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MADELEINE COLANI'S

MEGALITHS
OF
UPPER LAOS

Co-Edited by

Louise Shewan and Dougald O'Reilly

PHOTO TOCOME

FOREWARD

by Than Thongsa Sayavongkhamdy,
Heritage and Cultural Adviser to H.E.
Minister of Information, Culture and Tourism,
Lao PDR Government.

From 1987 until 2012 I was Director of the Department of Heritage, Ministry of Information, Culture and Tourism, Lao PDR Government. In this role I was charged with managing the cultural assets of Laos which now proudly hosts two UNESCO World Heritage Sites, Luang Prabang and Wat Phu. Of equal importance to the heritage of our nation are the jar sites of Xieng Khouang Province. I am delighted to see that research continues and that Madeleine Colani's impressive corpus of work has been translated into English for future researchers, students and all visitors to Laos.

My own interest in the field of Southeast Asian Archaeology led me to France where I commenced my undergraduate and Masters studies under the tutelage of many luminaries including Professors Paul Lévy, Jean Boisselier and Paul Courbin.

Professor Lévy introduced me to some high profile researchers such as André Leroi-Gourhan (prehistorian), André-Georges Haudricourt (linguist of SEA), Bernard-Philippe Groslier (art historian of Cambodia), inviting me to visit many museums and took me to quite a few famous restaurants, spending his precious time with me because after his lectures and his work, he enjoyed telling countless stories about his research, his life in particular in Indochina, his vision and his thoughts

about other members of École française d'Extrême-Orient (EFEO) including Madeleine Colani. During my undergraduate study I remember that I spent hours and hours reading and trying to get the sense of Colani's Megaliths in Upper Laos, she was very far away to me. But as Professor Paul Lévy told me more and more about her, she seemed gradually familiar to me and from then on her text seemed to be easier to understand. At La Sorbonne University, I felt her presence since she used to walk in the same corridors and attend the same auditoriums and classrooms. Professor Lévy described her as a respectable woman, despite her diminutive stature, she was full of energy, determination and a talented researcher both at fieldwork and analysis.

It is a great pleasure to see Colani's work brought to a wider audience in this excellent translation true to the original French-language version published in 1935.

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PHOTO TO COME

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Volume I

INTRODUCTION

(Maps I and II)

Presumptuous though it be, I am pleased to insert here the statement given pride of place by Joachim Barrande in his celebrated master work:

'Here is what I saw.
The witness to the judge.'

It is a motto to which, as far as possible, I have tried to do justice. Which is why I include many images in these volumes, some graphical, some not: however precise, a mere sentence conveys a less clear notion than a dimensioned sketch or a photograph. Over three consecutive years, I spent several months in Upper Lao. The initial purpose of my re- search was to study the monolithic urns on the Plain of Jars (Province of Tran Ninh). But it soon became apparent that this project was too restricted to afford adequate results; and I requested further support from M. Cœdès, the Director of the École française d'Extrême-Orient (the French Far-Eastern School), to enable me to study other groups of monolithic urns, which was why I visited the standing stones of Hua Phan.[1]

1 Hua Phan (or Hua Pan) Province.

During May 1931, I worked[2] on the famous Plain (or Peneplain) of Jars, in the area which I call the Field of Jars of Ban Ang (map VII), after the name of the nearest village. These monoliths and the grotto which is almost surrounded by them are extremely well known, every author who has ever traversed the Tran Ninh having mentioned or described them. Every conceivable theory has been devised to divine the purpose of them, though no definitive explanation has ever been arrived at.

On first standing in front of these countless numbers of stone barrels, some broken, some intact, more or less overgrown by entangled grasses, I was greatly nonplussed. What was one to make of such monoliths, none of them very different from any others? The place to begin the research, I decided, was the grotto, the funerary function of which soon became apparent. This was the missing clue; it led me to have the base of the jars excavated. The grotto had also given rise to much speculation and little enlightenment. It was in fact a crematorium; and the jars were funerary urns.

In the autumn of 1931, I visited the jars of the Lat Sen airfield, about ten kilometres to the south-south-west of Ban Ang. Two very similar groupings stand on a pair of slight hills; the artefacts associated with the megaliths show little difference from those at Ban Ang. The same can be said of those at the nearby field of Ban Soua.

After my return to Hanoi in December, M. Cœdès provided me with a sketch-map of the Province of Tran Ninh showing the sites of the main fields of jars, which had been made in 1903 by a former Government Commissioner. The map enabled me to draw up a programme for the research.

2 All figures and dimensioned sketches were done by me, unaided by any native participant.

In February 1932, I made a start on the most easterly jars, which are close to Ban Ban, Ban Sieng Kieu and Ban Hin (map VII) and completely unknown to tourists. Hitherto, I had been working on groupings which were more or less familiar to tourists. There was insufficient time to work on a field of twenty to thirty jars at map elevation 1020, barely accessible, and standing on a plateau about 2.5 kilometres to the south of those at Ban Sieng Kieu. My sister, M[lle] E. Colani, who reconnoitred the area, reported that the monoliths were of interest.

Our timetable, which was tight, entailed studying areas to the north-west, west-north-west and west of Ban Ang. We set off via Muong Soui, which lies some thirty kilometres as the crow flies from the mid-point of the Plain of Jars, but more than sixty kilometres via the Colonial Road no. 7. This was a venture into a protohistoric area, unknown to most people and unfamiliar to all but a few Europeans. To the north and north-north-east of Muong Soui (at Ban Xot, Ban Si and Ban Na Séo, map VII), we encountered for the first time groups of jars in which some had been deliberately laid flat by the makers, and cemeteries con- sisting solely of blocks of stone, etc.

I was too busy to be able to go to the field at Pou Soung, rising to a maximum altitude of 1320 metres, lying some kilometres away to the east of Ban Na Séo. My sister, who went there, is of the view that the site is full of interest, with jars and worked stones.

According to a native canton official (*tasseing*), there was a field of monoliths containing more than 1000 jars at San Kama, more than twenty kilometres to the south of Thao Kham. Although this figure seemed preposterous, I was very keen to set eyes on such a vast gathering of megaliths. On my instructions, a native in government employ sent two

workers from Muong Soui[3] to reconnoitre the area and have a shelter of branches and foliage built in the forest so that I could have somewhere dry to sleep. These two men not having returned, I decided to set off, as my work in those parts was now finished. Amid final preparations for departure, I was told that one of the men had turned up, but very ill. I suggested going to see him: 'No, out of the question! His neck is enormous, all swollen up. We'll send you his companion to Thao Kham.' I was never to set eyes on either of them.

Setting off to the north-west, we stopped at the *sala* at Thao Kham, a pretty little wooden dwelling, standing high on piles, built by the Travaux Publics (Public Works). It is surrounded by thick forest, amid a sea of mountains (map elevation 1250 approximately). We moved in. There are no jars in the environs; at kilometres 469.200, 469.500 and beside the *sala*, there is nothing but ancient cemeteries consisting of small blocks of shaped stone, lying flat, and a very few standing stones. These afforded very interesting observations; but it was here, too, that our plans began to go awry: the workers, necessary for excavating, were gradually leaving and those supposed to replace them were nowhere to be seen.

As we especially wished to reach the Pass at Moc Drehun, the farthest point where work was under way on the building of the road,[4] we set off and got to our destination. There, however, despite the kind welcome we received from M. Ruffet, the roadworks contractor, severe problems awaited us. The few workers accompanying us absconded one after the other, without even asking to be paid. Dengue fever was endemic in the workplace; my sister, my Laotian interpreter and some of the faith- ful workers all caught it. I was repeatedly promised that forty workers

3 In parts of Indochina where wild animals are to be encountered, the natives will never travel except in pairs, at least.

4 The western extremity of Colonial Road no. 7.

would soon be sent up (many more than required); but they were torn between the work of the *ray* and working on the road, and never turned up. By now it was the month of May, the season of the first large storms, and it was urgent to get back to the Plain of Jars before the road was cut. With the help of M. Ruffet, we returned to the sala at Thao Kham. There we conducted our research for a few days, with far too few work- ers. Our supplies had run out, we had nothing left to eat and in the villages, which are few and far between, food was impossible to come by. Eventually numerous reinforcements arrived and we sent several men to fetch victuals from a great distance away. Rather than leaving for Ban Ang, we endeavoured to press on with our very productive digs. We were given an ultimatum: these natives had come with the task of carrying our baggage and the products of our research down to Muong Soui; if we did not depart on the following day, they would all leave us in the lurch and we would find no one to replace them. We had to give in and went back down to Hanoi without finding out about the wonder- ful San Kama and its 1000 jars.

In January 1933 we set off for Hua Phan (map II): the words 'worked stones' written on the sketch-map from 1903, plus the intelligent account given by a man of standing from Ban Ban, whom I had commissioned to do a reconnaissance up there back in March 1932, had kindled in me a great desire to study these menhirs. Having set out from Ban Ban, sometimes walking, sometimes being carried in a litter, after about ten days I reached Muong Soui, from where I pushed on to Ban Koute and eventually to San Kong Phan. My bearers did not overwork themselves. At the field of standing stones, I lived in a shelter built for me. I spent nearly two months in the area, and in the vicinities of Samneua and Muong Vène. Then I undertook the lengthy journey back to Ban Ban, and motored the long road to Xieng Khouang.

I conducted some research among mountains of granite formation, very wild country, sparsely inhabited by Meo, about twenty kilometres to the south of Xieng Khouang.[5]

I had not, however, abandoned the idea of San Kama. I just went about it differently. Starting from Muong Soui, I immediately struck out from the Colonial Road no. 7, taking with me two native canton officials (*tasseing*) who were to help me recruit workers without difficulty[6] and to propitiate the spirits. This was an appalling journey, along barely marked trails which often followed the summits; their cross-section follows the slope of the mountainside; many tree trunks block the path, their purpose being to prevent it from disintegrating, and to clamber over them one after the other is tiring. At other points along the way, the slope is so steep that one must run down at speed, etc. Violent storms are quite frequent. In the evenings, rarely is there a village to stay in; and one must sleep in shelters of banana leafery, hastily erected in a hollow, by the side of a stream. Not to worry, though! For we are on our way to a field of 1000 jars! At length we came to San Kama. The local authorities had just made a fine hut for us from leaves and branches. Then came the surprise: no monolithic jars! All that trouble for nothing! In such a circumstance, it never does to take things too seriously. After much palaver with the natives, asking questions, then asking them again, explaining and promising, I obtained some information: more than half a day's march away, hard by a Kha village, there were several jars. I went there: it was the very important field of San Hin Oume, from where I was directed to the eleven aligned jars, and then Keo Tane and its circuit. It was time well spent; on such outings, nothing happens as one might expect; there is always something untoward.

5 To carry down to Xieng Khouang the subspherical lid, solid granite, weighing about 200 kilos, decorated with a figure (see plate LVI), it required twenty Meo. Some of them carried the litter; others hacked a way through the branches. Any impeding rocks they tipped downhill. I believe it took them four days to accomplish this task.

6 I have found gentle persuasion works best.

Since leaving Muong Soui, we had been constantly among wild, inaccessible mountains, at an average altitude of 1000 metres. Villages, exclusively Kha or Meo, are few and far between. I was told of several groups of jars in the region, which I would have been greatly interested in studying; but there was simply not enough time.

This research, and research previously undertaken, makes one idea stand out, an idea I have stated elsewhere: the lithic determinism of different prehistoric periods (terminology which may not capture the notion very accurately). In the vicinity of Ban Ang and elsewhere, the ground is composed of molasse, a soft stone, easily workable.[7] But at times the grains of quartz are large, giving a coarse appearance, akin to that of pudding-stone, and ill suited to delicate sculpture. From this material, man has fashioned an enormous body of monolithic urns, often roughly done. At San Kong Phan, the ground is gneiss or mica-schist,[8] types of rock which split into sheets, from which man has made, solely, menhirs shaped like long blades or discs, a type of circular paver, and hollowed out burial vaults with very solid natural walls. In south Sumatra (*63*, van der Hoop, p. 169), in the Pasemah region, 'pyroxene andesites' are very common; these are softish rocks, good for sculpture, with a fine enough grain to allow very delicate working (*63*, p. 30 and fig. 72, 73). Artisans have made the numerous 'images', representations of people and animals. On the monolithic jars of North Cachar, Mills and Hutton (*89*, p. 298, pl. 17) have shown that where rock is hard to work, the forms of the megaliths are crude. They attribute the definitive adoption of cinerary vessels in terracotta to the difficulty of working granite. In the deltas of Indo-China, with their comparative lack of stone, we find hardly any ancient monuments.[9]

7 The Tran Ninh jars are for the most part in gritty terrain: sandstone with large quartz crystals, quartzite, polygenous sandstone, etc.

8 The menhir cemeteries of Hua Phan, the ones close to Ban Koute, are in shaly terrain, very metamorphic, mica-schist.

9 It may be objected that in Indo-China the deltas are not of ancient formation.

So the forms and dimensions of megaliths depend on human mentalities and especially on the physical properties of the surrounding rocks.

According to M. Heine-Geldern (*60*, p. 282), when primitive man had no stone at his disposal, he raised monuments of wood[10] with the same meaning as megaliths.

Finally, I wish to express my very sincere and profound gratitude to the late M. Louis Finot of the Institut, the former Director of the École française d'Extrême-Orient. He it was who first advised me to study the monolithic jars of the Tran Ninh. My thanks go also to M. Cœdès, a corresponding member of the Institut and the present Director of the École française d'Extrême-Orient, among other things for his ex- cellent and unstinting bibliographical advice. I am extremely grateful to the late M. Thiébaut, Inspector of Political and Administrative Af- fairs in Laos; to M. Emmanuelli, the Resident of France in Tran Ninh Province; and to M. Lagrèze, the former Resident of France in Hua Phan Province. M. Thiébaut's vast knowledge of Laos, its people and customs, and the interest he took in my research, were invaluable. M. Emmanuelli was good at smoothing out the material and psychological difficulties that go with field-work. M. Lagrèze's detailed descriptions and explanations were of great asssitance to me. My gratitude goes also to M. Claeys, a member of the École française d'Extrême-Orient, who was kind enough to give me judicious advice on matters of photogra- phy, and to M. Manikus, who made skilful enlargements of my prints and photographed objects I had gathered. My thanks, too, to M. Lade, the Head of the Laboratory at the Services des Mines d'Indochine, as well as to M. Hoffet, a geologist with the Service géologique. To M. Lade I am indebted for the analyses he carried out and his interpretations, both of which were very useful; and to M. Hoffet for the unfailing kindness and extreme conscientiousness with which he conducted examinations of rocks and glass pearls in polarised light. Last but far from least, M.Thao Phanh, Chau Muong of Ban Ban, should not be forgotten; his intelligent helpfulness was a constant gratification.

10 When two megalithic centres are very far apart, it is entirely possible that they belonged to one and the same culture and that, in the intervening country, wood was used in the absence of stone (*60*, Heine- Geldern, p.

282).

PHOTO TO COME?

GENERAL –

FOREST, SAVANNAH AND MEADOWS

(Map III)

One particular aspect of folios 76 and 77 of the 1/100,000 map (*114*, 'interim version: Muong Soui and the Plain of Jars') should be mentioned: they show a great complication of forested mountains as well as several plains, that of Ban Ban to the east, the great peneplain to the south where the jars of Ban Ang stand and the more southerly fields of Lat Sen and Ban Soua.[11] Colonial Road no. 7, running roughly east-west, bisects these two folios. This is a road of great importance, as yet unfinished, which will link Luang Prabang to Phu Dien and the Mekong to the Gulf of Tonkin. The route it follows is that of the trails trodden by man over the millennia.

A map of Indo-China (*113*) has just been published by the Service forestier. It shows tropical forests, along the fringes of which relentless battles have been fought for thousands of years between man and forest. The forest, even leaving aside its fauna, is a world unto itself, in which everyone and everything fights fiercely for existence. This world

11 I call each field of jars and stones by the name of the closest village on the 1/100,000 map, which should make for easy reference to these cemeteries. I add, where known, the names in Lao, though I do not guarantee the correctness of any which happen not to be transcribed in characters.

is made of the great trees, greedy for the light, which grow ever upwards towards the sky, powerful fighters sometimes overwhelming their competitors; of the underwood, made of smaller trees whose demands are less imperious; of lianas accustomed to living in the half-dark, plants pale and sickly from spending their life in the shade, which grow to immense lengths, lean on their neighbours or twine about them; and finally of the epiphytes and parasites, these 'daughters of the air', which live chiefly upon the giants of the forest. Man is in constant conflict with these denizens. On the map (*113*), green shows the domain of the vegetable world; white represents the definitive conquests of the native; and yellow-brown signifies borderlands still fought over by the two opponents. In Laos, the victories won by man are of little significance,[12] as can be seen from the folio (*113*, folio of Upper Laos) dedicated to this region, with its small white patches, one of which, a little larger than the others, represents the Plain of Jars (in the broad sense). That is where the large field of jars of Ban Ang is located, surrounding a crematory grotto, as well as those at Ban Soua and the airfield at Lat Sen. Man must have long ago settled this healthy region, pleasant and fertile, and presumably cleared it. Hereabouts, jars are numerous; and there is a wealth of associated artefacts. It can be shown that here, as legend also has it, there was once an affluent city. Ruins of pagodas and *thats* abound. Near Ban Ban is another white patch on the edge of which stand the groups at Ban Sieng Kieu, Ban Hin, etc. In fact they stand in the fringes of the forest, already being overtaken by it. Did the people who fashioned the urns live in open country? This area is not as pleas- ant, less hospitable, though still fertile. The fields containing both jars and stones, the groups at Ban Xot, Ban Na Séo, etc., lie in the brown patches, which represent the battle-ground where man and forest fight

it out. Here, local conditions did not favour the development of a huge

12 In Laos, the area of forest per head of population is 24 hectares, which compares with 0.2 hectares in

undertaking, on an almost industrial scale, such as one finds at Ban Ang, where an army of workers was maintained. There are few mono- lithic urns. Funerary stones have been placed beside them. To the west- ward, the map shows a huge green patch, the forest[13] stretching away to the Mekong on a broad front of more than 100 kilometres, growing on a complicated mountainous system, where some ridges point in one direction and others abut them obliquely or perpendicularly; streams flow through the valleys, though the countless torrents that pour into them are dry for part of the year. Thirst can only be quenched at those times from the muddy water of stagnant pools. Malaria is a constant threat. Nowadays, villages are widely separated from one another, inhabited only by a few Kha or Meo. To set up a large manufactory for making stone jars was impossible;[14] the one at San Hin Oume was an interesting site, albeit small, the nature of the ground being particularly favourable.

Along the paths which have, or will, become the Colonial Road, the living made for the dead rustic cemeteries composed of more or less unworked sepulchral stones. The artefacts that were buried underneath them and round about, terracotta pots, iron knives, etc., were easy to transport.

The mountainous province of Hua Phan is almost completely covered in medium-sized forest. In the area of the menhirs, only some small local *ray*[15] have made slight inroads.

13 Because of the altitude, more than 1000 metres, this forest, while not sharing all the features of true tropical forest, is none the less remarkably vigorous.
Cochinchina (*113*, Note accompanying the forest map).

14 To the south there are those at Na Nong and Song Meng.

15 *A ray is a swidden agriculture field.*

PART I –

The Province of Hua Phan

A note on geography and geology

This province, also known by the name of its principal town Samneua, occupies the north-east corner of Laos, bordering both Tonkin and Annam. It is covered in mountains. To the west, it is bounded by the Annamite Range. Three major rivers (map IV) flow through part of it, in the general directions west-north-west east-south-east and north-west south-east: from north to south, the Sông Mã, the Sông Chu (a powerful tributary of the Sông Mã)[16] and the Sông Ca. 'Standing at an elevation of 1200 or 1400 metres, and surveying the whole region, one sees nothing but a succession of ridges, completely covered in forest and all rising to about the same height as one's vantage point . . . One cannot see the bottom of any valley.' The aspect of the country appears as 'a succession or juxtaposition of ridges of similar altitude, dominated by several higher summits' (*33*, Dussault, p. 10), often rising to heights of more than 2000 metres.

More than two thirds of Hua Phan is covered in 'medium forest' (*113*); and about one sixth is 'rich savannah' (map III).

16 The Song Chu could almost be considered a river in its own right and not as a tributary.

Needless to say, centres of population are widely separated from one another. At higher altitudes, one finds Kha almost exclusively; and higher up, Meo (or Miao). With a certain regularity they change the location of their miserable hamlets.

My travels were limited to the south of the province. A well trodden path, reasonably well maintained, partly figures on the road map as *route coloniale* no. 6, leading from Samneua to the Tran Ninh. A journey along this way takes one up, then down, then up again, and so on for ever. One is constantly surrounded by forest, not very dense but always blocking one's sight. For hours on end, one sees no living creature. There are no villages, save here and there, at the end of the main stages, a tiny native administrative centre. The country is monotonous and queer, with few resources. One assumes that those who erected the menhirs were quite numerous and must have enjoyed social organisation of some solidity; but it is difficult to realise that this is where they lived.

Geological notes (map V): the terrain of the province is composed of irregular strips, some of eruptive rocks, some of crystal-phyllite rocks and some sedimentary; their general lie is north-west to south-east, which is roughly the direction of the three rivers; they are made either of granite, rhyolite, pyroxenes (green rocks), gneiss and mica-schist, shale or limestone, or even triassic sedimentary formations.

The mica-schist is of particular interest, being the stone used for nearly all of the menhirs.

A note on history and ethnography

'Over the centuries, antiquities and manuscripts were destroyed in sequential waves of devastation, so the ancient history of the country

is based on mere legend' (*75*, Madrolle, p. 333). The region acknowledged the protectorate of Cambodia during the great expansion of the Khmer kingdom (9th to 12th centuries), then paid tribute successively to Luang Prabang and Vientiane. The intermittent influence of the Annamites made itself felt. At such times the people of Hua Phan were obliged to live under several overlords and to pay dues to all of them (*75*, Madrolle, p. 333).

In 1875, gangs of Chinese pirates roamed the country. In 1900, the government of Hua Phan was reconstituted by France. In late 1914, the province was once again ravaged by a substantial Chinese gang who ransacked everything (*75*, Madrolle, p. 333).

Here, as in the Tran Ninh, the natives are a vanquished people. Here, as in the Tran Ninh, many races live side by side without mingling: 'In the north, there is a preponderance of Black Thai (in the valley of the Sông Mã), with some groups of Red Thai, while in the centre and the south the Thai Nu'a (or Lao Nu'a) are in the majority. In the higher country one finds Indonesian Kmu[17] (or Phu Theng) and Phong[18] (Pai or Ok). Among populations of foreign origin, Miao (Meo) White, Red and Fleuris; and small numbers of Yao (Man).'

The legend of the menhirs

Like nearly all legends, this one is a little confused. Versions vary; but the basic content remains the same.

The chief of the Kha Yeui, who went by the name of Ba Hat, lived at Phon San Ang. He possessed magical powers. He was tall in stature;

17 More generally known as Kha.

18 Otherwise Pong.

the breadth of his chest was 1 metre 80 cm, a fathom,[19] and the space between his eyebrows measured 20 centimetres.

He ascended to heaven (in those days the firmament was so low that humans could climb up there at will). As he was quite highly regarded, the *phi thèn* presented him with three gifts: a two-sided drum (one side for making enemies disappear, the other for summoning heavenly help); a huge spike (if it was stabbed into the ground, it brought forth water when there was a shortage);[20] and an axe for cutting stone.

Emboldened by these wonderful instruments, Ba Hat refused to recognise the overlordship of the king of Luang Prabang. This annoyed the monarch, who declared war on his recalcitrant vassal, which led to his own defeat.

A hawk having dived on a chicken, the fight of the two fowls made a din. Those who had just defeated the Luang Prabang people took this to mean the return of the enemy. The magic drum was vigorously beaten. The *phi thèn* came down from his clouds: seeing no sign of any aggressors, he became so furious that he took back the magical instrument.

With his servants, Ba Hat went off to cut blocks of stone along the Nam Peun. These blocks were to be hoisted to the ridge of San Ang, where the free city of Kong Phan was to be built.[21] When the city was completed, the chief would declare his independence from Vientiane and Luang Prabang.

This angered the king of Luang Prabang who, having been unable to win by force of arms, had recourse to a ruse. He sent one of his mandarins, who was as hypocritical as he was wily, to ask for the hand of the

19 The fathom is really 1 m. 62.

20 Water is often in short supply in the mountains.

21 One of the fields of menhirs is located at San Kong Phan.

rebel's daughter. Ba Hat, all unsuspecting, granted this; and the wedding took place. The son-in-law from Luang Prabang, who was very obliging and extremely artful, won the good graces and the total trust of his parents-in-law. He managed to persuade them to set the magical spike and axe upon a burning brasier. Instantly, the two instruments lost their marvellous qualities. Their unfortunate possessors had to abandon all thought of constructing the fortress. The stones remained at the mountain pass to which they had been hoisted and later served to make the fields of menhirs at San Kong Phan and in that neighbourhood.

The story is not finished. The crafty fellow now suggested to his victims that they should build a wooden structure, high enough to allow them to see from the top of it as far as Luang Prabang.[22] This was done. One day, many people climbed the tower. Those who were at the very top suddenly shouted that they could see the great city of the Mekong. So full of astonishment and joy were they that none suspected what was afoot: the worthy son-in-law had set fire to the bottom of the edifice, which collapsed, dragging down with it all those who were on it.

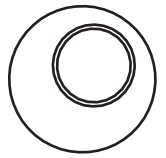
The scoundrel had a few more such tricks up his sleeve; and the wretched Montagnards died almost to a man. Their few descendants were the present-day Phong or Pong (pl. VII, 4).[23] These ancestors from heroic times, tall, strong, bearded, with tanned complexion and accentuated features, are held to be the original inhabitants of the country and the makers of the atrefacts found in the funerary pits, hard by the menhirs, and about the standing stones.

So legend has it. I have given here only one of the variants. One can find natives in the region who will recount some of the episodes; but few know the whole story. I owe the version I have told to the great kind-

22 As the crow flies, Luang Prabang is about 185 kilometres from San Kong Phan.

23 The Pong of Hua Phan (pl. VII, 4) are a dying race. They live high up in the mountains; they neither weave nor do they spin, and they practise little by way of industry.

ness of M. Thiébaut, Inspector of Political and Administrative Affairs in Laos. His perfect knowledge of the Lao language enabled him to provide me with this valuable information.



FIELDS OF MENHIRS

(Figs. 1 + 10)

As I have said, after a not very long season doing field work in Tran Ninh, I went back down to Hanoi in the summer of 1931. It was then that M. Cœdès, the Director of the École française d'Extrême-Ori- ent, showed me the sketch-map of the Province of Tran Ninh done in 1903 (see Introduction). It shows the main groupings of jars; and to the north-west one could read these words: 'Worked stones'. Intrigued by this, as soon as I returned to Tran Ninh, I sent a native of some standing off on a reconnaissance. He was back twenty days later with very detailed information written in Laotian characters and a map which, though of his own making, was accurate. He had located fields of menhirs, not in the Province of Tran Ninh but in the vicinity and to the south of the Province of Hua Phan. This same man led me, in 1933, after a long journey, to the fields of menhirs of San Kong Phan (figs. 2 & 16).[24] It was a great disappointment. All that was to be seen was a tract of land overgrown with very tall grasses. Here and there emerged the uneven tops of a few sheets of gneiss, narrow and not very

24 M. Madrolle (*73*, p. 338) saw menhirs in Hua Phan: 'At long intervals, blocks of "standing stones", sticking straight out of the ground, can appear to resemble the menhirs of the neolithic site of Robenhausen.' M. Dassault (*33*, p.14) speaks of them in these terms: 'The only vestiges that remain of the past splendour of the Pong are thousands of standing stones in the shape of long thin slabs set up in the ground at more or less regular intervals, which appear to be funerary monuments. The particular nature of the gneiss and rhyolite rocks of this area, lying in well bedded layers, made for easy extraction of these large plates of stone.'

natural grottoes in the limestone massifs may not contain relics, including whole skeletons or fragments thereof, left by these men from so long ago.

PRESENT-DAY CROMLECHS

(Plates IX, X + XI)

SEPULCHRES OF UPPER THANH-NOÁ

Along the mid-Sông Mã, especially on the left bank (fig, 29), in Upper Thanh- Hoá, there is to be found a rather curious present-day mode of burial among the Thai (Plates IX, 4; X, 2; XI, 3), in which the grave is ringed by standing stones. The graves to which my attention was drawn are situated approximately between 113° 57 and 114° 12 longitude east, and 22° 6 and 23° 5 latitude north, in very hilly country, though the mountains are not very high.

I visited seven burial sites containing solely graves of this type, at Hôi-xuân and Ban Ouân, and those at Fu Loi, Fu Lê, Muong Pang, Muong Ly and Muong Lat. There are others in the region. As will be seen, the geology is important: Hôi-xuân, Fu Lê, Ban Ouân, Fu Loi and Muong Pang are in a region of limestone and especially shale[80] (*33*, Dussault, coloured map inset); Muong Ly is in granite country; and Muong Lat in an area of crystalline schists.[81]

70 'Probably triassic'.

71 As in the region of the Hua Phan menhirs.

The present-day burial practices are as follows, according to what I was told: the dead body is placed in a coffin shaped like a canoe. It is generally kept in the house for a year,[82] sometimes up to three years. Among the poor, this period is much shorter. The Tho ti, the masters[83] and the rich, need time to be able to afford the cost of the beasts required for the funeral meal. On the day of the ceremony, all relatives and inhabitants of the village, even the poorest, are invited to the burial feast. Many jars of rice alcohol are emptied.[84]

For as long as the dead lie in the house, they are fed twice daily; the witch doctor calls them, lightly stroking a gentle chime from a little bronze gong. If they forget to feed the dead, this sends one or two of the inhabitants of the house briefly mad, a state that passes in about an hour.

On the day of burial,[85] the coffin is carried a little way into the forest.[86] The site has been chosen by the witch doctor, who says prayers and conducts the ceremony. The grave is dug and the coffin placed inside, generally with the head turned to the north;[87] on top, in Tho ti burials, they lay charcoal derived, it is said, from the cooking of the funeral meal;[88] in burying the poor, earth is mainly used. A little hut is built

72 'Before burial, the body is often kept at home for a long time, in a carefully luted coffin, and given the place of honour' (109, Robequain, p. 100, note 2).

73 A type of feudal regime survives in the area.

74 The Thai custom is that drinkers take turns, in groups, according to their rank, at the jar or jars. Standing in the vessels are long bamboos, in twos or even sixes, through which the guests, as a group, suck up with great gusto the highly appreciated beverage.

75 A small piece of gold or silver is placed in the mouth of the dead. (The Chinese and Annamese follow this same practice.) Among the rich, several bars of silver are placed in the coffin, under the head, I think, to please the deceased, it is said.

76 This part of the forest is a sort of 'sacred wood', where no tree may be cut down. Even the undergrowth is left uncleared, which makes it a rather dark place. The graves lie in this humid ambience, amid putrefying vegetable matter.

77 According to accepted ideas, backward peoples lay their dead with the head pointing towards the ancestral country.

78 Father A. Bourlet (*9 bis*, p. 40) describes funerals mong the Thai. He mentions the 'burial hut' but appears not to know of the cromlechs of Upper Thanh-hoá. Here is an extract from what he says: 'For several days the villagers have been busy making everything ready [for the burial ceremony]. Some have dug pits in

over the grave (plate IX, 1, 2 & 3) with a few beams and some laths of bamboo. The roof is made of long palm leaves; this is the 'altar of the dead person's ancestors'.[89] Beside it, or even inside, are placed the dead man's familiar objects, his teapot, his pipe, his enamel basin, etc. The hut is surrounded by standing stones, pieces of shale similar to the menhirs[90] of Hua Phan, though smaller. A larger stone stands at the head;[91] at the feet there is another of slightly smaller dimensions. Round the graves of the Tho ti stand many stones[92] (fig. 32; plate IX, 4); every child, it is said, must bring two; relatives of differing degrees are obliged to donate one. The poor erect only a small number by the graves of their dead (fig. 31; plate IX, 4).

Remarks on various tombs.[93]

At Hôi-xuân there still stands the 'altar of the ancestors' of a canton head who died about thirty years ago; the family was wealthy enough to afford wood of good quality, less prone to putrefaction. There are only four standing stones, why I do not know. The head lies to the east. On the ground there is much charcoal. The lower parts of the altar is framed by black planks on which white rings have been painted; in the middle is a little eccentric black circle. I assume all this is symbolic.

which they have slow-burned enough wood to provide five or six large basketfuls of charcoal. This will be put in the grave; the coffin will be as it were buried amid charcoal. I have enquired several times about the reason for this custom, to which the only reply has been that it shows respect, by preventing worms and white ants from consuming the coffin and the body of the deceased.' [*9 bis*, p. 43]

79 Other natives from Laos also build huts over their graves: 'The Khas Tiaris and Khas Mong-Khong bury their dead, whatever their social status or sex. They have particular places set aside for this, kinds of cemeteries lying deep in the forest, far from the villages. Over each grave is built a little two-sided roof supported by the lintel of a sort of portico formed by two wooden columns. These funerary structures are called, in both languages, D'dong K'Kemoût K'koaï (literally "house-spirit-man").'

'The bodies are always buried in coffins made of planks hewn by axe' (9 bis, Bourlet).

80 They are slabs of shale, except at Muong Ly where the standing stones are of granite (at Kang Dong, near Muong Peun, in Hua Phan, there are standing stones of rhyolite).

81 The stones bear neither inscription nor engraved design. After very few generations, the identity of those who lie here is unknown.

82 I counted twenty-seven, and even fifty-four in one exceptional case.

83 Nothing distinguishes the graves of women from those of men. Children's graves are smaller.

On top of the grave, set out on matting, are the objects which once belonged to this rich man: a mattress, a pillow, a rest cushion, a trunk, a chest, a hat, shoes, a basin, a glass, a pipe, etc.; up above, in a trellis, are a coloured paper fan and some flags. Outside is the bamboo cage which contained the soul of the dead during the funeral. Also outside are the chicken coop, the pigsty and a paper horse.

At Muong Pang, there is the grave of a village headman, six months old apparently. The fragile 'altar of the ancestors' is still standing. The head lies towards the north-west; close to it, to the right, is a bamboo tray with a teapot, some bowls, a glass, a pipe, an empty can, a comb, sandals, some small European bottles, a rice basket; beside it is a hod; in all, a weird medley of native things and objects made in the West; the glass and the old bottles appear to be highly valued funerary memen- toes. Near the feet are a pigsty, a henhouse, a ladder for climbing to the upper part, which is the trelliss balcony of the tiny construction; and firewood. There is a standing stone at the head and a more decorative one at the feet; a stone also stands at each side. There is no charcoal.

On the older graves (plate XI, 3) can still be seen the pillars of the 'altar of the ancestors' and some potsherds, the remains of the burial odds and ends which were broken when the little funerary house collapsed. On the ancient ones, there is nothing left, save for a few scraps of pot- tery, sometimes a little terracotta rice-alcohol jar, half buried, near the head. All that is left standing is the menhirs, round a subsidence, where the ground on top of the coffin, generally composed of charcoal for the most part has settled.

Remarks on some of the burial grounds:

Few, if any, burials are now carried out at the cemetery of Fu Lê. It stands on the right bank of the Sông Mã, on the mountainside running down to the river.

A headstone appears to measure 2 metres 10 from top to ground level; another stone measures in all 2 metres 50. On one grave there are thir- ty-two stones, on another, six; the one at the head is 1 metre 20 in height, those at the feet, 1 metre 30. Some of the burials are recent, others much older.

The cemetery of Ban Ouân stands to the west of the village, on the path leading from Cho Bo to Samneua; at this level, along this path, four standing stones indicate the whereabouts of this burial ground.

Fourteen graves can be made out. On one of them, there are twen- ty- nine standing stones, the largest of which, the headstone, measures 1 metre 50 above the ground; the one at the feet is 1 metre 05; and the lowest ones measure fifty and fifty-five centimetres.

On another grave there are forty-seven stones.

The cemeteries of Muong Pang and Muong Ly (or Luc Canh), not very old, stand near the path leading from Cho Bo to Samneua; along the path, standing stones indicate the site. The farthest of the burials grounds lies in a region of granite, concealed among a tangle of bamboo.

At Muong Lat, there are two cemeteries, the old and the new. The old one lies beside the path leading from Cho Bo to Samneua (along the path, standing stones indicate the site), quite close to Nam Lat, a tribu- tary of the Sông Mã, on a hillside. The menhirs surrounding the graves are of crystalline schist, some taller than those at Ban Ouân, other very small. The headstone is *to the north*.

On a rich man's grave (fig. 32) stand twenty-seven stones. Above-ground height: the headstone, 2 metres 11; the footstone 1 metre 05; the others about thirty or fifty centimetres, etc.

On a poor man's grave there are seven stones; the headstone measures forty-nine centimetres, the footstone, forty-one.

The new cemetery lies beside a path, not far from the older one.

Remarks. 'The *cromlechs* (from *crom*, = bent, crooked, and *lec'h*, = stone) are groups of menhirs set more or less regularly in a circle' (*28*, Déchelette, I, p. 375). The standing stones of Upper Thanh-hoá conform to that definition. The purpose of these cromlechs of Upper Thanh-hoá is unambiguously and solely funerary. They date from our own time. The practice must, however, date from the distant past. What relation is there between these monoliths and those of Hua Phan? In both areas, the Samneua and Thanh-hoá provinces, the rocks are roughly speak- ing the same (fig. 30). There is little difference in the shapes, and the working is identical; but one assumes that shape and working are pretty much constrained by the material. Using primitive procedures, would it be possible to treat similar rock in different ways and produce some other result? Probably not, given the determinism imposed by the stone used. The dimensions are not the same: in the Sông Mã burial grounds, most of the standing stones are less than a metre in height,[94] some exceptional ones rising to a maximum of two metres, whereas those at San Kong Phan are mostly over a metre tall and can be as high as three metres. But at Kéo Hin Tan, the length of some low menhirs, standing in sets, is less than fifty centimetres. Menhirs and cromlechs stand along pathways, some in high passes, very exposed and visible;[95] others are concealed among dense undergrowth, covered by tall trees,

84 From top to ground level.

85 It may be objected that in former times these stones may well have been covered by thick bush.

though their presence is indicated to the traveller by one or more standing stones along the way. In both cases the purpose is identical, indubitably funerary. They differ in the way they are set out: the old ones stand in rows; the present-day ones, in circles. However, at Vieng Noc Khoum (fig. 22) near Kéo Hin Tan, there is a half-circle of low menhirs (measuring under thirty centimetres), half-surrounding a funerary disc (maximum diameter 1 metre 85) which seems to have been set on top of a pit cut out of the crystallophyllienne rock. To the north was erected a menhir of 1 metre 45 which has fallen over. This ancient tomb is markedly reminiscent of those in North Annam. The method of burial was not the same, however: the early inhabitants of Hua Phan, to whom coffins were unknown, placed the dead in a pit closed by a disk of schist (fig. 7; plate V), whereas the Thai of the banks of the Sông Mã seal the coffin with luting and bury it in earth. All things considered, there are enough points of similarity between the present-day circles of stones and the menhirs of the Bronze Age to suggest that the former may be survivals of the latter.

I have described some of these burial sites as present-day, yet the natives look on some of them as ancient. It was impossible to undertake any digging; the very idea alarmed the people and, lest we provoke the anger of the spirits,[96] they implored us not to disturb the ground. From the surface of the graves I collected some fragments of china, some recent, the oldest of which date from the late eighteenth century. These mostly come from the oldest burial ground at Muong Lat; a number of them belonged to pieces from the nineteenth century.

Reverting to the relationship between the ancient menhirs and recent stone circles, it should be remembered that the province of Hua Phan is mainly populated by Thai (*75*, Madrolle, p. 333). Even if the men of

86 The spirits are apparently great personages from long ago, more or less godlike.

the menhirs were not of that race, their immediate successors may have adopted these funerary practices. The people who set up the stone circles are also Thai, a fact of great importance.

The possible star cult. Some circumspection is required with regard to one other possible explanation: in that region of Annam, I suspect the possible survival of a star cult (bearing upon the sun). I mentioned earlier ancient pendants of micacious schist (see her pp. 76-78) decorat- ed with stellar designs, and stars in woven bamboo, which are fetishes used today against evil spirits. In a hamlet belonging to the village of Fu Loi (fig. 36), not far from a rustic altar, there stands a hexagonal or even stelliform object, made of twelve strips of intertwined bamboo about fifty centimetres in length. They form a sort of table on which are placed, on holy days, the offerings of cooked meat for a spirit of a particular character which refuses to enter the houses. In two places along the bank of the Nam Lat, near the dams, very similar bamboo fetishes are set up with the purpose of preventing thieves from catching fish. At Fu Lê two stars, again very similar, are leashed to rafts which are left over-night. If my understanding is correct, this consigns the rafts to the care of a spirit and keeps them safe from robbers. At Fu Loi, on the feast day, a star of criss-crossed bamboos (fig. 35) was attached to a kind of portico[97] erected across the road, and beside it was another very similar item, albeit less clearly starlike. Nearby, in front of altars, stands a sacrifice *table* like the one in the hamlet.[98] Stars, or hexagonal designs not dissimilar to stars, thus have a relation to heavenly powers.

Present-day Miao and Thai ornaments and objects are decorated with a peculiar design, definitely symbolic (figs, 37 & 38): a set of lines drawn from the same point. May it be that this ornamental design also derives from ancestral beliefs about stars (namely, the sun)?

87 [*Colani's caption to fig. 35 says it was 'attached to a liana across the path'.*]

88 Strangely, a similar table is used on occasion as a grill for cooking small fish and a few pieces of meat.

It should be remembered that a bronze drum [see p. 98], like others, from Laos, shows a star in the middle of the upper face (*56*, Goloubew, plate XXXII, A);[99] Goloubew dates this to the first century AD (*56*, p. 42). According to van der Hoop (*63*, p. 151), each of the drums represented in 'images' from south Sumatra probably bore a star; in his view, the engraving is a representation of the sun.

If my theory about the survival of some type of star cult, albeit much weakened, is right, it is an argument in favour of the relationship between the menhirs of Hua Phan and the stone circles of Upper Thanh-hoá.

One fact should be noticed: the Thai of Annam cover the coffin with charcoal.[100] In almost all of the fields of jars in Tran Ninh, charcoal is found round the monoliths, in the earth and among the grave goods (fig. 157). At the airfield at Lat Sen and at Thao Kam funerary pots buried in the ground stand on a layer of charcoal. Speaking of menhirs in Brittany, Déchelette says: 'Charcoal seems to have been found everywhere'[101] (*28*, vol. I, p. 438).

What significance do primitives see in charcoal? Why do they use it in burial places?

Van der Hoop (63, pp. 121 & 122) speaks of 'tetraliths', types of circles made of four stones, very common in southern Sumatra, and associated

89 On almost *all other drums* a similar image can be seen (*56*, Goloubew, plates II & VII).

90 When I enquired about the reason for this custom, I was told that it is a remnant of the incinerations of former times which were discontinued, being too expensive for many people (see Robequain *109*, p. 103, note 2). This explanation strikes me as insufficient.

The main objects used during a person's lifetime are placed on the grave; in Indo-China, present-day primitives do not want for charcoal, having an abundance of wood for burning.

In the province of Sôn-la (Tonkin), at Mai-sôn, in 1933, on the death of the great black Thai mandarin Căm- vân-Oai, a retired bô-chánh, a pot full of charcoal was buried in the pit dug under or in front of (?) the pyre for incineration of the body (information drawn from a photograph and the man's legend; it was impossible to arrive at an explanation).

91 It must be said, however, that the Breton megaliths have not been shown to have had a funerary purpose.

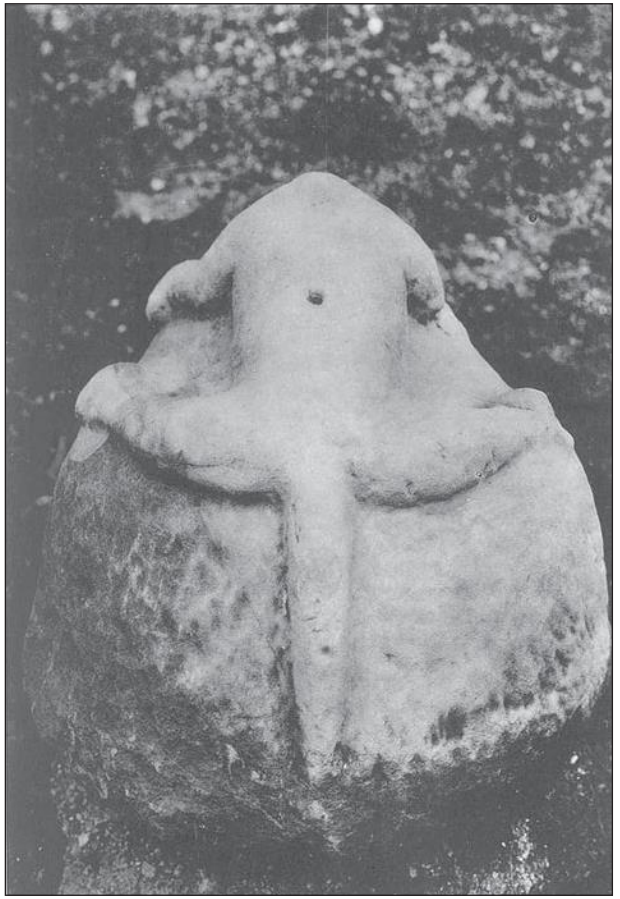
1

2

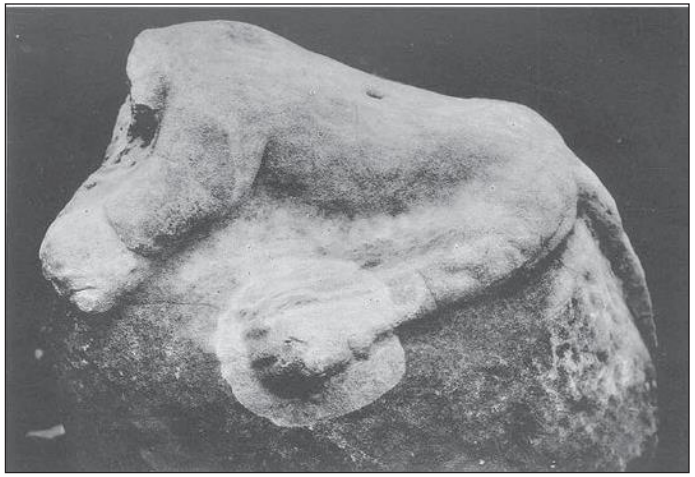
3

4

Pl LVIII
East of Kéo Tan, circular path. 1, small subcylindrical column (65 cm high); discoidal button. 2, 4, Block of stone; on top, small quadruped (c. 50 cm long) face, profile. 3, Block; view from above, informs the outline; on front, a kind of legs entwine around the cylinder.



Pl LIX Kilometre 473, 200. Statue of a cat (?) in sandstone; back (length c. 37 cm).

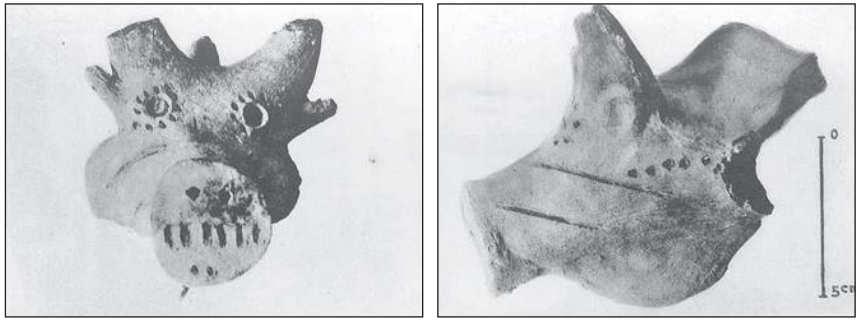


Pl LX
Kilometre 473, 200. Statue of a cat (?), profile, of that seen in preceding plate (length of body 63 cm).

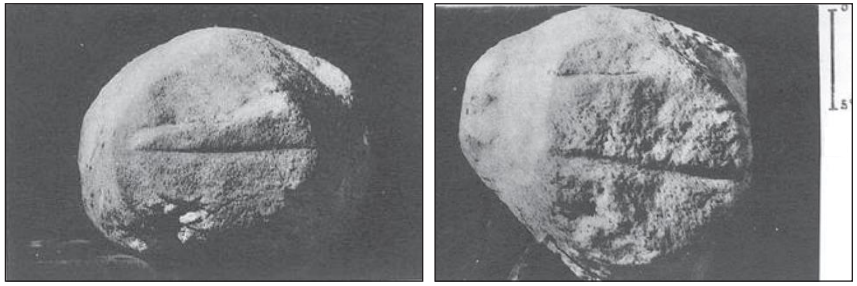
Pl LXI
Area of Kéo Tan. View from south, on the circular path. Stone marked with twenty notches, view from side (1 m wide, 1 m 50 long).

68 Slightly less than the diameter of the intact piece. The other measurements are almost equal to those of the complete piece.

1 2



3 4



Pl LXII
Heads. 1, 2, Ban Ang crematory cave. Terracotta Zebu front, profile. 3, San Hin Oume. Sandstone quadruped. 4, South of Kéo Tan. Decapitated head of quadruped, sandstone.

the bottom, 17 mms; thickness of the upper edge, 4. Section of the bowl: black, between two edges, the outer quite thin and brick-red, the inner narrow and grey; sharp fragments of quartz and other minerals, small dimensions.

b) About 20 or 35 centimetres from that object, were fragments of a pot (fig. 161, 11), probably from the neck which was brick red, decorated with wavy lines and had a small rim at the top. The diameter of that part of the original piece would have been 100 millimetres; the height of the neck would have been 60. At the break, the piece is 7 mms thick; its inner and outer edges are brick red, separated by a blackish middle. It contains sharp fragments of quartz and other minerals. The piece, not nearly as crude as the other one, looks more recent.

I. Small pots (fig. 162, 12-14, 16-19). Only two of them are more or less intact (fig. 162, 13 & 19); several others exist only in the form of large fragments. My classification of them is based upon their shape: a) more or less rounded bottoms; b) flat bottoms.

Rounded bottoms. 1) *Jar U.* A small piece was found close by (fig. 162, 10; plate LXXI, 1), about 20-25 centimetres below the surface. It is sub-spherical, though slightly flattened near the point of equilibrium, and its shaping is irregular. Slight narrowing below the aperture. The top edge no longer exists. The object is worn and eroded and has lost almost all form and colour. Maximum diameter, 46 millimetres; approximate diameter of the base area, 32 mms; diameter of the aperture, 35 mms. Height, 43 mms. Thickness of the broken edge, about 3 mms. None of the breaks shows the paste; but on a very worn part of the outer face sharp grains of minerals, quartz, etc., can be seen.

2) *Jar H.* A slightly larger piece was found close by (fig. 162, 13), about 25-30 centimetres below the surface. Shaped like a round-bottomed cooking pot. A small neck turned slightly outwards. There are two tiny handles horizontally perforated; the interval separating them is about one third of the circumference. The pot is lumpy and worn, of irregular fashioning. Maximum diameter and diameter of the aperture, 60 millimetres. Height, 57 mms; height of the neck, 7 mms. Maximum protrusion of a handle, 6 mms; thickness about 5 mms. Thickness of the broken edge, 5 mms. Brick red, showing small sharp grains of minerals.

Flat bottoms.[70] There are seven of these pots or fragments of pots, not all of which are described here; three of them are wide-bottomed, with narrower apertures, solidly built little pieces.

1) *Jar B.* Close to this jar, 20 centimetres below the surface, was a kind of miniature cooking pot (fig. 162, 14). The neck is straight, partly broken. An irregular piece, eroded, worn, dirty brick red. The bottom is slightly convex, halfway between the rounded-bottomed ones and the flat-bottomed. Maximum diameter (about 13 millimetres above the base), 56 mms; minimum diameter, 41 mms, close to the aperture. Total height, 44 mms; height of the neck, 9 mms. Thickness of the broken edge, close to the aperture, 3 mms. Brick red; sharp grains (of quartz and other minerals).

2) *Jar H.* Close to this jar, 20-25 centimetres below the surface, was a tiny cooking pot (fig. 162, 16), slimmer than the previous one. The surviving fragment represents about two thirds of the object. The fashioning is regular; the outside is smooth; it has an almost recent look to it; were it not for some clumsiness in the making, it

69 Or flattish.

could almost pass for a cheap toy for children's make-believe dinner parties. The neck is straight; there is no throat. One handle survives: it is thick, with a vertical perforation. Maximum diameter (about 11 millimetres above the base), 42 mms. Diameter of the aperture, 30 mms. Height, 42 mms. Width of the handle, 11 mms; height of the handle, 7 mms. Thickness of the paste, close to the aperture, about 2.5 mms; in the belly, 5 mms. Brick red, homogeneous paste.

3) *Jar L*. Close to this jar, 20-25 centimetres below the surface, was a fragment, half of a small cooking pot (fig. 162, 17), not very eroded; its greatest width near the throat; the neck is slightly folded outwards; the bottom is quite flat. The measurements of the surviving fragment could possibly be different from those of the pot proper. Maximum diameter, 56 mms. Diameter of the base, 47 mms. Diameter of the throat, 45 mms. Measurements equal to those of the whole pot: total height, 47 mms; height of the neck, 10 mms. Maximum thickness of the paste, 5 mms; cross section shows a broad brick-red inner edge and a grey outer one; between them, the paste is dark brown, with small sharp mineral fragments.

4) *Jar U*. Close to this jar, 25-35 centimetres below the surface, was a larger, taller, slim pot (fig. 162, 19; plate LXXVIII, 1). The curves of its sides have long radii; maximum diameter about halfway up; the neck high, slightly curved outwards; the bottom is a little irregular, flattish. The piece is rather smooth, not very worn. Clumsy fashioning; significant irregularites of shape, though reminiscent of modern types. Crosswise decoration, wavy lines, (plate XCVI, 7) on the upper half of the belly. Maximum diameter, 71 mms; of the throat, 56 mms; of the aperture, 63 mms. Total height, 95 mms; height of the neck, uneven, about 17 mms. Thickness of the paste at the aperture, 4 mms; sharp mineral fragments in the paste.

5) *Jar E*. Close to this jar, about 40 centimetres below the surface, were fragments of a pot (fig. 162, 12), its exterior completely covered with curving decorations (fig. 161, 4a, 4b; plate XVI, 6 & 6'). It is possible to reconstruct this item on paper. There was a certain harmony to its lines: the belly was gently rounded, curving smoothly into a slightly convex base. The sides were blackened and worn; the bottom of the pot was brick red, very faded. Inside, low on the belly, were several scores, crosswise. Diameter of the bottom, about 65 mms. Total height, 60 mms; height of the neck, 9 mms. Thickness of the paste: at the neck, 4 mms; belly, 3; bottom, 4. Cross section black, with small sharp fragments (quartz and other minerals).

Discs. Ear cylinders (*80*, Mansuy, p. 7; plate III, 23-26).

1 *Jar U*. Close to this jar, 35-40 centimetres below the surface, was a large disc (fig. 160, 2). Both of the large sides concave, blackened here and there; the rim much chipped. The edge concave, like the groove of a pulley, very faded brick red. Maximum diameter, 57 millimetres; diameter measured in the groove, 55 mms; maximum thickness of the edge, 12 mms; minimum thickness of the middle, 6 mms. Paste homogeneous and almost blond, with very few sharp fragments of minerals. Within the groove, traces of fine circular smoothing, possibly made by a potter's wheel (?).

2 *Jar I*. Close to this jar, eastwards, 25-30 centimetres below the surface, was a disc (fig. 160, 1a, 1b; plate LXXIX, 2). Same type as disc no. 1. Chipped rim. Greyish natural deposit on the outside. A cross carved on one of the faces, with deepish cuts of about 2 millimetres; the equal branches, 6 mms wide, reach to within 3 or 4 mms from the edge. Dimensions: maximum diameter, 53 mil-

limetres; diameter measured in the groove, 50 mms; thickness of the edge, 14 mms; minimum thickness of the middle, 7 mms, disregarding the carved cross. Blackish paste, with small sharp fragments of minerals, quartz. The groove, similar to the one on the previous piece.

3 *Jar G*. Close to this jar, eastwards, about 30 centimetres below the surface, was a disc (fig. 160, 3a, 3b). Same type. Chipped rim. Pale greyish. Some fire-blackening. In the centre of one of the faces, a shallow hole of about 4 millimetres in diameter, apparently an unsuccessful attempt at perforation. Dimensions: maximum diameter, 49 millimetres; diameter measured in the groove, 45 mms; thickness of the edge, 10 mms; of the middle, 4 mms. Greyish pale paste, with many sharp fragments of minerals, quartz. The groove, as before.

4 *Jar C*. Close to this jar, eastwards, between the surface and 20 centimetres below, was a small disc (fig. 160, 6a, 6b). Brick red and black, presumably from firing. Unchipped rim. Same type as before, but with unpronounced groove. Diameter, 20 millimetres; thickness of the edge, 8 mms; of the middle, 5 mms. Paste containing small sharp fragments of minerals, quartz.

5 *Jar H*. Close to this jar, eastwards, about 20-25 centimetres below the surface, was a small disc (fig. 160, 4a, 4b). Both large circles plane; no groove. Faded brick red. Diameter, 17 millimetres; thickness, 7 mms. Paste containing many sharp fragments of minerals.

Close to jars U (between 40 and 50 centimetres below the surface) and H (between 10 and 20 centimetres below the surface), two small discs, almost shapeless, their surfaces beige in colour. Paste containing many coarse sharp fragments of minerals, quartz.

Weights. Jar B. (figs. 159, 6, & 160, 12a, 12b). Close to this jar, about 25-35 centimetres below the surface, a truncated cone. Shape regular; piece almost intact, turned brick red by firing. On the smaller face, parallel scratches, caused by repeated friction with a coarse rasp. Complete perforation in the middle; diameter of hole, 6 mms. Diameters of the truncated cone, 42 mms and 37; thickness, 10. The side edge slightly concave, like a pulley groove. Paste contain- ing many coarse sharp fragments of minerals, up to 2 mms long, black crystals, quartz, etc.

A piece (fig. 153, 6), of quite similar shape, but taller, was retrieved from the grotto.

Jar A. (fig. 160, 13a, 13b). Close to this jar, to its west, 20 centimetres below the surface, an enigmatic piece,[71] shaped like some of our pestles. A truncated cone with slightly concave sides and a little swollen above the edge of the large circle. Brick red from firing; regular in shape, almost intact. Dimensions: large diameter, 41 mms, small, 29; height, 44. Paste dark brown, containing many small sharp fragments of minerals.

Beads (?) or small spindle-shaped weights[72] (figs. 159, 1, 2, 4 & 5; and 160, 7-11). Found near the six jars B (north-north-west group), M, I, H, L & D (north-east group). In all, 44 of them, either entire or broken; 15 of them near jar B;[73] 21 near jar H.[74] Lengthwise perforations. The in-

71 According to a Laotian informant, this is a terracotta facsimile of a metal instrument used in their small industry, made as an offering to the spirit. Such an interpretation seems utterly fanciful.

72 Might they be *fusaïoles*? For the most part, they are discoidal or globular. 'Countless clay *fusaïoles*, in a great variety of forms and often decorated with carved geometrical designs, have been retrieved from Bronze Age lake-dwelling sites.' Other terracotta objects 'must have been used as necklet beads, as weaving weights on looms or as fishing-net weights' (*28*, Déchelette, vol. II, 1, p. 390). Is the spindle unknown in Indo- China? (See Parmentier, *95*.) See Appendix I of the present work and fig. 228.

73 Between 20 & 35 centimetres below the surface.

74 Between 10 & 50 centimetres below the surface.

tact ones are spindle-shaped. The following description of those found near jar B is in two categories: large diameters and small diameters.

1 Diameters equal to or greater than 16 millimetres; four specimens. Dimensions of one of them (figs. 159, 5, & 160, 8): median diameter, 16 mms; diameter of the ends, 9; of the two apertures, 4 & 6 mms. Length, 43 mms. Width (diameter)-length index: = 37. One of the four is brick red from firing, another dark grey; they contain many sharp fragments of minerals, up to three millimetres long. The other two, reddish-grey, appear to have been roughly ground lengthwise, which irregularly flattened and scored some surfaces. Their paste is grey, homogeneous, without extraneous elements.

2 Diameters equal to or less than 10 millimetres.[75] Dimensions of one of them (figs. 159, 4, & 160, 9a, 9b): median diameter, 9 mms; diameter of the ends, 6 & 7; of the two apertures, 4 & 4.5 mms. Length, 32 mms. Width (diameter)-length index: = 28. This specimen is beige, blackened near one end (accidentally during the firing); faint, irregular, crosswise scoring. Quite fine paste. One of these short little weights is a truncated cone, possibly unintentional.

Near *jar H*, a specimen (figs. 159, 2, & 160, 10a, 10b) measures 16 mms in median diameter and 30 mms in length. This abnormal width-height relation is perhaps an effect of poor workmanship. All the others are thin. Dimensions of the narrowest (figs. 159, 1, & 160, 7): median diameter, 11 mms; diameter of the ends, 5.5 mms; of the two apertures, about 3 mms. Length, 56 mms. Most of these small weights are grey or reddish (coloured by firing); in relief, on their surfaces, can be seen the coarse sharp grains of the minerals

75 The diameters between 15 and 10 mms are 11 and 12; these pieces, mostly broken, are of no great interest.

mixed into the clay. The paste of one of them is fine; it has lengthwise flatter parts.

Decoration of pottery. The decoration of pots found with the jars is carved; there is no plastic ornamentation, unless one includes the broad horizontal bars [*bourrelets*] round the necks of some of the pots, part and parcel of the paste (plate XCVII, 10 & 10').

Designs are geometrical; there is not the slightest hint of any representation of beings or objects. They are of two types: the straight-line style (rare); and the unbroken curved-line style.

1. Near the aperture of only a few potsherds (plate XCV, 3, 3' & 4)[76] made of coarse paste, are long oblique lines of various directions, deeply carved; after these grooves were cut, a brown glaze was applied to the whole surface. Archaic appearance.

2. Potsherds of similar appearance were found not far away (plates XCV, 6-10, and XCVI, 2-5, 8);[77] similar glaze applied by the same method. Different decoration: unskilled longitudinal meanderings, clumsily drawn, in almost symmetrical arrangement, forming more or less the designs imagined by the artisan. Some saw-teeth, slightly curved (plate XCVI, 4 & 5); and sometimes small straight lines.

Potsherds that are not so crude are not glazed; their paste is thinner; only curved decoration (plate XCVII, 8). Six items with even waves, in various arrangements; for instance, five (or more) of these waves are parallel; they meet a group composed of the same number of parallel lines (plate XCVII, 8); the concavities of the latter are opposite the concavities of the former. A different model (fig.

76 Found near jar S (south-west group) 25-45 cms below the surface.

77 Found near jar T (south-west group) 50-60 cms below the surface.

161, 11) has some of these wavy lines broad and deeply incised; others are medium-sized; and others very flowing.

A pot (fig. 165, 1; plate LXXVIII, 1), almost intact, has a belt of such wavy lines round its middle, poorly drawn, with irregularities, second thoughts and awkward touches. Three or four vertical strokes with extremities of the same diameter touch these undulating lines.

Nearly ten potsherds are decorated with these designs, possibly on the belly, particularly on the neck. The neck of one of them, from a piece 54 millimetres tall, has apparently close to twenty lines. This mode of oramenting is widespread: a potsherd from Chỏ Gành (Tonkin) has four bands, each of them consisting of five such undulations (*21*, Col- ani, plate IV, 17). Two pottery fragments from an archaeological site near Perak (Malacca Peninsula) also have some (35, Evans, plate LI), etc.

The other decorations are curves often with large radii in various combinations (fig. 161, 1 & 2). I put these in the curved-line category, even though the design is often bounded by horizontal lines, covering a whole circumference. On one fragment (fig. 161, 5), the decoration is reddish white, standing out against a fired-brick ground. One speculates that the piece may have been coated with a whitish slip the thickest areas of which, where it filled the shallow incisions, were less subject to wear.

Two pots, one of them half-reconstituted, the other (fig. 161, 5) consisting of only two fragments of little surface area, have decorations on the outside of their bases. The most complete pot (figs. 161, 4, 162, 12; plate XCVI, 6) was covered in them up to the top of the neck; its designs touch, contrast and interrupt each other, standing out palely on a grey or blackish ground. One wonders

whether this was caused by the passing of time or was the original appearance of the piece. The main design is also seen on a potsherd located by Mansuy (*79 bis*, plate VI, 1) in the cavern at Ban Don Tio (near Luang Prabang) along with instruments of ground stone. The other item has simpler ornamentation, both curved-line and straight-line. Some parallel saw-teeth, apparently bounded by broad curves.

More recent potsherds, which give a clear sound when struck, of compact homogeneous paste, belong to two pots. On one of them (plate XCVI, 9), the incisions, very deep, are undulations or simple curves. The other piece (plate XCVII, 12 & 13), which could almost be reconstituted, reading from top to bottom, has short straight strokes in groups of four, perpendicular to a band of unaccentuated waves; then two more similar bands parallel to the first; and lastly a row of designs shaped like large *S*s (plate XCVII, 12). Such a complicated composition is not the brainchild of the same mind which conceived of the monotonous decoration on the other pottery. It would appear not to belong to the same period.

Carnelian beads, sub-spherical and olive-shaped[78] (fig. 163; water-colour I, at 11, 15, 16, 21 & 33). The density is close to 3.

Two are entire; they were found near jar C and jar L.[79, 80] More or less significant fragments were found with jars W and U in the south-west group, and with jars L, H and K in the north-east group. Rectilinear perforation along the axis of revolution. Dimensions of

78 A yellow olive-shaped bead was found in the upper grotto at Xóm Thâm (*24*, Colani, plate LIV, 6), smaller and better fashioned (fig. 162 of the present work – *[sic] must mean fig. 163)*. Diameter, 6 mms; length, 12 mms.

79 Belonging to the north-north-west and north-east groups.

80 Between 25 and 35 centimetres below the surface.

one of the largest (fig. 163, 26), found near jar C: maximum diameter, 15 mms; diameter of the apertures, 2.5 mms. Length, 16 mms. Width (diameter)-length index: = 93. The specimen is rather worn at both ends, as though from friction with contiguous beads, which would mean it was strung on a necklet. Contains a purplish extraneous element (?). Dimensions of the smaller one (fig. 163, 25), found near jar L: maximum diameter, 9 mms; diameter of the apertures, 1 and 1.5 mms. Length, 11 mms. Width (diameter)-length index: = 81. Reddish traces inside.

Glass. Small beads and tiny discs both perforated and unperforated. Found near jars W and U (south-west group), M, H, R, Q, P and O (north- east group). Especially numerous near jars R and Q, and in particu- lar round jar P, all three of these jars being close to each other. They are of three sorts: 1) the most abundant variety, cylindrical glass beads (fig. 163, 7-14), looking like terracotta; both ends flat; 2) glass beads of different colours (fig. 163, 1-5 and 20); 3) two small discs (fig. 163, 6), apparently glazed, yellow.

1 a). Diameter greater than height, for example: diameter 3 mms, height 2 mms $\frac{h}{d} < 1$.

b) Diameter less than or equal to height, for example: diameter 3 mms, height 3mms 2 $\frac{h}{d} \geq 1$. Rare.

Diameters vary between 3 mms (frequent) and 7 mms 2 (exceptional). Such large diameters occur only in this first category.

About four beads with dark longitudinal lines (fig. 163, 9 and 10).

2. Glass beads, green or blue, pale or very dark; cylindrical (rare), mainly sub-cylindrical, or rather being roughly the shape of a sphere mi-

nus its two pole-caps. The two perforated surfaces of these objects are slightly convex. Olive shapes are exceptional.

Rare fragments of emerald glass which look as though they derive from very large beads.[81]

Half a sphere in green glass; diameter about 6 millimetres; unpierced. Through a breakage, vacuolar texture can be detected. It seems that rounded gas bubbles were isolated at the place where we nowadays can see vacuoles. Because of this structure, the surface is variously coloured, giving the object a nice appearance.

3.[82] Two small yellow, perforated discs (fig. 163, 6). One of them found near jar W (south-west group) 40-50 centimetres below the surface. Dimensions: diameter, 7 millimetres; diameter of the aperture, 2 mms; thickness 1.1 mm. The other was close to jar H (north-east group) 20-25 centimetres below the surface. Dimensions: diameter, 8.2 millimetres; diameter of the aperture, 2 mms; thickness 2 mms. The colour of the first one is bright; it appears glazed. The surface of the other one is duller, more eroded; showing a very few tiny vacuoles. Both these little items seem to be made of glass.

Metal. Pieces of worked metal: bronze and iron found near many of the jars in all three groups. Few items are entire. They divide into instruments and jewellery.

Bronze. A denticulated chisel. A large flat item, found near jar E, between 55 and 60 centimetres below the surface, beside one of the knife fragments. Dimensions: length, 230 millimetres; pres- ent width of the top, 41 mms, of the bottom, 46 mms. Thickness,

81 I found a large green glass bead in the Mahaxay grotto (Cammon, Laos).

82 [*This number 3 has been added to the text for clarity, as it refers to Colani's 3rd category mentioned above.*]

1 mm. Length of a tooth, 5 mms. Diameter of perforations, 2-3 mms. Both large faces are rectangular, ending in four teeth: of the two in the middle, one is broken, the other bent inwards; the two outer ones lean outwards. In profile, a very slight curvature is evident in the top third of the blade. Perforations at three points (fig. 162, 1); the holes are round and well made, as in modern tools. It would appear that there was once a fourth perforation matching the one which stands alone nowadays; but the part where it would have been no longer exists. The perforations, one assumes, served to secure the blade to a handle, perhaps a small board. One won- ders whether it was nailed on. The teeth were the business end of the tool; their purpose is unclear.

Two items (fig. 162, 2) with similarities to the piece just described, brought back by the Pavie Mission, are classified as denticulated chisels.

Iron. Instruments: knives with tangs.

Only one of them is entire (fig. 162, 5a, b, and c), found near jar N, between 20 and 40 centimetres below the surface. Dimensions: length, 119 millimetres; tang, 40 mms; blade, 79 mms. Width of upper end of tang, 4 mms, of the lower end, 10 mms; of upper end of blade, 20mms, of the lower end, 7 mms. Thickness of tang, 3 mms; of back of upper blade, 4 mms; of lower blade, 1.5; of cutting edge, 0.4 mm. Shape: tang and blade form two quadrilaterals with long curvilinear edges. Tang: the side corresponding to the back of the blade slightly convex; opposite side, concavity of smaller radius. Blade: at the top, two shoulders, one of them rounded; the back is minimally convex; cutting edge concave; extremity oblique.

Piece partly transformed into ferric hydroxide, under a natural clayey coating.

Of two fragments apparently of this same item, one was found near jar U (south-west group) between 35 and 40 centimetres below the surface, and the other (fig. 162, 6) close to jar E (north-east group), between 55 and 60 centimetres below the surface.

Three fragments of truncated cones, hollow, of iron partly transformed into ferric hydroxide and very degraded would appear to be the barely recognisable remains of sockets. Found near jar B between 25 and 35 centimetres below the surface.

Metal jewellery. Bronze. Ear pendant (fig. 162, 8a, b, and c) found near jar A (south-west group) 30 centimetres below the surface. Diameter, 21 and 19 mms. Thickness, in middle of rod, 4 mms; at the ends, at least 2 mms; some slight flattening of the ends, perpendicular to the large dimension of the piece.

Bracelet (fig. 162, 7a, 7b) found near jar O (north-east group) between the surface and 20 centimetres below. Open ring, elliptical contour, on a single plane. Measurements: axes, 61 and 57 mms; maximum thickness, 4 mms. Slightly carinated in the middle; cross section of the ends, circular. The appearance and shape of this piece, and the sound it makes when struck, suggest it is more recent than the previous ones.

Bracelets and ear pendants consiting of metal rods with circular cross section: three of these pieces are twisted into spirals, reminiscent of snakes and most creeping plants, though they are made of a single twist (pretty irregular in form) and a fraction of a twist.

Bracelet (fig. 162, 9a, 9b, 9c), solid, found near and westwards of jar E (north-east group) at not quite 20 centimetres below the sur-

face. Measurements: large diameter, 59 mms; small diameter, 53 mms; thickness, 9 mms.

A smaller item (fig. 163,[83] 4a, 4b), found near jar I (north-east group) between 30 and 40 centimetres below the surface. Thick with a natural coating, difficult to remove because of the fragility of the piece. Measurements: diameter, 34 mms; thicknesses (including coating), in the middle, 4 mms, at one end of the rod, 2.5 mms.

Many thin metal rods (diameters, 3-5 mms), curved, probably fragments of similar jewellery, were found with jars B (north-north-west group), W, U (south-west group), H, L, E, R, Q and O (north-east group).

Hollow globular bell.[84] How is one to describe a somewhat surprising type of object: decorated globular bells, when all one has to go on is fragments and one almost complete specimen? They were found with three fine jars standing close to each other in the north-east group: jar P, three specimens, lying between the surface and 65 centimetres below; jar), a fragment, between the surface and 20 centimetres below; and jar K, two very small fragments, between 20 and 35 centimetres below the surface.

Only one item (fig. 164) (*25*, Colani, p. 123, fig. 13, a, b & c), found near jar P, is almost intact. Diameter of the sphere, 17 millimetres. Above the sphere is a kind of ring, all of a piece with the rest of the object, 11 mms high. The aperture corresponding to the slot in the bell is about 14 mms long and 2 mms in lateral width. The piece is composed of three parts: the uppermost, a cap about 6 mms high (we have four specimens); and the side parts, two fragments of

83 [*sic*], *Colani must mean fig. 162.*

rd

cap separated by the slot (only the almost complete specimen has these); together they make up the greater part of the object.

Decoration. upper cap: a small coil in relief consisting of 6 or 7 turns. Side caps: on each of them, the same simulated coil of a thread, about twelve turns. Across this ground lie two thicker threads, coming from the two corners, each of them a curve with a large radius; below the summit of the side cap, not far apart, each of them coils back on itself, the left one rightwards, the right one leftwards, making two spirals each consisting of four close turns. Along the slot, the incomplete cap is bounded by a rather thick rim, plait-shaped.

The only designs are the spiral and the plait.

This decoration is in a better style than that of the pottery described above. These pieces imitate bronze filigree.

Pieces with special decoration,[85] *there being a single specimen of each.*

1 Pottery: accompanying some jars are fragments of unglazed pots not much affected by atmospheric agents. Two or three pieces of crackled porcelain were also found.

a) Ordinary pottery: potsherds with clean breaks; when struck, they make a clear sound. Paste, grey tending to white, both edges of breaks are pink, homogeneous. Without slip or glaze. Found near jar C (north-north-west group; 40-45 centimetres below the surface), jar W (south-west group; 35-45 centimetres below the surface); jar L (north-east group; 35-40 centimetres below the surface).

85 They may be not as ancient as the previous pieces, if we leave aside the fragment of pseudo-Roman (?)

84 See plate LXXIII, 4 & 5, a speciment found at Ban Xot, in the 3 field of megalithic jars and burial stones.

bead, water-colour I, 11.

b) Fragments of crackled porcelain were found with jar L (north-east group; 10-20 centimetres below the surface).

c) Significant fragments of a large grey pot (plate XCVII, 11, 12, 12' and 13), which was found near jar D (north-east group; 30-40 centimetres below the surface), can only be reconstituted in part. Narrow base; broad belly; throat contracted; neck opening slightly outwards. Apparent dimensions: diameter of the base, 116 mms; of the throat, 136 mms;of the upper rim of the neck, 147 mms; of the aperture, 135 mms. Height of the neck, 29 mms. A band of decorations (plate XCVII, 12, large-S designs), 65 mms wide, comes down from the throat, containing among other things two small oblique bulges (19 mms), tiny simulacra of handles. Solid potsherds, making a clear sound when struck. Their broken edge (plate XCVII, 12'), about 10 mms thick, has a broad black outline on the outside, and a narrower one of the same colour on the inside, separated by brick red. The paste contains quite small sharp mineral fragments with surfaces less than a square millimetre.

2 Full beads, vitreous paste or glass.

a) One sub-hemispheric fragment of a pesudo-Roman (?) bead, water-colour I, 11 (see also *25*, Colani, p. 123, 14 a, b and c), perforated, of brown vitreous paste, found near jar O (north-east group), between 20 and 25 centimetres below the surface. Dimensions: approximate radius of the sphere, 6.5 mms; height, 13 mms; diameter of the perforation, 4 mms. Two sort of sinuous strips, more than a millimetre thick (*25*, Colani, p. 123, 14 c), 2.5 mms wide, in two colours (both edges white, the middle blue), divide the surface into curvilinear quadrilaterals (water-colour I, 11). The strips appear to have been set into the unsolidified vitreous paste. Inside each of

the diamond-shapes thus formed, on a ground of toned-down dark blue, is two-thirds or three-quarters of a bluish-white star-shaped flower, no doubt a stylised composite.

b) One small spherical bead (fig. 163, 24), apparently of glass, was found near jar P (north-east group), between 50 and 55 centimetres below the surface. Diameter, 6 mms. On one side are visible the remains of a white glaze; and on the other the yellow glass that the piece is made of has been exposed by wear.

3 One globular bell (fig. 161, 10 a, b and c), all of a piece, black, hollow, enamelled metal, it would appear. Found near jar O (north-east group), between 45 and 50 centimetres below the surface. The shape is exactly that of a bell without a clapper, like the one described above. Diameter, 10 mms. Like the former piece, it is composed of simulated coil of thread; there is none of the supplementary decoration of appliqué type. At its equator, about 3 mms from the edge of the slot, is a small, rounded, black protuberance.

Southern fields on the Peneplain of Jars.
(Map VIII)

Main specimens. The drawings in the accompanying figures having been done with care, there is no need for detailed description.

At the Airfield of Lat Sen and at Ban Soua, the objects found are more or less the same as at Ban Ang. A piece found only at Ban Ang is a ground stone fragment of a disc-ring.

Pieces absent from Ban Ang, found at the Lat Sen airfield: ground stone, three axes with tenons for hafting; five pendants of rectangular contour. Pottery, ear rings. Bronze, carved ring (fig. 172); the

presumed foot of an unknown piece. Gastropod shell, perforated Cyprea.

Pieces absent from Ban Ang, found at Ban Soua. Ground stone, a fragment of a crude ring, two axes (fig. 173, a, b and c; plate LXXI, 6), three pendants of rectangular contour (fig. 174, a, b, c and d; plate LXXIV, 4)

Lat Sen. Stone. One rather curious piece (fig. 166): sub-parallelipedal, with slight longitudinal curving, measuring 121 mms; 83 and 48, maximum dimensions. Has seven large faces, six of them smooth; some very narrow, slightly concave or flat; and one broken face occupying the total width and length of the object. Along one side, a rather oblique area, hardly any roughness; on the opposite side, an irregular broken face.

This specimen is of similar fashioning to the jars of the same rock, sandstone with quartz crystals.

One wonders about its purpose and whether it belonged to some other piece. Apparently it was ornamental. It cannot have belonged either to a jar or to an assumed lid. This means there were other models of the same category which we are ignorant of.

A fragment of a disc-ring in ground stone (fig. 167), crown incomplete, irregularly broken. Radius at most 24 mms; maximum thickness 11 mms. Much chipping to the outer edge; in its present state, none of the original edge exists. Grey shale.

A fragment of a grinding stone (fig. 168). Two large grinding sides. Outer edge rounded; to the right, looking at the drawing, it has been ground or just smoothed. Maximum thickness of outer edge, 20 mms. Any reconstitution, even on paper, would be very difficult.

Pottery. A small broken pot (fig. 169, 1), almost complete, shaped like a cooking pot. Very ancient appearance. Two tiny handles in vertical plane. Very coarse paste, shaley, containing sharp, whitish mineral elements, including quartz crystals. Broken edge grey, with reddish outlines. Outside surface eroded. Maximum diameter, 73 mms. Thickness of the sides, at most 8-10 mms.

Large fragment of a small cylinder (fig. 169, II), irregularly shaped. Blackish paste containing coarse sharp bits and pieces of minerals, among others fragments of quartz; they stick out on both the outside and the inside. Broken edge grey, with two narrow red outlines. Maximum diameter, 35 mms; maximum thickness of the sides, 5 mms.

Pot in the shape of a cooking pot (fig. 170), girth greater than height, with two little handles in horizontal plane. The sides of this receptacle have a slight curve of very large radius. Paste, pale, reddish, fine. Maximum diameter, 104 mms; maximum thickness of the sides, 4 mms.

Bowl (fig. 171), very weighty, ancient appearance. Paste of break blackish, both edges red, sharp fragments of minerals, quartz crystals. Maximum diameter, 128 mms; thickness of the largest side, 1 centimetre.

Bronze or copper. Open ring (fig. 172), decorated: curvilinear designs, stylised *vegetable* motifs,[86] some of the lines in relief. Inside, fine corrugations parallel to the axis of the piece. A specialist in metal-work, M. Mercier, assures me that this ornament is neither ancient nor even Asiatic;[87] according to prehistorians, it is proba-

86 Designs on the potsherds found with the standing stones of Hua Pan and the jars of the Tran Ninh are all geometrical.

87 According to Mercier, the piece is made of half-red [*demi-rouge*] copper; it was rolled and stretched, as is clearly proved by the striations on the inner side. Made in Paris in the mid-nineteenth century. That being

bly proto-historic. It has undergone none of the deterioriation of the bronze articles found with the standing stones and the jars; its surface is intact. After much hesitation, I include it here, but without vouching for it in any way.

Ban Soua. Stone. Axe (fig. 173), entirely ground. Some chipping of the cutting edge. Maximum width, 32 millimetres; thickness, 9. Fine-textured rock, light brown.

Pendant, entirely ground (fig. 174, a, b and c). The figure gives a clear idea of it; hence no need to describe it. Width 37 mms; thickness, 11 mms. Fine-textured rock, light brownish-grey. The iron prong stuck in the hole used for suspending it would appear to show that the object was attached to a ring or perhaps even an iron chain.

Pendant (fig. 174, d; plate LXXIV, 4), longer and better ground than the one at fig. 174, a, b and c. On the face opposite to the one shown in plate LXXIV, there is a smooth area which could appear to have served as a grinder. The thinning at the top, near the perforation, shows the cleverness of the worker: he was afraid of breaking the piece if he tried to put the hole through a thick part. Maximum width, 35 millimetres; maximum thickness, 11. Fine-textured rock, light brownish-grey, probably eruptive.

Hexahedron, very low, entirely ground (fig. 175, a, b and c). An enigmatic piece, with its marks of having been sawn, albeit quite faint. Uneven thickness, maximum 8 mms.

Three grinders (fig. 176, I, II and III), made from flat rounded pebbles. Piece I (a, b, c, d) has two grinding faces; the flatness on side b is of

the case, this ornament, so utterly different from the other items (in its fashioning, decorative designs, patina, etc.) must have come from France and come into the possession of natives. It may have been placed in the earth beside the jars; or it could have been accidentally dropped before gradually sinking below the surface.

interest: it can be seen also on the grinding stone from Na Nong (fig. 184) and was for some unknown type of work. Maximum width of the piece, 63 mms; maximum thickness, 19 mms. Fine-textured rock, light brownish-yellow, probably eruptive.

Two grinders found together (fig. 176, II and III), one small (II), the other bigger (III), narrow and elongated; for particular jobs, one of them likely complemented the other. Maximum width (II), 22 mms; (III), 43 mms. Thickest parts (II), 14 mms; (III), 20 mms. Fine-textured rocks, (II) pale bluish-grey, probably eruptive; (III) pale light greenish-grey, with small black crystals and tiny shiny flakes.[88]

Two small pestles (?) (fig. 177, I and II; plate LXXIX, 7 & 8), found side by side in the ground. Made from a soft mineral material, apparently a natural sandstone. One of them is pale grey (fig. 177, I; plate LXXIX, 8); the other is pink (fig. 177, II; plate LXXIX, 7). Rather enigmatic pieces, possibly not very old. Maximum diameters, 27 mms (fig. 177, I), 129 [*sic*] mms (fig. 177, II).

Large fragment of a disc (fig. 177, III), rather crudely worked in a similar substance to the two previous pieces; very pale grey; the circular surfaces have been ground. Maximum height, 17 mms. Function, unknown; provenance, dubious.

Pottery. Some of the potsherds and pots from Ban Soua being of the same types as at Ban Ang, nothing further need be added.

One fragment of the neck of a pot (fig. 178) does, however, deserve to be described. Coarse paste, containing bits of sharp minerals, whit- ish, often rather large. Broken edge, maximum thickness 1 centimetre, blackish brown, with two reddish outlines. Height of the neck, 73 mms.

88 Also from Ban Soua are other fragments of grinding stones not described here, with varied and interesting shapes.

This piece demonstrates that vessels of this type could at times be of considerable size.

Fields in the south of the province.

San Hin Oume (map VII) Stone. Pottery. Iron.

Stone. There is no need to rehearse here the monolithic discs (plates XLV XLVII), the low relief (plate XLVI, 1) or the head of a quadruped (plate LXII, 3). However, four other pieces do deserve some attention.

a) A large grinder of quartzy sandstone (fig. 179).

An irregular prism with six large faces; the two main ones, opposite one another, are fan-shaped; it is rounded at the ends. Four of the surfaces show evidence of friction and must have been used for grinding. Maximum length of the piece, 31 centimetres; maximum and minimum widths, 17 cms and 19 cms; greatest thickness, 13.5 cms.

Found under the easternmost stone set at the aperture of jar 1, fifty centimetres below the surface of the ground.

b) A smaller grinder (?) (fig. 180).

A parallelipiped seemingly of rather fine-grained quartzy sandstone. The four dihedral angles, where the large surfaces meet, are right angles; the smaller faces, two parallel bevels, form oblique angles. One of the large surfaces shows evidence of friction and must have been used for grinding. Maximum length, 25 centimetres; width, 5.5 cms; thickness, 5.2 cms.

Found under jar 21, to its north-east, below the surface of the ground.

c) A somewhat enigmatic stone (fig. 181).

A truncated cone almost twice the height of the diameter of the base; the top looking as though it was knocked sideways. Height, 25 centimetres; maximum diameter, 14.4 cms.

Found close to the previous piece.

The native tripod, on which cooking pots are placed nowadays, consists of three pieces similar to this one; however, this item shows no evidence of fire.

d) An irregular disc (fig. 204).

The two circles were crudely fashioned as large flat surfaces parallel to a diameter; round the edges are several planes parallel to the cylindrical axis. Maximum dimensions: diameter, 20.5 centimetres; thickness, 6.5 cms. Worked from violaceous shale of no great hardness.[89,90]

This piece was found near jar 4, between 50 and 80 centimetres below the surface. It was touching a terracotta pot[91] to which it served as a lid.[92] It weighs 2 kilogrammes 550; thickness of the sides of the pot, roughly 9 millimetres.[93] Given the movements of soils, this disc was bound to break the funerary vessel. One wonders whether the inevitability of such breakage was not foreseen, part of the ritual, so to speak. Evans wonders whether the great amounts of potsherds

89 [*Some of this doesn't seem to correspond to the caption of fig. 204, where Colani says it's quartzy sandstone; the diameter is different too.*]

90 In this field of jars, the transformation of the deeper clay, which is the upper part of the soil, into clayey shale is gradual; the topmost layers of the shale are quite soft.

91 The decoration of this pot is particularly well done.

92 A pretty similar arrangement can be seen in fig. 182.

93 [*All of this seems to contradict the information given in the caption to fig. 204.*]

found in prehistoric graves on the Malay peninsula might not be explained by a practice of breaking pots as a sign of mourning.

e) A fragment of sub-cylindrical ring, made of shale.

Maximum dimensions: presumed diameter, 49 millimetres; width of the crown, 6 mms; thickness, 5 mms. The outer side is rounded. The object having lain in clayey ground, its original colour can- not be discerned. It must have been pale. No doubt an ornament. The piece, which is fragile and of no great character, is of interest because it is the only small stone object retrieved from San Hin Oume.

Found north-west of jar 4, 70 centimetres below the surface of the ground.

Ceramics (plate XC, 5-13). Pots and potsherds were found in the earth, beside the jars (fig. 183, plate XXXI, 1) and even under jars. Depths varied from 35 to 90 centimetres. Very few vessels complete. Any that were almost intact disintegrated soon after being unearthed. Simpler types than at Thao Kham; few if any with long necks; cooking pot type, sometimes with a carina low on the belly, at a dihedral angle, obtuse, circular, with curved sides. As at Thao Kham, there are pots on top of each other, the upper one acting as a lid for the lower one (fig. 184 [*sic*][94]), or even a larger pot containing one of lesser dimensions.

Potsherds: possibly two types, though there is much similarity between them.

94 [*Colani must mean fig. 183, which shows superimposed pots.*]

Main characteristics of potsherds.

a) rather rare type:

THICKNESS OF EDGE: Quite thick, or thick.

COLOUR OF EDGE: In cross section, reddish outlines, more or less wide, separated by a grey, brownish or blackish strip.

COMPOSITION OF PASTE: Mixed into the clayey paste are mineral elements, all of them sharp, often white and small; sometimes coarser. Quartz crystals.

COLOUR OF POTSHERD: Usually reddish, often with traces of a brown glaze.

DECORATION: None.

b) very frequent type:

THICKNESS OF EDGE: Variable thickness, generally quite thin.

COLOUR OF EDGE: In cross section, most often two reddish outlines, separated by a brownish strip. Not very different from type a. Sometimes the whole edge is brownish or reddish.

COMPOSITION OF PASTE: As for type a.

COLOUR OF POTSHERD: Usually the piece is covered by a thin clayey gangue giving a beige tint. Sometimes reddish. Some traces of glaze.

DECORATION: Always incised, seldom excised. Rolls [*bourrelets*] (one per pot) and lines parallel to the equator of the pot. Broken lines, with very acute angles, sometimes slightly curved, making sequences of capital Ns; this decoration is among the most frequent at Thao Kham. Wavy lines exceptional.

Iron: very few fragments, some from knives. Some were found near jar 16, 50 centimetres under the surface of the ground; others near jar 11, 45 centimetres under the surface.

Remarks. There are no beads or bronze. This was a workplace of stone cutters, an industry which must have inhibited other industries; the pots in natural sandstone (fig. 77) of Thao Kham may have been made here. There are a great many potsherds, identical with those from Thao Kham, which means the two burial sites were contemporaneous and that there were close relations between them (one of stones, the other of monolithic jars), over an apparent distance of about thirty kilometres. One wonders whether the same rites were practised at both. It seems unlikely, as the mushroom discs are to be found in only one of them.

Na Nong. Stone industry. Pottery. Glass beads. Bronze. Iron.

Stone. A sub-spherical cap decorated with a stylised man in low relief (plate LVI).

Nothing else, other than a grinder (fig. 184).

Made from a flat pebble (crystalline rock), 119 mms long; bearing traces of rubbing on one of its large surfaces and on one of the side edges.

Ceramics. three categories:

a) Very crude potsherds (plate LXXVII, 2 & 3).

Maximum thickness of the broken edge, 15 mms (or even 17 mms). Clayey paste containing very many coarse sharp fragments of minerals, some as long as 4 mms. The surface area of the specimen having been worn down by natural forces, these stone fragments now protrude. All of them are elements of granite,[95] crystals of feldspar, quartz and mica. The broken edge, of the same present colour as the outside of the potsherd, grey or beige, seldom black. It is impossible to determine what the surface of these pieces was like before wearing away.

b) Thinner paste.

Thickness, 3 to 7 mms. Paste also containing sharp fragments of granite, usually smaller. The surface area is uneroded, with a few traces of a coarse glaze.[96]

c) A large incomplete pot with its potsherds (fig. 185). Broken edge thin, 4-6 mms, black and dark grey, both of them with pale outlines; sometimes the edge is the same colour as the pot itself, that is to say pale brown shading slightly towards mauve. Decoration: small, flat, parallel, meridional ribs in quite regular groups, separated by plain spaces of no great size, more or less parallel to the equator. The upper area of the pot being now non-existent, it is impossible to know anything about the shape of the top; as it stands, the pot seems to be an oval stuck onto a small foot. The base, set slightly into the foot, is very slightly convex.

Maximum dimensions: diameter of belly, about 24 centimetres; height of the incomplete item, 26.5 cms. Diameters of the foot: bottom, 12.6 cms; top, 11.3 cms. Height of foot, 2.3 cms. Thickness of sides: foot bottom, 7 mms; foot top, 17 mms; the upper parts of this damaged piece, 9 mms and 5 mms.

95 The neighbouring rocks and ground are granitic.

96 A potsherd, possibly more recent, 22 mms thick, containing mineral elements like those found in the other broken bits of pottery, is covered in a brown vegetable glaze, unfired, which can be seen on ceramic fragments from Ban Ang.

Found near to and eastwards of jar 22; the base was about 60 centimetres below the surface of the ground.

Other thin potsherds were also found in this field; the paste of some of them seems to contain not the granite elements but the quartzy sandstone sort so prevalent farther north, at Ban Soua, etc. The pots which have ended up as these fragments would therefore appear not to have been made here.

Some few and far between glass beads:

Almost subspherical; maximum diameter, 1.5-2 mms; blue, green and blackish.

Found in the soil, close to the jars.

Bronze: a fragment (fig. 186), probably from a cylinder.

Length, about 35 millimetres; width, almost 24 mms; thickness, apparently 1 millimetre. Decorated with contiguous ribs, parallel to the presumed base of the item, separated by fine, deep scores. Regular fashioning; imitation filigree. The piece is largely transformed into hydrocarbonate of copper.

Found southwards of jar 27, about 40 centimetres below the surface of the ground.

The question arises of whether this piece is contemporary with the jars. There is a fair probability that this may be so: the technique seems to be akin to that used in the bronze globular bells (see the chapter on industries).

Iron: six or seven fragments apparently from knives; the metal being largely transformed into ferric hydroxide, the pieces are fragile and more or less misshapen.

The largest one is a knife with tang for hafting; the back, slightly convex; the cutting side slightly concave. The distal extremity is missing. Measurements: length, 194 mms; maximum width, 34 mms; thickness near the business end of the blade, 1 millimetre or a bit less.

Found near jar 29, 50 centimetres under the surface.

The shape is not very different from that of Laotian cutlasses of today; and it has affinities with pieces from the Malayan Peninsular Iron Age found in a grotto at Bukit Chuping Perlis (*35*, Evans, p. 111).

The other instruments are smaller, broken and misshapen; their maximum widths vary approximately between 18 mms and 14 mms. On two of them, the tangs for hafting are still discernible.

For the most part, these fragments were found near the jars.

The types are the same, it would appear, as those found in the other fields of monoliths with spacious cavities. One type looks as though it is close to that of an instrument from the Malay Peninsula, from the grotto at Bukit Chuping Perlis (*43*, Evans, p. 75, fig. 7). Evans's hypothesis is that this shape is Iron Age; but it is more likely modern.

Remarks. Except for the large incomplete pot and the piece of bronze, there would be nothing to distinguish the grave goods at Na Nong from those found in the other burial grounds, were it not for the granite cap with the little stylised human figure (fig. 76; plate LVI).

Song Meng. Pottery. Carnelian and glass beads. Bronze. Iron.

Undecorated ceramics.

The same potsherds, very crude and thick, as at Na Nong. Sharp elements of granite in a clayey paste, standing out because of natural erosion.

More or less thinner potsherds, of finer paste, often reddish; broken edge generally black.

Carnelian beads: three globular yellow beads; equatorial diameter varying between 7.5 mms and 9 mms; the poles are sometimes slightly cupped.

Glass beads, green and blue; one of them, cylindrical, 4.5 mms tall. On another one an orifice looks as though it might have been an attempted equatorial perforation. Orange beads, resembling terracotta, small, one of them even littler.

The beads were found in the soil, near the jars. One of the carnelian beads was close to jar 6, 85 centimetres below the surface of the ground.

Bronze. Fragment of a cylindrical ring, with thin sides.

Presumed diameter, 25 millimetres; height, 13 mms; approximate thickness, 1 mm. The piece is largely transformed into hydrocarbonate of copper.

Found close to jar 1, 50 centimetres below the surface of the ground.

Iron.

A large instrument, possibly quite recent, for breaking the stems left in the *ray* after burning off. Closely resembles those used nowadays by the natives (fig. 193, 1).

The tang, or rather the handle, curved, about 14 centimetres in length; 8 mms wide at the top, 20 mms at the bottom. The business end is not as thick, at almost a right angle to the handle; length, 7 cms; width, 28 mms.

Found close to jars 4 & 5, 50 centimetres below the surface of the ground.

A strange piece.

Length, 86 mms; maximum width, 31 mms; thickness, about 3 mms. Rounded ends. One of the two long sides of the large faces is rectilinear; the other is shaped more like a circumflex accent.

Found close to jars 4 & 5, 50 centimetres below the surface of the ground.

This instrument is similar to the short sabres used nowadays by the Pong.[97]

A fragment of a knife with tang for hafting.

Maximum width of blade, 19 mms; not dissimilar to the type shown in Evans (*43*, plate IX, 2) and dating, if we are to take his view, from the Iron Age.

Quite probably found close to jar 6, 45 centimetres below the surface of the ground.

97 Remarkably, an iron sword of similar shape and the same dimensions has turned up at Västerbor (eastern Sweden) (Janse, in *The Museum of Far Eastern Antiquities, Stockholm*, Bulletin no. 3, p. 105, fig. 4; and Colani, *BEFEO*, vol. XXXIII, fasc. 2, p. 981). Probably from the Viking period (AD 800-1050). [See also her vol. I, bottom of p. 213.

PRESENT RESEARCH BYTHE EDITORS

Since the pioneering work conducted by Madeleine Colani limited research has been undertaken at the megalithic jar sites of Laos. The country became embroiled in the conflict that engulfed much of Southeast Asia during the 1970s and it was only with the cessation of hostilities have researchers been able to turn their attention, once again to the enduring mystery of the 'Plain of Jars'. Building on the research conducted in the preceding decades, a new multi-year Lao-Australian research programme funded by the Australian Research Council commenced in 2016. In the first stage of the project, The Lao-Australian team undertook archaeological research at Site 1 to compile an inventory of all the archaeological features at the site and to record the position and morphological details of each of the jars that dot the surface. Three units were also opened for excavation revealing evidence of a mortuary use for the site. Of particular interest was the identification of three forms of interment, secondary burial of bones, burial ceramic vessels containing infant remains and primary interment of two individuals. Scientific analysis of the skeletal material and material culture is in progress.

The second stage of fieldwork involved the excavation and mapping of another jar site located near the mountain-top village of Ban Phakeo where nearly 400 jars are perched on razor-back ridge surrounded by thick forest. A comparative analysis of these sites will be undertaken as the jars are morphologically distinct and the geography is much differ- ent to that of the broad lowland plain location of Site 1. Four new jar sites, probable quarries or transport sites were discovered during the field season. Future research will be expanded to examine some of the interesting similarities between the Lao jar sites and those located in

distant regions including Northeast India. Another location with comparable jars can be found in Central Sulawesi although these do not bear