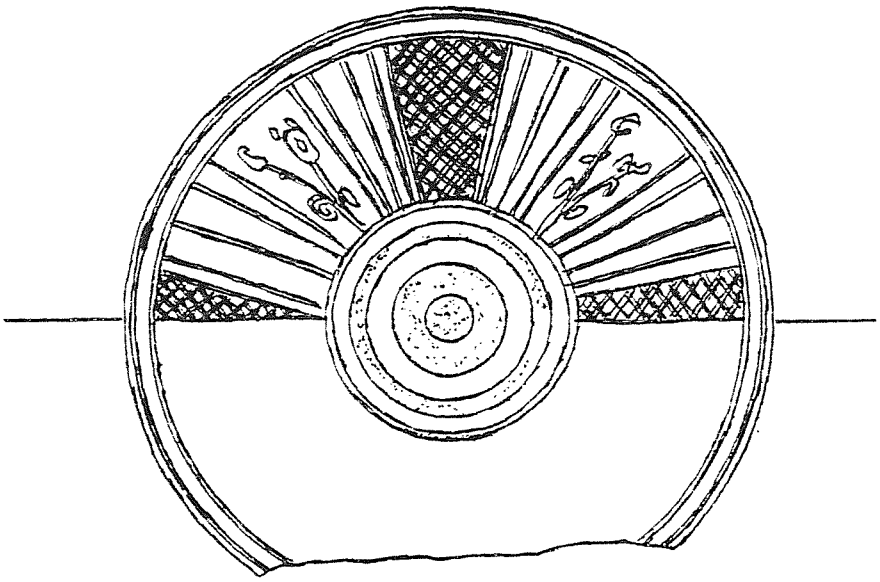


Illustration 14: A lid of a cover-box of Sawankhalok iron-black type. Found at Kota Batu in 1987 and dated from the fourteenth to the fifteenth centuries A.D. height 1.7 cm, 8.7 cm diameter and 0.25 cm thickness.

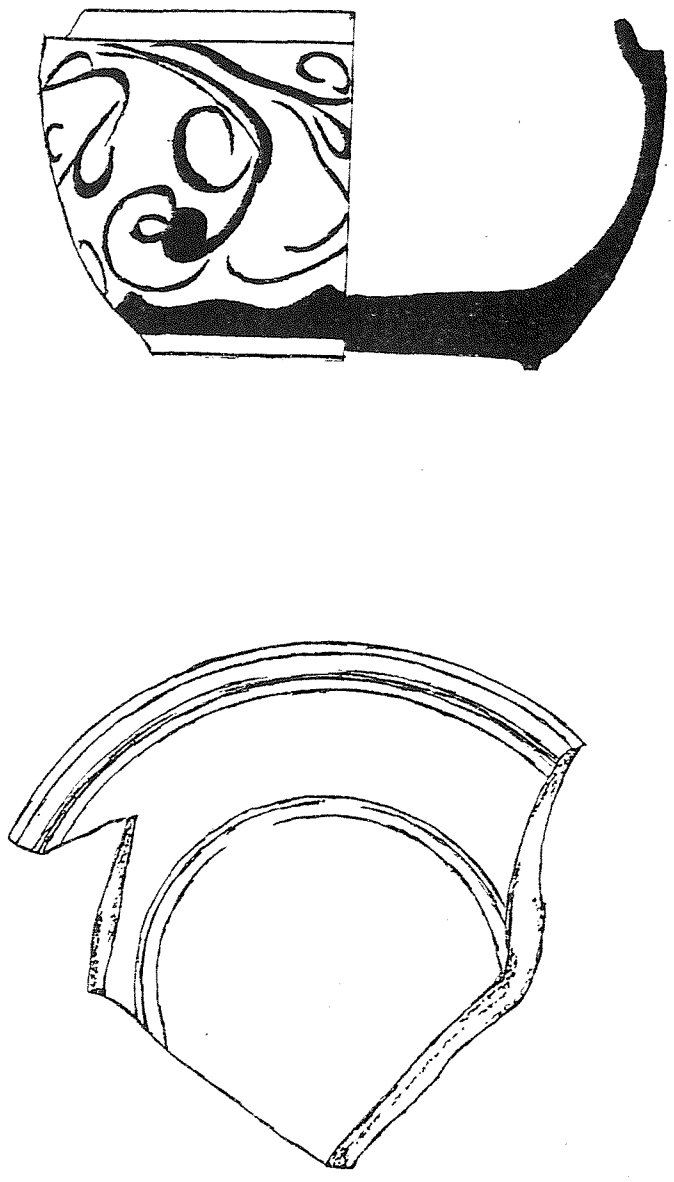


Illustration 15: A Sawankhalok incised-biscuited cover-box found at Kota Batu in 1987. Floral motifs at the exterior body and plain unglazed at the interior body. Dated from the fourteenth to the fifteenth centuries A.D. Height 5 cm, diameter 8 cm and 1-2 mm thickness.

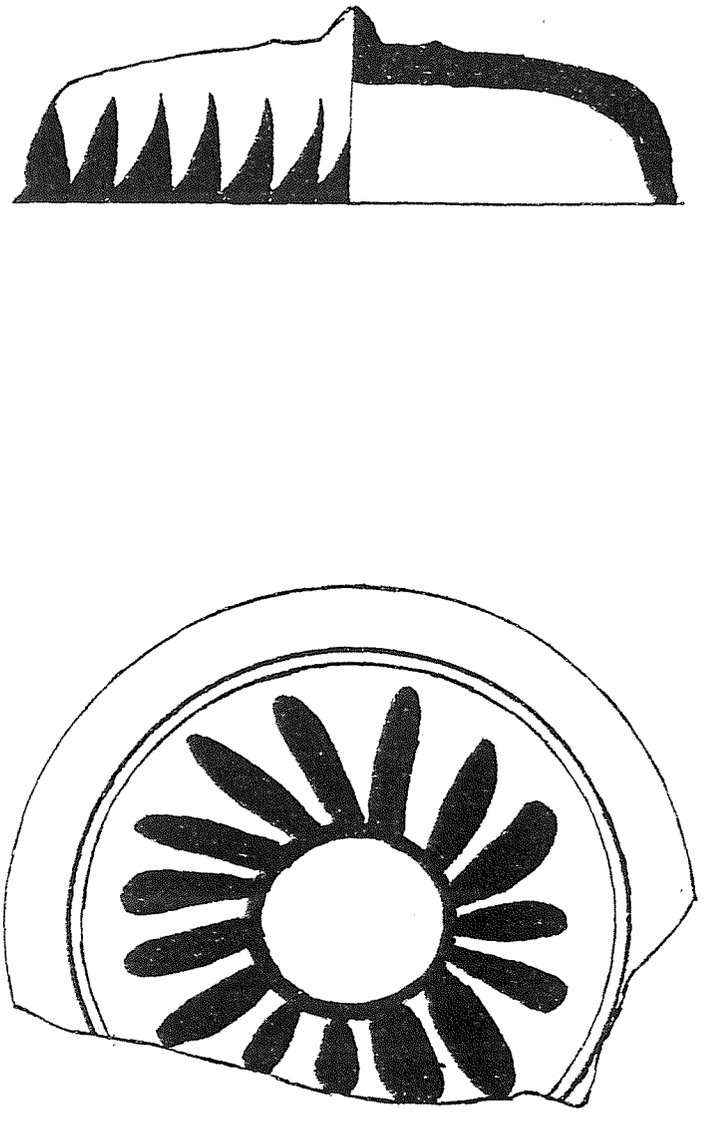


Illustration 16: A lid of a cover-box of Sawankhalok incised-biscuited type. Found at Kota Batu in 1981 and dated from the fourteenth to the fifteenth centuries A.D. A fern-leaf design motifs at the bottom lid and *cakra* or solar-whorl design motifs at the top. Height 3.5 cm, 10 cm diameters and 0.65 cm thickness.

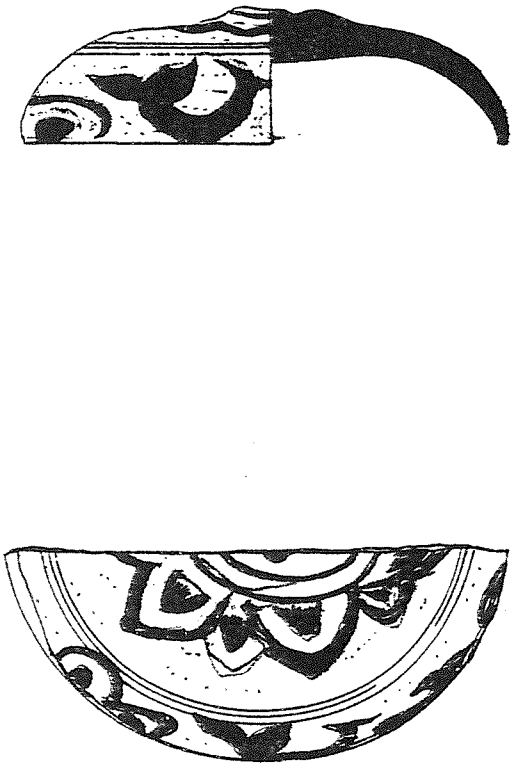


Illustration 17: A lid of Vietnamese Blue-and-White cover-box. Found at KB. A2, Kota Batu. Floral design motifs. Dated from the fifteenth to the sixteenth centuries A.D.

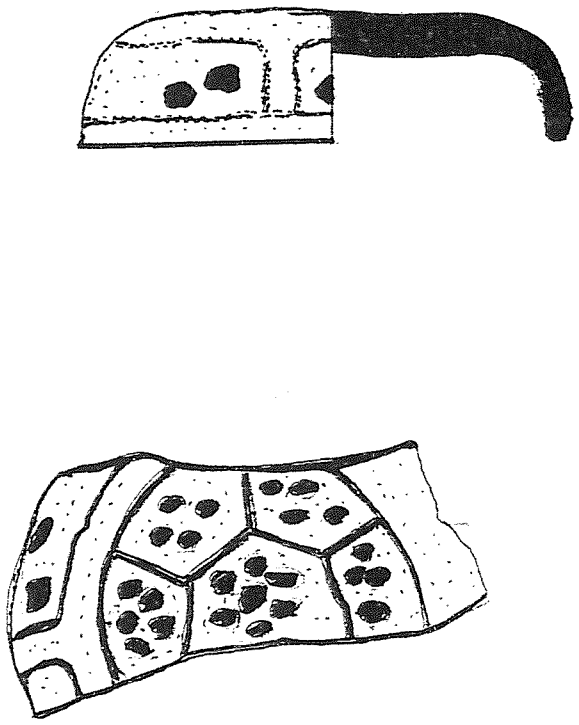


Illustration 18: A lid of Vietnamese polychrome (blue, green and white colours). Found at KB. A2, Kota Batu. Dated from the fifteenth to the sixteenth centuries A.D.

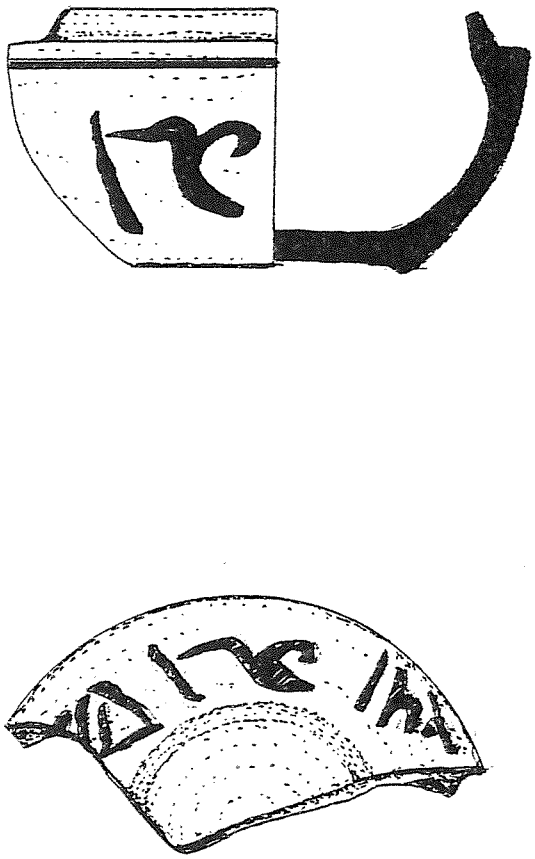


Illustration 19: A body of a Vietnamese Blue-and-White cover-box. Found at KB. A2, Kota Batu. Dated from the fifteenth to the sixteenth centuries A.D.

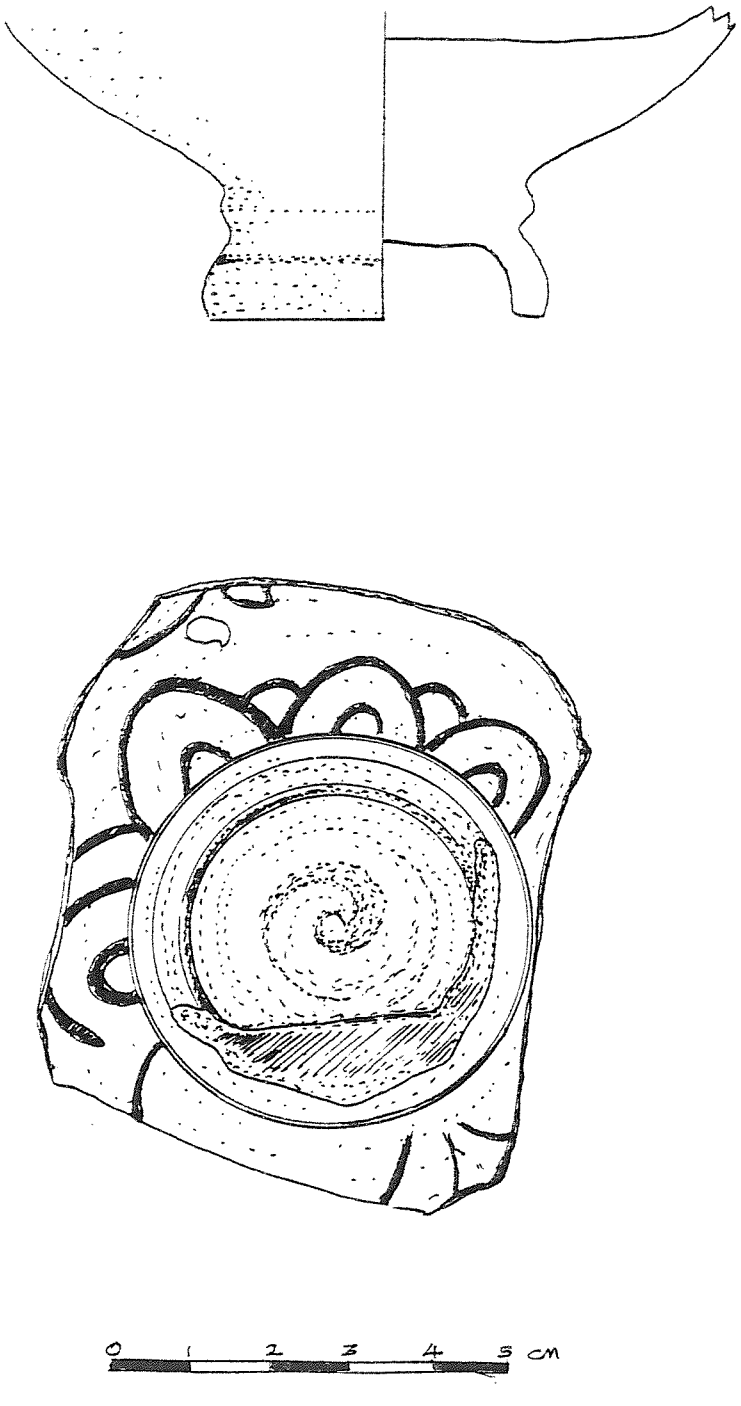


Illustration 20: A tray of Vietnamese Blue-and-White found at KB. A2, Kota Batu. Dated from the fifteenth to the sixteenth centuries A.D.

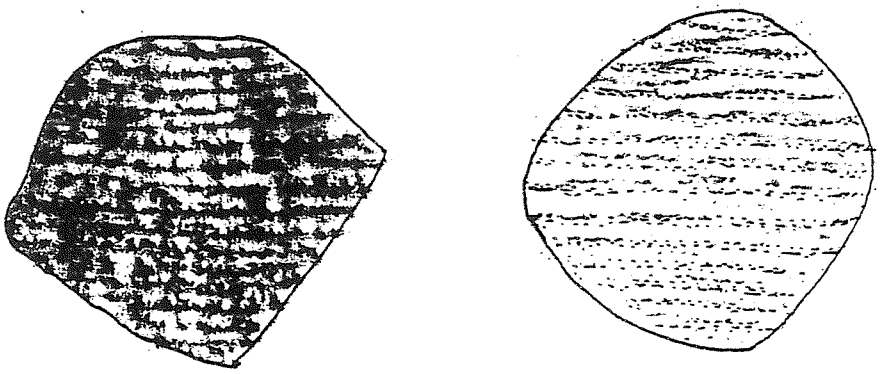


Illustration 21 a & b: Ribbed paddle-impressed design patterns of Terusan Kupang earthenware.

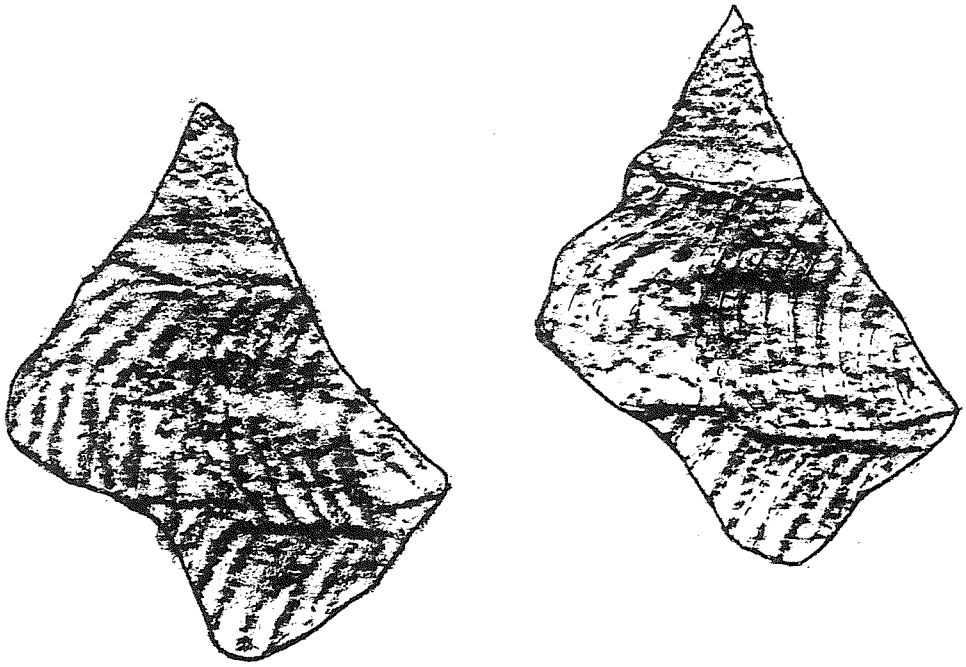
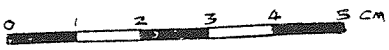


Illustration 22 a & b: Paddle-impressed of parallel rows of shallow arcs between horizontal lines of Terusan Kupang earthenware.



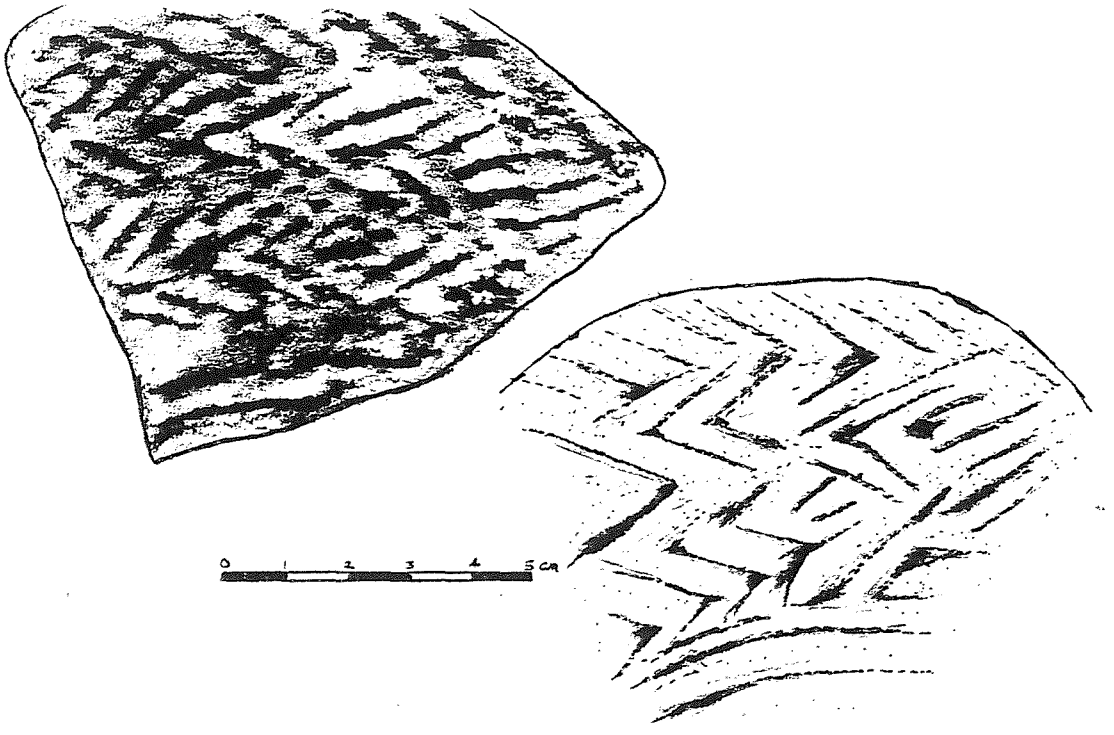


Illustration 23 a & b: Paddle-impressed of herringbone or the pine tree design patterns of Terusan Kupang earthenware.

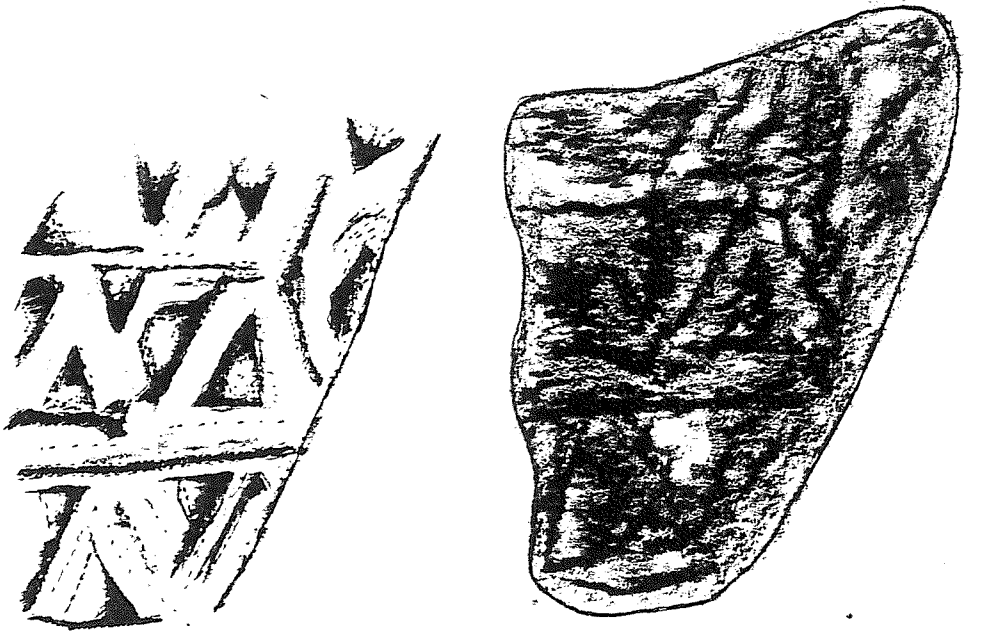


Illustration 24 a & b: Paddle-impressed of a triangle between bordering lines patterns of Terusan Kupang earthenware.

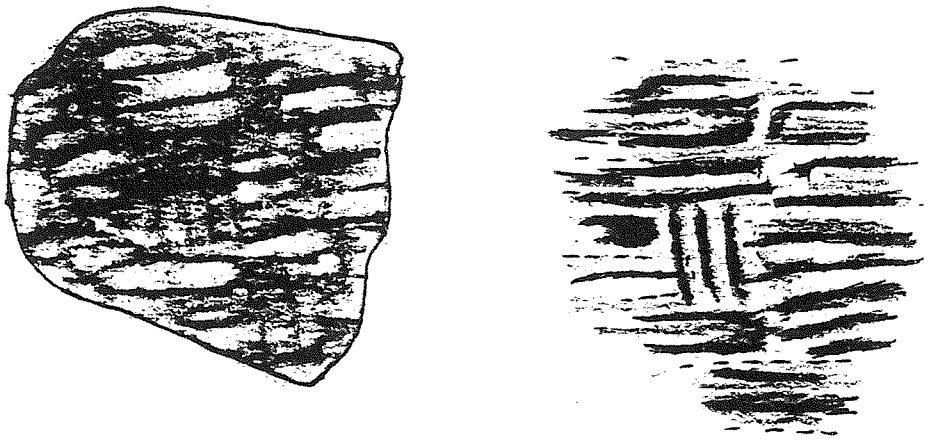


Illustration 25 a & b: Paddle-impressed of meander patterns of Terusan Kupang earthenware.

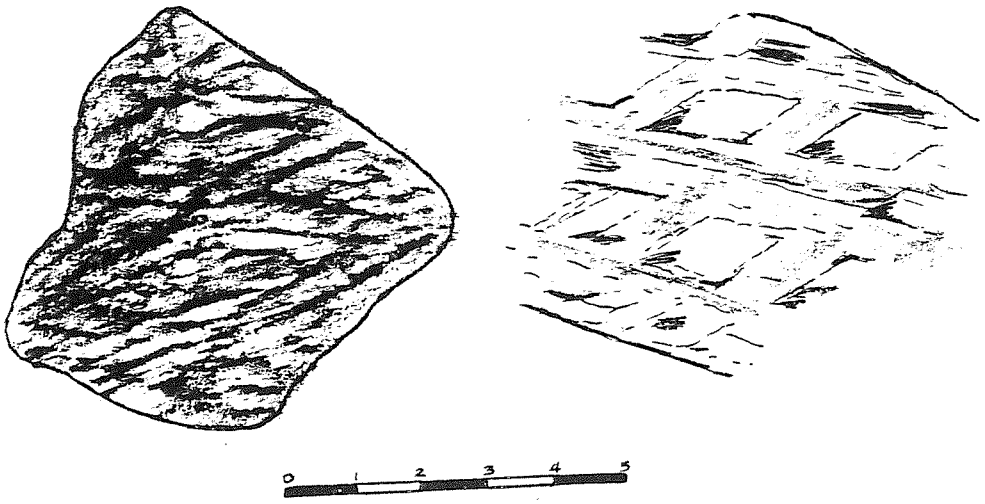


Illustration 26 a & b: Paddle-impressed of discrete diamond patterns of Terusan Kupang earthenware.

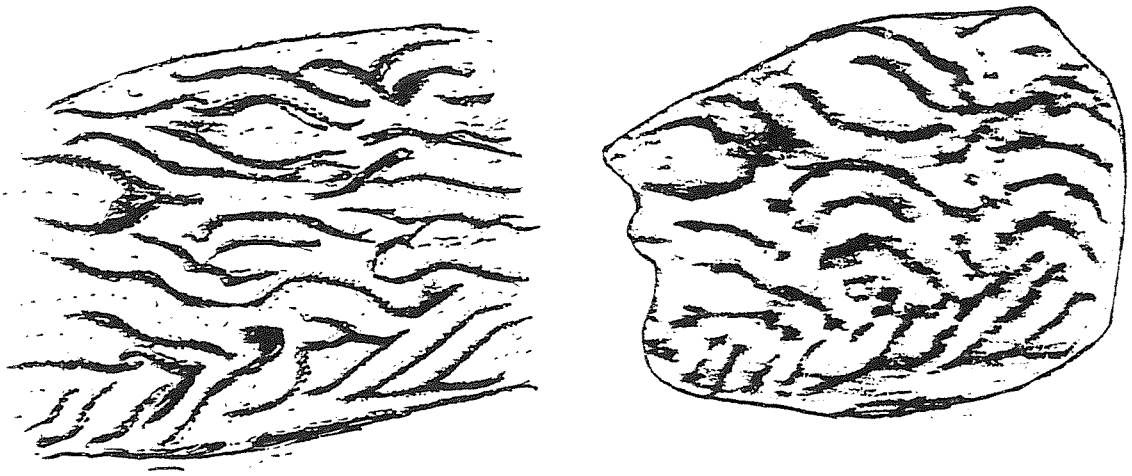


Illustration 27 a & b: Paddle-impressed of curvilinear motifs of Terusan Kupang earthenware.

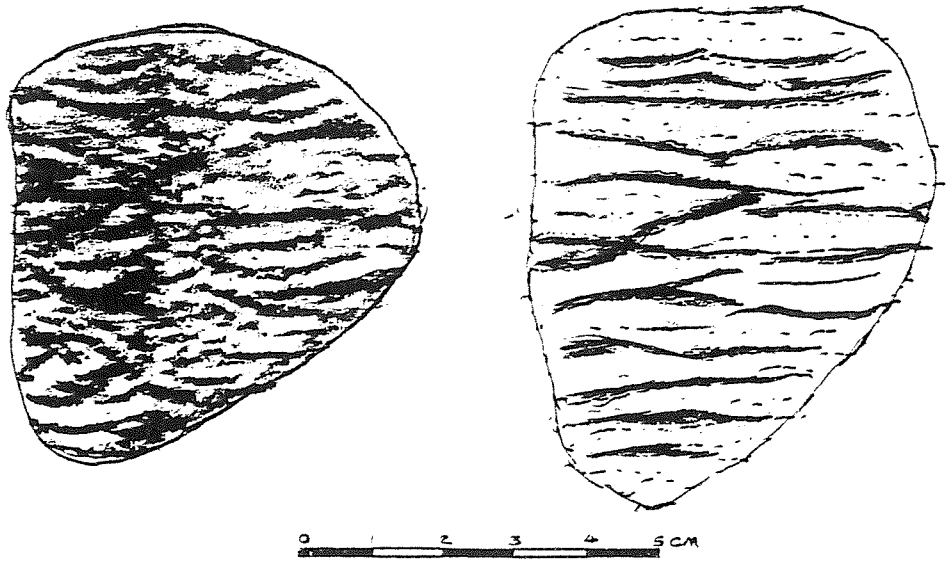


Illustration 28 a & b: Paddle-impressed of wavy motifs of Terusan Kupang earthenware.

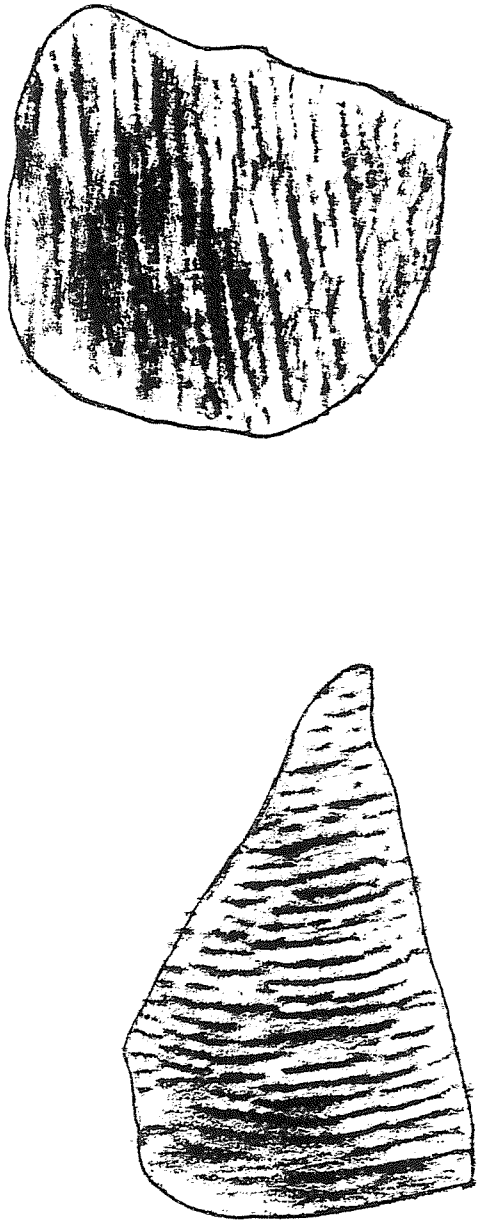


Illustration 29 a & b: Paddle-impressed of ribbed motifs of Kota Batu earthenware.

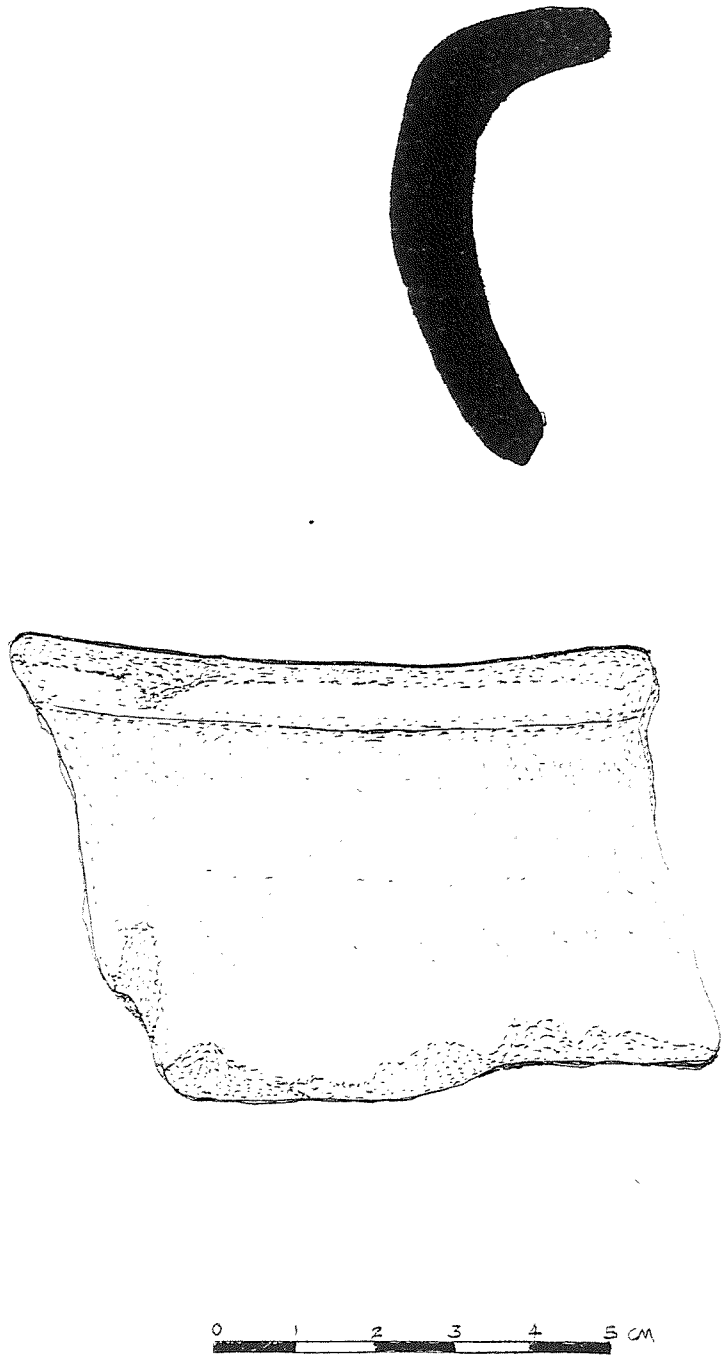


Illustration 30: A rim of an earthenware cooking pot found at Kota Batu. Plain, with porous body. Fabric 1 types.

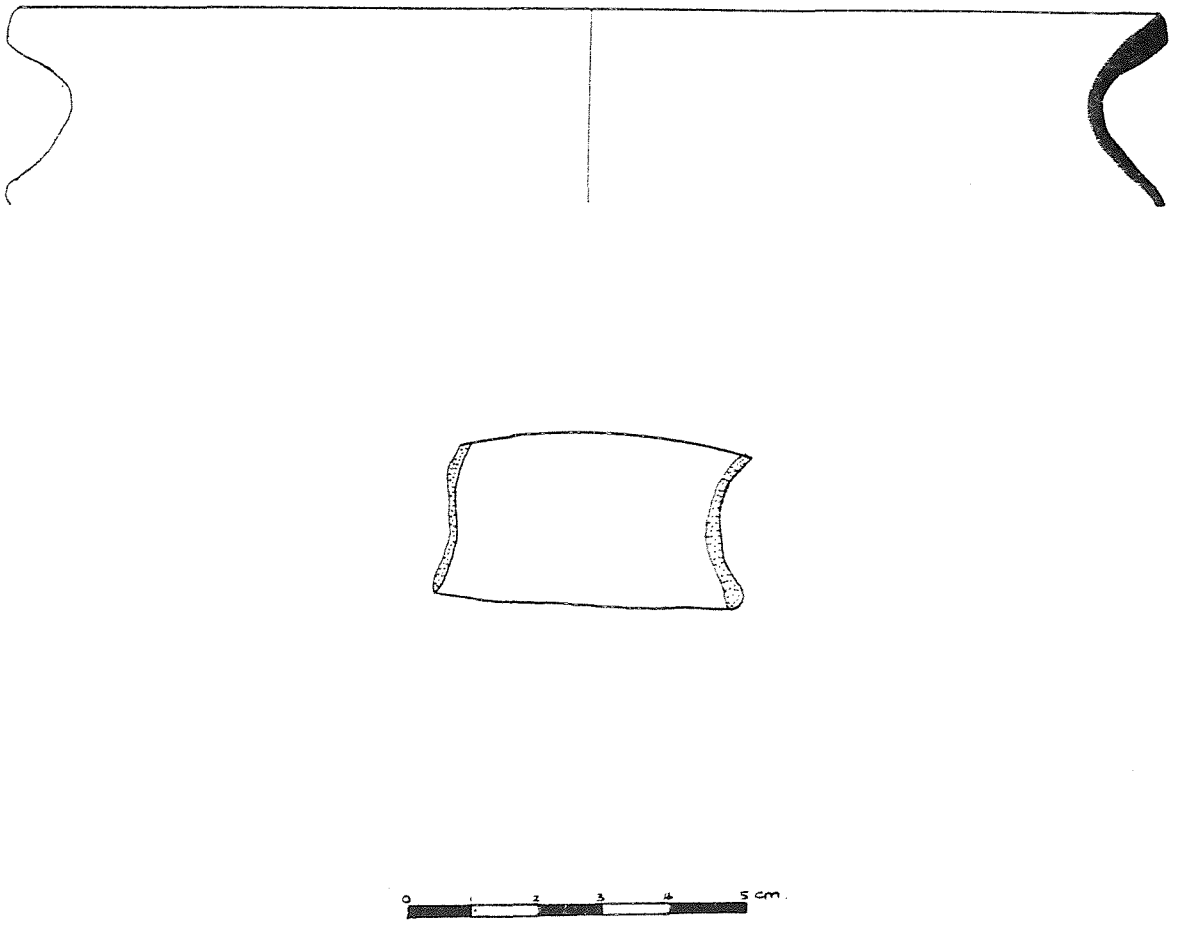


illustration 31: A rim of an earthenware cooking pot found at Kota Batu. Thin body, without any decoration.

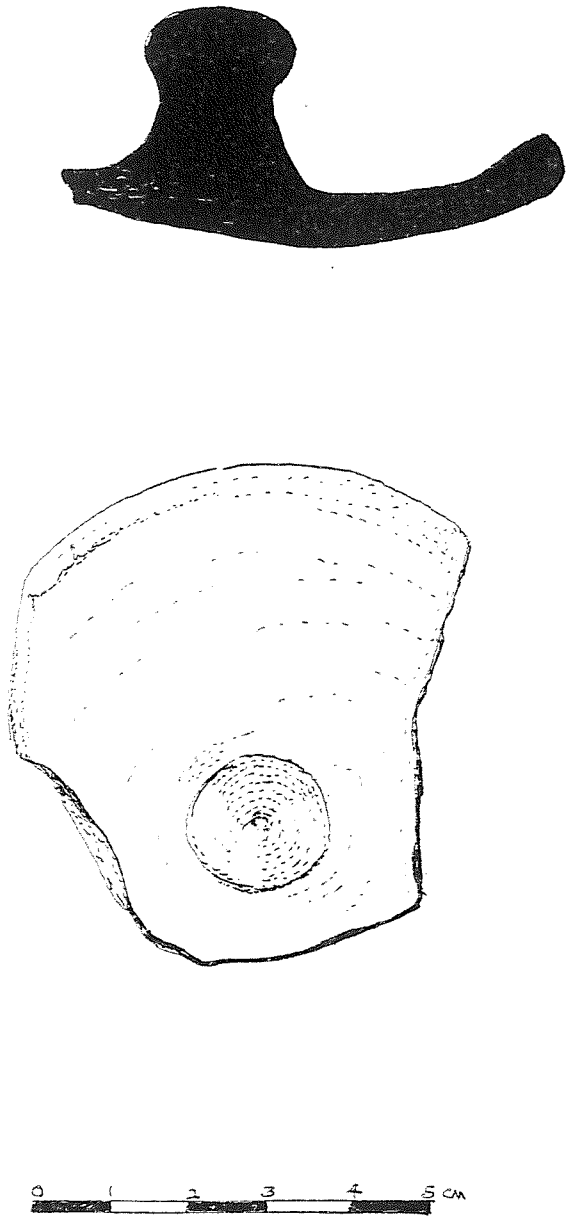


Illustration 32: A lid of a cover-box or a kendi found at Kota Batu. Hard and plain body, with fabric 5 type.

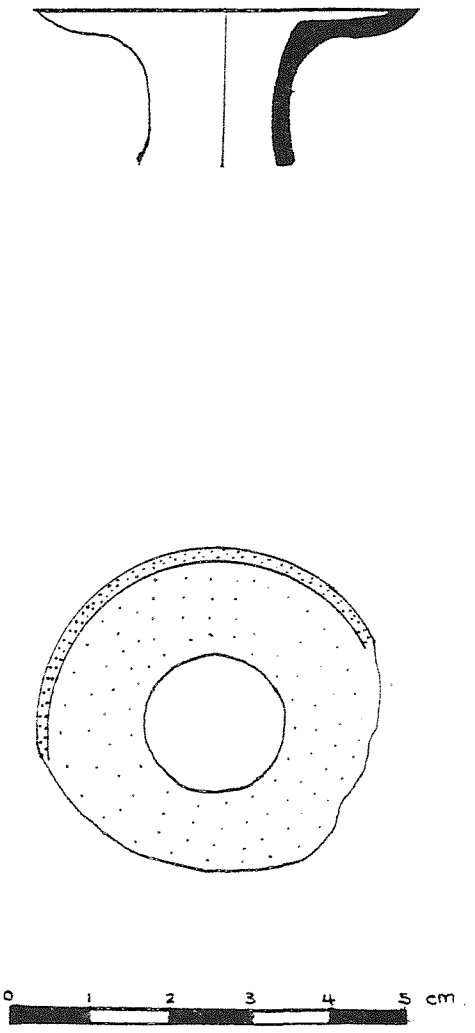


Illustration 33: A rim of a small earthenware jar or a kendi found at Kota Batu. Thin, plain body of fabric 5 type.

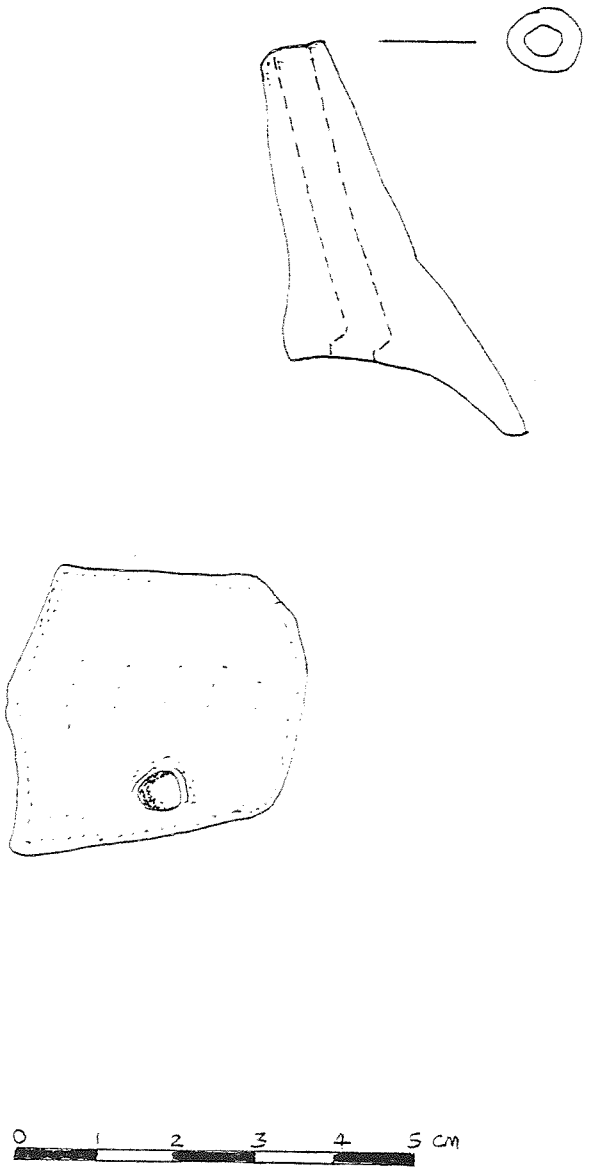


Illustration 34: A knob of a ewer found at Pulau Chermin. Hard and plain body, with fabric 3 type.