

# THE AYUDDHAYĀ PERIOD EARTHENWARES, SOME CONTEMPORARY THAI KILNS, THEIR WARES AND POTTING METHODS

by

C. Nelson Spinks, Ph.D.

During the Ayuddhā Period (A.D. 1350-1763), a great many earthen ware and stoneware household utensils were made in and around the former Thai capital at Ayuddhayā, about 70 kilometres north of present-day Bangkok on one of the courses of the Maenam Cao Phrayā river. The exact locations of these kilns are not known, however, and there are no modern kilns in or around the present city of Ayuddhayā having any historical continuity that still carry on this craft. The nearest operating kilns to Ayuddhayā today are those at Pākkret, about 30 kilometres downstream from the old Thai capital, a site which is described more fully later in this article.

Whatever kilns there may have been in Ayuddhayā in the old days were in all probability destroyed when the Burmese forces invested and sacked the old Thai city in 1763, bringing to a tragic end the long Ayuddhayā era in Thai history.

Nevertheless, Ayuddhayā Period earthenware cooking pots and stoves, and other kitchen utensils reflect highly skilled potting, firing, and incised decoration, including some attractive appliqué work.

The principal types of Ayuddhayā wares were the traditional Thai *mòh khao* rice-cooking pots, similar earthenware vessels for cooking curry (*mòh kaeng*), various other types of large and small spheroid-shaped vessels for cooking, earthenware stoves, and ring-stands to which the oval pots and jars could be transferred when removed from the supporting stoves.

For some fine examples of Ayuddhayā Period earthenware pieces, see Plates Nos. 2 to 9.<sup>1</sup>

Plate No. 1 is a typical modern Thai earthenware rice-cooking pot (*mòh khao*) that I purchased a few years ago in one of Bangkok numerous *talād mòh din* (earthenware markets) for about four *baht*, approximately U.S. 20 cents at the then prevailing rate of exchange. For a crude, simple cooking utensil, it is a beautifully made piece, well proportioned and well fired being so hard that it yields a pleasant musical ring when its side is gently tapped with one's fingers.

Plate No. 2 illustrates a typical earthenware *mòh khao* of the Ayuddhayā Period which has the characteristic Thai-type pendant-design impressed around the shoulder of the pot by a carved stamp or a carved roller that had been run over the still-soft clay before firing. Still another Ayuddhayā Period earthenware pot having this same shape and with the same kind of pendant design is shown in Plate No. 3. A very large earthenware vessel from the Ayuddhayā Period with an extensively incised design is illustrated in Plate No. 4, resting on its earthenware ring-stand.

Some other examples of Ayuddhayā Period earthenware bowls and pots are shown in Plates Nos. 6, 7, and 8. The piece shown in Plate No. 6 has a flat base, but all the other examples have the more typical spheroid bases for which special ring-stands must be used to support them once they are removed from the stove, like the large pot shown in Plate No. 3. Plate No. 4 illustrates a model of any Ayuddhayā Period earthenware stove on top of which is a model of a simple earthenware bowl from the same period. This unusual item from the Hauge Collections has an overall height of  $7\frac{1}{2}$  cms., the model pot being only  $4\frac{1}{2}$  cms. in diameter.

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1) All the Ayuddhayā Period pieces presented in this article are from the extensive ceramic collections of Mr. and Mrs. Victor Hauge, now housed in their museum-like home at 6629 Tansey Drive, Falls Church, Virginia 22041 (Tel. 534-4564, to whom I am deeply indebted for the privilege of examining their collection. I also owe a debt of gratitude to the Freer Gallery of Art of the Smithsonian Institution in Washington, D.C. for the superb photographs their skilled photographers made for me, which form some of the Plates in this article.

Strange to say, in all my exploring in Thailand I have never come across a Thai earthenware *kěndi* of modern manufacture. The only extant *kěndi* of which I am presently aware are those magnificent painted ware or celadon pieces made at the Sawankhalōk 13th and 14th century kilns, or foreign pieces imported from China or Annam in the 14th and 15th centuries. In more recent times, I believe the Thai may have ceased using the *kěndi* as a drinking vessel, small silver bowls having come into use for this purpose. Originally in Thailand and elsewhere in Southeast Asia the *kěndi* appears to have been used primarily for dispensing medicines to a patient in a prone position, or as ritual vessels for pouring lustrations.<sup>2</sup>

Thailand today abounds with ceramic kilns and it would seem that almost every village and small community has some kind of kilns, if only for the purpose of making its local, everyday earthenware utensils. It would be impossible, therefore, to attempt to describe a few of the more significant and better known contemporary local kilns: namely, those at Pākkret, mentioned above, and at Rātburī that supply the Bangkok markets today with much of their earthenware utensils, stoneware mortars and glazed-ware tubs and water jars; the well known contemporary Chiang Mai kilns, so familiar today to the ever-increasing numbers of foreign tourists who now visit that paradisiacal city of Northern Thailand; the well-known Thai kilns near Songkhlā in southern Thailand; the equally interesting kilns of Northeast Thailand at Chōkchai, near Khōrāt in Nakhon Rātsīmā or Khōrāt Province; and the Northeast kilns at Bān Nòng Buau Kīn Mā in Khon Kaen Province that supply the Northeast District, as well as Bangkok, with earthenwares and quality kiln-gloss stonewares.

The brick-constructed Pākkret kilns (See Plate No. 10) are located in a small riverine village of that name about 30 kilometres downstream

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2) In this connection, see Michael Sullivan's scholarly study in *The Archives of the Chinese Art Society of America*, Vol. XI, 1957, pp. 40-58, with illustrations and line drawings of *kěndi* of various types and from various places of manufacture. This article is the most definitive piece of work on the *kěndi* with a full and perceptive discussion of its uses in Indonesia and elsewhere in Southeast Asia.

from Ayuddhayā on one of the diverse branches of the Maenam Čao Phrayā river. For some years these kilns have specialized in making *mòh khao* rice-cooking pots, but they have also become deservedly famous for their hard-fired stoneware *krok*, or mortars, unglazed except for a soft grey kiln gloss. The inner surfaces of these mortars are unglazed and are deeply scorred with cross-hatching lines to provide a specially rough surface that will help to break up and grind material placed in the mortar when the heavy, hardwood pestle is applied. The Pākkret mortars thus closely resemble the Japanese *suribachi* mortars which also have scorred inner surfaces and use hardwood pestles.

The fine kiln gloss on the Pākkret mortars is the result of their being stacked in the kilns based-to-base, and mouth-to-mouth, so that the kiln gloss develops only on the two exposed surfaces. These kilns also make some heavy glazed kitchen water jars.

The wares of the Pākkret are all sent down stream to Bangkok in those old-fashion picturesque river cargo boats that still ply the lower reaches of the Maenam Čao Phrayā river with their strange looking hulls and their semi-circular rattan-covered roofs. Pākkret mortars have become so famous, however, that many people make special trips to the kilns to purchase them and some of the Pākkret earthenware cooking utensils. For examples of these latter wares, see Plate No. 11 which shows small-scale models of such cooking utensils. The piece on the right in this Plate with a lid has a perforated base which fits into another jar similar to the one on the left in this illustration that is filled with water and placed on an earthenware stove to boil. Thus the combination of these two vessels can be used to steam certain kinds of food, such as dumplings, in the total absence of anything in the Thai kitchen comparable to the Western oven.

The Rātburī kilns are located on the Maenam Khlōng river in the provincial capital of Rātburī, about 150 kilometres from Bangkok on the main southern highway to the seaside resort of Hua Hin and points south. The large sloping kilns at Rātburī are built in the Chinese style. They are now famous for their manufacture of heavy, hard-fired water jars

that are handsomely glazed with dragon or floral decorations a yellowish-brown glaze.

The Rātburī water jars are, of course, much too large and too heavy to throw on the potter's fast wheel. Instead, they are built up by the ancient coil method of potting. Once a jar has been raised in this fashion, plain but unbound and uncarved paddles are beaten against the jar's sides, while the potter holds a heavy stoneware anvil against the inner side of the jar opposite each blow of the paddle. This process is carried out solely for the purpose of strengthening the walls of these large, heavy jars as part of the finishing process. (See Plates Nos. 12 and 14). After application of the paddles and anvils, the jars are wiped clean with a damp piece of coarse cloth. The designs are then incised in the paste with a simple scribe. Plate No. 15 shows one of the Rātburī potters incising the dragon's mane on one of the jars, using only a broken piece of a pocket comb for a scribe. Before the glaze material is next applied, the jars, while still in the biscuit, are dried in open, well-ventilated worksheds. Finally, the jars are placed in the large sloping kilns for a high temperature firing to make them into a hard, durable stoneware. Smaller jars and flower-pot-type tubs are also made in the same way. In the old days the Rātburī water jars and other wares were shipped to Bangkok by sea, the sailing vessels proceeding down the Maenam Khlōng river to the Gulf of Siam. Today, however, they are transported directly to the capital by truck or train and are placed on sale in the large flower-pot and water jar markets along the Petchburī Road and the South Sathorn Road, or at the *Talād Nat*, the weekly markets staged on Sundays around the Phra Mane Grounds near the Royal Palace.

At the Rātburī kilns the glaze material is prepared in a very primitive but picturesque manner. The stone for the glaze is first broken into small pieces on cement or a stone-paved floor with hammers and heavy wooden mallets. The stone is finally crushed to a fine, flour-like powder by the use of circular stones, flat on top, but convex on their underides. The girl workers at the kilns stand on top of the circular stones, and with arms outstretched to maintain their balance while turning their

bodies from side to side, rock the heavy stones back and forth over the glaze material on the cement or flagstone-paved floors, grinding the glaze material to a fine powder.

These beautiful and useful water jars are inexpensive, costing about 40 to 50 *baht* each, depending on the size and the quality of the glaze and incised decoration. Almost every home in Bangkok seems to have one or more of these fine jars for use in its bathroom or kitchen, or to place just outside the house so as to catch the fresh rain water running off the roof. A model of a typical Rātburī water jar is shown in Plate No. 15. This piece has the floral rather than the more common dragon design. The actual model shown in this photograph is only 10 cms. in height. An actual Rātburī water jar would be about 70 cms. in height.

The Songkhalā kilns are on the eastern shore of the Thanlé Sap, an inland sea or large lake in southern Thailand. The kilns are principally along a small stream in this area called Sting Mòr, or "pot creek" as this name may be literally translated into English.<sup>3</sup>

The Songkhalā kilns were also famous at one time for their manufacture of flat, light ceramic roof tiles which, in the old days, were shipped to Bangkok as ballast on the cargo sailing vessels that then plied between the capital and this southern part of the country. This type of roof tile was widely used in Bangkok in the 19th century, and was customarily known to the Thai as *Krabüang Songkhalā*, that is, "Songkhalā Tile". (For some examples of Thai roof end tiles, see Plates Nos. 26 and 27).

The Sting Mòr kilns are staffed almost entirely by women potters. They have been in operation for some decades, the potters and other

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3) The kilns are actually in the *king* or sub-*amphoe* (district) of Ban Chai Son, near the village of Pak Paiyum, about 15 kilometres north of the town of Songkhalā. According to Dr. Solheim, the word *sting* is a Cambodian term for stream, while *mor*, meaning a pot or jar, is one of the less happy transliterations of the Thai word more commonly rendered *moh*, that is, a pot or jar. See Dr. Wilhelm G. Solheim II, "Pottery Manufacturing in Sting Mor and Bān Nòng Bua Kin Mā," *The Journal of the Siam Society*, Vol. LII, Part 2, July, 1964, pp. 151-61, with 8 Plates.

craftsmen reportedly being descendents of prisoners-of-war from Laos, who were originally settled in this remote part of the country by the Bangkok authorities as a security measure during the wars with Laos in the late 18th and early 19th centuries, much in the same way that some of the more politically aberrant Vietnamese refugees from the north-eastern part of Thailand were also transported to and settled in the early 1950's around the town of Phatalung on the northwestern shore of the Thanlé Sap, not far from the present Songkhalā site of the ex-Lao potters. There are also a few Lao-operated ceramic factories on some of the small islands that dot the Thanlé Sap lake near Sting Mòr.

In and around Chiang Mai in the far north of Siam there are a number of kilns now well known to foreign visitors. The most famous of these kilns are probably those of the Thai Celadon Company, an enterprise founded some decades ago by an enterprising woman, Mrs. Robert North. These kilns have successfully specialized in manufacturing and marketing western-style tablewares and ornaments with a fine celadon glaze, such as ash-trays, candle-stick holders, and elephant figurines, along with larger pieces of garden-type statuary, notably figures of the *Devanama* (or *Thephanom*), the traditional Thai guardian angels, usually depicted in the attitude of supplication.<sup>4</sup>

The Thai Celadon Company employs two types of kilns. One is a small "biscuit kiln" that resembles, except for its diminutive size, a beehive. In fact, it looks very much like those enormous beehive-shaped kilns used in Satul Province, in the extreme southwest corner of Thailand, that make great quantities of charcoal by burning the plentiful supplies of mangrove wood that grow in that area along the seacoast and adjacent waterways.

The Thai Celadon Company's "biscuit kilns" are used only for a low temperature firing, but after the glaze mixture is added to the pieces, the wares are then re-fired in the larger kilns that roughly resemble the kilns at Sukhōthai and Sawankhalōk that produced hard-fired stonewares

4) See "The Story of Thai Celadon," a six-page brochure published by the Thai Celadon Company, Bangkok: Watana Panich, 1960, illustrated.

in the time of the illustrious King Rāma Kambaeng; but the large Thai Celadon Company's kilns are of an oblong rather than an ellipsoid shape.<sup>5</sup>

Another well known ceramic complex in Chiang Mai is the so-called Burmick Kilns that have been operated by Mr. Sūpbachai Palaśiri and his family for many years. Heretofore, these kilns catered mainly to the local Chiang Mai market, but more recently, like the kilns of the Thai Celadon Company, this ceramic complex has also been seeking to promote its wares among foreign tourists and residents in Bangkok. I have also been told that some of the Burmick wares have actually been exported to Europe and Australia, but with unreported results. The Burmick kilns produce mainly vases, ash-trays and candle-stick holders. They have also performed, however, the very valuable function of duplicating in facsimile form some of the traditional Sawankhalōk ceramic shapes, such, for example, as the attractive gourd-shaped vase with ears shown in Plate No. 21.<sup>6</sup> The Sūpbachai family originally came from the Shan States in Burma.<sup>7</sup>

The Bān Nōng Būa Kin Mā kilns are located near a village of that curious name some 55 kilometres northeast of the provincial capital of Khon Kaen province in Northeast Thailand, on the border between Khon Kaen and Udorn provinces. Among the wares made at these kilns are some of the famous Northeast Thai ceramic drums that have lizard or snake skin stretched tightly over their open ends that make them percussion instruments.<sup>8</sup>

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- 5) See Figures Nos. 1 and 2 which respectively show the ellipsoid kilns of Sukhō-thai and Sawankalōk; drawings which I based upon the official surveys made in the field of these kilns by the Thai Government's Department of Fine Arts.
  - 6) The original Sawankhalōk ware from which this piece was copied was less than one-half the size of this facsimile.
  - 7) For some helpful background information on the Burmick Kilns, see *The Financial Times* (Bangkok) of October 15, 1970, which published a nine-page article on these kilns of the Suphachai family, with illustrations of some of its products.
  - 8) See Figure No. 3 for a drawing of one of these typically Northeast ceramic drums. See also Solheim, *loc. cit.*, for a thorough account of these Northeast Thailand kilns.



The very productive Northeast kilns at Chōkchai are in the *amphoe*, or district, of that name in Nakhōn Rajāsīmā Province, just off the Khōrāt-Ubol Highway that runs across the southernmost tier of provinces in the Northeast. (See Map No. 4). The Chokchai kilns were made by digging large pits in the ground. One side of each pit is left sloping to provide easy access to and from the surface of the ground. The pit banks opposite these incline planes have short tunnels that form the kilns' firing chambers. At the rear of these tunnels shafts rise to ground level to form the kilns' chimneys.<sup>9</sup>

The very heavy and hard-fired products of the Chōkchai kilns are trucked to Khōrāt from whence they are shipped to Bangkok by rail. Heavy vases with incised decoration, like the piece shown in Plate No. 22, are now sold at a special shop in Bangkok far out on the Petchaburi Road Extension that caters principally to foreign residents who buy these handsome jars and have them made into table lamps with teakwood bases and Thai silk lampshades.<sup>10</sup>

We should not belittle this practice of foreigners for making unusual uses of common Thai products. Some years ago, the de luxe Rama Hotel in downtown Bangkok on Sathorn Road surprised the Thai visitors by having its lobby filled with very handsome table lamps made out of *namplā* (fish sauce condiment) jars, many of which were made at the Rātburī kilns. In fact, the hotel set a new trend among the Thai and foreigners alike in using common Thai articles for such artistic and decorative purposes.

In Chiang Mai there is a considerable number of small kilns that specialize in making the incomparable Chiang Mai earthenware the bases of which are turned ink silver, bases, not so much for decorative purposes, however, but to keep these areas from chipping. And for the

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- 9) See Figure No. 4 for a drawing of one of the Chōkchai based on the author's surveys of the kiln sites.
- 10) The Chōkchai vases shown in Plate No. 22 is, incidentally, a very old North-east ceramic form that may possibly be of Khmèr origin.

Bangkok foreigner's market, the *kuat din* earthenware water fattler are now being fitted with cast silver stoppers some of which are made in the shape of the ever-popular Chiang Mai Elephant.

These lovely water bottles are now shipped to Bangkok by rail, and, as one may readily assume, it is nowadays easier to find one of these pieces for sale in the art and curio shops that line Bangkok's New Road or the Oriental Hotel Lane, than in Chiang Mai, where one must generally search out the kilns that make them. A few of the shops in Chiang Mai, however, now do have these supernal bottles for sale, along with bolts of Thai silk and carved teakwood elephants. They are usually inferior pieces, however, as all the better grade Chiang Mai *kuat din* are sent to the more lucrative Bangkok market.

In the old days almost every northern Thai household had a number of these *kuat din* about the home in which to store and have available cool drinking water. In fact, there was customarily a special roofed shelf set at one side of the house's open, upper storey verandah, where rows of these bottles were placed to catch the benefit of every passing breeze and thereby keep their drinking water delightfully cool.

Many times when travelling about in the North of Siam during the hot dry season, it was always a refreshingly pleasant experience to have a drink of really fresh, cold water from one of these bottles when stopping to rest at some farmhouse or at the *salawat* of some quiet monastery. No drinking water ever tasted so good or so refreshing, for there is something almost magical about the capacity of a porous, unglazed piece of earthenware to keep drinking water fresh and cool that no modern technology can match with a thermos bottle or ordinary ice water.

These same bottles are also manufactured in the Shan States of Burma, and I can pleasantly recall once when stopping at the *dak* bungalow in Lashio to find that the house's Indian "butler", as those grasping worthies were customarily called, had placed a Shan-made *kuat din* with

a clean glass on a tray beside my cot. I still have one of these supernal *kuat din* from Chiang Mai, and every time I touch its soft, unctuous surface with my hand, like Aladdin's lamp, it seems to carry me back to that lovely vale of northern Siam.

The Chiang Mai earthenware kilns also produce other kinds of porous earthen ware water vessels, including large, lidded jars for storing water in the bathroom, some of which are actually fitted with faucets set in holes at their side with rubber washers. The are not so satisfactory, however, for they keep the bath-water so cold that bathing from one of these jars on a chilly northern evening or of an early morning in Siam's far north can be a trying experience.

In the far north of Siam it is also customary to place a simple, porous earthenware jar at the side of the road on a box, wooden stand, or the stump of a tree. The jars are filled with cool drinking water and have a wooden or earthenware lid to keep out the dust and insects. A beautifully polished Chiang Mai silver bowl is frequently placed invitingly on top of the jar's lid. The purpose of these jars with their cool drinking water and highly polished silver drinking vessels is to provide monks and other wayfarers on these dusty northern roads a cool drink in the heat of the day. Farmers, woodsmen and others in the far north customarily set out these jars of cool water as an act of merit in the best Buddhist tradition. When trudging along a dusty road in the hot, dry season, I can well recall how I have gasped with relief and delight at the sight of one of these jars at the roadside with its sparkling silver bowl!

As noted, many of these supernal earthenwares are also made in the Shan States of Burma. Indeed, some of the Chiang Mai potters and other craftsmen who now produce these wares in Siam are descendents of Shan families that migrated to Chiang Mai and Chiang Rai provinces many years ago. And today in the Shan country you can still see these earthenware vessels being made in places like Hsenwi, Lashio, and Bhamo, and even around Mandalay and Sagaing, across the muddy but majestic

Irrawaddy River, where such earthenwares are now produced by simple, open-pit firing, using merely bales of rice-straw for fuel.<sup>11</sup>

All these simple earthenwares have a deep animistic significance. Hence, it is an instructive as well as a pleasurable rewarding experience to visit these contemporary kilns in Siam and Burma. They not only take you back in time, but they also bring you into much more direct and intimate contact with the life of the people by whom and for whom these simple earthenwares are made. They are indeed superior products that enter into the daily lives of the people in various ways, primarily, of course, as their simple but practical and attractive household utensils, but also as food and water storage receptacles, as mortuary urns to hold the ashes of the deceased, and as jars filled with sand to support the incense sticks, flowers and candles that are customarily placed before household spirit shrines or Buddhist household altars, or at those simple, crude animistic shrines set up at roadsides and river landings in the northern country to win the favor of the benign spirits of woods, rocks, sacred trees and hills, or to ward off the machinations of evil spirits from those and other quarters. It is the close, intimate association of these wares with the daily lives of the people and their material and spiritual needs that confer upon them such abiding beauty and enduring charm.

Moreover, the mere manufacture of such wares is also permeated with a deep-rooted animistic character and association. As with most ceramics, their manufacture demands that the potters and other skilled craftsmen be closely attuned to the spirits of the land, woods, sky, and, above all, the Guardian Spirit of Fire that inhabits the kiln. It is a curious point that in Thailand, as in so many other parts of the world, the making of ceramic wares has been entrusted to a large extent to women, a rôle-assignment that I believe goes much deeper than a mere token appreciation of the skill and dexterity of their more delicate fingers. Their work, in combination with the male laborers who haul and prepare the clay and cut and haul the firewood to fuel the kilns was all part of a

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11) See Plate No. 24, from a photograph of open pit firing at Sagaing, Burma, taken by the author in the cold season of 1954.

process of creation. Consequently, the important rôles assigned to women in pottery-making may more properly be identified with recognition of their places in the household as mothers and as the members most directly concerned with preparing the family's life-sustaining food. Women would naturally have a vital family rôle in any society so dependent in its everyday life upon ceramic wares.

Consequently, in Thailand, as in China and some other countries, the pottery kiln has been endowed with a special animistic character and magical powers, since its basic work involves creation. The Thai consequently believed that some mysterious force, benevolent rather than malign, is involved in the capacity of a ceramic kiln, through the element of the heat generated by its fire, to convert the simple materials of clay and stone into objects of rare utility and bewitching beauty. It is significant, I believe, that in Thailand, as in China, potters have traditionally recognized that the making of ceramic wares involves the fortuitous use in combination of the Five Elements or Natural Forces of the Universe: what the Chinese reverently call the *wu-hsing*, namely, wood, fire, earth, metal, and water; or what the Thai with equal reverence refer to as the *benča thūt*, that is, earth, air, fire, water and atmosphere.<sup>12</sup> Ceramics are thus created by the special interaction of these five basic elements, and they thus represent the manifestation of a magical or supernatural power.

Consequently, among the Thai, after the pots and jars have been carefully turned on the wheel, decorated and or glazed, and are finally placed in the kiln, it is customary for the potters to conduct an appropriate ceremony of thanksgiving and propitiation by placing the required offerings before a small spirit shrine, call *Sāl Phra Phūm*, that is usually set up directly above the entranceway to the kiln; for through such humble offerings as incense sticks, lighted candles and fragrant flowers,

12) See, respectively, R. E. Mathews, *A Chinese-English Dictionary*, Cambridge: American Edition, Harvard University Press, 1943, p. 1072, the original edition of which was published in China by the China Inland Mission and Presbyterian Press; Shanghai, 1931; and George Bradley McFarland, *Thai-English Dictionary*, American Edition; Stanford University Press, 1944, p. 488.



Plate No. 1.

Typical Thai earthenware *mòh khao* (rice-cooking pot). Height 16 cms. Diameter of body 18 cms. Diameter of rim 14 cms. Diameter of the base  $19\frac{1}{2}$  cms. (Author's Collection).



Plate No. 2.

Ayudhaya Period *mòh khao* Height 17 cms. (Hauge Collection).



Plate No. 4.

Earthenware globular jar with stamped design on the body. Height 25 cms. Diameter 33 cms. Diameter of mouth 21 cms. (Hauge Collection).





Plate No. 5.

Squat-shaped Ayudhaya Period earthenware bowl with incised decoration.  
Height  $13\frac{1}{2}$  cms. Diameter 24 cms. (Hauge Collection).



Plate No. 6.  
Ayudhaya Period earthenware globular cooking pot with domeshaped lid.  
Height 18 cms. (Hauge Collection).



Plate No. 7.

Ayudhaya Period earthenware *mǝh khao*-type pot with incised Thai pendant-style decoration around the shoulder. Height  $13\frac{1}{2}$  cms. Diameter 17 cms. (Hauge Collection).

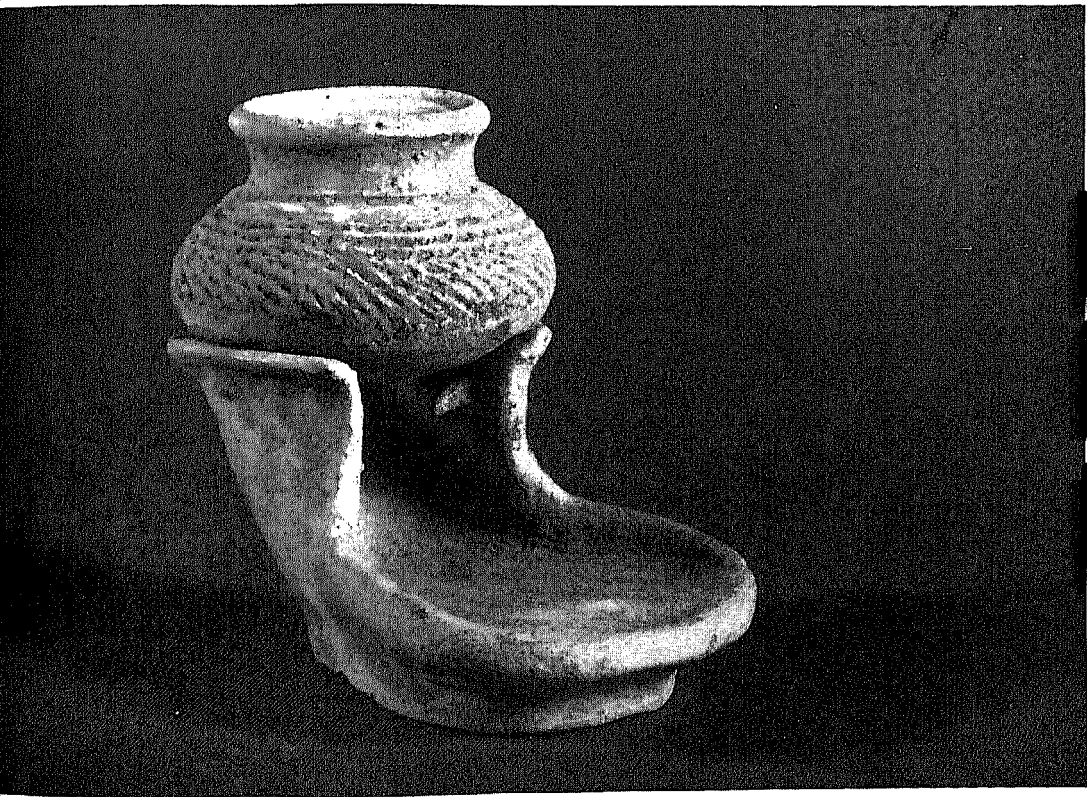


Plate No. 8.

Model of Ayudhaya Period pot (4.5 cms. in diameter) resting on a model of an earthenware stove.  
Overall height of stove and pot 7.6 cms. (Hauge Collection).



Plate No. 9.

Ayuddhayā Period earthenware jar with separate circular ringstand. Over all height 36 cms. Diameter of lip of jar 30.5 cms. Diameter of body of jar 42 cms. Height of footring stand  $9\frac{1}{2}$  cms. Diameter of top of base of ring-stand  $26\frac{1}{2}$  cms. This unusual piece probably dates from the 18th century. (Hauge Collection).

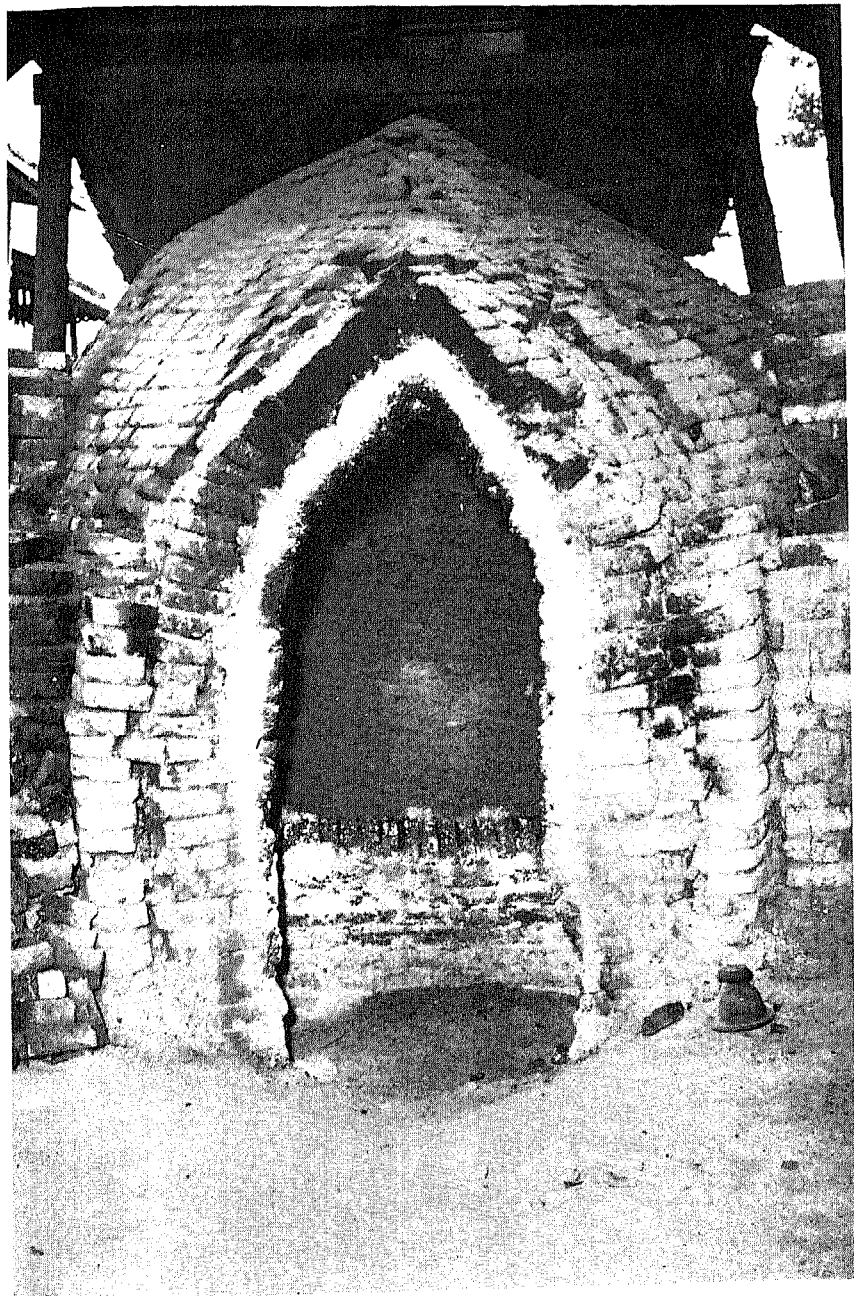


Plate No. 10.

One of the brick Päckret kilns. A fired mortar is resting on the sand to the right of the kiln's entranceway.



Plate No. 11.

Models of contemporary Thai earthenware household utensils made at the Pākkret kilns. Height of right-hand side jar, including lid, 9 cms. (Author's Collection)

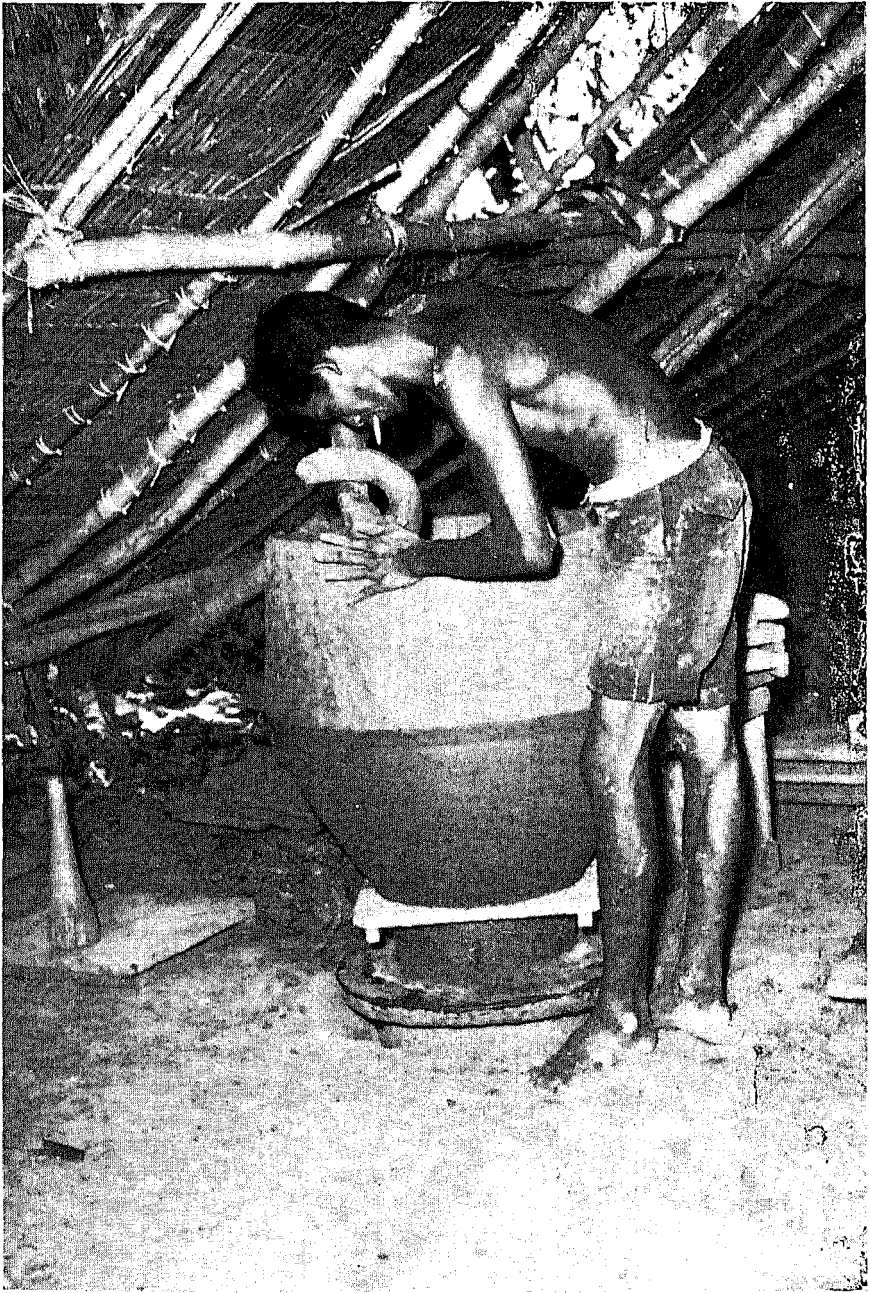


Plate No. 12.

Making a Rātburī kiln large water jar (Photographed by Mr. Bānchai Kunalai at the Rātburī kilns in 1973)



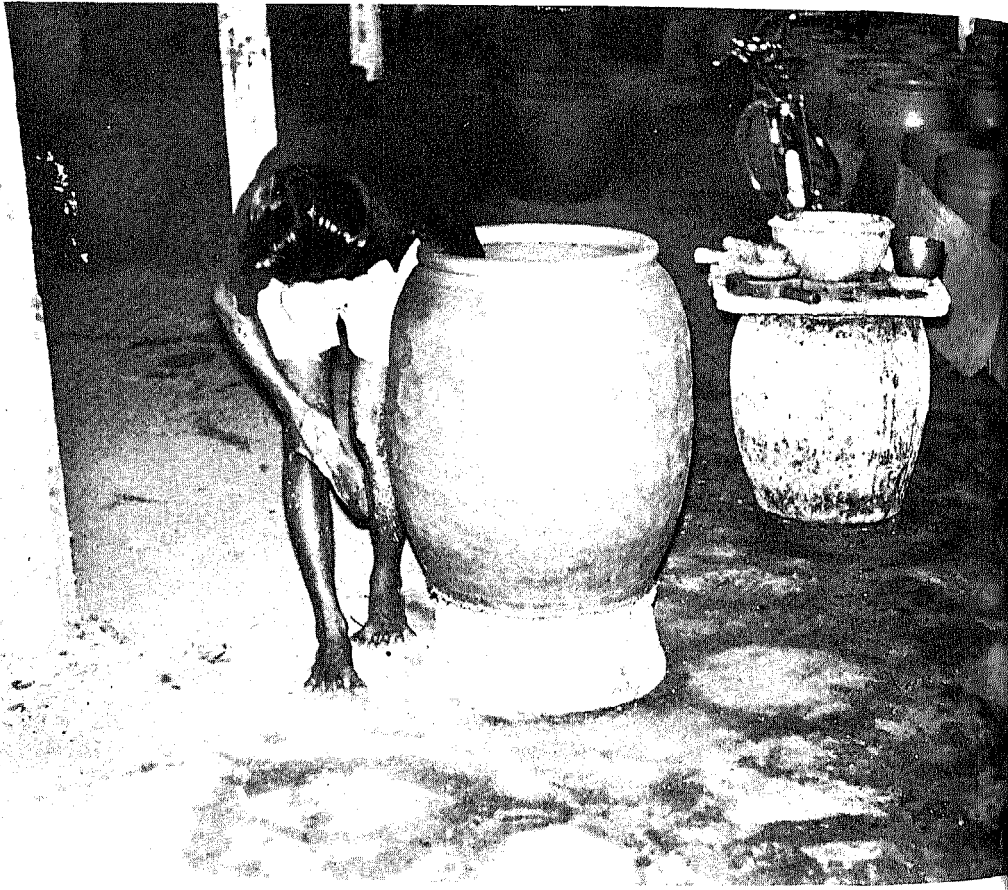


Plate No. 13.

Potter at the Rātburī kilns going over the side of the large water jar with a paddle while holding a ceramic anvil inside the jar opposite each blow of the paddle to strengthen the walls of the vessel made by the co method. (Photographed at the Rātburī kilns by Mr. Bānchai Kunalaid of USIS Bangkok in 1973).



Plate No. 14.

Potter at the Rāṭburī kilns incising the dragon's mane on the side of a water jar with a broken piece of a pocket comb. Photographed by the Author at the Rāṭburī kilns in 1970.



Plate No. 15.

Model of a Rātburī water-jar. Height 10 cms. The actual jars are about 70 cms. in height. Author's collection. Photograph by the Freer Gallery of Art, Washington, D.C.



Plate No. 16.

Girl workers at the Rātburī kilns grinding stone to a fine powder for making the glaze material, as described in the text. Photographed at the Rātburī kilns by the author in 1956.



Plate No. 17.

Girl Worker at the Rātburī kilns pouring glaze material over a recently turned basin.  
Photographed by the author at the Rātburī kilns in 1956.



Plate No. 18.

Workers at the Pākkret kilns making glazed jars to hold *namplū* (fish source) condiment. The boy in the center turns the heavy wheel by kicking motion of his foot, maintaining his balance by holding the rope tied to one of the rafters of the workshea. Photographed by the author in 1956.



Plate No. 19.

Woman worker at the Pākkret kilns turning the heavy wheel by her foot. The potter is turning out *krok* (mortars) for which these kilns are famous.



Plate No. 20.

A worker at the Pākkret kilns kneading clay prior to using it on the potters wheel.  
Photographed at the Pākkret kilns by the author in 1956.



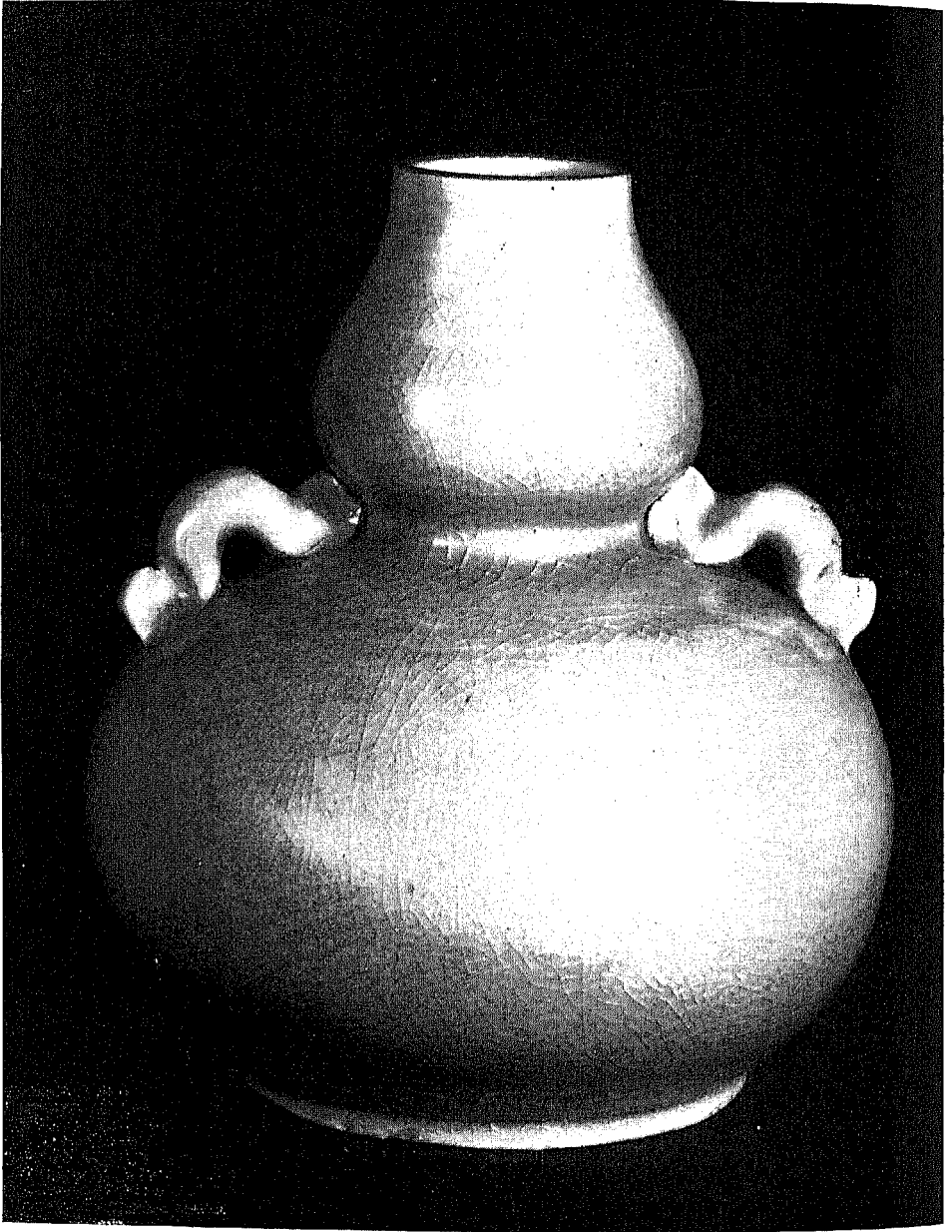


Plate No. 21.

Goladon glazed gourd-shaped jar with ears made at the Burmick Kilns in Chiang Mai as a small-scale facsimile of a typical jar from the Sawankhalōk kilns of the 14th century. This piece is  $16\frac{1}{2}$  cms. in height; the body is 15 cms. in diameter and the base has a diameter of only 9 cms. Photographed by the Freer Gallery of Art. (Author's Collection).

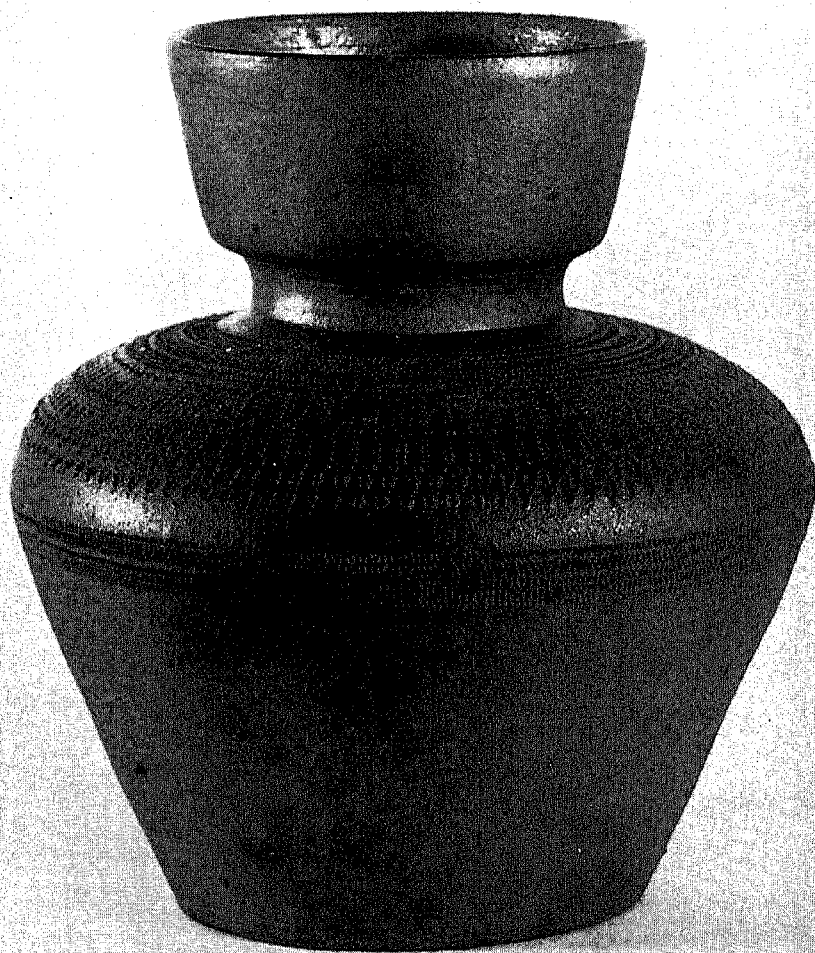


Plate No. 22.

A contemporary stoneware jar made at the Chōkchai kilns in a Northeast Thailand ceramic shape. Height 37 cms. Diameter 25 cms. (Author's Collection). Photographed by the Freer Gallery of Art.



Plate No. 23.

Earthenware Chiang *knat din* water-bottle. Height 23 cms. Photographed by the Freer Gallery of Art. (Author's Collection).



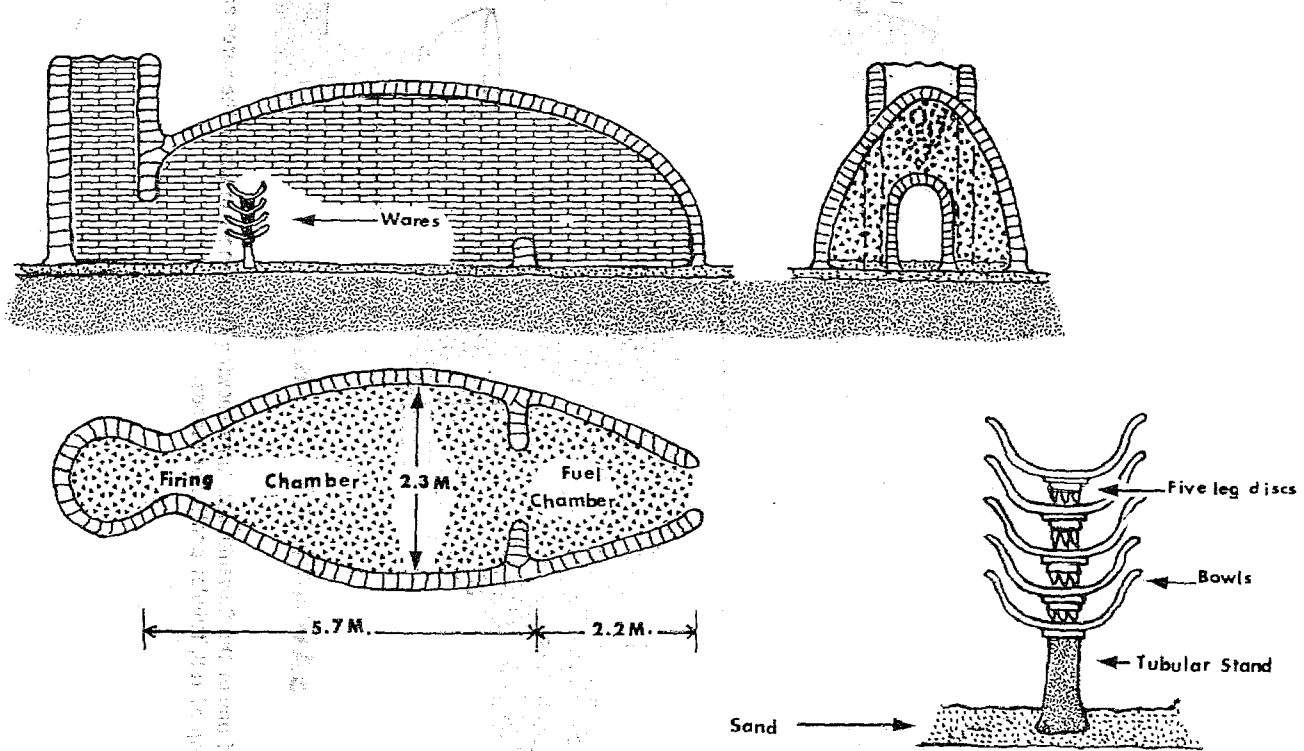
Plate No. 24.

Making earthenware water jars by open pit firing, using rice-straw bales for fuel. Photographed at Sagaing in Upper Burma by the author in 1954. The open-pit firing pit is in the background.



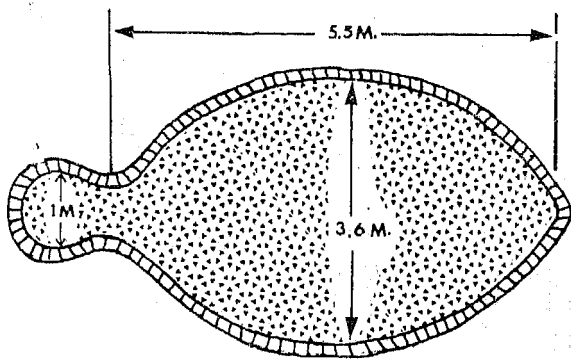
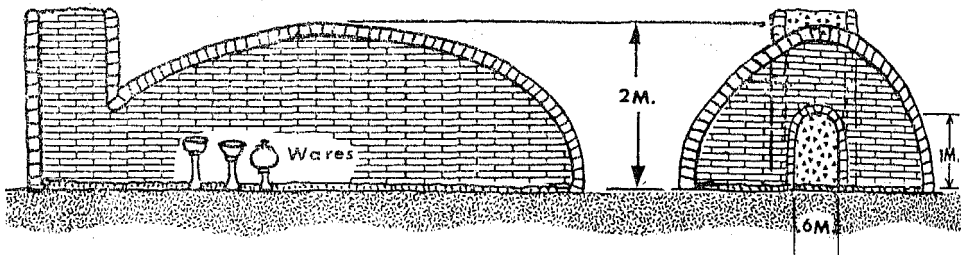
Plate No. 25.

One of the Rātburi kilns with a spirit shrine (*Sal Phra Phum*) over the entranceway, to assure a good firing. Photographed at the Rātburi kilns by the author in 1950.

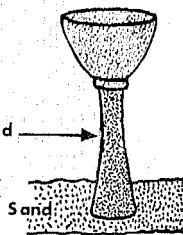


## SUKHŌTHAI KILN

Fig. 1. Drawing of a Sukhōthai kiln and also showing the method of stacking the wares in the kiln with a tubular stand and disc-shaped pontiles with five projecting legs.



Tubular Stand



## SAWANKHALÖK KILN

Fig. 2. Drawing of one of the Sawankhalök kilns showing the manner in which the wares are fired on top of tall, tubular pontils or stands.

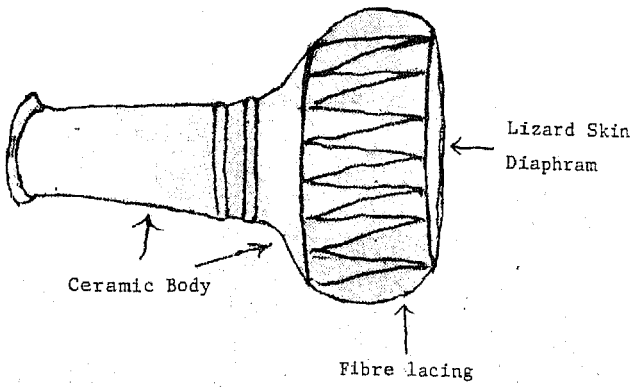
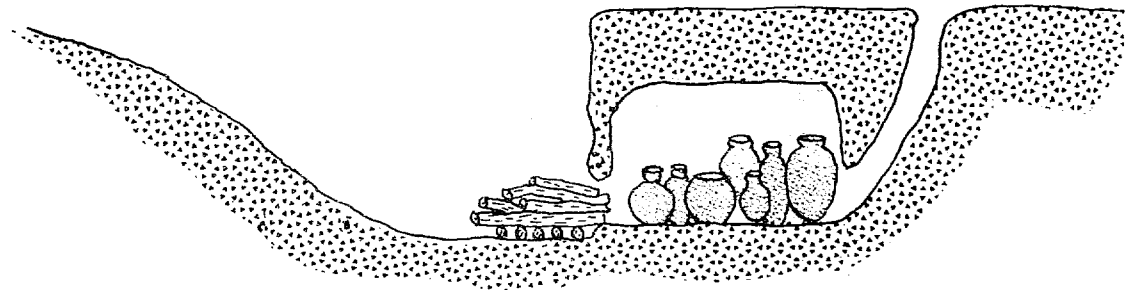
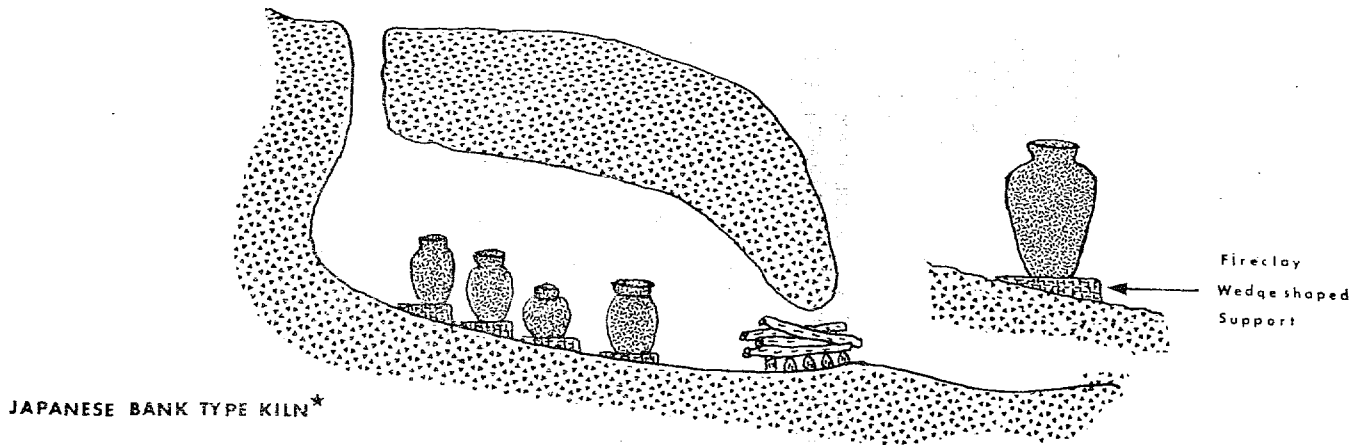


Fig. 3. Drawing showing at the top the Japanese bank-type kiln and at the bottom one of the Chokchai kilns in Northeast Thailand.

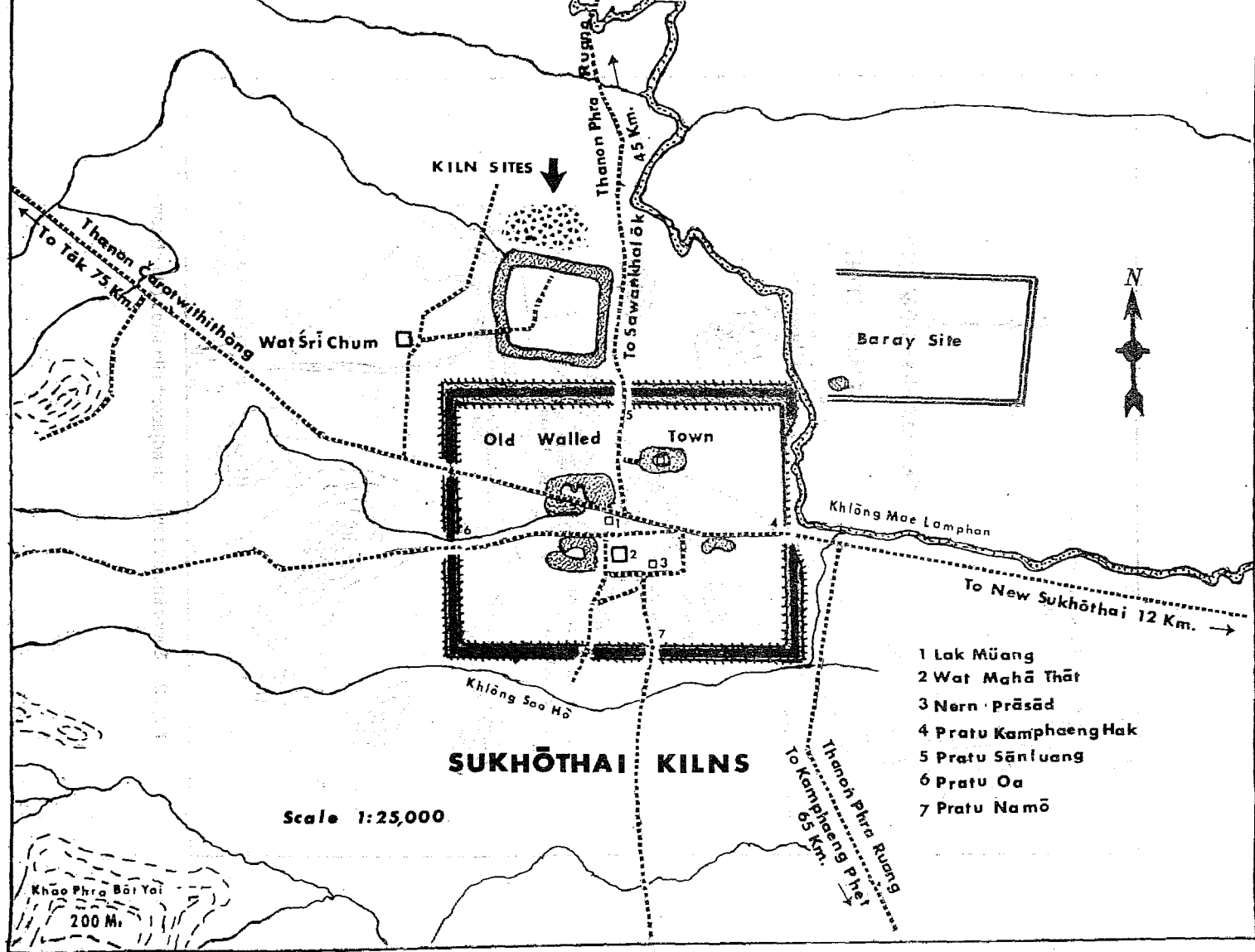




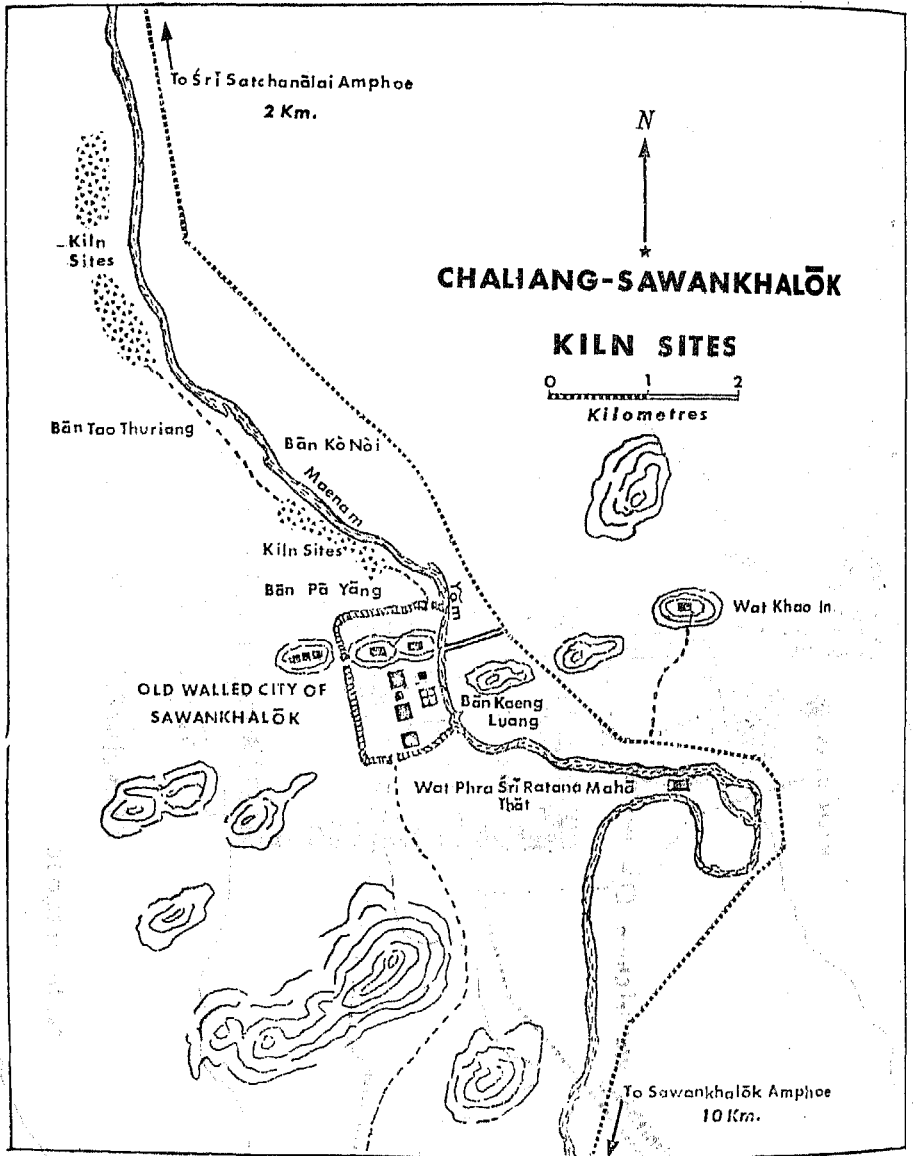
THAI TUNNEL TYPE KILN AMPHOE CHŌKCHAI (โศกชัย) N.E. THAILAND

\* After Rhodes, Kiln: Design, Construction, and Operation

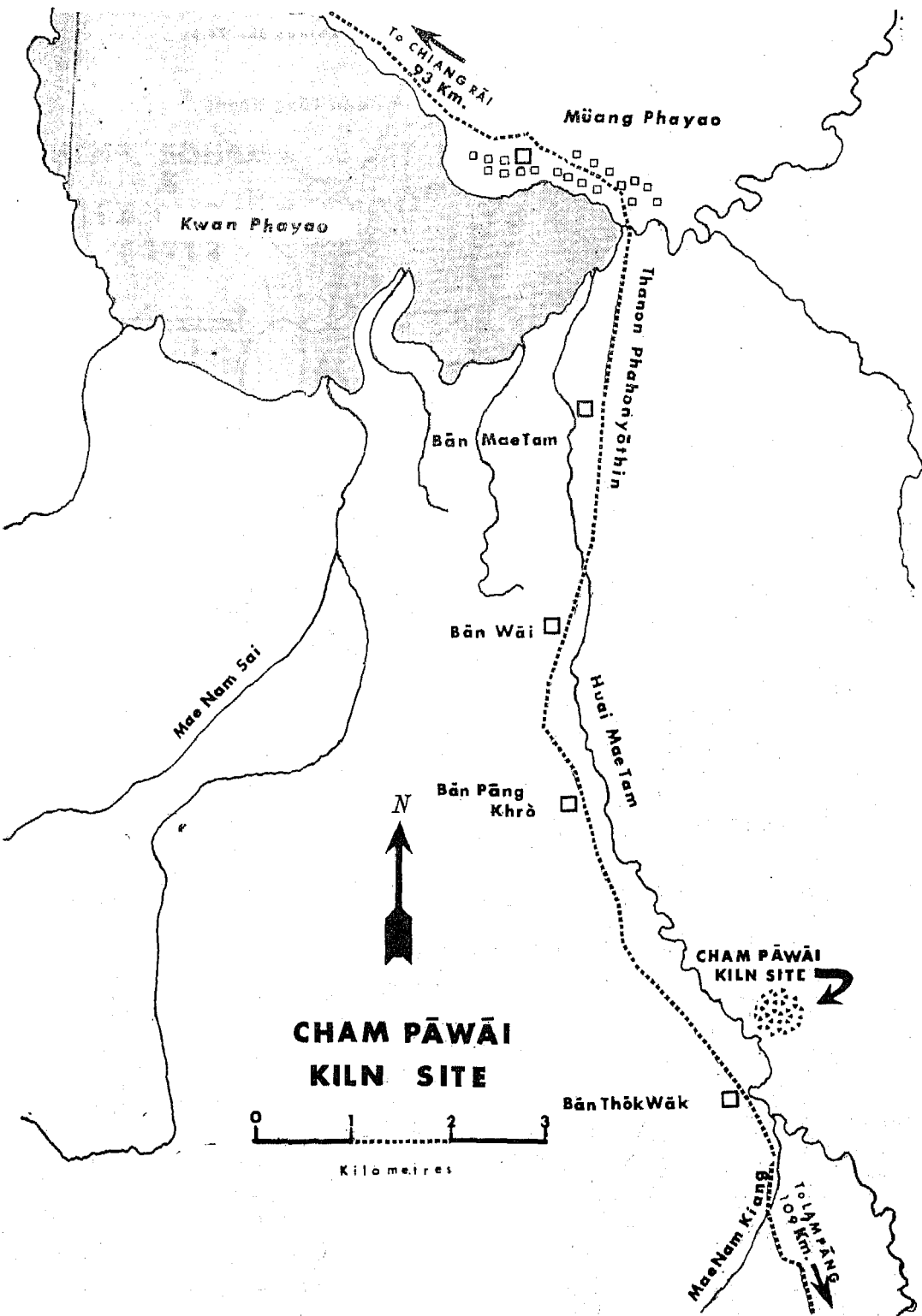
Fig. 4. Drawing of a Northeast Thai-type of ceramic drum of the kind made in Khon Kaen Province.



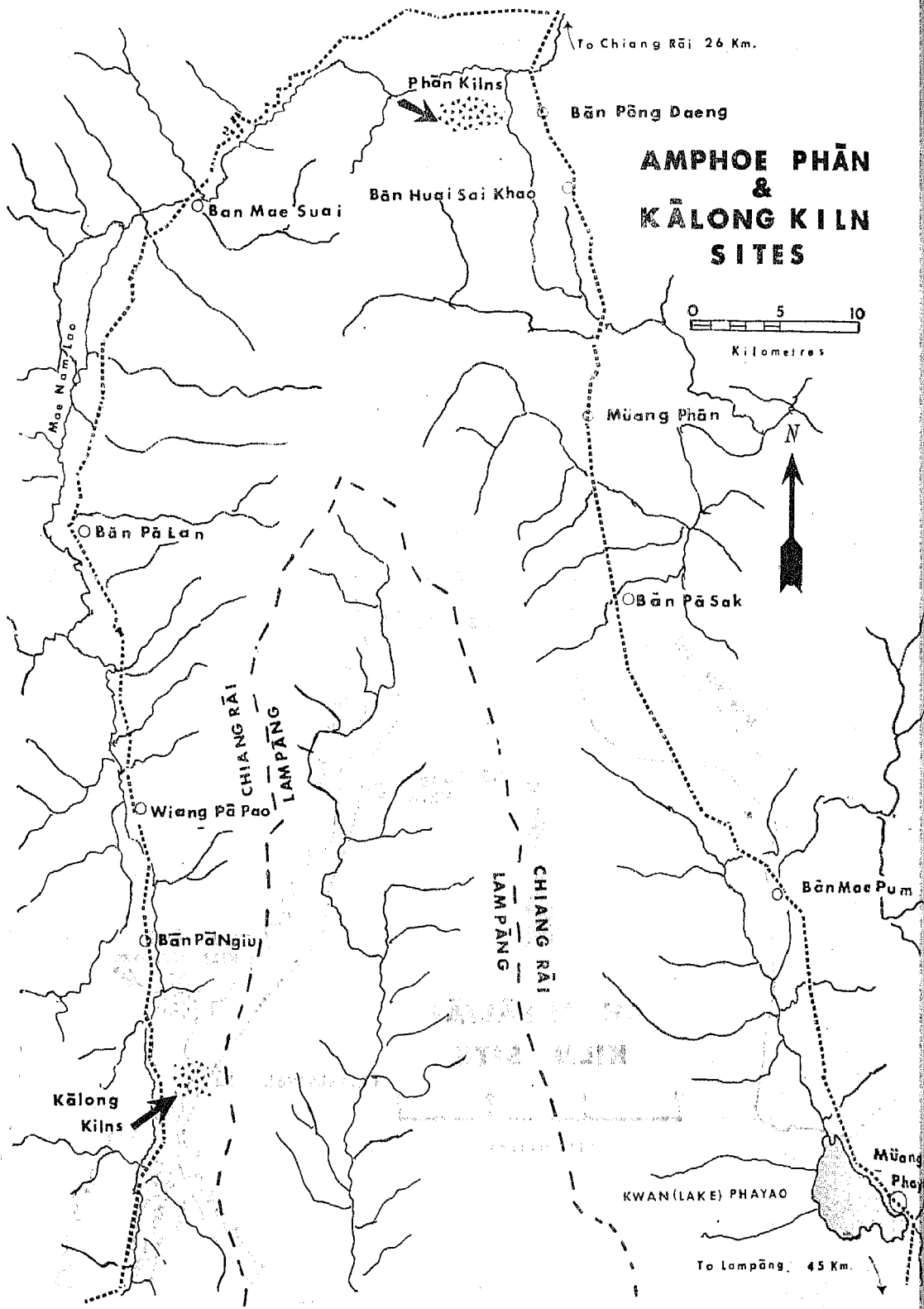
Map. 1. Sukhōthai town and kiln sites.



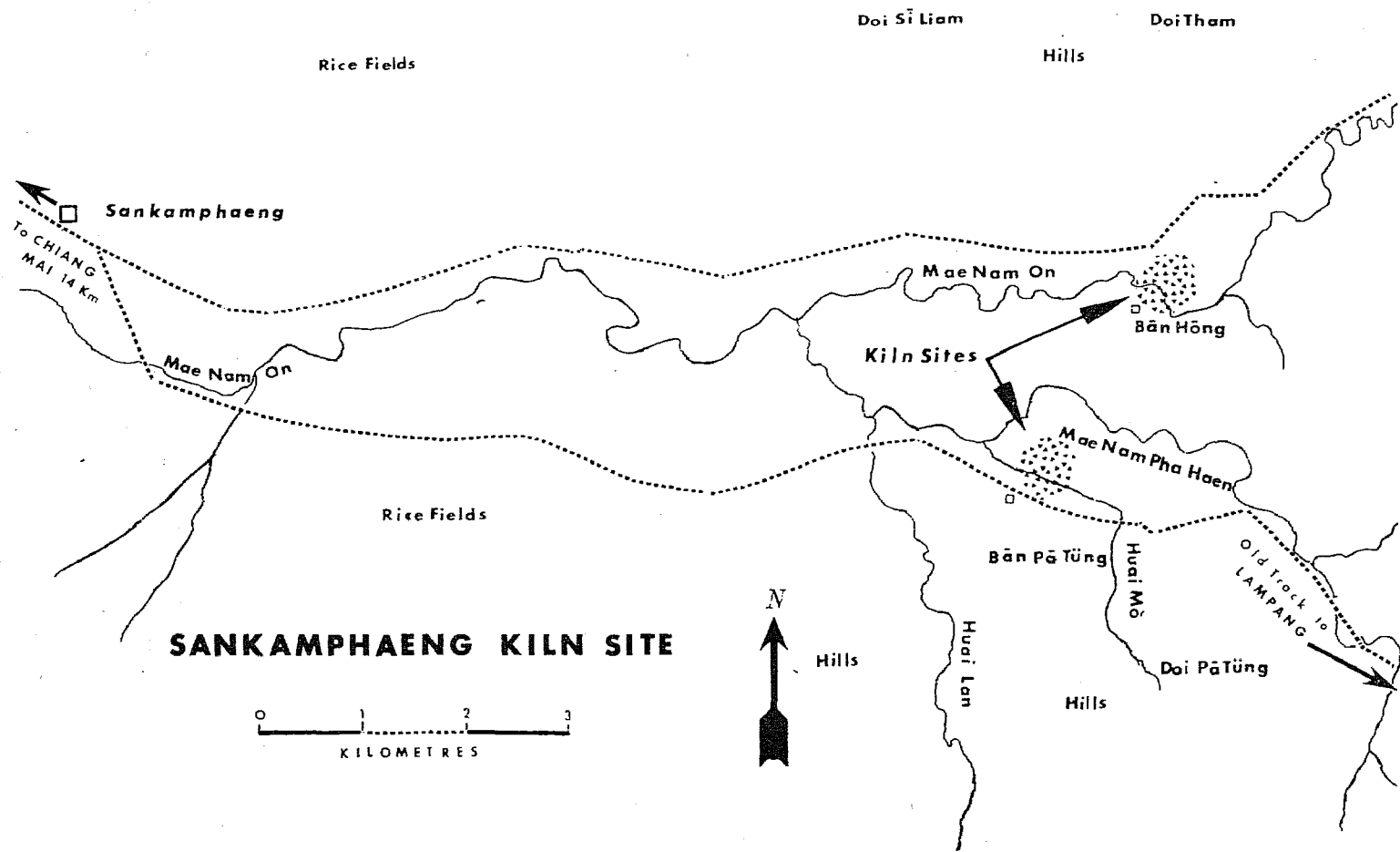
Map. 2. Sawankhalōk town and adjacent kiln sites (Up stream).



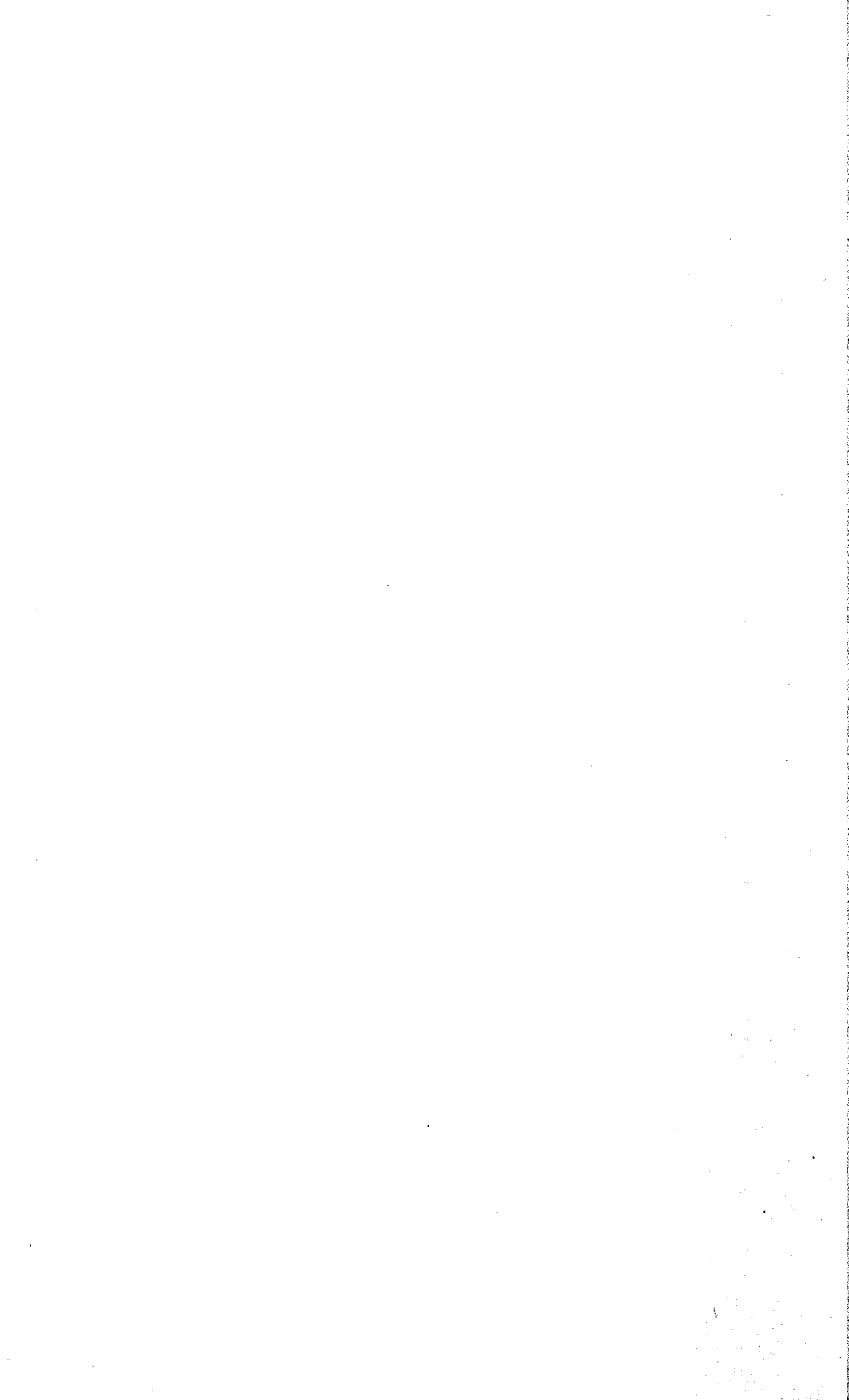
Map 3. Cham Pāwāi Kiln Sites.



Map. 4. Amphoe Phän Kiln Sites.



Map 5. San Kamphaeng Kiln Sites.



the Fire Spirit residing in the kiln will take due note and view with favor the devoted, diligent and dedicated work of the potter and his assistants, and assure him (or her as the case may be) a successful firing.

To those who dwell as close to the Unseen World as the Thai, to depend for successful results by such crass, mundane devices as temperature cones for a successful firing would indeed be a shoddy substitute for a proper ceremony of thanksgiving and supplication, as well as a grievous affront to the Guardian Spirit of Fire who rightfully claims suzerainty over the kilns. Hence, I have always found it a moving sight to see one of those fully-accutered shrines over the entranceway of a newly-filled kiln, with its bright fire glowing with timeless reassurance through the narrow kiln entranceway. (See Plate No. 35).<sup>13</sup>

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13) I took this photograph at the Rātburī kilns in 1956. I would say that this photograph has captured fully the spirit of the occasion, and I am sure that the charming young girl potter standing beside the entranceway to the kiln was as much moved by this event as I was.