by

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PRELIMINARY REMARKS.

時代に見たい。日前は法と反

It is a source of pleasure to me to submit to you what I have been able to note of Tai Ceramics. As a matter of fact before I became interested in and commenced my collection of what is known as Sănk'ălok (Săwănk'ălok) ware, I hardly thought that there could have been any persons more interested in this subject than Messrs. Graham, Sebastian and le May, as shown by their addresses and contributions to the Journal of the Siam Society and other publications. All authorities uphold the belief that Sănk'ălok pottery was first manufactured after the return of Ramă K'ămhêng as King of Sŭkhot'ăi from China, where History says he went in 1294 A. D. or 1300 A. D., and brought back some 300 or 500 Chinese potters. I too, who was in the habit of taking persons interested in this matter to the kilns of Sănk'ălok and Sŭkhot'ăi, accepted the truth of this belief.

It was Mr. le May who suggested that if I could make a collection of specimens it would be of much value to students of history. At first I was not prepared to undertake this, as I still believed in the correctness of the theory that our potters came from China, and consequently, that there could be nothing further to be discovered that would be of any interest. It was only when I met Mr. Bourke Burrowes, the then Adviser in Forestry to the Government, on his return from a visit to the Săwănk'âlok kilns, bringing with him a number of specimens of the ware, and his telling me of the interest shown in Chinese pottery in London that my curiosity became really

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aroused. Mr. Bourke Burrowes told me that his father dealt in Chinese pottery in London, and on one occasion when some consignments of greenish grey pottery were received from that country they sold quickly and fetched high prices. This was "celadon" which the Chinese called Lung Chüan ware. His father sent an agent to China to make purchases on the spot but was unable to procure specimens similar to those which he had recently sold, his agent being told that the manufacture of this pottery had ceased a thousand years back. Mr. Bourke Burrowes, speaking from memory, said that the specimens which his father had sold were of a colour and translucency somewhat similar to the pottery which he obtained in Săwănk'alok (Plates I, II, III, IV, V). That led him to believe that the pottery sold by his father came from this place. This conversation made an impression on me, but I was unable to say anything as I had no knowledge of the subject.

I then took up the study of Siamese history and it appeared that the Tai race had been in existence as an independant people for a period not less than that claimed by the Chinese. This fact further stimulated my interest, and I asked myself what utensils the Tai people used prior to contact in war with the Chinese and prior to the visits of Rama K'amheng to that country. It is a historical fact that the Tai people were capable of producing beautiful images in bronze and brass of the Buddha and that the clay crucibles in which the metal was melted were glazed. Therefore, if they could make glazed crucibles, why did they not produce pottery, and, if they did not, what did they use in its place ?

Although my interest in the subject had been excited, I did not carry my investigations further, as experts told me that the subject was most difficult, demanding the possession of a large collection in order to be able to compare, check and separate the spurious from the real and to know the age of each specimen. The subject seemed to be so complex that I felt I had not the time to take it up.

Later on, however, Mr. le May again persuaded me to collect, offering to help with specimens of Chinese pottery in case I should wish to make comparisons. I decided therefore to start collecting, not only because I was now interested but also because I felt that in my official position in P'itsănŭlok I should be able to talk intelligently on this subject to those foreigners and others who might visit the kilns. I have been collecting now for over six years, and some of my

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friends describe my house as a rubbish heap, for it is a home of over 1,500 pieces and over a ton of fragments. I sincerely hope that my collection which is open to inspection may be of value to those interested, and, as its contents have been collected from kilns in various parts of the country, a study of it may throw a new light on the history of the origin of this ware.

2.—METHOD OF WORKING.

The first steps I took in the investigation of this subject were quite simple. I bought and gathered together fragments of Sănk'ălok ware, collecting pieces of pottery which were lying buried in the vicinity of several kilns both in Săwănk'ălok and Sŭkhot'ăi. In excavating I removed the upper layers, carefully digging down to the lowest in order to be able to judge of the differences between the earlier and the later productions. The points which I took up for particular examination were: the kind of clay, the method employed by the potter, the shape and form, the enamel, the decoration and the method of baking. I stretched my hands out to embrace old cities and other populated centres such as T'ung Yang in Uttaradit, C'alieng, C(r)i Săt'c'ănalăi, Sŭkhot'ăi, P'itsănŭlok, Mu'ang Pêp, Kămp'êng P'ět, Ban Kôn, Wăng P'răh Th'at, U-T'ông in Sup'an, Nak'ôn Păthom, P'ong Tu'k and Lopburi; and I collected a number of specimens from each place, so that I might ascertain the kind of pottery formerly used in these different localities and their successive development, and if possible to trace the kilns from which the pottery I collected had originated. Obviously the older specimens would be found at a lower level than the more recent. When I was unable to superintend the excavation in person, I entrusted the matter to my friends, giving them particular instructions that notes were to be made of the depth at which the articles were found. My attention was attracted to certain river banks where broken specimens of pottery were seen in the soil such as at the Bo tree of Wat Noi and south of Pak P'ing (on the Nan river), both in the province of P'itsănůlok, as well as on the east bank of the Yom river at C'alieng (i. e. Săwănk'ălok) in front of the Monastery of the Great Relic. I had such places excavated in some instances to the depth of 3 metres, in order to fix definitely the different periods at which certain types of pottery were used, working on the principle that pottery found at a lower level were the more ancient.

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Although my method of working might not have been scientific, still I was able to decide definitely that at the lowest levels no specimens of Chinese pottery either prior to or contemporary of the Sung dynasty (A. D. 960-1280) were found. Those at the lowest levels, were almost all from C'alieng. At the upper levels, however, in some places such as at Lopburi, specimens of Chinese pottery dating from the Sung period were found intermingled with others in small quantities. When coming to within 20-30 centimetres of the surface there were some specimens of Chinese pottery of the Ming period (A. D. 1368-1644). This evidence goes to prove that prior to or during the Sung dynasty the Tai people made pottery themselves, but seemed to have ceased doing so during the middle of the Ming period. As regards purely Tai pottery, broken examples coming from Sŭkhot'ăi were found mixed in large quantities with those from C'alieng in the upper levels. These disappeared later on and a hybrid form took their place. This hybrid form still retains the Sŭkhot'ăi design, but the clay, shape and method of baking are those of C'alieng. Excavations undertaken in the vicinity of the kilns of C'alieng brought to light examples of decorated pottery, but instead of monochromes or of thick translucent enamels a thinner enamel was used. This causes me to lay down as a premise that this pottery was produced at three periods, or at the three different factories. I have already mentioned the C'alieng and the Sukhot'ai factories, it seems to me that when work ceased at the C'alieng kilns, potters from Sukhot'ai established themselves at the C'alieng site, and these latter works are what I shall call the kilns of Sătc'ănalăi, which is the name of an old state which we now called Săwănk'ălok. This gives us as regards date the following sequence: first C'ălieng, then Sükhot'ăi, followed later by Sătc'ănalăi. Although the Sătc'ănalăi kilns were worked by potters from Săkhot'ăi, the finished products as regards clay, glaze or finish were superior to the products of Sukhot'ai. This division will help us to come to an understanding of the age of each of these kilns (Plates VI to XI).

Excavation carried out at Sükhot'ăi to a depth of over 3 metres reveals the fact that the lower layers of pottery found were of ordinary baked clay, the middle layer contained those of C'ălieng, and the upper ones were of pottery manufactured in Sükhot'ăi itself. However I have not been able to find in the C'ălieng factories any specimen, perfect or broken, of Sükhot'ăi pottery. This would seem



Approximate Plan of Kalŏng. a. Kilns; b. Slopes of hill; c. Moat; d. Walls; e. Watercourses.

to prove that the C'ălieng kilns existed prior to those of Sŭkhot'ăi. The latter used utensils of C'ălieng, but C'ălieng did not obtain any supplies from Sŭkhot'ăi, probably because the C'ălieng article was superior both as regards clay and finish. This evidence of the existence at Sŭkhot'ăi of baked clay pottery unglazed which is not found in C'ălieng, leads me to believe that Sŭkhot'ăi must have been in existence prior to C'ălieng.

3.—THE KALONG KILNS.

I have come across a few specimens of pottery (Plates XII to XIV), some broken, some perfect in form, obtained from Tung Yang in Uttaradit, from Löpburi and from P'ong Tu'k. Examination proves to me that these specimens had not their origin either in China, Sukhot'ai or Sāwānk'ālŏk. Archaeological and historical records which have been so far considered would seem to show that the Tai people came south owing to the pressure of the Chinese, but there can be little doubt that the Tai people had spread themselves over a vast area to the north of the Mêkhong prior to the Chinese pressure on them. The locality which I wish to talk about now is in the modern province of C'ieng Rai, which is the northernmost province of Siam. I wrote to a friend there to obtain specimens for me, laying stress on the importance of their being dug up. Subsequently I received a cup, a salt cellar and a broken lamp, accompanied by a letter saying that these articles had been picked up in levelling a landing ground for airplanes. When I compared the clay and the enamel with other examples in my possession I was forced to the conclusion that pottery kilns existed in the north too, and I offered a reward to any one who could point out the site of the kilns. In February 1933 I received information that kilns had been discovered at Wieng Papao. Broken pieces of pottery collected in the vicinity of these kilns were also sent to me. I took the opportunity to visit them. I started from C'ieng Rai, travelling by motor along the main road for 29 kilometres. There the road for C'ieng Rai branches off. I had now to use ponies and carriers because the country was intersected by hills. I came to Amp'ho' Mê S(r)uei at a distance of 26km. from the main road, and continued my journey to Wieng Papão at a further distance of 31 kilometres. From the latter place 1 had to go south 15 kilometres, and then branching off to the left at a distance of a kilometre I arrived at the kilns. The general direct-

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tion was SSW. from C'ieng Rai. This place is about half way between C'ieng Măi and C'ieng Rai and if one travels with light loads the journey could be made in two days, or with heavy loads in four from either of these starting points. The site of the kilns had now been occupied by settlers from Tung Man in the province of Lampang and they adopted the name of their old village for this settlement. The original name of this place was Khŭa Wai, meaning the "Rattan Bridge", but I could not ascertain how far back the use of this name This village is in the commune of Hua Fai which bounds went. with Amp'ho' Čê Hom in the province pf Lampang. At no great distance from Hua Fai I found the site of an old town or an ancient fortified place on a hillock called Wieng Kalong. This town has a width of about 400 metres but a length of 1.5 kilometres. A moat surrounds the town. The earth from this moat, which is about 6 metres deep and 5 metres wide was used for making the rampart which is high and broad. At the centre of its length, the town is bisected by two walls running parallel one to the other. Near this old town are found the remains of kilns at three places : first, on the banks of the Mênăm Lao (a tributary of the Mêkhong), scattered haphazard, are no less than 100 kilns within an area of a square kilometre; secondly, on the banks of the Huei Sat (a local stream), in Amp'ho' Cê Hom, at a distance of over one kilometre from the above place there are found the remains of several kilns; and thirdly, at the foot of the hillock of Kalong at a distance of about 2 kilometres from the first mentioned-place more kilns are found built in line. In all these three sites, the shape of the kilns, the clay employed, the enamel and the decoration are in all respects similar. I was told that at a ruined town called Wieng Ho at a distance of about 8 kilometres from there, as well as in Amp'ho' Čê Hŏm remains of kilns also exist. The examples of pottery given to me from these two places are the same as those from the Kalong kilns. The kilns which I carefully examined are constructed in the following manner: the base or foundation is built with brick on level ground; the domes are somewhat in the shape of a turtle's back; the smaller ones are 2 by 3m., and the larger ones 4-5m. by 6-7m. The furnace which has its aperture in the front of the kiln occupies about one quarter of the depth of the kiln and is screened off by the erection of a low wall. Each kiln has several chimneys or passages in order to allow the smoke to escape. These passages are also used for looking into the

kilns to watch the progress of the baking and are similar in construction to those of Sukhot'ai (Plates xv and xvi). I am led to believe that the heat was never used at its full strength, such being regulated for half or less. At Săwănk'ălok however although the kilns are of the same dome shape the chinney or smoke passage was placed at the bottom of the kiln. By this means the full heat of the furnace was retained (Plate XVII). There were no peeping holes or passages. Now with Chinese kilns the bottom is not level. It slopes. Its length is generally ten times greater than its width. The furnace is situated on the base of the kiln, the chimneys being on the top. All articles to be baked are placed in a clay box or receptacle, and I wish to emphasize that I have never seen Tai kilns constructed on this plan or Siamese pottery baked in this manner. None of the kilns I examined at Kalong were intact, the domes having disappeared. These kilns were buried under an earth deposit of about one metre in depth, and big trees had struck their roots in the foundation. T had to excavate to uncover the kilns.

4.—Kalöng older than C'ieng Sên.

Collectors and investigators should endeavour to ascertain the age of the different specimens which come into their possession, otherwise they cannot know their value. It is generally accepted that Tai ware of Săwănk'ălok is not older than 640 years, which synchronises with the alleged visit of Rama K'amhêng to China. This theory gained credence because people have been in the habit of using pottery of Chinese manufacture and because the remains of ancient kilns have been discovered only in Sŭkhot'ai and Sawank'alok. I have now found the remains of kilns of great age situated in the north. On what authority then can it be said that some one brought potters from China and established them at Kalong and its neighbourhood, or that Chinese potters fleeing from disturbances in China settled in this area? It is necessary to depend on the evidence of historical chronicles and memoirs in order to gauge the period. Even then it is difficult to find reliable data prior to the dynasty of Khun Cri Indrāditya, the liberator of Sukhot'ai, because stone inscriptions prior to that date have not been found. All one can fall back on is a few chronicles and stories which have been handed down from ancient times. This necessitates the selection of those portions which are in agreement with the main features of the histories of

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neighbouring countries. What I am about to say therefore may not agree entirely with the statements recorded in certain histories and articles and I leave it to you to exercise your judgment to arrive at the truth.

5.—THE AGE OF C'IENG SÊN (about 7th century A. D.).

It is stated in the Läk T'ăi, (by Nai Să-nga Kanchanak-Phan B. E. 2472), that the Tai people originally had their habitat in the valley of the Yang Tse and the Hoang Ho which are now under the Năk'ôn Pa and Năk'ôn Lũng would seem to Chinese dominion. have been two independant Tai states in this territory. As time passed the Chinese pressed on them and the inhabitants migrated gradually south, coming eventually to a halt in what is now known The important point is to ascertain when the Tai people as Siam. came into this territory. An examination of a map will show that the city of C'ieng Sên is situated at the most northerly point. It is a question of when that city was built. Little reliance can be placed on the accuracy of the dates given in chronicles referring to For example in the school History (ประวัติศาสตร ภาคสุโขทัย this place. แลอยู่เขา ฉบับโมเรียน สวนกุหลาบ พ.ศ. ๒๔๙๕, p. 68), it is stated that in B. E. 1111 (568 A. D.) King Sinhanavati built the city of Yonok Nak'anăk'ôn. Three years later he waged war against the Khmers, drove them out of the city of Umongk'asela Nak'on and from other Khmer cities in the north, and established his authority in their place. In the Läk T'ăi, p. 75, it is stated that a son of Khun Bôrom built Năk'ôn Youŏk C'ieng Sên as his capital about B. E. 1299 (756 A. D.). I have made calculations based on the number of years which it is alleged that each sovereign reigned and taking into account the discrepancies in the dates as mentioned above, I have come to the conclusion that this city was built not earlier than the 7th Century of the Christian era. The reason of fixing with some accuracy this date is because it is connected with the use of pottery manufactured in the kilns of Kalong near the Mênăm Lao. In old C'ieng Sên, as well as at the site of a later C'ieng Sên situated at the present-day headquarters of Amp'ho' C'ieng Sên, and at C'ieng Khong, pottery from the Kalong factory was used almost exclusively (Plate XVIII-XIX). I have not come across specimens of Chinese pottery prior to the Ming dynasty (1368 A.D.) there at all. I have moreover examined the banks of the Mêkhong at old C'ieng Sên and noticed broken

pieces of pottery at a depth of more than 2 metres. Which then is the older, C'ieng Sên or that walled place called Kalong to the south, in the vicinity of which I collected many specimens of pottery? I assume that the latter was of an older origin, because its ramparts are of earth work, and also because of its vicinity to other old places, such as Wieng Ho, Dong Wieng, Muang Wang, and Cê Hom, to which no date has been assigned in History. References are found in the P'ongsawadan Yonok, pp. 124 and 435, which name the territories comprised within the old Kingdom of P'ayao. It is stated there that, in the first year of the Little Era which synchronises with 638 A.D., these four places were merely $p'ann\bar{a}$, a term of territorial division which may be compared in modern parlance to a tämbon. My theory about the age of Kalong and other old walled places in this vicinity would seem to find some support in the fact that specimens of pottery from these places have been found in the stupa of Nak'on Pathom, in the stūpa of the Great Relic in Lopburi, and at P'ong Tu'k, which places no one will deny are older than C'ieng Sên. Many Shans (related to the Tai stock) of an older generation whom I have met and discussed the problem with gave an unanimous opinion that the design and writing on this pottery were Tai Lu' which they could read although it was different to their own writing (Plate xx). The home of these Lu' is north of C'ieng Sên centred around C'ieng Rüng.

6.—SITE OF C'ALIENG.

As to where the site of the ancient city of C'alieng really is, Prince Damrong in his commentary on the "Travels in the P'rah Ruang country," written by His late Majesty King Rama VI., came to the conclusion that C'alieng was situated in the neighbourhood of the monastery of the Great Relic in old Săwănk'ălok. I do not think any one would care to argue against this, for Prince Damrong's statement is supported by the evidence of stone inscriptions. On the Rama K'amhêng inscription (No. I in Cœdès' Recueil des inscriptions du Siam, Première partie) it is declared that "a stone inscription has been erected with the stūpa of the Great Relic at C'alieng". This causes me to believe that although the two names of C'alieng and Q(r) Sătc'analăi are distinct one from the other, the latter being situated a little further north near the Great Rapids (Kêng Luang), still the two names have been applied indiscriminately to the same place in later days. Unless, therefore, these two cities were close

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together, how could the two names have been mixed up? Furthermore another inscription (No. 10 in the Recueil) relates that Prince Phan, acting for the king, erected a Vihāra, with a frontage of nine pillars and other things in C'alieng, which by the way are still in existence. The Vihāra of "Prince Phan" is probably that Buddhist bot converted from a Hindu temple standing at a distance of about 400 metres from the stupa of the Great Relic above-mentioned. This Vihāra is now known as "the wät of Prince Chan", which I believe is a corruption from "Phan". I am also inclined to think, by way of a parallel, that the word ทูเลี้ยง (t'ulieng) or ทุเรียน (t'urien), applied to certain of the kilns, probably had its origin in the word ซแล๊ยง (C'alieng). The building of the new city (Sătc'ănalăi) two kilometres to the north was probably rendered necessary by the falling in of the banks of the river and with them of certain portions of the old city, as is evidenced by the state of the stūpa of the Great Relic which has only been saved from falling into the river If one compares the archæological remains by artificial means. of the two cities, such as Wat C'ang Lôm and others within the city walls, erected in the time of Rama K'amhêng, with such wats as Wat Palan situated outside the walls near the kilns, great differences in their state of preservation are discernible. Those buildings on the presumed site of C'alieng have crumbled away, a wall being left here or there or even only the foundations which in some cases have become mounds of earth; whereas the later buildings in the city of Sătc'ănalăi are in a comparatively well preserved state. An exception should be made of the stupa of the Great Relic which has been so frequently repaired and built over that it is difficult to ascertain its original form. Moreover broken pieces of pottery and images of the Buddha found in these two places show strongly marked differences, in fact so strong as to prove all the more that the two cities are of a different age. The pottery produced at the C'alieng kilns improved in quality as time passed, because the potters who originally used ordinary clay developed in time a clay mixture and finally used a fine pure white clay making pottery of some opacity closely akin to porcelainous stoneware (Pl. XXI-XXV). To sum up then, a city was built on a new site and was known as C(r)i Sătc'ănalăi. Having located the site of C'ălieng let us now ascertain the date of its construction,

7.-DATE OF C'ALIENG.

In the absence of reliable data as to the age of the Kingdom of C(r)i Sătc'ănalăi, I shall, until conclusive proofs to the contrary be forthcoming, base my calculations upon the data given by the Pongsawadan Yonok in conjunction with the evidence of ceramics. This authority states (pp. 62, 65-66) that after this kingdom had been founded and ruled over by three generations of sovereigns, King Abhayagāminī had a son called P'răh Ruang, who while on the throne disappeared in the rapids of Kêng Luang just outside the town in B. E. 1200. The Kingdom had at this time been in existence for By a simple means of calculation it would seem that the 157 years. city was founded in the year 1043. This date is further supported by a fact in the Pongsawadan Yonok towards the end of the book that in this year P'aya Kalavanădis, King of Lavo, sent P'raya P'alărat up to govern Sükhot'ai. This act on the part of the King of Lavo may have been one of policy in order to guard the outer marches of the Kingdom owing to the southward movement of the Tai people who were at this time close to the northern frontier of his state. The name P'răh Ruang was a panegyric, indicating the final character of his word of command. It was also dynastic, somewhat akin to the use of the name Rāma by some Kings of Ayudhya and of the present The date given for the foundation of the Kingdom (of dynasty. C'alieng) conforms to the findings of Sir George Grierson who says (Linguistic Survey of India, part II, p. 59) that the Tai migrated south in the 6th. century A. D. This is identical with the middle of the era of Nam Pak, when, according to Chinese historians, the Tai realm or confederacy of Ai Lao comprised six independent states, called by the Chinese, Mongsui, Iase, Langkong, Tengsiang, Silang and Mongse. Mongse was the leading capital (Läk Täi, p. 60); and was undoubtedly the city known as Nong Sê or Talifu. This agrees with the Tai chronicles of Mu'ang Mo (Pongs. Yonok, p. 35) which says that in B. E. 1111, Khun Lu reigned in Mu'ang Sê Luang and sent his sons out to found states, and it was during this time that Tagaung (in northern Burma on the Shweli river) was conquered by the Tai. The Hsenwi chronicle places on record that in B. E. 1274 Khun Tungkham had two sons, Khun Lu and Khun Lai. Khun Lu succeeded his father and sent his sons to rule over six states. In the Lan C'ang chronicle we find that the son of Khun Borom, the King of Thêng, named C'ăiyăp'ong or Săip'ong, sent a son to found the city

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of Nong Sê but no date is given. The History of Burma (P'ongs. Yonök, p. 38) mentions that the Kingdom of Tagaung was conquered by Khun Lu in B. E. 1111, during the reign of Thado Thammaraja, a Meng (i. e. Mon) king of the Tasaraj dynasty. As the year B. E. 1111 synchronises with the dates given in the Mo and C'ieng Sên chronicles as to the date of the foundation of Yonok Nak'anak'ôn or C'ieng Sên, so it is probably more accurate than the date given in During this period, commencing about the the Hsenwi chronicle. 8th. century, the Khmers were beginning to become a power and were extending the frontiers of their state, and had already brought under their subjection the kingdom of K'otrăbun or Năk'ôn P'ănŏm. The political condition of the time would seem to render it impossible for the Tai settlers to establish themselves and found cities, and therefore it may be assumed that the Tai had established themselves prior to the ascendancy of the Khmers. Thus, to sum up, the date of the foundation of C'alieng agrees with the Chinese records and was certainly before the Khmers becoming a power. Further support for this view lies in this fact that Haripuñjaya (Lämp'un), which was founded in B. E. 1200, had walls constructed on a plan similar to that used by the architects of C'alieng (P'ongs. Yonok, p. Fournereau, in Le Siam Ancien (p. 52, on map XX), marks the 57). frontiers of the Tai state as contiguous to Sŭkhot'ăi then under Khmer authority. The people of the country were early Tai settlers. The title of Khun Bôrðin might have been given to Khun Lu in an honorific sense owing to his having extended Tai power throughout a great region and was probably given for the same reason as His late Majesty King Chulalongkorn who is known among us Siamese as P'rah P'utt'ac'ao Luang.

8.—Development of TAI CERAMICS.

Having established the date of the foundation of C'alieng we shall now try to trace the changes which took place in the method of the production of its pottery up to the time when it finally ceased. There is ample evidence to prove that there was much movement taking place among the Tai people caused by war and other reasons. An episode in the history of C'ieng Măi (*P'ŏngs. Yonŏk*, p. 212) would seem to give the clue as to how Tai potters came to be established in Sŭkhot'ăi. King Sên Muang Ma of C'ieng Măi having died, a younger son named Sam Făng Kên succeeded him.

The latter's elder brother named Yi Kum Kam who governed C'ieng Rai attempted to overthrow him by force of arms. He was defeated, and sought the help of the king of Sŭkhot'ăi. This monarch gathered together an army and marched on C'ieng Măi. The fortune of the day was decided by a single combat between two champions appointed by the rival armies. Yi Kum Kam, the ally of Sukhot'ai, lost the fight. The King of Sŭkhot'ăi then marched to C'ieng Rai, the capital of his ally, and finding that the latter would be unable to live in peace with his neighbours, collected together the inhabitants and brought them down with their king to Sŭkhot'ăi. This happened in the year A. D. 1359. Inscription No. 8 (Recueil des inscriptions du Siam, Première partie), 3rd face, lines 9-23, records that the king conquered territories up to the Nam-buri, obtained much plunder and brought under his sway the country to the east up to the Pasak river, his frontiers touching those of P'raya Phakông (Unos) of Nan and Phlua in the north and of P'răya Fa Ngum (ฟี่งุ้ม) of Luang P'răh-bang in the east. This king of Sǔkhot'ǎi eventually came to Song K'wê, the modern P'itsănŭlok, and while here renovated the "Venerable Shrine of the Great Relic," planted a sacred Bô tree, stayed at this place seven years and then returned to Sŭkhot'ăi. This leads me to conclude that the potters of Kalong and other places in the vicinity were brought down to Sŭkhot'ăi at this time by the king of Sŭkhot'ăi, who, according to the inscription, was C(r)i Sŭrĭyap'ŏngs Măha Th'ămmărac'a or Lit'ăi. Further more, the kilns, the design, the enamel, and the shape of Sukhot'ai pottery have some resemblance to those of Kalong. From the researches of Professor Beyer in Luzon and the Visayas, in the Philippines, and from the writings of Walter Robb, it is clear that undecorated monochrome pottery (from C'alieng), have been found dating from the 13th. century of the Christian era; whereas decorated polychromes date from the 14th. and 15th. to the 16th. centuries.

I would crave indulgence from my readers for digressing from the subject of this paper in order to elucidate a point in history which I feel bound to raise an objection to an established fact. The point I am about to speak of has a bearing on this paper in so far as it is connected with a date. Authorities on the subject of Siamese History have hitherto reckoned King Lit'ăi, the fifth of the P'răh Ruang dynasty as Th'ămmărac'a I.; but I have numbered him second in this

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paper for reasons which have been set forth in another note which I have submitted to the Society. I would therefore ask my readers to envisage the fifth king as Th'ămmărac'a II.

Dating from A. D. 1359, pottery from Sükhot'ai began to compete in foreign markets with those from C'alieng, notably in the Philippines. A comparison of the pottery from these two factories shows that the products of Sŭkhot'ăi were more easily manufactured than those of C'alieng because ordinary clay was dug up in the vicinity of the kilns. This clay was only mixed with crushed stones of just sufficient quantity to enable it to bear the heat of baking. The potters of C'alieng on the other hand used a fine white chalky clay or decomposed rocks which had to be brought from a considerable distance and even now can hardly be found. The design on Sukhot'ai pottery was painted on by applying paint to the surface; whereas in the case of C'alieng it was incised, and if several colours were required each one had to be applied singly in much the same manner as one applies paint to an oil painting. In Sŭkhot'ăi kilns heat of only half strength was used, whereas in C'alieng the heat was fierce. By examining broken fragments lying about in the precincts of the respective kilns, we would find that such fragments are more numerous at C'alieng and that the process of baking there must have been more troublesome. For these reasons Sukhot'ai pottery, sold at a lower price than that of its competitor, naturally found a ready market, which eventually led to the kilns of C'alieng being closed down. At about this time too the capital was removed to P'Itsănŭlok, which fact may also have contributed to the decadence of C'alieng pottery.

The age ascribed by me to the Sŭkhot'åi kilns is supported by historical evidence. Counting from A. D. 1359 to the conquest of Sŭkhot'åi by the newly established Kingdom of Ayŭtth'åya in 1378, a period of 19 years had elapsed. It is a significant fact that there are no good pieces of pottery from Sŭkhot'åi in the Ayŭtth'åya Museum, Sŭkhot'åi pottery being only represented by a few broken specimens brought from that place within recent times; whereas specimens of the C'ălieng or Sătc'ănalăi period abound. This might have been due to the cessation of commercial relations between Ayŭtth'åya and Sŭkhot'ãi owing to political conditions. In places so far apart, however, as the Philippines, Java, K'orat, and P'änatṣānīk'ôm (in the province of C'ŏnbŭri) good and broken specimens of Sŭkhot'ãi

ware are found; while in Pitsănŭlok those of Sătc'ănalăi predominate especially in monasteries which were erected after the transference of the capital to that town. I am therefore led to believe that there is no great error in the dates I have adopted.

Supposing that the pottery was manufactured from the time of the foundation of C'alieng in A. D. 500 and continued up to A. D. 1374 when the place was deserted, the duration of its manufacture would cover a period of 874 years; and, if we wished to ascertain the age of this pottery up to the present day, then a period of 560 years must be added on, giving a total period of 1434 years since its first production. As regards the Sŭkhot'ăi kilns, if we accept as a fact that they were constructed by the potters brought down by King Th'ammarac'a II., in A. D. 1359 then these kilns were only producing for about 15 years, because it would seem that Sŭkhot'ăi was conquered by Ayutth'aya about that time. The age of Sukhot'ai pottery up to the present day therefore would be between 575 to 560 years. As I have already stated, Sătc'ănalăi took the place of C'ălieng, and, for the purpose of this paper, Sătc'ănalăi ware was first produced in A. D. 1374 after the C'alieng kilns had ceased to work. These kilns continued to put out pottery up till A. D. 1446 when P'aya Yŭt'itsačieng (i. e. Yuddhisthira, the title of the vassal chief of C'alieng under Ayutth'aya) took all the population to C'ieng Mai. Although it is not stated that the potters were included, it is probable that they went with him. This gives a period of 72 years, during which this particular ware was produced. The age of this ware up to the present time would therefore be between 560 and 488 years. Turning again to the Kalong kilns, and supposing that they had been producing at the time of the foundation of C'ieng Sên in A. D. 568 or A. D. 756 and continued working up to A. D. 1359 when they were presumably brought down to Sŭkhot'ăi, they would have been producing for 791 or 603 years, their ages up to today being reckoned at 1366 or 1178 vears.

The reason for my assuming that C'alieng pottery was first manufactured about the time of the foundation of that city is because I have not come across any specimen of utensils such as jars, bottles, cups, dishes etc., made of pure clay in the precincts of Săwank'alok[.] Specimens however of this type of pottery have been found in localities believed to have been in existence before C'alieng such as T'ung Yang in Uttaradit, Sukhot'ai, Nak'ôn P'athôm, or Löpburi.

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The utensils I refer to are of ordinary baked clay and not glazed. Lying above this kind of earthenware, pottery of a crude and rough type made in C'alieng have been found. There is another point which has brought me to conclude that C'alieng was in existence from ancient times (approximately B. E. 1043 or A. D. 500) and that is that I have found votary tablets with the representation of a stūpa impressed on them instead of the usual image of the Buddha (Pl. XXVI), and also because the pottery deposits lay at a great depth (Pl. XXVI).

'As to my reason for assuming that the Sătc'ănalăi kilns ceased when the inhabitants were led away to C'ieng Măi by P'răya Yuddhisthira, that was based on the evidence of Dr. Beyer's researches in the Philippines which showed that no pottery of that type was ever imported into those islands in the 16th. century of the Christian Besides, two kilns have been discovered in Sătc'ănalăi some 15 era. years ago which were full of pottery. One of them contained many perfect specimens; whilst in the other every article was broken to pieces. It is evident in this case that when baking was completed the kiln was closed up to cool in the customary way and was never re-opened, perhaps on account of the sudden removal of the inhabitants to C'ieng Mai mentioned above. Upon being re-opened, therefore some centuries afterwards the sudden impact of air might have caused the wholesale breakage. The first kiln probably had some leakage through which it was always kept in communication with the outside air.

I have also tried to find out whether these people took up again manufacture when settled in C'ieng Măi, but I have not been successful in locating any kiln in that neighbourhood which yielded debris of either Kalŏng or Chinese origin. The kilns of Kalŏng, again, could not have been attributed to settlers from the south, for the manner in which designs of southern manufacture developed seems to point to a northern origin, and not the other way round (Pls. XXVIII-XXXIII).

9.---TECHNIQUE OF EACH TYPE.

Tai pottery embraces every field of utility, in which such a material could be used. They include utensils, cups, dishes, large and small jars, lamps, bottles, powder and wax pots, toys, dolls, animals, ornaments, Nāga heads, balusters, canopies, elephants, lions,

ogres, as well as roofing and paving tiles, pulleys and images of the Buddha (Pls. XXXIV-XXXVII). These articles vary in size from the smallest about the size of the thumb to the largest which a man may encircle with his arms.

For the purpose of a general survey the following characteristics of the respective kilns should be noted :---

The kilns of C'alieng use grand feu, thick enamel of any kind and colour; without glaze or slip, whatever shine noticeable as resembling celadon being due to moisture resulting from the great heat in the process of baking. In the case of polychromes each colour would be applied separately or else painted on to the paste. This kiln has consequently produced only the following varieties of pottery: (a) plain glaze, (b) those with designs incised, (c) those with designs painted direct on to the paste, (d) those with designs separately painted on in different colours, (e) polychromes or glazed monochromes with designs incised or moulded on to the paste (Pl. XXXVIII a,b,c,d,e).

The kilns of Kalong employ either demi grand feu or petit feu, with slip and glaze, thick enamel, painted on to a previously incised surface. No carving or moulding as in the case of C'alieng has been noticed. Their products fall therefore into either of the following categories: (a) plain glaze applied direct to the paste, (b) plain glaze on a slipped surface, (c) glaze on an incised surface, (d) glaze on a surface which had been already treated with slip and then painted with designs, (e) thick glaze on a polychrome surface on which each colour had been separately applied (Pl. XXXIX a.b.c.d.e.).

The kilns of Sŭkhot'ăi employ demi grand feu similarly with those of Kalŏng, but as the clay was inferior, slip had to be employed. The varieties found are: (a) glaze on a slipped surface (Pl. VIII), (b) designs painted on or stencilled on to the slipped surface and then glazed (Pl. XXIX), (c) designs painted on to the paste before the application of glaze (Pl. XL and XLI).

The kilns of $\mathbf{Q}(\mathbf{r})$ i Sătc'ănalăi employ grand feu as in C'ălieng. It would seem however that the heat could not have been equally great or else the duration of baking could not have been the same, for in this case we find specimens either excessively baked within a short duration so that the black enamel is blurred into a reddish colour, or insufficiently baked, so that it is not sonorous owing to the clay having insufficiently evaporated and tends to lose its glaze

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easily owing to internal moisture. The varieties are: (a) designs sketched out on a slipped surface and then treated with coloured glaze (Pl. XLII a), (b) designs on a slipped surface and then glazed all over (Pl. XLII b), (c) designs painted or stencilled on a slipped surface and then treated with coloured glaze (Pl. XLII c), (d) plain enamel and transparent glaze on an unslipped surface (Pl. x).

As to the colours employed in enamel they range from black to yellow, grey, greyish green, white and brown. The Kalŏng kilns have in addition an emerald green which have been baked in *petit feu*, whilst those of Sŭkhot'ǎi only use opaque white and light straw colours. It would seem from this enumeration that the range of colours was small but, as a matter of fact, it was by no means so, for each colour could be again divided into its degrees of shade What I have classified under yellow for instance would include a cream shade, a light yellow, an orange shade, a dark yellow and the various shades of brown. I have collected fragments and made comparisons of their colours and found that some 27 shades could be distinguished (Pl. XLIII).

The products of these kilns are what I call Tai Sănk'ălok ware. There are details which I do not think need to be gone into here such as the different kinds of earth used in the respective kilns, the methods of baking and the designs (Pls. XLIV-XLVI). Should any one care to go into details about this feature I shall only be too glad to try and discuss with him on another occasion for I do not wish to bore my general readers.

10.—COMPARISON WITH CHINESE CERAMICS.

There is one more point of importance which I believe may be of interest, that is the difference between Tai and Chinese ware. I propose to give you a brief comparison of the two based upon my own observation as follows:

1. In the manufacture of vessels with narrow necks, the Chinese article bears a ring of joint inside the body; while the Tai has none, however narrow the neck may be.

2. Chinese articles of the Tang and Sung dynasties were usually turned out in moulds, and not hand-made as is the case with Tai articles. I have never come across Tai ware made in pairs of identical size and shape at all—a practice so common with the Chinese.

3. In the incision of designs, it is almost always the case that the

Chinese artisan places his tool in a slant leaving a line which is deep on one side and shallow on the other, while Tai vessels bear marks of either a triangular or a rounded point of a chisel applied evenly to the surface.

4. The colouring known as Lung Chüan or Celadon as found on Chinese articles is hard and opaque, whilst that on Tai articles is softer but is very shiny and transparent. An exception should be made with regard to Chinese ware of the Ming dynasty which is shiny like those of the Tai. I shall state my view of the wherefore of this feature later on.

5. Crackles in the texture of some Chinese articles were purposely made, whereas with Tai wares they were results of wear and tear. Consequently Tai articles in constant use have more crackles in their texture.

6. With the exception of inferior products, the handle of a Chinese ware is formed in a circle; whilst in a Tai ware the circles is never completed. Exception to this rule may be found at Kalong where handles resembling those of Chinese ware are found attached on smaller articles. Bigger ones have handles in the form of a knob.

7. The Chinese method of drawing patterns, even in the beginning of the Ming period, seems to have consisted of a preliminary linear sketch followed by the application of paint. Thence the theory advanced by many authorities that they were copies of existing patterns. The Tai however drew their pattern in paint without any preliminary sketches, in the same way as the Chinese did in later periods.

8. The majority of Chinese ware bear factory marks and dates of manufacture, which are never found on Tai ware.

9. Chinese designs always include one or all of the emblems known as "the three felicities".

There are other points which may be gone into with no little interest, such as pin-holes, the colour of the biscuit or the paste, the overflow of enamel, the designs, the shape and so on, for pottery in China has a long history, better specimens being used as a source of inspiration and even copy. In Siam, on the other hand, no matter how old or comparatively well made an article may be, copying was never indulged in. The modern C'ieng Măi ware manufactured by Shans, though resembling somewhat that of C'ălieng in colour, is not

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intended to be a copy for neither the shape, design and material nor the method of baking are at all similar. It can never be mistaken for the old Tai ware except by the most inexperienced of collectors.

11.—Relations of Thai ceramics to those of China and Japan.

There is a matter connected with Tai pottery which I would like to mention. Mr. le May in an article published in the Burlington Magazine, Vol. LXIII, nos. CCCLXVII and CCCLXVIII, The Ceramic Wares of North-Central Siam, describes the results of Dr. Beyer's researches. Dr. Beyer is of opinion that the Japanese having realised the value of Sank'alok ware sent ships to Luzon in the Philippines prior the xvth. century of the Christian era to take this ware to Then they copied the best types of it, producing pottery Japan. known as Shino, Karatsu, Sunkoroku, and Mishima. In another part of that article it is stated that some specimens, beautiful in design, have been dug up in the Philippines, which is an evidence that early attempts to copy Sănk'ălok ware on the part of the Chinese eventually led to the production of the pottery known as Celadon. From the Sung period to that of the Yuan there only existed articles with an opaque glaze, for it was only during the Ming dynasty that pottery with a transparent glaze similar to that of Săwănk'ălok was produced in order to compete with Sănk'ălok ware and seize the markets of India as well as those of eastern and southern Asia. This theory of the development of Chinese Celadon from Sănk'ălok ware was formerly advanced by me among friends and fellow collectors but never found acceptance. After my visit to the Kalong kilns and a further discussion of the subject with Mr. le May, the latter became prepared to admit that perhaps pottery made of rough clay without design might have been the handiwork of Tai craftsmen independent of Chinese influence. Then came this pronouncement of Dr. Beyer which made me realise that although the learned Doctor and I have never met, our respective observations lead after all, quite independently of one another, to the same conclusion, namely that the Chinese developed Celadon out of that Tai pottery which is now known as Sănk'ălok ware. Some time later I sent to Mr. le May a few specimens of what I found at Kalong. I received a reply that they had aroused the interest of Mr. Hobson and that I should send him a more complete series

of that pottery for further examination. I would have gladly acted upon this suggestion had it not been for the fact that I still have need of them for my own investigations and his researches could hardly be complete unless the whole collection could be before him. I would suggest, therefore, that any of you who take an interest in the matter be good enough to lend a helping hand in taking note of these finds in order that they may be available to that savant. What he thinks of them would surely be interesting.

12.—TRADE IN TAI CERAMICS.

The trade in Sŭkhot'ăi ware has been proved to have been extensive. Dr. S. W. Bushel, whose authority and pronouncements upon Chinese ceramics are accepted by all including the Chinese themselves, states that some thirtcen generations ago the Chinese of the Sung dynasty produced only monochromes. Later, when the Arabs produced pottery with desgins, such pottery came into favour, and the Chinese copied it. In another portion of the book, the Doctor says that this pottery was manufactured by the Arabs and exported from Martaban.

Now, in these early days of Sükhot'ăi power, Martaban was the seaport of that Tai Kingdom. It seems but natural that the produce of the kilns of C'ălieng and Sükhot'ăi must have been exported from this town, and perhaps also that of Kalŏng. Besides, one of the names, current in the Near East, for Chinese celadons was *Martabani*. "The name", says Hobson, the Keeper of Ceramics in the British Museum, "is doubtless derived from the name of this port and applied to the Siamese as well as Chinese ware". As a proof of the prevalence of the use of a land-route, may be cited a common design found on this pottery of pack elephants. No connection with the gulf of Siam has been so far traced, for that part formed a different state, which was not altogether in harmony with Sükhot'ăi.

Having established the identification of the so-called "Arab" wares of Martaban with those of the Tai kilns, I want now to indicate the extent of its trade. According to the British Museum guide to the Pottery and Porcelain of the Far East "Săwank'ălok wares, especially the celadons, are found in Borneo and other islands of the East Indian Archipelago, in India, Persia, and Egypt. They were probably shipped at Martaban..... an entrepôt of mediaeval trade." Arab, Persian and generally Islamic designs have been recognised

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among Sănk'ălok wares, tending to show that the demand must have been sufficient to warrant the execution of foreign designs. Bushel, too, mentions that pottery dug up in Sumatra and the Philippines came from Martaban—a statement which has since found strong confirmation from the eminent American expert, Dr. Beyer, who has besides his scholastic qualifications the authority of being on the spot.

In connection with this method of deducing the age of pottery by comparing their texture and glaze, I would like to place on record a few facts which have come to my notice and may be used as a basis for this purpose. I have in my possession pieces of pottery, the age of which may be arrived at by comparing the clay and the glaze. I have for instance found in the great stupa of Wat Cang Lôm in C(r)i Sätc'ănalăi a broken cover of a vase with a thick white glaze and another also of white glaze decorated with yellow flowers both being of the same type as C'alieng pottery (Pl. XLVII). Now Inscription I. tells us that the erection of this stupa was commenced in 1285 and completed in 1291, the encircling walls occupying another period of three years. It is probable that these vases were placed in the stupa between 1285 and 1291, which date is anterior to the visit to China of Ramă K'ămhêng (circà 1294). I have also found a large water jar glazed on its upper portion and a covered stoneware dish of black colour made of a mixture of clay and stone-composition of the kilns of C'alieng (Pls. XLVIII and XLIX). They were in a place in P'itsănŭlok which is supposed to have been the site of a chapel erected in the time of Prince Prom's rout of the Khmers and his subsequent foundation of this town in 1108 (A. D.). Examples of decorated ware from C(r)i Sătc'ănalăi have been found in P'itsănŭlok by other people in places which date after the transference of the capital to this latter town, owing to the state having come under the suzerainty of Ayūtth'iya. In Kalŏng there have been found two urns of considerable beauty, one of which had a silver plate with an inscription dated B. E. 1764 (A. D. 1221), testifying to the level of workmanship already attained at that date. Glazed pottery must have been produced also at Luang P'rah Bang in olden days as evidenced by the two jars in my possession (Pl. L). It is clear that they possess characteristics differing from those found in other places for the glaze was brushed on before decorating and the handles are in the shape of the letter Moreover it is possible that pottery was manufactured in the W.

ancient city of K'otrabun, now identified with Nak'ôn P'anom on the Mêkhong river. Spittoons, dishes and pots have been found in Săkon Năk'ôn and Năk'ôn P'ănom in considerable quantities. Ι have a water pot and a bottle, the shape of which and the method by which it was baked are peculiar, indicating nothing that suggests an origin in China or any other centre of manufacture so far known. They are distinct in themselves. This state of K'otrăbun came under the Khmers in the VIth. century. I have in my house more than twenty types of Khmer jars and many more are known to collectors. The only feature of it which lays any claims to beauty is the shape (Pls. LI-LV). The decoration is not good and the glaze very inferior, for it cracks and breaks very easily. Khmer culture had it origin in India, and, as the people of that country used metal for the making of their utensils from olden times, the Khmers showed great skill in metalwork and produced articles of great beauty. The question arises as to whether the Khmers received from the Indians the potter's art, or were already accomplished potters before Indian culture began to have influence upon them. Khmer pottery has been found in large quantities in the provinces of Khukhan, Suriu, Buriram, and K'orat. In Lavo (or Lopburi), however, only about three per cent. of the pottery found is of Khmer origin.

13.—Conclusion.

What I said may appear strange to those who have hitherto been interested in the subject, because I advance new theories, supported nevertheless by evidence. The theories are opposed in nearly all respects to beliefs formerly accepted as based on history. Although, on first examination, my views may seem somewhat revolutionary, still I put forward my opinion with the hope of arousing interest leading to further investigations the basis of which should be a meticulous comparison between Chinese and Tai pottery. I have in my possession examples of both, which are sufficient for the purpose of arriving at a correct understanding. If it is true, as is generally accepted, that Chinese potters were established in ancient days in the Tai country, then it is but reasonable to assume that they would have applied methods in the making of pottery with which they had been familiar in their own country. When the whole weight of evidence is opposed to the generally accepted belief in any matter it is but right that the investigator should state frankly what is

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in his mind in order that the question may be decided according to reason. Those who read this paper are at liberty to form their own conclusion. I presume however that they will not be too much influenced by the theories of savants, but rather decide for themselves by taking into account that evidence which I place before you in the form of actual pottery. There is a (Siamese) proverb which says that being told ten times is not equal to seeing, seeing ten times is not equal to touching, and touching ten times is not equal to experience.

It would have been a source of pleasure to me to have read this paper to members of the Siam Society at your 'home', and I regret that I have not been able to do so. The factor which prevents my appearing before you there is that, to have its full value and be really understood, the paper must be supported by evidence in the form of specimens of pottery of different types and periods. This would have necessitated my carrying to the Society's home a large I therefore decided that I would give the number of samples. Society the benefit of my investigation in this paper which I ask to be printed in the Journal, at the same time asking members to accept an invitation to my house for the purpose of looking at the examples in my possession. I may be permitted also, I hope, to record my thanks to the friends who have kindly translated it into the English language, also to the gentleman who has been kind enough to undertake to read that translation now to you.



Sketch map showing the position of Kalong.

E.E.E.



Translucent celadon glaze Cup $(2 \times 5 \text{ in.})$.



Translucent celadon glaze Covered jar $(13 \times 10 \text{ in.})$.



Spittoon $(5 \times 7 \text{ in.})$.



Bottle (6×5 in).



Translucent celadon glaze Covered jar $(11 \times 10 \text{ in.})$.



Specimen of C'ălieng Period A covered celadon jar $(6 \times 6 \text{ in.})$.



Specimen of C'ălieng Period Celadon jar (10 × 10 in.).



Specimen of Sŭkhot'ăi Period White glazed dish (4×8 in.).



Pl. IX.

Specimen of Sŭkhot'ăi Period White glazed dish with black designs under the glaze.



Specimen of Sătc'ănalăi Period Dark brown gourd-shaped bottle, translucent (4 $\times\,5\,$ in.).


Specimen of Sătc'ănalăi Period (Covered jar, white slip, black designs, then glazed (5 $\times 4$ in.).





Pl. XIII.

Bonbonière, vitreous grey glaze (3 $\times\,5$ in.), from Lŏpbŭri.



Pl. XIV.

Bottle, translucent glaze, buff colour (2 $\times 2$ in.) from Tůng Yáng.



Kalŏng kiln.

Pl. xv.

Sŭkhot'ăi kiln.

Pl. xvi.



C'ălieng and Sătcialăi kiln.

Pl. xv11.



Pl. xviii.

Bottle from Kalŏng (4×3 in.).





Statues of the Buddha (Kalŏng) a and c (6×4 in.) of celadon. b (8×4 in.) green glazed, inscription in T'ai Lu' characters reading "Sophito chao" *i.e.* the 8th of the former Buddhas.



 $\begin{array}{c}(2\times5) &(2\times4)\\ \mbox{Made of clay, glazed inside in white and sepia respectively, illustrating}\\ & \mbox{an early specimen of C'ǎlieng ware.} \end{array}$

Pl. XXI.



the next stage of development in C'alieng ware.

Pl. XXIII.





Stoneware, thick white enamel, black designs in relief, illustrating a third stage of development.



Pl. XXIV.



Stoneware stand, celadon, decorated inside as well as outside, third stage of development.



(3×6)

Translucent celadon stoneware, Illustrating the final stage of development, *i.e.* a fine pure white clay.

Pl. xxvi.



Baked votary tablets depicting stūpas.



Section of the river bank at the monastery of the great Relic, C'alieng. From b to a only monochromes have been found ; whilst above b polychromes (*i.e.* Sătc'ănalăi) have been met with.







A water jar of Sătc'ănalăi, with designs characteristic of Kalŏng (marked a) proving that Kalŏng still influenced the South.







Pl. xxxIII.

Dish of white glaze and black designs from among the debris of a Sătc'ănalăi kiln. Owing to its shape, design, and method of baking being those of Sükhot'ăi, while its material Sătc'ănalăi, it has been thought that it might have been an early product of the reestablishment of the kiln at Sătc'ănalăi after its transference from Sükhot'ăi.





Pl. xxxv.

(14×6) Decoration of gopura, white glaze, brown design, from C'ălieng.



A Yakṣa head (18×16) , probably a door-guard, white glaze, brown designs, from C'ălieng.

Pl. XXXVII.



A Nāga-head (18×6) for eaves, white glaze, brown design, from C'ălieng.

Pl. XXXVIII (a).



C'alieng ware A lamp (6×5) brown undecorated glaze.

Pl. xxxviii (b).



C'ălieng ware Water jar (14 \times 12) yellowish green glaze, incised designs. Shape different from Kalŏng ware.

Pl. XXXVIII (c).



C'ălieng ware Jar (3×5) , brown designs on paste.

Pl. xxxvIII (d).



C'ălieng ware Vase (6 \times 5), unglazed, white decorations on brown slip.



C'ălieng ware Covered jar (7×16) , stoneware, designs in white relief on a yellowish green surface, unglazed.



Kalŏng ware Covered cup (3 × 2), glazed.



Pl. XXXIX (e).



Kalŏng ware Water-jar (16 \times 12), body in black, whilst mouth is in white glaze.

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Sŭkhot'ăi ware Mortar (5 × 8), black designs printed on white slip and then glazed.

Pl. XL.


Sŭkhot'ăi ware

A Nāga head (21×13) black designs on white slip, then glazed.

Note the double head indicating the idea that one Nāga (i. e. the lower one) was so powerful that he emitted another. The motif is still to be found on stairs in temples in the North, but has never been detected in Chinese art.



Sătc'ănalăi ware Covered stoneware jar (4×5) ; black designs on a slipped surface then treated with light green glaze.

Pl. XLII (b).



Sătc'ănalăi ware Water jar (17 × 7), stoneware, black design on slip and then glazed.

Pl. XLII (c).



Sătc'ănalăi ware Water jar (6 × 5), stoneware, black design, glazed.



Fragments of different colours.

Pl. si.m.



Pl. XLV.



Method of baking, Kalong, a development of the pontils.





Pl. XLVIII.



Jar, glazed clay mixture (13×14), in sepia, from P'ĭtsănŭlok.

Pl. XLIX.



Covered dish (4×5) , C'ălieng period, found at P'itsănŭlok. The material is a peculiar mixture that is harder and heavier than stoneware.



Water jar (24 \times 18), thought to have been made at Luang P'răh Bang.



Pl. LI.



Water jar (19 × 10), brownish black glaze, found at KhonjKên.



Water vessel (9×5) brownish black glaze, found at Ç(r)i Tep.



Water pot (14×10) baked in grand feu till a dark brown colour was acquired and then glazed in brown, hardware. Thought to be a product of Ná'kôn P'ánŏm.



Bottle (6×3) , brown glaze, hardware. Thought to be a product of Năk'ôn P'ănŏm.