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THE PLAIN OF JARS OF NORTH LAOS
Beyond Madeleine Colani

ROSALIA GENOVESE

Thesis submitted for the degree of PhD

2014

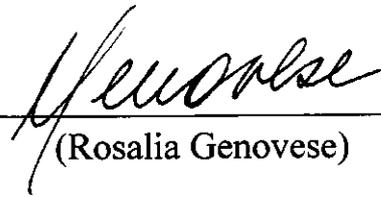


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ABSTRACT

The Plain of Jars is a series of archaeological sites located in the Xieng Khouang and Luang Prabang Provinces of north Laos, populated with megaliths attributed to the late Iron Age of Southeast Asia. The thesis combines the historical study of this area in relation to the colonial institutions in Laos from 1893 to the early 1940s, with my new mapping of the jar sites based on extensive original documentation. The historical focus is the French archaeologist Madeleine Colani (1866-1943), author of a two-volume monograph on the Plain of Jars (*Mégalithes du Haut-Laos*, 1935). The events leading up to the first archaeological mission to the Plain of Jars in May 1931, led by Colani under the auspices of the École Française d'Extrême-Orient (EFEO), are analysed. Also addressed is academic interaction between Dutch researchers in Indonesia and their French counterparts in Indochina and how these exchanges led to the first Far-Eastern Prehistory Congress held in Hanoi in January 1932. Under-researched or undocumented aspects of jar form are discussed, together with a sequence of carving steps based on my observations at quarries and jar sites. An expanded site distribution is analysed in relation to sources of stone and historical routes. The thesis re-contextualizes Colani's work in her time and with new survey and production matter, redefines jar design and iconography, the spatial distribution of sites and their close relationship to the places and processes of manufacture. Regional comparisons are explored and discussed in relation to megaliths and material culture from archaeological sites in Mainland and Island Southeast Asia, and South Asia.

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ABBREVIATIONS

AGIF = Annuaire Général de l'Indo-chine française
AMHN = Archives du Museum d'histoire naturelle
BAL = Bulletin des Amis du Laos
BAVH = Bulletin des Amis du Vieux Hué
BEFEO = Bulletin de l'EFEO
BEI = Bulletin Économique de l'Indochine
BGHD = Bulletin de Géographie Historique et Descriptive
BIPPA = Bulletin of the IPPA
BSEI = Bulletin de la Société des Études Indochinoises
BSGI = Bulletin du Service Géologique de l'Indochine
BSPF = Bulletin Société Préhistorique Française
CEFEO = Cahiers de l'École Française d'Extrême-Orient
ChrEFEO = Chronique de l'École Française d'Extrême-Orient
CNRS = Centre National de la Recherche Scientifique
CSEAS = Centre for Southeast Asian Studies
DAI KAAK = Deutsches Archäologisches Institut (DAI), Kommission für Archäologie
Außereuropäischer Kulturen (KAAK)
DoICT = Department of Information, Culture and Tourism, Lao PDR
EFEO = École Française d'Extrême-Orient
EIA = Environmental impact assessment
EurASEAA = European Association of Southeast Asian Archaeologists
FEPA = Far Eastern Prehistory Association
GIS = Geographic Information Systems
GSI = Geological Survey of Indochina (Service Géologique de l'Indochine)
IDEO = Imprimerie d'Extrême-Orient (Hanoi)
IGS = Institute of Geological Sciences (London)
IEH = Institut Indochinois pour l'Étude de l'Homme
IPPA = Indo-Pacific Prehistory Association
ISEAS = Institute of Southeast Asian Studies
ISSI = Institute of Social Sciences Information
JAR = Journal of Archaeological Research
JAS = Journal of Archaeological Science
JFA = Journal of Field Archaeology
JPASB = Journal and Proceedings of the Asiatic Society of Bengal
JRAIGBI = Journal of the Royal Anthropological Institute of Great Britain and Ireland
JRASGBI = Journal of the Royal Asiatic Society of Great Britain and Ireland
JSEAS = Journal of Southeast Asian Studies
JSS = Journal of the Siam Society (formerly known as JTRS)
JTRS = Journal of the Thailand Research Society
MSGI = Mémoire du Service Géologique de l'Indochine
NUS = National University of Singapore
PACEA = De la Préhistoire à l'Actuel, Culture, Environnement, Anthropologie
PAVH = Publications des Amis du Vieux Hué
PCPEO = Premier Congrès des Préhistoriens d'Extrême-Orient (Hanoi, Jan. 1932)
SBBR = SOAS Bulletin of Burma Research
SWJA = Southwestern Journal of Anthropology
TJA = Taiwan Journal of Anthropology
UNESCO = United Nations Educational, Scientific and Cultural Organization
WH = World Heritage
WREA = World Renewable Energy Assembly

GLOSSARY OF TERMS

Ahu	Sacred ritual space on Easter Island.
AMS	Accelerator Mass Spectrometry. A dating technique suitable for small carbon samples.
Andesite	A fine-grained, extrusive igneous rock.
Andesitic tuff	Igneous rock found in parts of the Sumatran Highlands.
Bai sema	Stones, or border markers, of the Dvaravati of central Thailand.
Ban	Lao: village.
Bedding	The arrangement of a sedimentary rock in beds or layers of varying thickness and character.
Breccia	A rock composed of broken fragments of minerals or rock cemented together by a fine-grained matrix.
CBT	Community-based tourism. Villagers undertake day-to-day management of a site for a share of the revenue from ticket sales.
Conglomerate	A sedimentary rock composed of fragments of pre-existing rocks.
Discontinuity	An interruption in the sedimentary structure, a time interval when sedimentary structure ceases or erosion sets in.
Dvarapala	Guardian deity.
Extrusive rock	Igneous rocks such as andesite, basalt, obsidian, pumice or rhyolite, that solidify on or above Earth's surface.
GIS	Geographic Information System. A collection of geographic datasets.
Gonds	Indian ethnic community speaking a Dravidian language.
Granite	A medium- to coarse-grained volcanic rock.
Hintang	Lao: hin = stone and tang = standing.
Hmong	Ethnic group closely related to the southern Chinese. Hmong groups are found in the hills of Laos, Thailand, Burma, Cambodia and Vietnam.
Igneous rock	Rocks formed from the solidification of molten rock material. There are two basic types: intrusive and extrusive.
Intrusive rock	Igneous rocks (diorite, gabbro, granite and pegmatite), that solidify below Earth's surface.
Kalamba	Large stone urns, or stone vats, in Indonesia's Sulawesi Island.
Kerkour	A cairn of rough stones.
Kha	Pejorative label (meaning 'slave') for the Kmhmu.
Kmhmu	Also known as Khamu or Kammu, the Kmhmu speak a Mon-Khmer language. In Laos, they dwell mainly in Luang Prabang, Xieng Khouang and Hua Phan Provinces.
Lawā or La-wa	Mon-Khmer speaking people.
Lenticular limestone	A highly porous type of limestone.
Lesoengbatoe	Flat stone slabs with multiple hollows.
Limestone	A sedimentary rock.
Massive jar	A jar structurally massive, consisting of a homogenous texture, exhibiting no bedding planes or discontinuities.
Meo or Méo	Pejorative label for Hmong ethnic groups.
Mica schist	A metamorphic rock consisting of quartz and mica, with a tendency to split into layers.
Microwear analysis	The study of the patterns of wear or damage on the edge of stone tools, which provides valuable information on the way in which the tool was used (Renfrew & Bahn 2004: 569).
Moai	Monolithic statues from Easter Island.
Muang	Lao: district, subdivided into <i>ban</i> .
Mudstone	A fine-grained sedimentary rock made up of tiny clay particles invisible to the naked eye.
Na	Lao: rice field.

Nagas	Ethnic communities of NE India speaking Sino-Tibetan languages.
Naiban	Village chief in Laos.
Nam	Lao: water or river.
Niogadji	Mushroom-shaped stone.
Nong	Lao: lake or pond.
NVA	North Vietnamese Army. Armed forces of Vietnam.
OSL	Optically Stimulated Luminescence. A dating technique often used in conjunction with radiocarbon analysis.
Outcrop	A rock formation protruding through the soil level.
Pathet Lao	People's Revolutionary Party or Lao People's Liberation Army, backed by the Viet Minh (from the Lao: pāthêet = country).
Phou or Phu	Lao: mountain.
Résident-Supérieur	The administrative head of each of the provinces of French Indochina: Tonkin, Annam, Cochinchina, Cambodia and Laos.
Rhyolite	Volcanic rock.
Ri guang jing	A Han bronze mirror.
RIR	Recessed Inner rim.
RLA	Royal Lao Army. The official military of the Kingdom of Laos during the 1964-73 civil war.
Sala	Lao: resthouse.
Sandstone	A sedimentary rock composed of sand-sized grains set in a matrix of clay or silt, bound together by cement. The sandstones of Xieng Khouang were deposited in shallow marine environments, mainly beach deposits (Baldock 2008: 4).
Sedimentary jars	Jars carved from sedimentary rock (sandstone, limestone and conglomerate).
Sedimentary rock	A sedimentary rock bed is formed from plant/animal remains or weathered and eroded particles from pre-existing rocks. These may be transported by water or wind and deposited to form sediments.
Tad	Lao: waterfall.
Tai	Group of peoples in Mainland Southeast Asia speaking Tai languages, including Thai, Lao, Shan and Lü communities, as well as the Yunnan Tai and tribal Tai of northern Vietnam.
Tasseing	District chief and the first port of call in justice administration for minor misdemeanours. Under French rule, it was the lowest administrative unit reserved for Lao nationals.
Tectonic joint	Deformation of a primary structure, able to form a fracture plane through the rock mass (Baldock 2008: 2).
Tham	Lao: cave.
Thap	Bronze sarcophagus.
That	Lao: stupa.
Vat or Wat	Lao: temple or funerary monument.
Viet Minh	See NVA.

CHAPTER 1

INTRODUCTION

This thesis is a study on the extent of jar distribution, quarries and the carving process, on form, surface decoration and regional parallels. It is the result of my fieldwork on the location of the jars and their associated quarries.

The aim of this thesis is to document aspects of the Plain of Jars by highlighting developments since the early 1940s. Coverage is also given to under-researched topics prior to the 1940s, including the publication of books and accounts by visitors and government officials in the latter part of the 19th and the early part of the 20th centuries.

1.1 Rationale for the Thesis and Research Questions

My interest in the Plain of Jars was sparked while volunteering in the Culture Unit at UNESCO Bangkok in 2007-2008. May 23, 2008 marks my first visit to the Plain of Jars. Then as now, I am struck by the area's peace and tranquillity and even the three most popular sites close to Phonsavan - J1, J2 and J3 - offer periods of solitary enjoyment throughout the day.

My research questions can be summarised into five main points, relating to historiography, undocumented diversity, spatial distribution and regional parallels.

1. The events that finally sparked the interest of the EFEO in 1931, to study the Plain of Jars. The research question centres on the 28-year gap, from 1903, the year Pierre Morin delivered a first map of the Plain of Jars to the EFEO, to 1931, when the EFEO financed the first mission to the Plain of Jars, led by Madeleine Colani. Until the late 1920s, research efforts at the EFEO centred largely on the study and documentation of monuments influenced by Hindu or Buddhist art, prompting some academics to declare that Indochinese archaeology had been absorbed by India, to the detriment of those areas, including the Plain of Jars, bypassed by Indianisation. The starting point for the question is the documented evidence that, following annexation in 1893, research projects in Laos in the early part of the 20th century were conducted under the banner of linguistics (e.g. Louis Finot's trip to Vientiane in 1900), the study of religious structures (Henri Parmentier's 1912 mission to document the temples of Xieng Khouang Province) or geology (the assessment conducted by Léon Dussault in Xieng Khouang Province in 1912-13).
2. How to critically assess Colani's contribution to our understanding of the Plain of Jars and her legacy, including extent of her fieldwork and theories. Colani's survey and documentation of 26 sites are still a point of departure for researchers and her publications on the subject are becoming more relevant, as they constitute the only source of information on sites which are now inaccessible or where the stone artefacts have been severely damaged to the point of destruction. Furthermore, her descriptions, sketches and photographs are the only documentary evidence for the artefacts retrieved from the Plain of Jars, most of which are now inaccessible for study.
3. Are the jars and discs of north Laos uniformly barrel-shaped and, if diversity is encountered, what are these features and what could account for morphological differences. The research question centres on the manufacture of the jars to suggest a possible carving sequence, styles in the lip rims and other under-researched topics such as double-ended jars and buried jars.

4. To redefine the geographical reach of the Plain of Jars, by bridging the gap between Colani's 26 sites and the 52 discussed in this thesis. Geographical coordinates to all the sites is a closely-guarded piece of information for a variety of reasons, including the need to prevent tourists from venturing to contaminated sites. The two Examiners and my Lead Supervisor have received an electronic copy of my complete Database, including the geographic coordinates for the 52 sites listed in Table 1 and illustrated in Map 1.3.
5. My final research question deals with other megalithic areas within Laos and discusses regional parallels with Southeast Asia and South Asia. This question progresses from Colani's suggestion in the 1930s of an envisaged connection between the Plain of Jars and Assam, linked by trade movements between coastal central Vietnam and the northeast of India via the Plain of Jars. The question compares the stone artefacts and the material culture of the Plain of Jars and its neighbours, to discover reasons that may account for affinities or differences.

1.2 Outline of Chapters and Thesis Plan

This thesis is organised into eight chapters (with core Chapters 2-7), an Appendix and a Bibliography. A summary of the thesis and arguments in each chapter are provided below.

Chapters 2-4 follow a progressive historical argument. Chapters 5-7 deal with diversity, spatial distribution and regional links respectively. They are set more alongside one another for their archaeological content. Chapter 8 synthesises Chapters 2-7 and reaffirms the thesis with the evidence provided in the research questions.

Chapter 1 introduces the rationale for the thesis and research questions, with related approaches, methodologies, extent of fieldwork and constraints.

Chapter 2 explores historical events following Laos' annexation and the projects to take stock of the country, led by administrators (Morin and Raquez), architects (Parmentier) and geologists (Dussault). The accounts of these early visitors were instrumental in arriving at the first inventory of sites published by the EFEO in 1926.

Chapter 3 analyses French colonial institutions in Indochina and the cultural exchanges between French and Indonesia-based Dutch academics. The chapter also underlines the fortuitous circumstances surrounding Colani's nomination to the EFEO in 1929, after 14 years spent at the Geological Survey of Indochina (GSI), and the EFEO's gradual shift from its mainstay of languages and religious architecture to field archaeology and the prehistory of Southeast Asia.

Chapter 4 discusses the pivotal role played by Colani in the EFEO's journey towards prehistory and field archaeology. It fell on Louis Finot, interim director, to offer Colani a position as corresponding member, which saw her posted on several excavations to the Plain of Jars starting in 1931. Colani's fieldwork centred mainly on excavations and the analysis and interpretation of material culture, an approach that continues to be the method of choice for contemporary archaeologists. For instance, the team led by Dominik Bonatz has employed similar comparative studies to discover "intra and inter-regional cultural links",¹ in documenting the megalithic complex of Jambi, in the Highlands of Sumatra. Colani was not the only researcher at the Plain of Jars and other academics' work is discussed throughout the thesis.

¹ Bonatz *et al.* 2006: 491.

Chapter 5 deals with under-researched aspects of jars, including lip rims, double-ended jars, jars with reduced cavities and buried jars. A carving sequence is suggested, from initial trimming of the boulder to transportation of the finished jar to the field. The megalithic jars of Xieng Khouang Province are a unique phenomenon in Mainland Southeast Asia and for this reason parallels draw on the work of other researchers, mainly in Island Southeast Asia.

Chapter 6 redefines the geographical reach of the Plain of Jars, with a spatial analysis and density of jar distribution for 52 sites. The spatial analysis is presented in relation to sources of stone and other factors like historical trade routes, to widen the geographical reach beyond the confines envisaged by Colani. These expanded borders will become obsolete when newly-signalled sites are surveyed in the districts of Thathom, Mokmai and Nong Hét (Map 1.4), as yet undocumented.

Chapter 7 explores regional links with other archaeological sites in Laos, Mainland and Island Southeast Asia, and South Asia. It places the Plain of Jars in the context of other megaliths and the material culture retrieved from these areas.

Chapter 8 reaffirms the thesis and illustrates the conclusions reached, with answers to the questions and justifications for the approach used by the study, as well as pathways forward.

1.3 Theoretical and Archaeological Approaches

The theoretical approaches in this thesis can be divided into three main disciplines: history, geography and archaeology. The historical content deals with the annexation of Laos into the Union of French Indochina and the setting that framed Colani's work at the GSI and the EFEO. The geography approach relates to the database and spatial analysis. The archaeological content is applied to a number of under-researched aspects, such as lip rims, buried and doubled-ended jars. The archaeological approach taken in this thesis can be broadly defined as that of landscape archaeology, of a regional survey, rather than a site-specific survey.

1.4 Fieldwork

Prior to enrolling for a PhD in 2009, I had visited the Plain of Jars on three separate occasions in 2003 and 2008 (two visits). I was aware of the practical and administrative difficulties that would impact on my fieldwork, including provincial instructions imposing a strict separation in movements by local transport means within and outside Phonsavan (since rescinded).

Preparatory fieldwork was undertaken in 2008 and in the summer of 2009. I soon became familiar with the three elements that would bear heavily on my research. Firstly, the lack of substantial publications on the Plain of Jars after 1943, the year of Colani's demise. Secondly, the realisation that the Lao Government does not issue excavation permits to students. Thirdly, terrain and weather conditions, as well as administrative difficulties, that turned the customary six-nine months fieldwork into a series of protracted periods spread over two years.

In the summer of 2010, I spent three months in Strasbourg, Colani's birthplace, perusing the city's archives and visiting and documenting her early years and her family background.

Fieldwork was undertaken in stages from 2010 to 2012. With the exception of the most visited locations near Phonsavan, the sites present logistical difficulties and it is not uncommon for three days to be necessary to visit one single site. Throughout the fieldwork, I was based in Phonsavan

because of its reasonably developed infrastructure (guesthouses, camera repair shop, internet connection, etc.) but also due to cultural considerations, in that overnight stays for foreign travellers are often not allowed in isolated corners of the province. In Phonsavan I was also able to interact with the provincial authorities, including the Survey Team.

My fieldwork was interrupted in the summer of 2011, when I had to return to Europe due to a family bereavement. Fieldwork resumed in the autumn of 2011, at the start of the dry season.

Fieldwork in Laos was supplemented by three separate trips to Vietnam, to peruse the library of the Institute of Social Sciences Information (ISSI), which inherited an almost complete set of EFEO publications at the end of the colonial period. The libraries at other institutions in Hanoi were also visited for copies of publications not stocked by the ISSI, including the reference library at the Museum of Geology, the keeper of Colani's early publications (1914-1928). At the EFEO library in Vientiane I obtained photocopies of historical and contemporary publications.

1.5 Methodology

A database of jar sites has existed for a number of years but is not in the public domain. The only information on sites available to the general public, in English, consists of a list of the eight sites, in Xieng Khouang Province, which are open for tourist visits. Colani's publications provide extensive details in French but the sites are listed by their historical names, many of which have since changed. Throughout the formulation and writing-up stages of the thesis, the database I have developed has been analysed and interpreted alongside relevant publications. In the final steps, the database was analysed by reference to the thesis rationale and research questions.

Data on some sites were obtained from numerous sources, some of which were not available at the start of the fieldwork. The methodology combines qualitative and quantitative assessment, with empirical data organised in an historical documentation and synthesis to interpret the era and work of Colani in a fresh light.

The first step consisted of reviewing and analysing the existing literature, mostly in French and printed during the colonial period. A few recent articles and book chapters in English deal with test excavations undertaken in the mid-1990s and during the 'Safeguarding the Plain of Jars' project (1998-2010). Material in German consists of reviews of Colani's monograph.

Though my extended database contains data for 120 sites, for this thesis I will refer to the 52 sites I have visited personally and on which I have employed a consistent data collection method. My Database has been developed by reference to:

- Colani's publications on the Plain of Jars (text and maps);
- the writings of other academics on the Plain of Jars;
- photographic information from the French National Library;
- maps displayed at tourist offices in Vientiane and Phonsavan;
- related publications by UNESCO;
- historical and contemporary geological reports.

I have also acquired some data as a result of joint outings with the Survey Team of Xieng Khouang Province, a reciprocal arrangement where I was allowed access to the sites and related archaeological reports in exchange for writing and editing archaeological and promotional

material for the Department, an arrangement that continues to this day. I have forged a mutually-beneficial relationship with the Xieng Khouang branch of the Department of Information, Culture and Tourism (DoICT) and I have undertaken to write a Guidebook on the Plain of Jars.²

Basemaps purchased from the Lao Geography Department in Vientiane have also been a source of data for village names and topography. However, these basemaps do not specify the location of jar sites or quarries and, upon reaching the nearest village, I have relied on villagers' knowledge (remunerated) to accompany me to the site. It has been a slow process but I have forged good local contacts at numerous sites. On occasions, as at site QS22, I have compiled a simple dossier on the site's history (documented by Colani in the 1930s) and delivered several copies to English-speaking villagers, urging the elders to share the stories surrounding the ancient jars and discs in their village. At other sites I have delivered printed copies of articles for distribution to villagers, so that they may take pride in their megalithic heritage.

Except for a fieldwork grant of £734 from SOAS (2010) and a Small Grant of £800 from SOAS-CSEAS (2012), my research has been self-funded. The CSEAS grant allowed me to visit particularly inaccessible sites through the hire of a four-wheel drive vehicle with driver and administrative costs related to district permits and armed escort to areas beset by tribal disputes.

1.6 Survey Area

The initial aim was to survey every jar site and quarry but it soon became apparent that this would be difficult to accomplish. Fieldwork consisted of survey work through five districts in Xieng Khouang Province (Paek, Phaxay, Phoukood, Kham and Khun, in Map 1.4) and some sites in Phou Khoun District, Luang Prabang Province. The majority of the 52 sites were surveyed once, while others required repeated visits due to difficult recording conditions or other factors. Visits to some sites in Khun (J38, QS39 and J40, mainly), have required repeated attempts and have always been conducted under supervision from local officials and armed escort.

The survey work consisted of visiting the archaeological sites where the jars are located but occasionally visits were made to a museum, temple museum or village setting housing relocated jars. Data on the sandstone jar at the Smithsonian Institution in the USA (Chapter 6.3.2, N437) were obtained by email communication with museum staff.

The vast majority of megalithic jars are still to be found in their original location but in recent decades a few jars have been moved to museums or to adorn religious structures in the village, while others have been moved as statements of political authority, as artefacts of national or local heritage or in response to commercial development.

Fieldwork at the sites has been combined with meetings and discussions with experts in other fields, such as stone masons for general carving information. It should be stressed, however, that megalithic jars are a unique expression and not a common area of expertise among stone carvers.

1.7 Recording Techniques

Geographic coordinates have been collected with a Garmin 301 GPS unit, set to WGS84. For elevations I have used data from GoogleEarth. On site, data were recorded on paper, with relevant sketches, and later transferred to a digital format. Where possible, jars and discs have

² The Guidebook is at an advanced draft form. Final edits and printing planned for 2015.

been photographed with a scale. Queries generated by a first level of analysis of these field data were dealt with by further readings on the topic but also through email exchanges with my Lead Supervisor and other academics from the fields of history, archaeology and geology.

1.8 Spatial Definition of the Plain of Jars

The geography of known sites has undergone transformation over the decades but there has been no adjustment to align the terminology with the increasing number of sites. Early in the 20th century, “Plaine des Jarres” defined J1/Ban Ang. This convention persisted for the next 20 years, as shown in a 1932 Madrolle Guide (Map 1.1).



Map 1.1. ‘Plaine des Jarres’, corresponding to present-day J1/Ban Haihin. The numbers below each location refer to the pagination in Madrolle’s 1932 Guide. Madrolle 1932: 11.

On a visit to J1 in 2014, the name printed on the direction sign read ‘Plain of Jars’ (Fig. 1.1). In current literature, “Plain of Jars” refers to all known jar sites in Xieng Khouang and Luang Prabang Provinces, to the exclusion of sites populated only with funerary stones.



Fig. 1.1. J1, still synonymous with ‘Plaine des Jarres’. L. Genovese (2014).

‘Laos’ is the country, ‘Laotians’ its people and ‘Lao’ is the language. In official literature, the country is known as Lao PDR (Map 1.2).



Map 1.2. Map of Lao PDR. Circled in red are the four provinces of Xieng Khouang, Hua Phan, Luang Prabang and Luang Namtha, and Vientiane capital city. History-map.com, 80241141 (C00140) 7-03.

1.9 List of Sites and Conventions

The 52 sites discussed in this thesis are listed in Table 1 and illustrated in Map 1.3. Other sites will be discussed and will be referred to by their geographical name.

Table 1 – List of 52 sites discussed in this thesis

Site #	District	Site type	Jars	Discs	FR	RIR	OR	RIR-O	PR	CR	Stone	DE	BJ
J1	Paek	J	339	30	✓		✓		✓		S		✓
J2	Phaxay	J	93	14	✓	✓	✓	✓			S		
J3	Phaxay	J	247	45	✓	✓	✓				S		✓
J4	Paek	J	3		✓						S		
QS5	Paek	QS	11	2	✓						S		
Q6	Paek	Q	14								S		
J7	Paek	J									S		
Q8	Phaxay	Q	8		✓	✓					S		
Q9	Paek	Q	10								S		
Q10	Paek	Q									S		
QS11	Paek	QS	2								S		
Q12	Paek	Q	34	2							S		
J13	Khun	J	3	1	✓	✓	✓				G		✓
Q14	Khun	Q									G		
Q15	Khun	Q									G		
QS16	Khun	QS	36	1	✓	✓	✓				G		
QS17	Khun	QS	37		✓		✓				S		
Q18	Khun	Q	8		✓		✓			✓	S		
J19	Paek	J	1								S		
J20	Kham	J	21	1	✓	✓					C		
Q21	Paek	Q	9		✓	✓	✓			✓	S		
QS22	Kham	QS	10	1		✓	✓				S		
QS23	Kham	QS	28		✓	✓	✓				B		
J24	Kham	J	12								C		
J25	Phoukood	J	24		✓		✓				S		
J26	Phoukood	J	11	2	✓	✓					S		
J27	Phoukood	J	4	3	✓	✓					S	✓	
QS28	Kham	QS	33	2		✓					S		
J29	Kham	J	7								L		
J30	Kham	J	3								S		
J31	Paek	J	1		✓						S		
J32	Kham	J	2								S		
J33	Kham	J	9		✓						S		
QS34 ¹	Kham	QS	1								L		
QS35	Kham	QS	132		✓	✓					S		
J36	Paek	J	35		✓	✓					L		
J37	Phoukood	J	8		✓	✓					S	✓	
J38	Khun	J	17		✓	✓	✓				G		✓
QS39	Khun	QS	61		✓	✓	✓				G		✓
J40	Khun	J	16		✓		✓				G		✓
J41	Paek	J	371	96	✓	✓	✓				S		
QS42	Phoukood	QS	2		✓						S		
J43	Paek	J	2		✓						S		
QS44	Paek	QS	9		✓	✓	✓				S		
J45	Paek	J	6		✓						S		
J46	Kham	J	6		✓						S		
QS47	Kham	QS	1		✓						L		
J48	Kham	J	1			✓					C		
QS49	Khun	QS	9		✓	✓	✓	✓	✓		G		
J50	Phou Khoun	J	2	2	✓						S		
J51	Phou Khoun	J	21	21	✓						S		
J52	Phou Khoun	J	19		✓	✓					S		
Total			1739	223									

Source: Database L. Genovese (extract)

Site types: J = jar site; Q = quarry; QS = quarry + jars

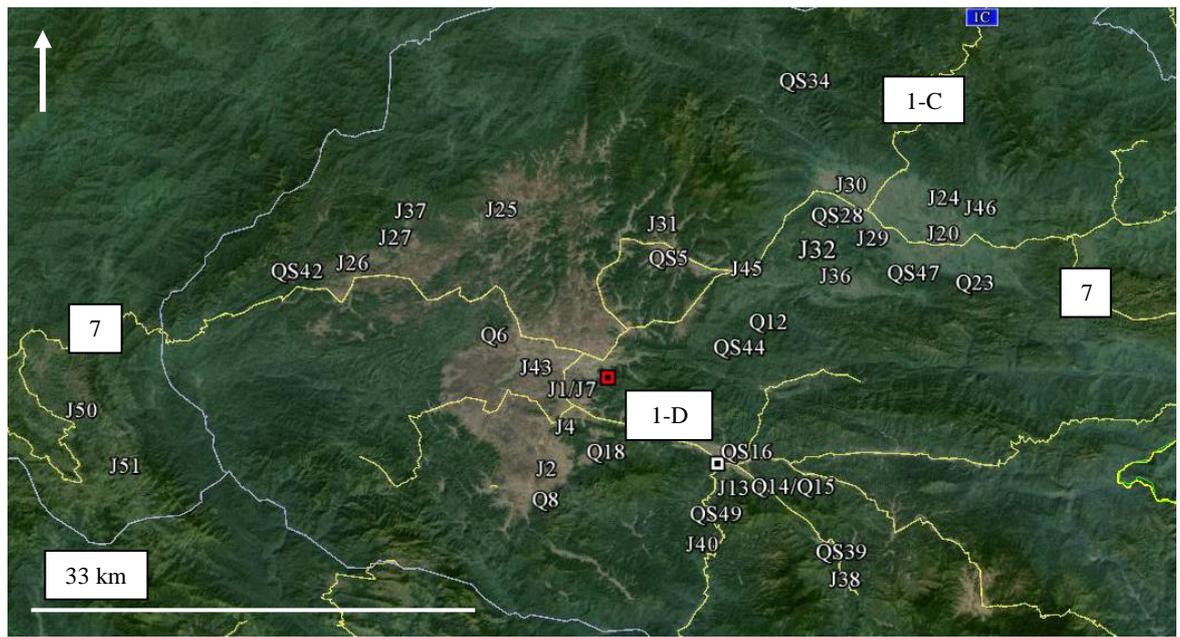
Rim: FR = Flat; RIR = Recessed inner; OR = Outer; RIR-O = RIR + Outer; PR = Prominent; CR = Collar

Stone types: S = sandstone; G = granite; C = conglomerate; L = limestone; B = breccia

DE = Double-ended jars; BJ = Buried jars

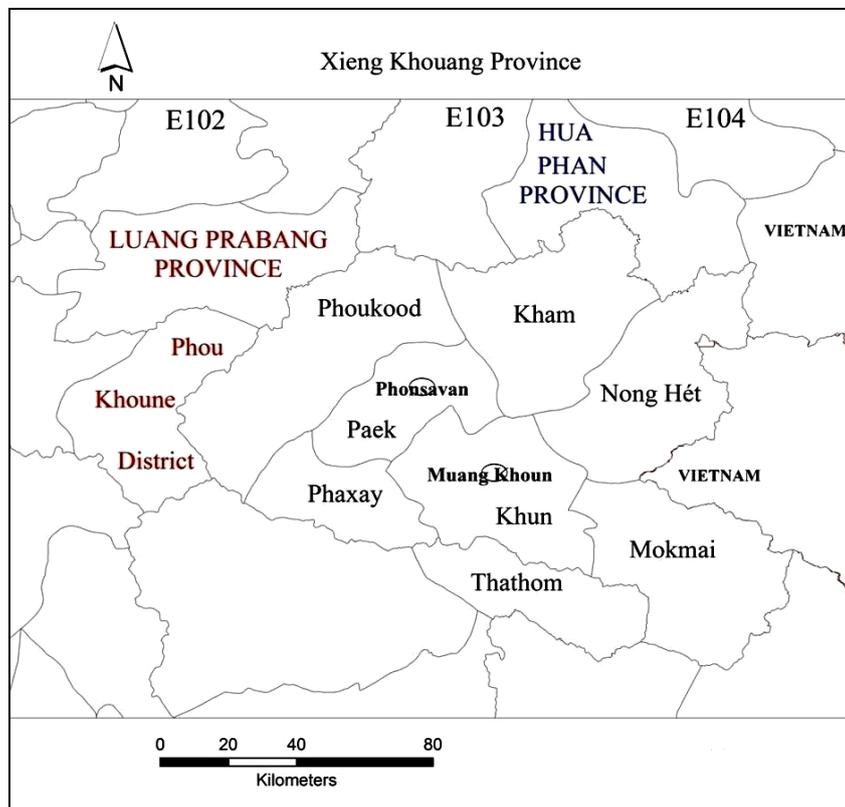
¹ Unable to establish rim style due to badly fragmented jar

Some sites in Map 1.3 are not displayed as they are located a short distance from another site. Their exact location is shown in the expanded area maps in Chapter 6.



Map 1.3. The 52 sites discussed in this thesis. The red square identifies Phonsavan and the white square (near QS16) stands for Muang Khoun, the former capital of Xieng Khouang Province. GoogleEarth.

Modern Xieng Khouang Province (Map 1.4) consists of eight districts: Paek, Phaxay, Phoukood, Kham, Nong Hét, Khun, Thathom and Mokmai. Phou Khoun District, Luang Prabang Province, also hosts numerous sites.



Map 1.4. The eight districts of Xieng Khouang Province (in black). Also shown are Phou Khoun District in Luang Prabang Province (in red) and, in blue, Hua Phan Province, home of undecorated standing stones and discs. Phonsavan, in Paek District, is the new capital of Xieng Khouang Province. Shown in Khun District is Muang Khoun, the former provincial capital (referred to as 'Xieng Kouang' in historical texts). Map drawn by Lia Genovese in ArcMap.

Lao is a tonal language of the Tai-Kadai family, for which there is no common Romanisation standard. Transliterating Lao phonetics is therefore prone to inconsistencies. For village and town names, I have used the Romanised spelling on basemaps issued by the Lao National Geographic Department in Vientiane. For personal names, I have used spellings from official websites (UNESCO, the National Regulatory Agency of Laos, etc.) or as printed on business cards.

Locations visited by early explorers are illustrated through maps printed in their relevant publications. Villages visited by later explorers, such as Colani's visit to Ban Nakham (QS16) in 1940, have been cross-checked to 1:50,000 topographic maps produced in the 1960s and 1970s by the US National Geospatial Intelligence Agency in the Indochina, Southeast Asia and Laos series, available from Texas University (<http://www.lib.utexas.edu/maps/topo/laos>).

In Laos, when a village is affected by bad luck or illness, it is felt that its name is inauspicious and must be changed. For instance, in recent years, Ban Moune village, in Kham, became Ban Sang when villagers experienced sickness.³ This practice was also reported by Colani: "In Indochina, village names are easily changed".⁴ Wherever possible, village names have been cross-checked to their new appellation.

The referencing style used is: author, year of publication and identifier (page, figure, plate, table, etc.). Bibliographical references are shown as footnotes in this format. Footnotes are also used to clarify meanings or to supply additional information.

Mentions of 'Colani's 1935 monograph' or 'the 1935 monograph' refer to *Mégalithes du Haut-Laos*, published by the EFEO in 1935 and abbreviated as follows in the references:

- Colani 1935a, v1 = Vol. 1 of Colani's 1935 monograph
- Colani 1935a, v2 = Vol. 2 of Colani's 1935 monograph.

References to the '2008 geological survey' or similar are for the survey carried out by Jeremy Baldock in the early part of 2008, with a report issued by the UK-based firm GWP Consultants and delivered to UNESCO Bangkok in February 2008.

Quotations of up to four lines of text are shown in-text within quotation marks. Longer quotations are indented and shown without quotation marks in smaller font size.

Text within quotation marks is reproduced *verbatim*.

[...] indicates that words have been omitted in a longer quotation from a writer's work.

[*sic*] denotes a quote *verbatim*.

[] denotes a clarification or to supplement omissions in the original text.

Working translations French into English (and occasionally Lao into English) are by the author, unless otherwise indicated.

The term "site" can refer to three different places: a quarry, a jar site or a hybrid of these two. In this thesis, these locations will be identified as the examples below, unless otherwise indicated:

³ Communication of 17/12/2011 from Konekham Mahaphan, a native of Ban Hin, near QS22.

⁴ Colani 1933d: 104, N1.

J2 = Jar site 2
 Q8 = Quarry 8
 QS35 = Quarry-site 35

A *jar site* contains carved jars and discs, with stone artefacts transported there from a workshop or quarry. Exceptionally few instances of carving at a jar site have been documented.

A *quarry* is a source of stone which may or may not include carved jars or partially-carved jars.

A *quarry-site* is located near a source of stone and can contain carved and incomplete jars, as well as rough and trimmed boulders.

Two crucial distinctions can be made between a quarry and a quarry-site. First, the physical location of the completed jars: a quarry is a source of stone and a workshop, from where the finished jars are transported to the final destination (jar site). In the case of a quarry-site, however, the completed jars are left where they were carved and can share the space with partially-carved jars as well as boulders. Therefore, ‘carving’ is a feature of both quarries and quarry-sites but whereas in the former the finished jars are transported to the field (e.g. from Q8 to either J2 or J3), in the latter they remained at the place of carving (as at QS35), ostensibly fulfilling the same function. This is the official definition for quarry-sites: “a combination of quarry and jar site and the rock source protrudes at the site”.⁵

The second crucial distinction concerns evidence of carving. There is little or no evidence that carving was carried out at the field where the finished jars were deposited but there is abundant evidence at quarry-sites, where partially-carved units are found together with finished jars. Quarry-sites, therefore, fulfilled the same role as jar sites but additionally functioned as workshops due to their proximity to a source of stone.

The Ban Phakeo group is an assembly located in Paek District. Its six sites are listed in Table 2:

Table 2 – Ban Phakeo

Site	Jars	Discs
Q9	10	0
Q10	0	0
QS11	2	0
Q12	34	2
J41	371	96
QS44	9	0
Total	426	98

References in this thesis at times are to the Ban Phakeo group as a whole but at other times simply to J41, the largest site, for comparisons with other large sites like J1 or J3.

In historical accounts, locations populated with jars were associated with the nearest village, irrespective of distances. During the surveys by Henri Parmentier (1912) and Madeleine Colani (1930s), the jar locations were identified as Ban Ang, Lat Sen, Ban Soua, or as the case may be. This convention is difficult to maintain in modern times since village names in Laos (as in other countries in the region), are easily changed. UNESCO and the Lao government have instituted a

⁵ Plain of Jars Archaeological-Landscape Heritage Management Plan, First Draft, February 2009, p. 7.

system where a number identifies a jar site, a quarry or a quarry-site. For example, Site 1 corresponds to Ban Ang, Site 2 identifies Lat Sen, Site 3 stands for Ban Soua and so on (respectively J1, J2 and J3 in this thesis).

The numerical sequence is independent of jar quantities, a convention that recalls Barnes' study of archaeology in paddy fields at Nara, Japan, where "*Site* in the Japanese sense is a location of archaeological discovery. One find spot may be termed a site".⁶

The area covered by a site can vary from a few metres, as for the single jar at J19 or J31, for example, to the 28.5 ha at J1. A site cannot be defined in terms of "surface area" because gates or other delimiting barriers never demarcate its beginning or end, one exception being the barrier at J3, installed to protect the jars from grazing cattle. The problem of boundaries is encountered often in field archaeology. Excavating at Ban Lum Khao, Thailand, for instance, Higham has stated: "Even with a relatively large exposure such as that at Ban Lum Khao, one encounters the problem of boundaries, and we do not know where the rows [of graves] terminate, and how many graves there are in each".⁷

Jar will identify a stone jar, carved from a single rock boulder. *Pot* will identify a terracotta vessel. *Recumbent*, *reclining* or *horizontal* refers to a jar flat on the ground. Where measurements are given for upright jars, these exclude the portion sunken into the ground.

Jar burial generally identifies burial in a clay pot, as at Sa Huynh, central Vietnam. I define these as 'pot burials'. 'Burial jars' is frequently applied to the stone jars of Xieng Khouang, even though no skeleton has ever been found inside a jar.⁸ For the sake of clarity, and because there is no consensus on jars as stone coffins, this thesis will not use *jar burial* in reference to the megalithic jars of north Laos, except when quoting other writers' work.

Disc will identify a plain or decorated monolith and stone discs shaped like a dome.

Often called the French Indochina War or "la sale guerre" (the dirty war) in France, the First Indochina War began on 2 November 1946, when several thousand Vietnamese civilians died during a French naval bombardment of the port city of Haiphong, near Hanoi. Laos participated until 1954, primarily on the side of the French in their struggle against the Viet Minh.

The Second Indochina war refers to the 1964-73 conflict, when the Royal Lao Army (RLA), allied to CIA-backed forces and Hmong troops, battled with Pathet Lao communist forces allied to the North Vietnamese Army (NVA). On 2 December 1975, Laos became a one-party state, with Vientiane as the capital.

Dates are in the dd/mm/yyyy format.

⁶ Barnes 1986: 374.

⁷ Higham 2002: 143.

⁸ With the exception of ash and bones found by Colani inside a few stone jars at J1 and J3.

CHAPTER 2

EARLY VISITORS TO THE PLAIN OF JARS

This was the earthly paradise that all the French had promised; the country that was one vast Tahiti, causing all the French who had been stationed there to affect ever after a vaguely dissolute manner.
- N. Lewis. *A dragon apparent: travels in Cambodia, Laos and Vietnam*, 2003: 258.

The above quote implies that French nationals were shaped by Laos, the country where they found themselves “most happy”,⁹ according to Virginia Thompson, an American journalist. By virtue of the treaty of 3 October 1893, signed in Bangkok and ratified by French Parliament on 2 February 1894, Siam agreed to withdraw from the left bank of the Mekong, giving rise to Laos as the fifth province of Indochina. The status of Laos was that of a protectorate, similarly to Tonkin, Annam and Cambodia, while Cochinchina (southern Vietnam) was the only colony. Visitors to Xieng Khouang in the 19th and early 20th centuries consisted of surveyors, cartographers, government officials, architects and geologists, commissioned to re-draw borders between Thailand and Indochina, to take stock of natural resources or to document its religious structures. For the first 30 years of the 20th century, the EFEO’s research focus centred on languages and the documentation of Hindu or Buddhist architecture. As early as 1914, Henri Parmentier published his documentation on Vat Phu, a Hindu temple in the former Khmer outpost of Champasak, in southern Laos, a site aligned to the EFEO’s research interest: “The work in the south [of Laos] was an extension of the scholarly interests in the Khmer sites of Cambodia”.¹⁰ The Plain of Jars was publicised as the epitome of exotic Indochina, a mix of rugged overland travel and mysterious megalithic jars, but the first archaeological expedition to the area would have to wait until 1931, some 38 years after annexation.

2.1 Xieng Khouang: Geography, Climate and Ethnic Groups

There are 17 provinces in Laos, divided into *muang* (districts), which in turn are divided into *ban* (villages). Laos measures 1700 km north to south and over 500 km east to west and just 140 km at its narrowest. Much of the country is characterised by craggy terrain, with forest cover occupying over half of its 237000 sq. km. surface.

The Truong Son range, also known as the Annamite Cordillera, runs NW to SE for over 1000 km along the Laos-Vietnam border, forming a natural border between the two countries. The Cordillera is home to the 2720 m peak of Phu Xai Lai Leng, on the Laos-Vietnam border.

Laos borders China to the north, Vietnam to the east, Cambodia to the south, Thailand to the west and Myanmar to the NW. Its latitude spans from 14°N in the southern province of Champasak to 23°N at the northernmost tip of Phongsali. Its longitude progresses from 100°E in Bokeo, on the border with Myanmar, to 108°E in Attapeu, close to the Vietnamese border. The climate is characterised by sub-tropical conditions in the south, including Vientiane capital city, and cooler temperatures in the north. The hot dry months of March-April usher in the southeast monsoons from May to October. The average annual rainfall is 1300-3000 mm,¹¹ with sharp differences between the northern mountainous areas and the tropical lowlands in the south along the Mekong and its tributaries. In the closed valleys, temperatures can rise to 42°C (109 Fahrenheit).

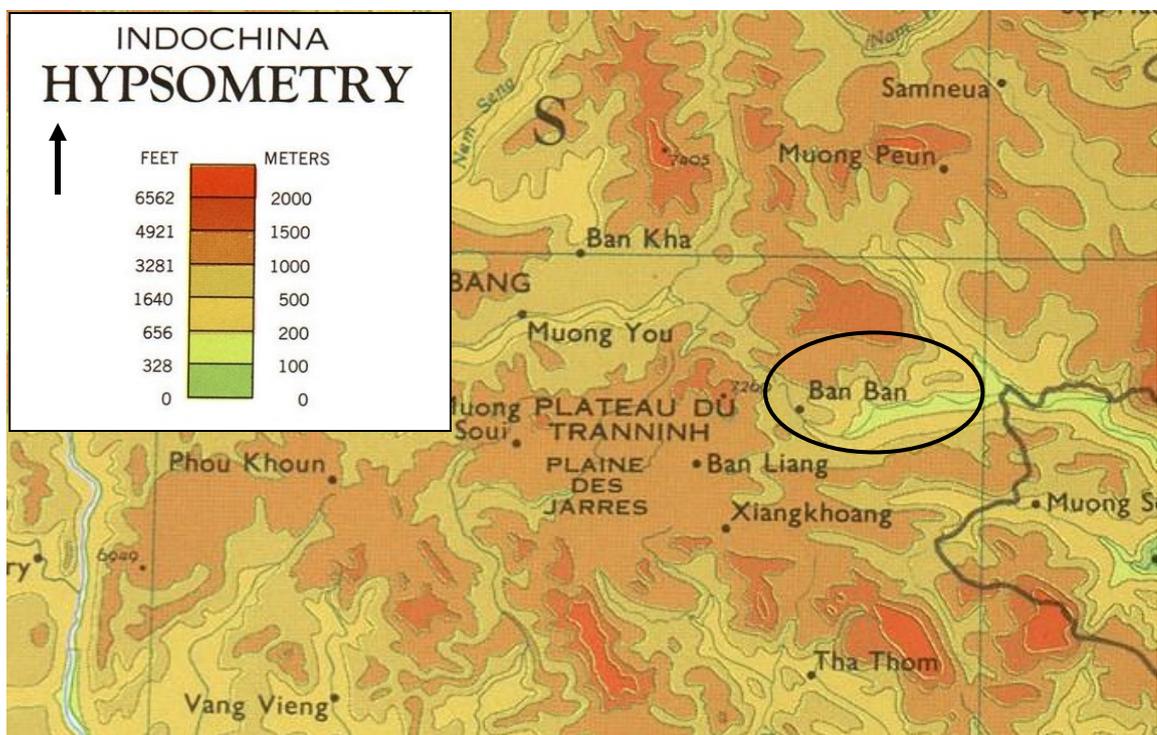
⁹ V. Thompson. 1937. *French Indochina*, quoted in Askew *et al.* 2010: 75.

¹⁰ Chapman 2013: 120.

¹¹ UNDP 2009: 10.

Xieng Khouang Province is located east of the Mekong and shares domestic borders with Hua Phan, Luang Prabang, Vientiane, Xaisomboun and Bolikhamxai Provinces and an international border with Vietnam's Nghe An Province. It occupies an area of 15880 sq. km. and at May 2012 the population totalled 37,500.¹² The province is set at an average altitude of 1100 m and hosts several peaks rising 2000 m above sea level, including Phou Bia, set at 2819 m, the highest peak in Laos. Limestone-rich sedimentary rock is prevalent in the valleys, while on higher ground limestone, conglomerate and sandstone can be found.

The province is densely forested. The fertile central grassland plateau of Tran Ninh (Map 2.1) extends 60 km east-to-west and 40 km north-to-south. The Tran Ninh appellation was created by the Vietnamese, after they wrested control of the area from the Thai Phouan (Lao) in the 15th century. The French historian Charles Archaimbault (1921-2001), who documented the customs and rituals of Xieng Khouang Province, including a buffalo sacrifice, states: "In the 15th century, the Annamites named this *muang* Tran-ninh (garder la paix) [sic]".¹³



Map 2.1. The low-laying basin of Muang Kham, with Ban Ban as its main district town. Texas University, Map of Indochina, 78336-8-70.

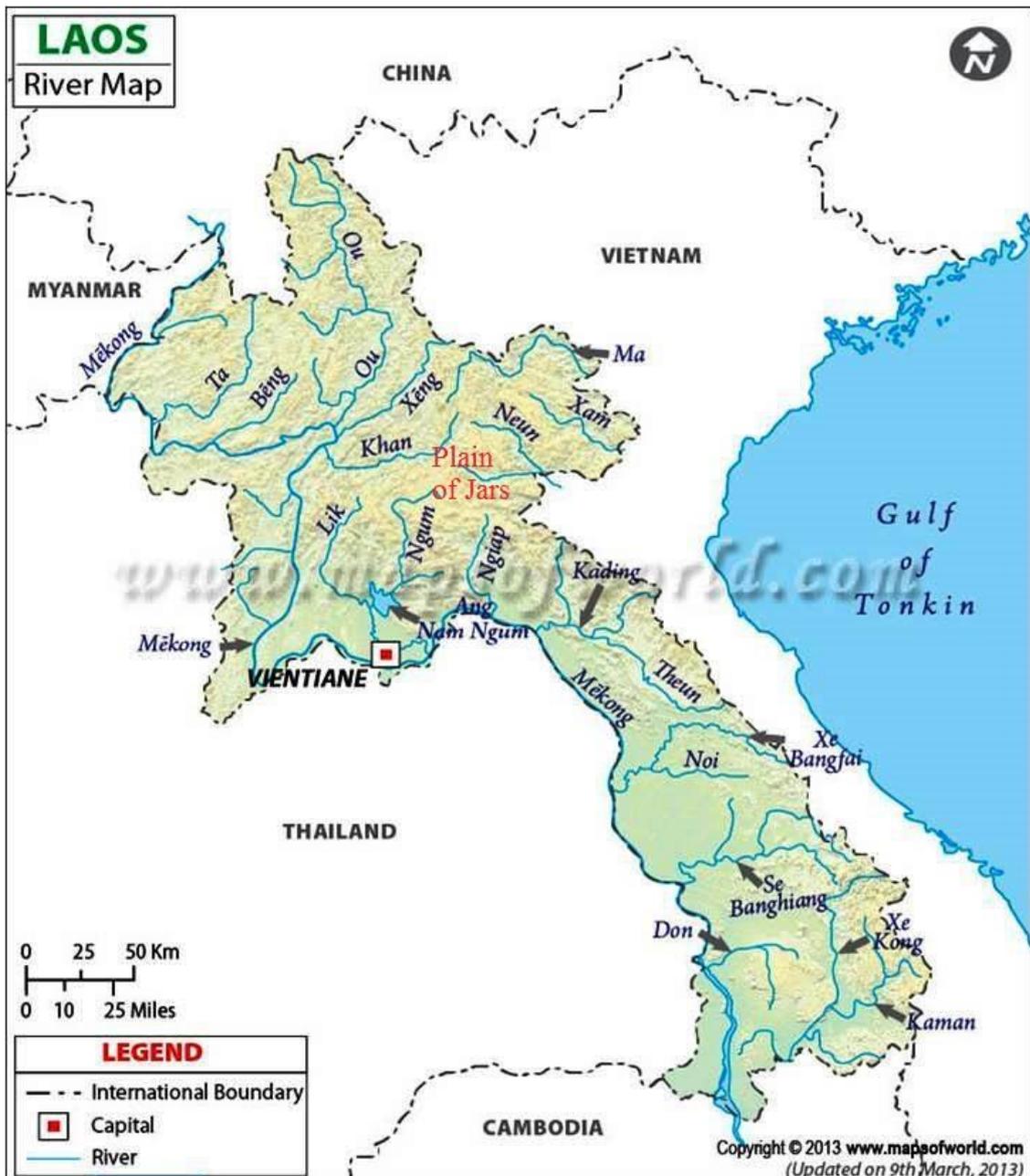
The Nam Khan forms a natural barrier between Xieng Khouang and Luang Prabang Provinces. The large reservoir of Nam Ngum, in Vientiane Province, has its source in the north of the Tran Ninh plateau (Map 2.2). Phonsavan is located 440 km NE of Vientiane city and 250 km east of the former royal capital of Luang Prabang. Xieng Khouang Province is set within 19°N latitude with a longitude spanning from 102°E to 104°E.

Jacques Fromaget (1886-1956) and Edmond Saurin (1904-1977), surveyed north Laos on behalf of the GSI and concluded that the vast plain of the Plain of Jars "is furrowed by the narrow alluvial depressions of the Nam Ngum [river] and its affluents".¹⁴

¹² Lao Ministry of Foreign Affairs (<http://www.mofa.gov.la/en/about-lao-pdr>) accessed 09/12/2013.

¹³ Archaimbault 1991: V, N1.

¹⁴ Fromaget & Saurin 1936: 8.

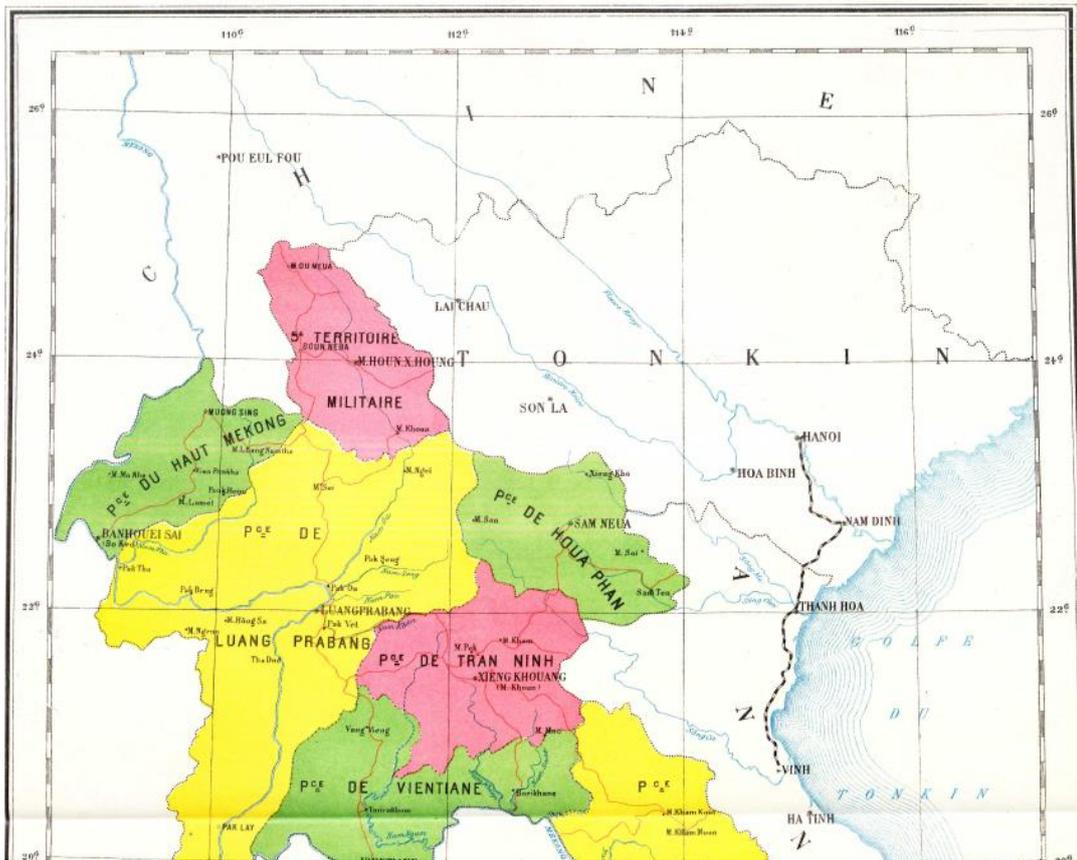


Map 2.2. Main rivers of Laos.
Maps of World.

The physical definition of “Xieng Khouang” has changed over the last few decades. Early in the 20th century, colonial maps identified the area broadly corresponding to present-day Xieng Khouang Province as ‘Tran Ninh’, with Xieng Khouang (modern Muang Khoun) as its provincial capital, as illustrated in this 1920 Atlas (Map 2.3) published by the French government.

This appellation was in existence even before the 1893 annexation of Laos, as when Captain Cupet of the Mission Pavié wrote that on 8 May 1888 he began his journey “towards Xieng-Khouang, capital of the Tran-Ninh”.¹⁵ It is still common for older generations to use “Xieng Khouang” in reference to both the former provincial capital and the province itself, even though the former provincial city has since been renamed Muang Khoun.

¹⁵ Cupet 1900: 37.



Map 2.3. Tran Ninh Province, with Xieng Khouang former capital (modern Muang Khoun). Atlas de l'Indochine 1920, Service Géographique de l'Indochine, Carte no. 21.

Until the mid-1960s, the area encompassing Xieng Khouang Province was smaller and excluded districts like Ban Si and Muong Soui (NW) and Ban Ban (east). Muang Phong Savan was a district in its own right with a boundary demarcating it from Muang Xieng Khouang (Map 2.4).

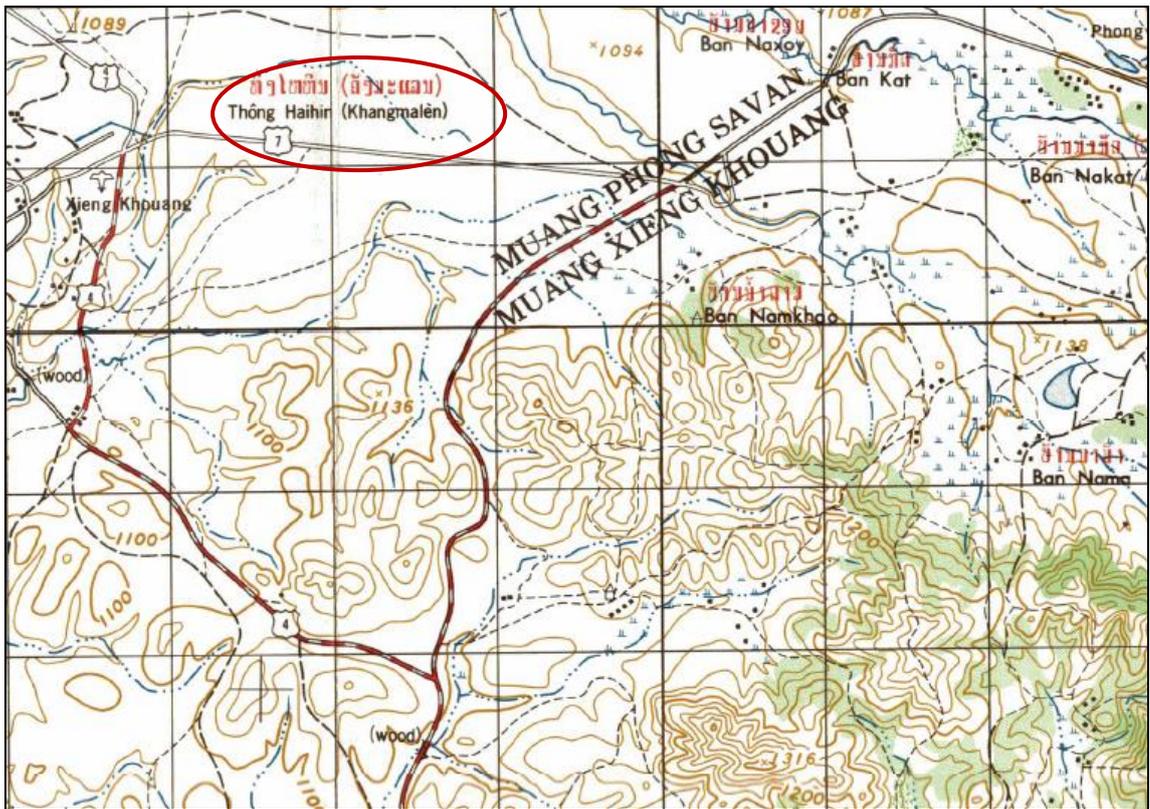
Xieng Khouang Province was one of the first to be surveyed in 1912 by the GSI. The mountains have provided abundant and varied rock for the jars scattered all over the province but in Luang Prabang Province, jars and discs have been documented exclusively in sandstone. The customs of communities from west and east are reflected not only in the diverse monuments erected – megalithic jars in Xieng Khouang and funerary stones to the west in Luang Prabang Province – but also in the grave goods dedicated to the departed, with bronze bells found mainly in the west and SW and more modest findings of glass beads at sites in the east. An apt description might be the contrasting ecologies demanding “different adaptation strategies”,¹⁶ discussed by Moore in relation to differences in the development of walled cities in Upper and Lower Myanmar.

In Xieng Khouang Province, where wintry conditions prevail from November to February, significant temperature variations have been recorded. In 1932, a temperature of -5°C (23 Fahrenheit) was recorded in the capital in January, followed by 40°C (104 Fahrenheit) in May.¹⁷ Isabelle Massieu (1844-1932) arrived in Saigon on 6 October 1896, a full two years before Colani’s 7 January 1899 arrival in Hanoi. Massieu travelled to Burma, the Shan states, Siam, Tonkin and Laos. Crossing Laos from early February 1897, she compared the Tran Ninh plateau to “a real *sanatorium* [original emphasis], a vast plateau at 1600-1800 m of altitude”.¹⁸

¹⁶ Moore 2007: 151.

¹⁷ Colani 1943: V, N3.

¹⁸ Massieu 1901: 224.



Map 2.4. Phongsavan and Xieng Khouang as two separate districts. The circle identifies *Khâng Mả Lên* (ponies' playground), first used by James McCarthy in his travel accounts from the 1880s. Texas University Map 5647-IV, series L7015, 1965.

Images from Raquez's May-June 1900 visit to J1, in the early stages of the rainy season, show bare ground around the jars (Fig. 2.1 & Fig. 2.2).



Fig. 2.1. J1. Large jar on the hill at the entrance to the site. Raquez 1902: 379.



Fig. 2.2. J1. One of the earliest printed images of megalithic jars from Xieng Khouang. Raquez 1902: 327.

Similarly for images of J2 in 1931, taken by Colani in October, when foliage is at its most luxuriant, but the largest jar on the western hill is surrounded by barren ground (Fig. 2.3). The same jar was photographed in December 2011 (Fig. 2.4), in the cool and dry season.

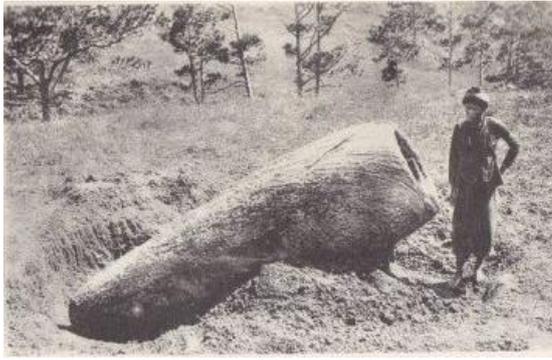


Fig. 2.3. J2, October 1931. The ground around this sandstone jar was excavated to expose its full length of 300 cm.
Colani 1935a, v1: pl. XVII.



Fig. 2.4. J2. The same jar photographed in December 2011, several months after the end of the rainy season.
L. Genovese (2011).

Laos' ethnic map reflects its position near China, Vietnam, Cambodia, Thailand and Myanmar, with the ethnic groups in the hilly areas of Laos also found in these neighbouring countries. Xieng Khouang Province is home to numerous ethnic groups, including Thai Phuan, Hmong, Kmhmu and Tai Dam. The Phuan represent the majority but other groups can constitute significant minorities in hilly areas. In the early 1800s, Hmong tribesmen moved gradually into the province via Tonkin and “accepted the tutelage of the Phouan (Lao) [*sic*] princes who ruled the region”.¹⁹ The Hmong have woven a chequered history during their relatively short stay in Laos, forging powerful alliances through tutelage or subjugating other ethnic groups. In the Second Indochina War, the Hmong general Vang Pao (1929-2011)²⁰ led his tribesmen to fight with the RLA and the CIA against Pathet Lao and NVA forces.

2.2 The Plain of Jars as a Tourist Destination

By the 1920s, Xieng Khouang featured in guidebooks extolling the rugged beauty of Laos and its enigmatic jars, a destination in the “mysterious, fatalistic and inscrutable East”.²¹ The tourist guides compiled by Claudius Madrolle (1870-1949) were intended to play a role among the French population at home and justify colonialism for the betterment of undeveloped countries. The introduction to the travel diary charting Madrolle's first trip to Asia, from 1895 to 1896, was targeted at the increasing numbers of French visitors to the Far East and Indochina, “where the French system of Protectorate has resulted in rapid and positive change [...] The practical information has been collected with the utmost care for the many visitors who wish to witness the astonishing achievements made by France in the Far East”.²²

The preface to the 1925 and 1932 editions of the Madrolle Guides recalls Britain's ‘jewel in the crown’ in reference to India: “Indochina is one of the jewels in France's colonial Empire”.²³ The authors of these tourist guides were often officers who had served in France's colonial expansion and it was perhaps inevitable that the megaliths of north Laos should be compared to similar artefacts in North Africa: “These funerary monuments recall the kerkour of the high plateaux of

¹⁹ Gunn 1986: 111.

²⁰ Vang Pao (real name: Vaj Pov) was born in Nong Hét District, Xieng Khouang Province, and died in the USA, where he was given sanctuary at the end of the 1964-73 civil war.

²¹ Crocker 2003: 5.

²² Madrolle 1902: I.

²³ Madrolle 1932: 5.

Algeria”.²⁴ Raquez had used the same analogy – *kerkour* – in reference to the stone cairns he encountered in his travel through Xieng Khouang in 1900.²⁵

The Madrolle Guides advised tourists to journey to Xieng Khouang from Phu Dien in central Vietnam (Map 6.6 Chapter 6.2). Travel within the province was “a very tiring but picturesque journey”.²⁶ The 1925 edition exalted the natural beauty of Xieng Khouang Province, covered in pine forests, set at an altitude likely to appeal to European visitors, and the home of megaliths: “These stones shaped into jars still bear the signs of tool marks [...] This picturesque area has been named the Plain of Jars (altitude: 1,100 metres) [*sic*]”.²⁷ The 1932 edition included suggested itineraries for visits to J1, described as a vast plain with large, carved stone *cists* comparable to European menhirs. Phelan defines a menhir as “a large stone, sometimes of considerable height, set vertically into the ground”.²⁸

The 15 m tall limestone cave (Fig. 2.5 & Fig. 2.6) at J1, whose apertures on the ceiling function as chimneys, was the dwelling place of Neolithic man, since converted “into a pagoda”.²⁹



Fig. 2.5. J1. Cave, with shrine at the entrance. L. Genovese (2009).



Fig. 2.6. J1. Shrine at the cave's entrance. L. Genovese (2009).

A tourist map issued in 1924 (Map 2.5) illustrates the well-developed road infrastructure between Saigon and the temples of Angkor, a contrast to the isolated setting of most of Laos and particularly the Plain of Jars.

With Hanoi as the political capital of French Indochina, Vietnam occupied the lion's share in these travel publications, depicted as an outpost of French culture. The Plain of Jars was promoted for its rugged allure, whose challenging transport conditions portrayed it as the last frontier, an exotic corner within exotic Indochina, a mixture of close-to-nature and untamed beauty. If the weak or inexistent infrastructure made Laos prohibitively expensive to develop under colonial rule, its image as the land of lotus eaters³⁰ could infuse mystery and adventure in a far-flung corner of France's eastern dominion.

²⁴ Madrolle 1932: 70.

²⁵ Raquez 1902: 363.

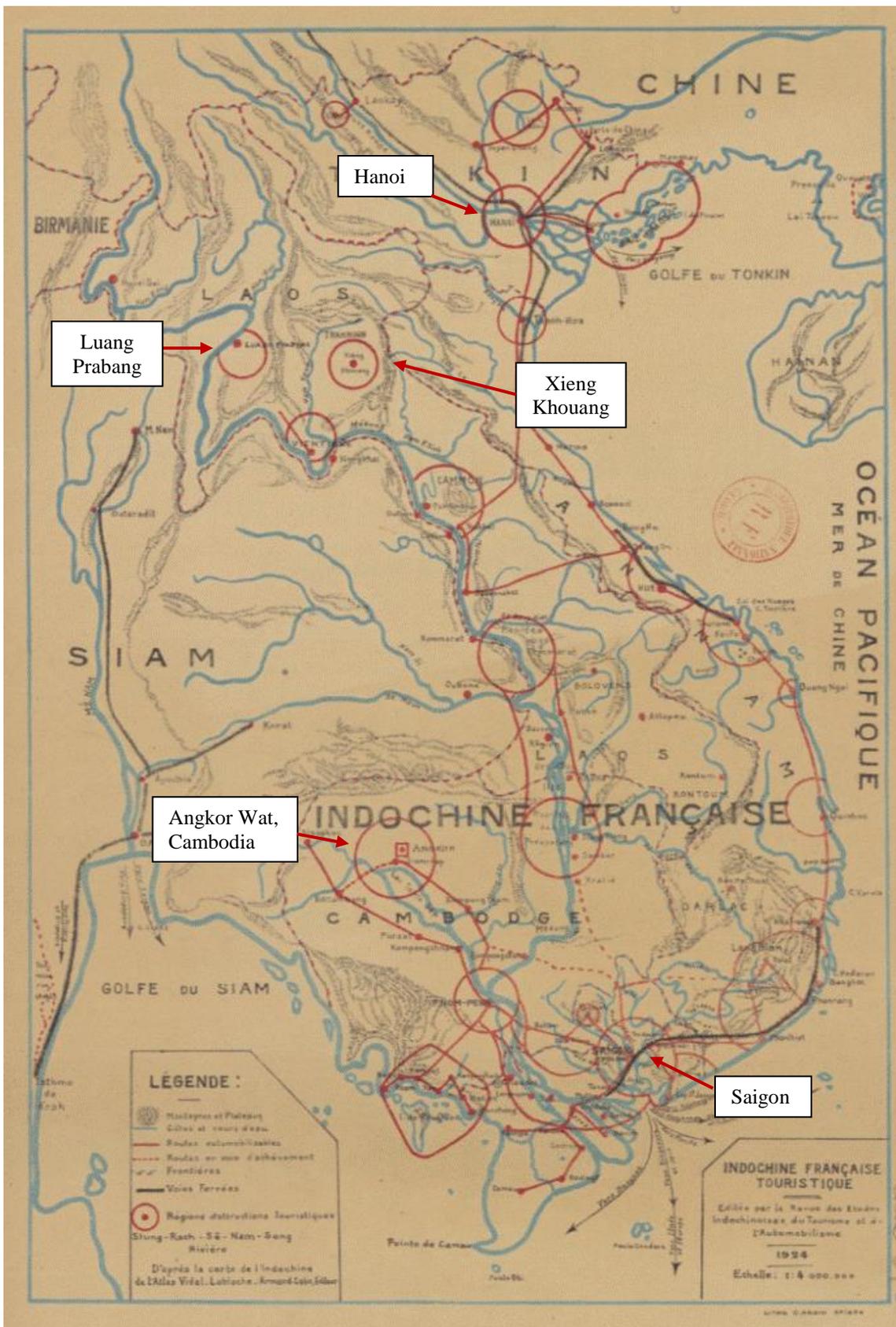
²⁶ Madrolle 1932: 306.

²⁷ Madrolle 1925: 322.

²⁸ Phelan 1997: 1.

²⁹ Madrolle 1932: 306.

³⁰ Lotus eaters belong to the realm of myth, where visitors to exotic lands consume a local edible plant and become addicted to its narcotic effects.



Map 2.5. Tourist map of French Indochina. The red dotted circles in the original map identify tourist attractions.

Indo-Chine française touristique. 1924. www.bnf.fr.

2.3 Early Encounters with the Plain of Jars

The accounts from early visitors were useful for French writers who strived to convey images of the megalithic jars. Georges Maspéro (1872-1942), EFEO corresponding member, wrote that on a high plateau in Xieng Khouang, there existed “about a hundred truncated cones in stone, irregularly shaped, their appearance vaguely justifies their designation as *jars [sic]*”.³¹ Maspéro’s work was published in 1929, two years before Colani’s first expedition to the Plain of Jars and six years before the publication of her monograph, but he felt sufficiently confident to suggest that the jars “could have been meant for burials [...] people have a superstitious terror of them”,³² believing that misfortune would befall whoever removed even the smallest of these jars.

2.3.1 James McCarthy (1884)

Early missions to Xieng Khouang were often instigated by border disputes for territories under Siamese influence. This was the case with the expedition led by James McCarthy (1853-1919), seconded in 1881 from the British Raj in India to the court of King Chulalongkorn (*r.* 1873-1910) of Siam, to serve as Superintendent of Surveys. McCarthy was ordered to report on disturbances in the NE of Siam’s dependencies, which was being attacked by marauders from Yunnan. The bandits, often mistaken for *bona fide* Muslim traders known as Haw,³³ consisted of ‘Flag Gangs’, bands of defeated rebels fleeing southern China in the wake of a suppressed rebellion which first surfaced in Yunnan in 1857 and was finally put down by Qing imperial forces in 1873. The following year, in 1874, the Plain of Jars fell to the marauders: “The Ho, for the Phouan, personify the merciless barbarians; if they spared one of the vanquished, they would leave them only with eyes to cry”,³⁴ echoed by a recent publication: “In Laos, even today, the term “Haw” [*sic*] is closely associated with murder and rape, looting and pillage”.³⁵

Overcoming his initial concerns, on 16 January 1884 McCarthy left Bangkok escorted by two hundred soldiers and seven Siamese officers he had personally trained in the art of surveying: “For geographical research, especially, the frontier region provided a wide and interesting field; for the greater part of it still remained unvisited by Europeans, and on the maps the country was a blank”.³⁶ More than a century after McCarthy’s statement, Lao and American archaeologists are rewriting the ancient history of Laos, with their findings showing that “ the Mekong has been an ancient highway for peoples, technologies and cultures for at least 6,000 years”.³⁷

On ascending the banks of the Nam Tang River and some rice fields, the vast plain of *Khâng Múa Lên* (Map 2.4 Chapter 2.1) presented itself. In the distance, some objects were at first mistaken for tents, then for cattle and rocks rising from the ground:

As we approached our supposed rocks, we were astonished to find that they were gigantic stone jars; some were erect, some were on their sides, others broken. They were of the ordinary shape of water-jars. One that I measured along the broadest girth was 25 feet [7.6 m], the diameter of the mouth being 4½ feet [1.4 m], and it was six feet high [1.83 m]. Some of the people with me, who formerly lived in this beautiful country, say they were made by angels to drink liquors from.³⁸

³¹ Maspéro 1929: 184.

³² Maspéro 1929: 184-185.

³³ Also spelt ‘Hor’, ‘Hô’, ‘Ho’ or ‘Hos’.

³⁴ Colani 1935a, v1: 121.

³⁵ Forbes & Henley 1997: 139.

³⁶ McCarthy 1994: 18.

³⁷ *Vientiane Times* 2010. Team members: Dr. Joyce White and Bounheuang Bouasisengpaseuth.

³⁸ McCarthy 1888: 126.

European visitors were known to emphasize their first impressions of megalithic structures from exotic corners of the world and one wonders how much of this reaction was for the use and consumption of little-travelled audiences at home. Another instance of mistaken identity concerns the megalithic human figures on Easter Island, which 18th century Spanish explorers mistook for “big shrubs symmetrically set up”.³⁹

The area was still reeling from the devastation inflicted by Yunnanese marauders and on travelling south of J1, towards Muang Khoun, McCarthy experienced desolation: “there was nothing to indicate the presence of a human being anywhere at hand, until nearing Chieng Kwang, once the capital of, I might say, the most beautiful province in Indo-China”.⁴⁰

2.3.2 Mission Pavie (1888-1889)

If King Chulalongkorn posted McCarthy to report on disturbances in Siam’s NE dependencies, a different purpose attached to the mission led by August Pavie (1847-1925). An army officer, explorer, diplomat and the first French official to be based in Laos, Pavie joined the French army aged 17 and became the leader of the longest expedition to Indochina, from 1879 to 1895. In June 1887, Luang Prabang came under attack from the Yunnanese rebels and Pavie offered to support the King of Luang Prabang, thus gaining an ally for France.⁴¹ Increasing interest in the affairs of Laos led to a series of explorations, including the missions led by Pavie or his trusted officers.

Led by Pierre Cupet (1859-1907), one of Pavie’s officers, the expedition to north Laos began in April 1888 and reached Muang Khoun on 18 June. The mission left two days later, saddened by the town still reeling from the devastation and “unspeakable cruelty”⁴² inflicted by the bandits. The mission returned to Xieng Khouang in March-May 1889, and their account expressed anew the sadness that engulfed this once-prosperous province. From this period we have images of expedition members measuring the jars at J1. Wearing pith helmets, the officers on horseback convey the size of the urns (Fig. 2.7 & Fig. 2.8), their preparedness to measure the jars suggesting a keen interest in the heritage of north Laos.



Fig. 2.7. J1. Mairet and Bateau, members of the Mission Pavie.
Pavie 1919: fig. 73.



Fig. 2.8. J1. Mairet and Bateau, of the Mission Pavie, measuring the jars on horseback.
Pavie 1919: fig. 74.

³⁹ Scoresby Routledge 1917: 321.

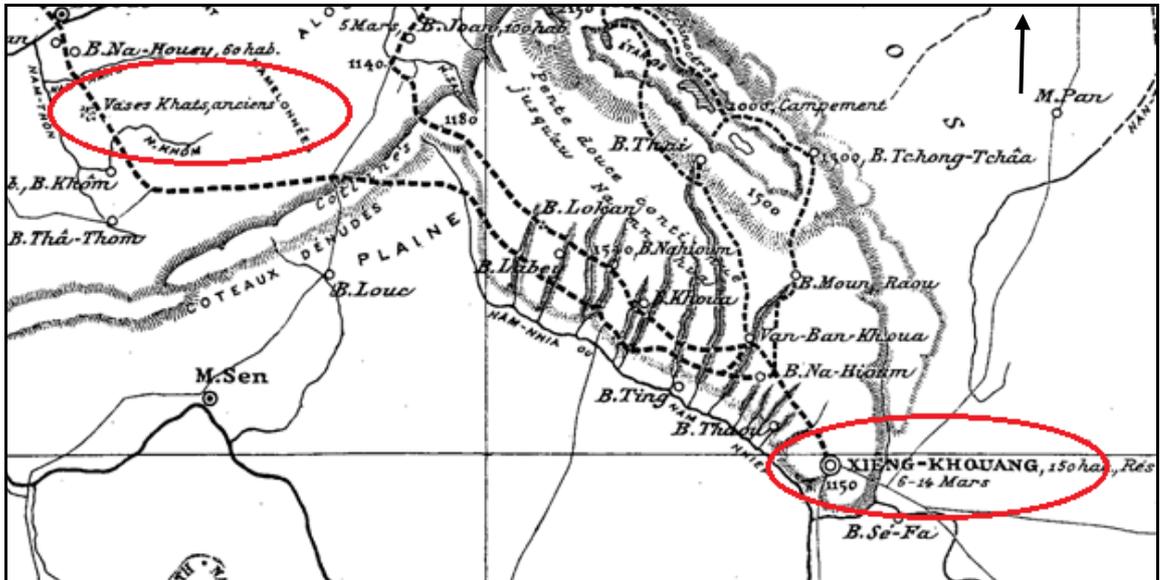
⁴⁰ McCarthy 1888: 127.

⁴¹ Gunn 1986: 109.

⁴² Cupet 1900: 63.

2.3.3 Comte F.P. de Barthélemy (1896)

Towards the end of 1895, two years after the annexation of Laos, the French Ministry of Public Instruction commissioned François Pierre, Comte de Barthélemy (1870-1940), to report on Indochina. Disembarking from the *Aréthuse* at Natrang, central Vietnam, on 5 January 1896, he travelled west through Vinh (North Vietnam). From 6-14 March, he traversed Xieng Khouang via the districts of Nong Hét and Ta-do and made his first encounter with the “Vases Khats, anciens”,⁴³ (Ancient Kmhmu vessels), the jars at J1 (Map 2.6).



Map 2.6. The route followed by the Comte de Barthélemy, on his journey from North Vietnam to Luang Prabang. In the top left-hand corner, the location of the “Vases Khats, anciens”. Barthélemy 1901: feuille 4, after p. 375.

Their random position - standing or reclining – and their size, created much interest and begged questions as to their makers and purpose: “Their presence in this area points to a considerable effort in transportation, because this vast plain offers no clues that anything similar to these monoliths exists” and the jars were not carved at the site but “must have been moved by very powerful machines or thousands of porters”.⁴⁴

2.3.4 Alfred Raquez, Louis Finot and Étienne Lunet de Lajonquière (1900)

Of the next three visitors, very little is known about Raquez. On 15 October 1899, shortly after the abolition of the administrative separation into Upper and Lower Laos, Armand Tournier (1852-1930), Résident-Supérieur for Laos (1899-1903), ordered the first survey of Upper Laos. He telegraphed Alfred Raquez (1865-1907),⁴⁵ a French businessman and explorer visiting a trade event in Yokohama, Japan. Raquez was enthusiastic at the prospect and on 1 December 1899 began his journey from Yokohama via Hué (central Vietnam) and Savannakhét (south Laos), reaching the new administrative centre in Song Khône Province, Laos, on 18 January 1900.

From January to July 1900, Raquez travelled through Upper Laos, crossing the Plain of Jars from 26 May to 13 June. Visiting Muong Soui, in the NW of Xieng Khouang Province, he came across

⁴³ Barthélemy 1901: feuille 4, after p. 375. In colonial times, the Kha (Kmhmu) were classed as the ancient inhabitants of Xieng Khouang.

⁴⁴ Barthélemy 1901: 193.

⁴⁵ Raquez may not have been his real name.

five jars scattered on the grass, the largest of which measured “2.9 m in height and 1.28 m in diameter [...] aperture measured 52 cm in diameter with a cavity 73 cm deep. Around the aperture, a groove of 20 cm perhaps meant for a lid”.⁴⁶ Raquez had just stumbled upon a Phoukood jar, massive in size, with narrow aperture and shallow cavity.

On 3 June he travelled to J1, where he counted 130 “prehistoric jars randomly scattered”.⁴⁷ Two of the 24 other jars on a hill were massive in size. Employing a device used by Colani 30 years later, villagers were asked to stand next to the jars or to climb inside them, to convey their size (Fig. 2.1 and Fig. 2.2 above refer). Raquez was struck by the limestone cave at J1, believing that it had served as a gathering centre for the people who migrated to the area, whose pastoralist inhabitants used the stone jars for the storage of “milk, cheese and other provisions” or as shelter “in case of attack”.⁴⁸

Like McCarthy and the Mission Pavie, Raquez was saddened by the devastation wrecked by the Yunnanese bandits. Since a gap of 12 years separated Raquez’s visit from Pavie’s mission (and 16 years from McCarthy’s visit), it appears that little or no reconstruction had been effected in the ensuing years: “The towns are not just deserted. They are abandoned, a feeling of utter sadness that pierces the soul”.⁴⁹

The study trip of Louis Finot (1864-1935) was not as geographically diverse as Raquez’s. Finot, a Sanskrit scholar trained by Silvain Lévy (1863-1935), was posted to Indochina in 1898, to serve as the first director of the EFEO. In 1900, with Étienne Lunet de Lajonquière (1861-1933), he travelled from Hanoi to Savannakhét in south Laos, via Luang Prabang and along the Mekong past Vientiane. The actions of Finot and Lunet de Lajonquière particularly those of Finot, had implications for the Plain of Jars. As will be discussed in Chapter 4.1, Finot was committed to increasing the ranking of Laos within the French Union, nominating Colani as corresponding member of the EFEO in 1929. For his part, in 1902 Lunet de Lajonquière was responsible for compiling the first inventory of monuments in French Indochina, with information collected by early visitors to Laos, including Auguste Pavie, Louis Delaporte (1842-1925) and Étienne Aymonier (1844-1929). It was on the second edition of this inventory, published in 1926, that the Plain of Jars received its first official listing (Chapter 2.4, Table 3).

2.3.5 Pierre Morin and the First Map of the Plain of Jars (1903)

During his tenure as the first colonial administrator of the city of Vientiane, Pierre Morin collected material for the first known documentation of the Plain of Jars, which mapped the main fields. The project was the subject of a brief announcement: “We have received from Mr. P. Morin, colonial administrator of Laos, a map indicating the various points of the Tran Ninh or Plain of Jars [*sic*], where there are some groups of stone jars”.⁵⁰ The first recorded use of the map is in late 1931, when George Cœdès (1886-1969), director of the EFEO, handed it to Colani, after she had surveyed J1, J2 and J3: “In December [1931], we returned to Hanoi. Mr Cœdès gave us a sketch of Tran Ninh Province indicating the main jar fields. This document had been drawn up in 1903 by a former Government Officer. With this map, we planned our work”.⁵¹

⁴⁶ Raquez 1902: 372-3.

⁴⁷ Raquez 1902: 378.

⁴⁸ Raquez 1902: 379.

⁴⁹ Raquez 1902: 376.

⁵⁰ BEFEO 1903: 526.

⁵¹ Colani 1935a, v1: 6.

Morin’s map likely included sites mentioned in accounts from the Mission Pavie and books published by the Comte de Barthélemy and possibly Raquez. For these reasons, in Table 9 (Chapter 6.1), I have suggested that Morin’s map probably included fewer than the six sites listed in the 1926 inventory, compiled with data collected by Raquez, Parmentier and Dussault.

2.3.6 Henri Parmentier (1912) and Léon Dussault (1912-13)

The focus changed with the visit of Henri Parmentier (1870-1949), an architect at the EFEO. In 1911, he began working on a compendium of Lao architecture and his visit to Xieng Khouang in 1912 enabled him to prepare a summary documentation of jar sites located in the immediate vicinity of religious structures. Parmentier visited four locations populated with jars: Khâng Múa Lên (J1), Ban Nong Tó (J3), Ban Nakham (QS16) and a site located between Thong Hac and Ban Na Som, near J25. Parmentier’s descriptions were instrumental in allowing the EFEO to build a first database of sites.

Parmentier analysed J1 in some detail, on account of its “approx. 250”⁵² jars. Considering the architectural purpose of his trip to Xieng Khouang Province, his descriptions of jar size and shape (Fig. 2.9) are remarkably accurate. About J1, for example, he commented that the jars are “elliptical, with the largest urns [...] barrel-shaped, where the diameter is identical to the height”.⁵³

It is perhaps his visit to Ban Nakham/QS16, in Khun District, that received more publicity than he could have envisaged. Despite Colani’s 1935 monograph available since the early part of 1936, it was Ban Nakham that featured in the 1937 Tourist Guide of Indochina, which listed “The Jars of Ban-Na-Kham and Ban-Nong-Teu [J3]”⁵⁴ as the highlight of a visit to Xieng Khouang. It was customary to visit the Plain of Jars as a two-day excursion from Vietnam *en route* to Luang Prabang and this 1937 guide was no exception, advising travellers to travel via Xieng Khouang to admire its “verdant hills”.⁵⁵

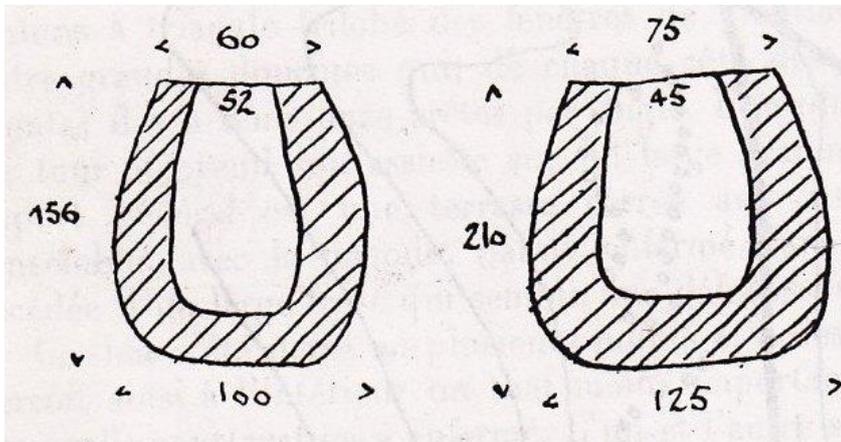


Fig. 2.9. Parmentier’s sketch of the jars at QS16.
Parmentier 1954: 18, fig. 3C.

Parmentier correctly assessed that one of the 43 jars (historical quantity) at QS16 was carved from a different rock: “The jars are cut from local granite [...] A large-size urn is carved from a

⁵² Parmentier 1954: 31-32.

⁵³ Parmentier 1954: 32.

⁵⁴ Taupin 1937: 344.

⁵⁵ Taupin 1937: 424.

different material, perhaps reddish-brown sandstone”,⁵⁶ an observation consistent with a recent geological survey, which found “[One] Strong, light grey ... sandstone [jar]”⁵⁷ sharing the site with 35 other granite jars.

About J3, Parmentier wrote: “Some of the jars are carved from fine granite and others from schist-rich sandstone”.⁵⁸ Recent geological surveys have not reported granite jars at J3, only 247 sandstone jars, and therefore any granite jars that *may* have existed at the time of his visit have been lost. There is the possibility that Parmentier made an erroneous assessment but this is unlikely since at QS16 he correctly identified one sandstone jar among the granite jars.

In 1948, Parmentier published *L'art architectural hindou dans l'Inde et en Extrême-Orient* and wrote briefly about the jars, illustrating a unit at the entrance to J1. He also noted that the Plain of Jars “hosts one of the world’s strangest prehistoric souvenirs”.⁵⁹

Despite further efforts in 1927, *L'art du Laos* remained in manuscript form until 1954, when it was edited by Parmentier’s widow, Jeanne Leuba-Parmentier (1882-1979), an expert in Cham art. She was assisted by Robert Dalet, Parmentier’s student.⁶⁰ In 1912, Leuba-Parmentier accompanied Parmentier to Xieng Khouang, where this image was taken (Fig. 2.10) at J1, against the backdrop of the gigantic jar now known as Jar no. 1. This image does not appear in the 1988 version edited by Madeleine Giteau (see below), perhaps due to its poor quality or the unusual presentation where Leuba-Parmentier, perhaps standing on a stone, appears to tower over a jar measuring more than 200 cm in height (Fig. 2.11).

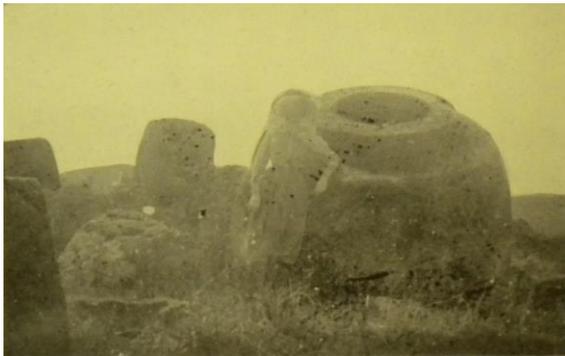


Fig. 2.10. J1. Jeanne Leuba-Parmentier. Parmentier 1954: 11/A.



Fig. 2.11. J1. Jar no. 1 (100 cm scale). Genovese (2014).

Parmentier has rarely been acknowledged as the surveyor of jars deposited in the vicinity of temples or other religious edifices in the province, perhaps due to the artistic title of his *L'Art du Laos*. Madeleine Giteau (1918-2005), a Southeast Asian scholar and author of several books on Lao art and religion, edited a second edition published in 1988.⁶¹ She was unable to visit the sites due to safety concerns in the aftermath of the 1964-73 Indochina war.

From Parmentier’s index, we discern that he made extensive use of Raquez’s 1902 *Pages Laotiennes*. It will remain a matter of supposition whether he adopted Raquez’s suggestion, the first in print, that the stone discs found near the jars could have functioned as lids for the jars:

⁵⁶ Parmentier 1954: 18.

⁵⁷ Baldock 2008: Appendix I.

⁵⁸ Parmentier 1954: 21.

⁵⁹ Parmentier 1948: 162.

⁶⁰ R.P. Dalet had been a corresponding member for the EFEO since 1935 (EFEO 1941: 20).

⁶¹ Parmentier 1988.

“All of the jars appear to be accompanied by a cover of the same material, with many of them displaying the slight internal rim with a narrowing intended to accommodate the covers”.⁶²

Parmentier praised the Buddhist structures of Xieng Khouang Province as a prime example of Lao architecture: “The purest form and the one which, in my view, best represents the spirit of Lao art, is provided by the numerous pagodas of the Tran Ninh”.⁶³ Decades earlier, witnessing the destruction inflicted by marauders from Yunnan, James McCarthy had also praised the province’s refined architecture: “the Muang Puan population exhibited refinement in all they did, but their elegant taste was of no avail against the rude barbarian”.⁶⁴

Concurrently with Parmentier’s visit, a mission to north Laos was conducted by Léon Dussault (1866-1934), Commander of the colonial infantry and winner of the 1924 Tchihatchef prize for mapping the geology of Southeast Asia. His mission to Xieng Khouang Province was financed by the GSI, two years before Colani joined the organisation as a volunteer.

On 24 April 1912, he met Parmentier, who quizzed him on the nature of the jars. Dussault backed the notion that the jars were “fashioned from local stone and the difficulty in transporting these boulders over significant distances should not be underestimated”.⁶⁵

Dussault made an important contribution to the first inventory of sites and provided details for the only site it listed for Kham District: San Tiau, a site of limestone jars close to QS47. More than 20 years later, Colani pointed to these directions in her monograph and despite surveying several sites in Kham, she did not venture as far as “the Méo [Hmong] village of San Tio, between Muang Phan and Muang Thé” (Map 2.9 and Map 2.10 Chapter 2.4 refer), where there are “some small limestone jars, and others cut into the limestone rockface”⁶⁶ (Fig. 2.14 below refers). He returned to Xieng Khouang in 1913 and published two accounts of his surveys.⁶⁷

2.3.7 The Mystery of ‘Mr. Allard’ (ca. 1919)

The limestone cave at J1 received a visit from a ‘Mr. Allard’ who, “according to an ancient village chief (*pho ban*) [*sic*], a dozen or so years ago [excavated the cave and] removed some pottery vessels and some metal bracelets”.⁶⁸ Colani surveyed J1 in 1931 and therefore, by inference, ‘Mr. Allard’ may have visited the cave around 1919. This remains an isolated citation for which I have been unable to find further mentions.

2.4 Inventory of Classified Monuments (1926)

It is now useful to analyse how the information collected by these individuals was employed to compile a first database for the Plain of Jars.

A decree on historical monuments issued in France on 31 December 1913 had no authority over the cultural heritage of French Indochina, but colonial governments could decide under which

⁶² Parmentier 1954: 32.

⁶³ Parmentier 1954: 7.

⁶⁴ McCarthy 1994: 51.

⁶⁵ BEFEO 1912: 198.

⁶⁶ Colani 1935a, v1: 125.

⁶⁷ Dussault 1915 and Dussault 1919.

⁶⁸ Colani 1935a, v1: 208.

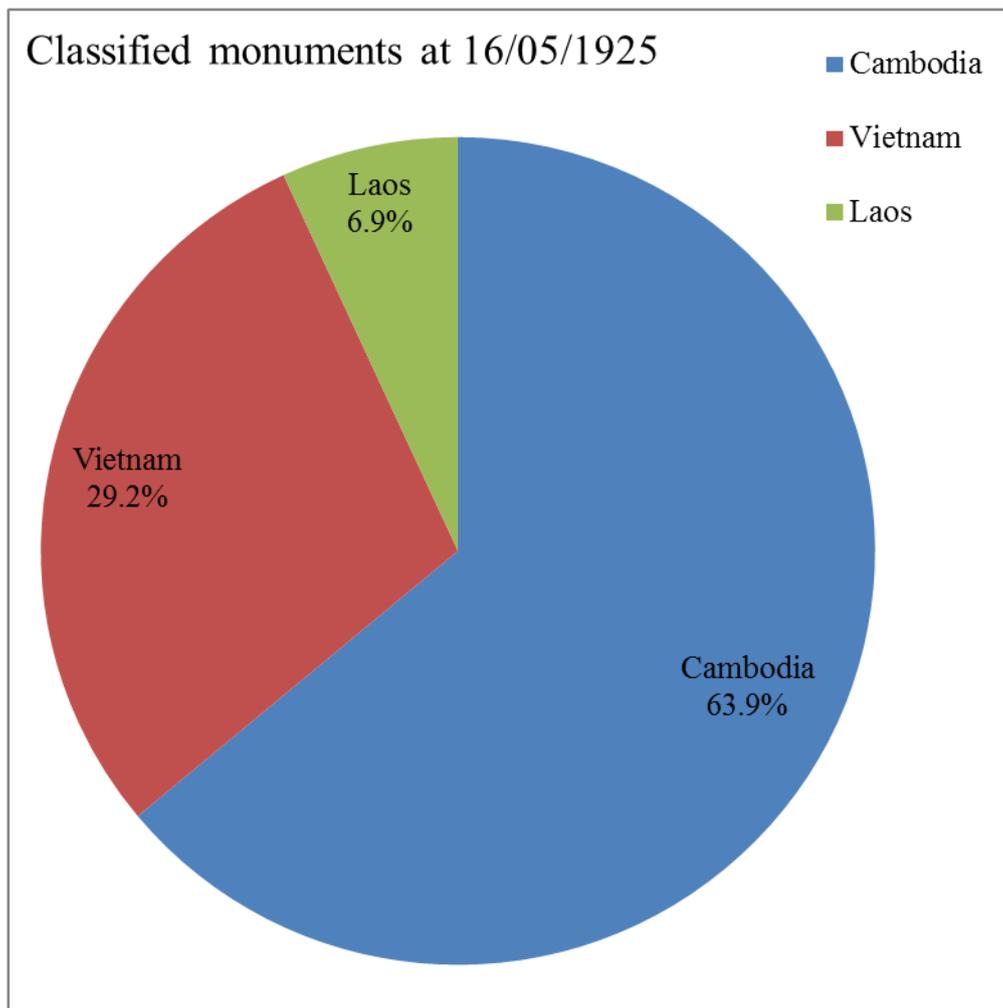
conditions it applied to antiquities under their jurisdiction.⁶⁹ A subsequent decree issued in December 1924 enshrined in law the classification and protection of historical monuments in Indochina and, with some modifications, the 1913 law would apply to cultural monuments in Indochina. Parmentier was entrusted with the compilation of this second inventory of monuments in Indochina, more comprehensive than the first edition under the stewardship of Lunet de Lajonquière, published in 1902.

The EFEO Bulletin for 1925, published in 1926, stated that: “In accordance with their responsibilities, the Secretary-general of the Government-general of Indochina and the Director of the EFEO are charged with implementing the terms of this decree. Hanoi, 16 May 1925”.⁷⁰ Data from this Bulletin are illustrated in Table 3 and related graph.

Table 3 – Classified monuments at 16/05/1925

	Cambodia	Vietnam	Laos	Total
Number of monuments	670	306	72	1,048
As a % of the total	63.9%	29.2%	6.9%	

Source: reconstructed from *BEFEO* 1926: 551-648



⁶⁹ Bulletin Archéologique 1914: 15.

⁷⁰ BEFEO 1926: 551, 648.

Twenty-five of the 72 monuments listed for Laos, were situated in Xieng Khouang,⁷¹ of which six consisted of Plain of Jars sites (see Table 4 below).

Laos ranked a poor third, its 72 monuments overshadowed by the efforts devoted to Cambodia’s Khmer monuments. The list for “Vietnamese and Lao monuments was more perfunctory”.⁷² The efforts to take stock of Khmer monuments continued apace for the next few years, with the total for Cambodia growing from 670 to 761 (an increase of 13.6%) in the next list compiled in 1933 and published in 1935. Scrutiny was firmly fixed on Cambodia, which ranked first, according to Erik Seidenfaden (1881-1958): “and every year new and epoch-making discoveries of archaeological, epigraphical or artistic importance are made. It seems that this country is an inexhaustible treasure-chamber of good things”.⁷³ In recent years, this point has been reprised by Higham *et al*, who suggest that the initial euphoria ensuing from the discovery of bronze objects in Samròng Sèn subsided over the two World Wars, when resources were devoted to Angkor Wat and other Khmer-period monuments: “This initial interest in the Southeast Asian Bronze Age waned over the period of the two World Wars and the diversion of archaeological energy into the restoration of Angkor Wat and the associated Angkorian monuments”.⁷⁴

Per Table 4, Parmentier reported four of the six sites, while Dussault reported one site. Raquez provided details for Ban Sop, where neither Parmentier nor Dussault had ventured. Raquez’s detailed descriptions of J1 also augmented the data bank built up with Parmentier’s details. The six sites were fairly dispersed, reflecting the nature of the missions led by Parmentier (temples in Xieng Khouang), Dussault (geologically-rich Kham and Nong Hét Districts) and Raquez (the longest journey). The missions led by disparate scholars and explorers were invaluable in arriving at this first inventory of jar sites.

Table 4 – Inventory of Plain of Jars sites at 16/05/1925

	Description	Present Site	District	Visited by
1)	Thong Hac	near J25	Phoukood	Parmentier
2)	Plaine des Jarres	J1	Paek	Parmentier & Raquez
3)	Ban Nakham	QS16	Khun	Parmentier
4)	Ban Nong Tó	J3	Phaxay	Parmentier
5)	Ban Sop	near J26	Phoukood	Raquez
6)	San Tiau (or Tio)	near QS47	Kham	Dussault

Source: reconstructed from BEFEO 1926: 645-646

All six sites are shown in Map 2.7. Four of the five sites visited by Parmentier or Raquez were illustrated in Parmentier’s 1912 sketch map (Map 2.8).

The following analysis illustrates the state of knowledge of the Plain of Jars more than 30 years after Laos became a French protectorate and six years before Colani’s first mission.

The likely location of the first site, Thong Hac, is close to J25, where Parmentier reported that there were “about twenty jars”⁷⁵ scattered around the village. In recent surveys, 24 sandstone jars have been recorded at J25, spread over four groups. The site is very close to the village.

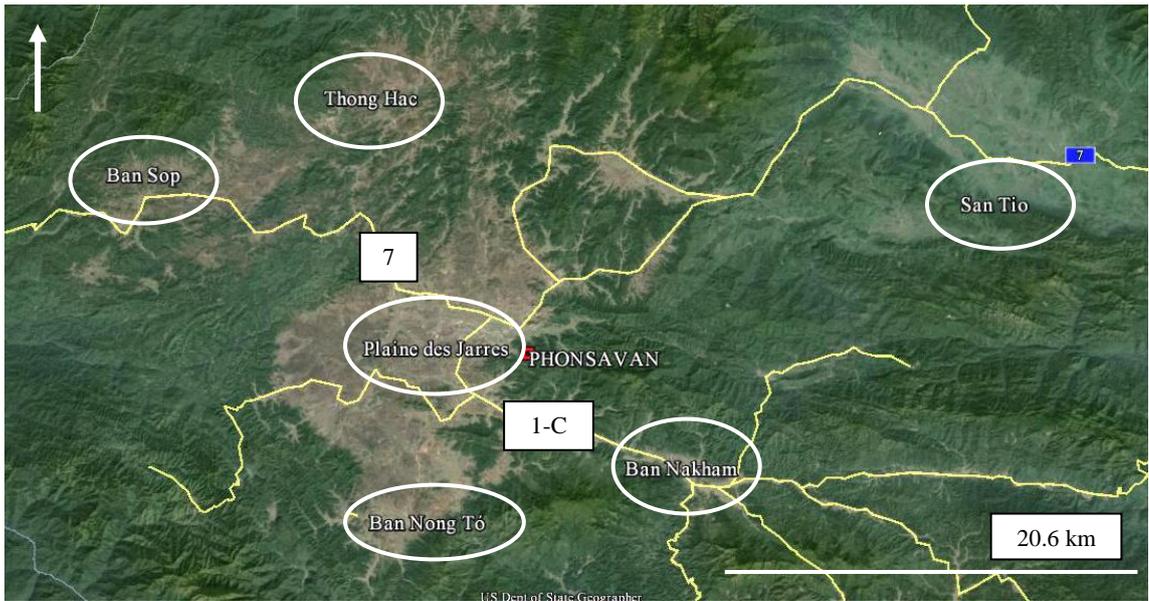
⁷¹ BEFEO 1926: 645-7.

⁷² Clémentin-Ojha & Manguin 2007: 83.

⁷³ Seidenfaden 1941: 24.

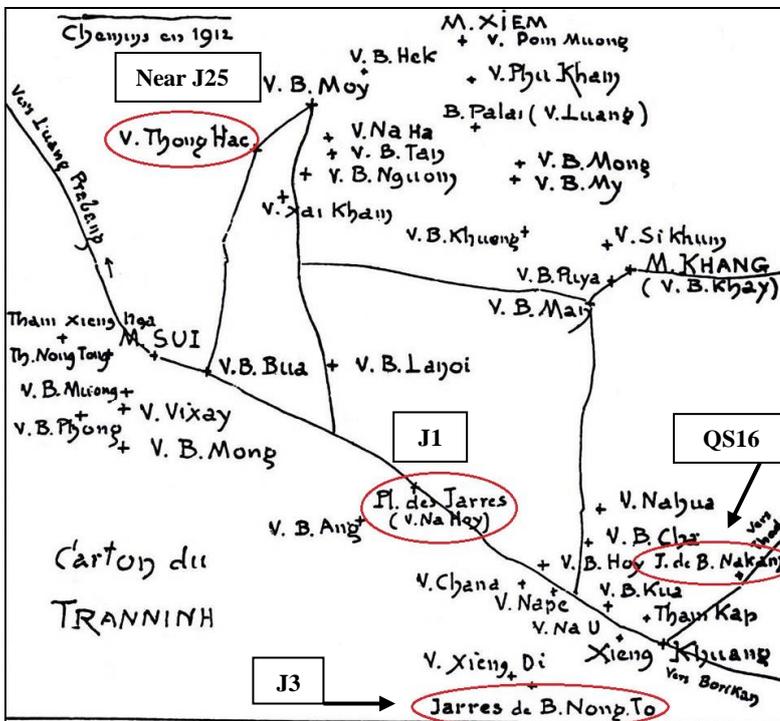
⁷⁴ Higham *et al*. 2011: 229.

⁷⁵ Parmentier 1954: 40.



Map 2.7. The six sites in the 1926 EFEO inventory.
GoogleEarth.

The second site, Plaine des Jarres, corresponds to J1 and consisted of “Jars, cave and coffin cave”.⁷⁶ It is a matter of conjecture how the EFEO could have surmised the mortuary nature of this cave, since pots containing human remains were not unearthed from its floor until 1931, during Colani’s first excavation. It is possible that details were provided by ‘Mr. Allard’ (Chapter 2.3.7 earlier), who removed some grave goods from the cave floor at J1 during his visit *ca.* 1919.



Map 2.8. Sketch map drawn by Parmentier in 1912.
Parmentier 1954: pl. II.

Ban Nakham, the third site, corresponds to the granitic site of QS16, a few kilometres to the NE of Muang Khoun. Parmentier visited it while recording the large temple of Wat Phiawat, 4 km from QS16. Colani visited QS16 only in 1940 so it is omitted from her 1935 monograph.

⁷⁶ BEFEO 1926: 645.

Ban Nong Tô, the fourth site, is stated as “1 km east of Ban Xieng Di village”,⁷⁷ which corresponds to J3. There is no mention that Parmentier visited J2, located 2.3 km north of J3. The village near J3 is still called Ban Xieng Di.

Details for the fifth site, Ban Sop, were provided by Raquez. In late 19th and early 20th centuries,⁷⁸ it was customary to reach Xieng Khouang via one of two popular routes: overland from Hanoi or via Bangkok and the NE of Thailand. Raquez followed a third, unusual route, travelling through Luang Prabang to reach Xieng Khouang. Ban Sop may be to the NW of J26, an area of distinctive jars with narrow openings and shallow cavities, including one such jar carved with a Recessed Inner rim (Fig. 2.12 & Fig. 2.13).



Fig. 2.12. J26. Massive sandstone jar carved with a Recessed Inner rim.
L. Genovese (2011).



Fig. 2.13. J26. The same jar photographed by Colani in 1932.
Colani 1935a, v1: pl. XXXV.

The sixth site, the Hmong village of San Tiau (Map 2.9), between “Muang Phan and Muang Thé” with “jars carved from limestone and others carved out of the limestone rockface”,⁷⁹ is likely to be in the vicinity of QS47, a limestone-rich area in Kham District, surveyed by Dussault in 1912.



Map 2.9. The Hmong village of San Tiau (or Tio), Kham District, NE of Muang Khoun.
Atlas de l’Indochine 1920, Service Géographique de l’Indochine, Carte no. 32.

⁷⁷ Parmentier 1954: 20.

⁷⁸ In the late 19th century, members of the Mission Pavie travelled through a series of villages in the Ban Sop area, on their westward journey from Hanoi to Luang Prabang. A similar route was followed in 1931 by Sidney and Gertrude Legendre on their journey from Hanoi to Luang Prabang via the northernmost areas of Laos, from where they reached Muang Khoun on Christmas Eve 1931.

⁷⁹ BEFEO 1912: 198. Colani used this exact description in 1935a, v1: 125.



Fig. 2.14. QS47. Limestone jar, carved at the rockface.
L. Genovese (2012).

It is pertinent to ask how it was possible for the number of sites to increase from six in 1926 to the 26 documented by Colani in 1935, an increase of 20 sites over ten years, when there had been no missions in the intervening years. The answer lies in Parmentier's *L'Art du Laos* manuscript, which would have been available to Colani at the EFEO where she started working in 1929. Parmentier wrote that caves existed in Kham and Mokmai but "Jars are found only in Muang Kham".⁸⁰ Neither Raquez nor Parmentier had ventured to Kham or Mokmai. Before setting off for the Plain of Jars in May 1931 for her first season of excavations, in addition to the 1926 listing and Parmentier's manuscript, Colani may have received data gathered by Dussault for sites in Kham District. She made good use of any information she may have received, for in February 1932 she surveyed QS22/Ban Hin,⁸¹ QS28/Ban Sieng Khieu⁸² and the as-yet unidentified fields of Eight Jars,⁸³ Jars on a Plateau⁸⁴ and Isolated Jar.⁸⁵

⁸⁰ Parmentier 1954: 48.

⁸¹ Colani 1935a, v1: 6, 14, 113, 131, 144, 150, etc.

⁸² Colani 1935a, v1: 6, 14, 113, 131, 144, 150, 153, etc.

⁸³ Colani 1935a, v1: 150, 243.

⁸⁴ Colani 1935a, v1: 244.

⁸⁵ Colani 1935a, v1: 244. The Isolated Jar was located in open forest, around 0.6 km north of QS28.

CHAPTER 3

THE GSI, THE EFEO AND THE PREHISTORY OF INDOCHINA

Laos was barely seen to have a past worth investigating, although in recent years this has been seen to have been quite wrong and French, Italian, Swedish, and Lao archaeologists have made a significant start in creating a prehistory for the nation.

- I.C. Glover. *The past, present and future of prehistoric archaeology in Burma*, 2001: 121.

This chapter will examine the close links between French scholars and their Dutch colleagues, who had researched the prehistory of Indonesia from the mid-19th century. These exchanges were instrumental in setting up a first conference on the prehistory of Southeast Asia, an event that placed Colani and the Plain of Jars on the international stage. Louis Finot's appointment in January 1929 as the EFEO interim director coincided with Colani's inability to negotiate further contract extensions at the GSI, where she had worked for 14 years. Finot asked her to join the French School as a corresponding member and from February 1929 she led the first of many expeditions to prehistoric sites. Her nomination to the EFEO coincided with a shift in the French School's activities, widened to encompass prehistory and scientific archaeology. She was suitably qualified to meet this new focus but her appointment was as much a fortuitous set of circumstances as it was a conscious choice by the EFEO.

3.1 Geological Survey of Indochina

Created in 1898 as a branch of the Department of Agriculture and Commerce of Indochina, the Geological Survey of Indochina (GSI) was the brainchild of Paul Doumer (1857-1932), Governor-general of French Indochina from 1897 to 1902. The GSI was a small institution in Hanoi headed by Jean-Baptiste Counillon (1860-1923), a geologist and member of the Mission Pavie from 1889 to 1892: "Among the scientists, Counillon is worthy of a mention".⁸⁶

Staff at the GSI included geologists based in Indochina and others in metropolitan France. The Hanoi branch operated as a relatively autonomous satellite of a better equipped laboratory in France. Hanoi-based geologists could study and document samples collected in their field trips within Indochina but were duty-bound to forward to the Faculty of Science in Marseille (France), samples that could not be identified locally. The colonial institutions were granted a degree of autonomy but institutions in France had the authority to oversee their activities.

3.2 École Française d'Extrême-Orient

Established in Saigon on 15 December 1898, the École Française d'Extrême-Orient (EFEO) started life as the Mission Archéologique d'Indochine and assumed its present name on 20 January 1900, two years before its seat was moved to Hanoi. Lorin claims that the EFEO was probably the creation of which Doumer was most proud and for which he developed a "lasting affection".⁸⁷ Article 2 of the Foundation Decree states its objectives: "carry out research on the archaeological and philological exploration of the Indochinese Peninsula, and to contribute, by every means possible, to the understanding of its history, its monuments, and its languages".⁸⁸

⁸⁶ http://pavie.culture.fr/rubrique.php?rubrique_id=35 (accessed November 2012).

⁸⁷ Lorin 2004: 97.

⁸⁸ I have used the English version quoted in Clementin-Ojha & Manguin 2007: 18.

In the first three decades of the 20th century, research projects at the EFEO focused on epigraphy, languages and religious architecture, commensurate with the skills of some of its prominent scholars. Parmentier and Jean-Yves Claeys (1896-1979), for instance, were architects, while Finot, Cœdès and Émile Gaspardone (1895-1982) were linguists. In 1936, on his return to France after ten years in Hanoi, Gaspardone was nominated Professor of Vietnamese at the School of Oriental Languages in Paris. He praised the GSI for financing research projects into the prehistory of Indochina: “In Indochina, these studies were mainly conducted by three savants: Mr. Mansuy, Mr. Patte and Miss Colani. All three worked at the colonial Geological Survey. After 1928 only Miss Colani remained, who was posted on missions by the *École Française d'Extrême-Orient*”.⁸⁹

Parmentier and Claeys took charge of the Archaeological Service, while Finot served as Director on several occasions. In the words of two Swedish archaeologists: “In Indochina, the colonial research institute, the *École Française d'Extrême-Orient* (EFEO) [*sic*], initially concentrated its efforts on research in art history and epigraphy, and practiced a kind of archaeology that focused primarily on the architectural history and iconography of religious monuments”.⁹⁰

A book by Higham and Thosarat juxtaposes archaeology in colonised Southeast Asia – Laos, Cambodia, Vietnam, Indonesia, Malaysia and Myanmar – with archaeological research in Thailand, which escaped European colonisation in the 19th and 20th centuries. The authors claim that archaeology in these colonies may have been practiced differently had the science been entrusted to local researchers: “The colonial powers introduced their traditional methods for archaeological research”.⁹¹ This incident of political history, they claim, allowed Thailand to look to its own resources, unlike her neighbours whose research was influenced by a European power.

An alternative view is offered by Rasmi Shoocongdej, a Western-educated Thai archaeologist. She accepts that French scholars’ studies and involvement in the epigraphy and art history of the Khmer empire directly influenced the way Thai scholars interpreted the past of Sukhothai. For most Thais, the northern city represents the country’s first capital: “Archaeological research in Thailand proceeded in the same direction as French archaeology; in particular, similar art styles were viewed as evidence of migration by outsiders who brought new ideology, techniques, and innovation” but this new tool, she argues, “helped to support Thai historiography”.⁹²

3.3 International Congress of Orientalists

From 3-8 December 1902, the EFEO hosted in Hanoi the International Congress of Orientalists (later renamed the International Congress of Far Eastern Studies), where 35 delegates from six countries presented a total of 50 papers. Officially inaugurated by the Governor-general of Indochina on 4 December, it was the first international gathering of academics organised by the newly-formed EFEO. The organisers admitted that the limited focus on “the history, languages and ethnography of peoples in the Far East (India included)”⁹³ had allowed for the majority of papers to be presented in plenary sessions. Despite the closing session on 8 December exhorting

⁸⁹ Gaspardone 1936: 618. Mansuy retired to France in 1926. Étienne Patte (1891-1987) was a military man and geologist who contributed to some of Mansuy’s and Colani’s publications.

⁹⁰ Källén & Karlström 2010: 302.

⁹¹ Higham & Thosarat 2012: 7.

⁹² Shoocongdej 2007: 392.

⁹³ BEFEO 1902: 416.

the French School to widen its activities by including the study of “prehistoric sites”,⁹⁴ for the next three decades the EFEO’s activities remained centred on oriental languages and epigraphy.

3.4 1929: A Year of Change for the EFEO

In the five months between January and May 1929, three events impacted the activities of the EFEO and would set the French School towards prehistoric research. The first was the death of Léonard Arousseau, which precipitated the second event, involving Louis Finot, and the third was a meeting in Java between Victor Goloubew (1878-1945) and P. V. van Stein Callenfells (1883-1938). I will now deal with each of these events in turn.

The first significant event happened when Léonard Arousseau, born in 1888, died in France on 24 January 1929 from malaria complications. He had studied oriental languages under Édouard Chavannes (1865-1918) and had filled the position of EFEO director since November 1926. The second significant event was linked to Arousseau’s sudden death, resulting in the appointment of Louis Finot as interim director. Finot’s interim tenure came to an end on 2 September 1929 with the appointment of George Cœdès as permanent director.⁹⁵ Cœdès, a linguist and historian, had worked as director of the National Library of Thailand from 1918 to 1929 and was an expert on the periodisation of the Bayon.

The third event occurred when P.V. van Stein Callenfells (Fig. 3.1), former director of the Archaeological Service of the Netherlands Indies, met Goloubew (Fig. 3.2), who had travelled to Java to attend the Fourth Pacific Science Congress, (16-25 May), to present two papers: one on bronze drums and one “on the present state of prehistoric research in Indochina”.⁹⁶



Fig. 3.1. P.V. van Stein Callenfells.
Wikimedia.org

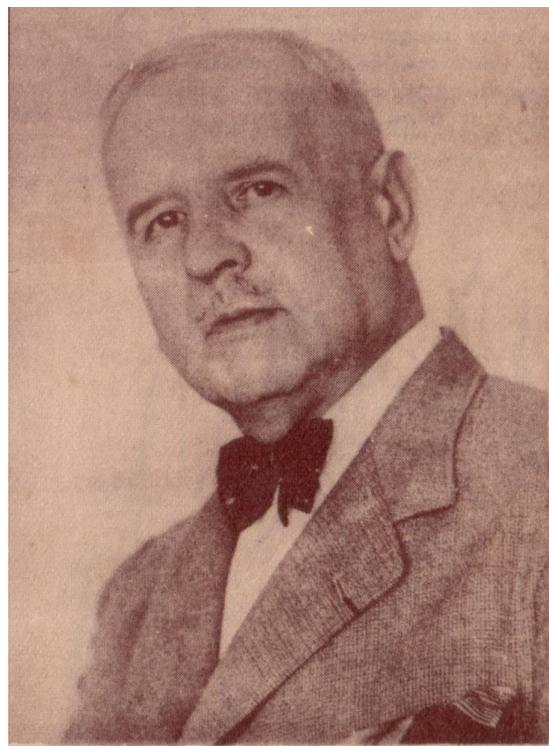


Fig. 3.2. Victor Goloubew.
Indochine magazine, 8 April 1943.

⁹⁴ Clémentin-Ojha & Manguin 2007: 111.

⁹⁵ BEFEO 1929: 550.

⁹⁶ BEFEO 1929: 466.

Van Stein Callenfells was well placed in the field of Southeast Asian prehistory. From 1920 he had studied shell middens in Sumatra, Java, Sulawesi and Malaya. His published output was limited but he enjoyed a good reputation with the EFEO, who nominated him corresponding member in February 1932 shortly after the first Far Eastern Prehistory Association (FEPA) congress.⁹⁷ The position of “corresponding member” used in the EFEO bulletins is akin to that of an associated scholar, a person of sufficient academic standing to be posted on missions, to collaborate with and publish papers and books under the EFEO banner.

At the Java meeting, Goloubew and van Stein Callenfells drafted a proposal calling for a first FEPA congress “towards the end of 1931 or the beginning of 1932”.⁹⁸ Their proposal was approved by the “Governor-general and the Director of the École Française”⁹⁹ and preparations began under the sponsorship of French and Dutch academic institutions. The seeds of the first FEPA congress were sown at this encounter and because its organisation was conceived in Java, it has been called: “An offshoot of the Pacific Science Congress of Java in 1929”.¹⁰⁰ In other publications, however, the congress is the brainchild of van Stein Callenfells, with Goloubew credited as one of the local organisers in Hanoi: “The original idea and preliminary organization came from Dr. P.V. van Stein Callenfells [...] For this Congress, Dr. George Coëdes acted as Organizing Chairman, Dr. Paul Rivet was president of the Congress, Dr. Paul Mus was secretary. Other local organizers were Drs. Victor Goloubew and Madeleine Colani”.¹⁰¹

Through presentations like Goloubew’s in Java, the EFEO began to build a reputation as an institution interested in researching the prehistory of Indochina. The importance of prehistory and the role it played in the 1932 FEPA has been acknowledged over the years, as have also the generational metaphors that define this branch of history: “prehistory is notable for the way in which it is constantly rewritten in the light of current experience”.¹⁰² Twenty-five years after the 1932 FEPA congress, B.P. Groslier (1926-1986), Chairman of the Council, defined prehistory as:

a very austere discipline, with no immediate benefits, to be applied often under hostile skies [...] a very, very young science, at the most fifty years old, still uncertain of its basis, of its methods, of its prospects [...] We hope – in fact I am personally sure – that this situation will improve greatly and quickly. But it would be unreasonable to think that the FEPA could do so by itself.¹⁰³

3.5 French-Dutch Academic Exchanges

EFEO academics were encouraged to forge ties with Dutch scholars in Indonesia, where colonial institutions long predated French institutions in Indochina. The Batavia Society of Arts and Sciences was founded in Jakarta in 1788, followed in 1822 by a Commission for the Discovery, Collection and Conservation of Ancient Objects. In 1901 the Dutch East Indies Commission for Archaeology in Java and Madura was set up, later renamed the Archaeological Service. EFEO academics were encouraged to emulate the studies conducted by academics “in the Dutch Indies, our neighbours in Java, the very seat of the admirable Society of Batavia, which we continue to view with envy”.¹⁰⁴ Unlike exchanges between the EFEO and the GSI, academic exchanges between French and Dutch scholars were frequent and fruitful, in a number of fields.

⁹⁷ BEFEO 1933: 418.

⁹⁸ BEFEO 1929: 466.

⁹⁹ BEFEO 1929: 466.

¹⁰⁰ Groslier, B.P. 1957: V.

¹⁰¹ Asian Perspectives 1967: 7-8.

¹⁰² Sherratt 1990: 3.

¹⁰³ Groslier, B.P. 1957: VI-VII.

¹⁰⁴ BEFEO 1901: 1. Letter dated October 1900 from Auguste Barth (1834-1916) to Louis Finot.

When Louis Malleret (1901-1970) posted some French scholars to Java in 1928, this exchange led directly to Henri Marchal (1876-1970) learning the technique of anastylosis from Dutch researchers, who had applied it successfully to monuments in Indonesia for a number of years. One of Marchal's projects, the restoration of Banteay Srei in Cambodia, was "inspired by the techniques employed by the Archaeological Service of the Netherlands East Indies".¹⁰⁵

Scholarly exchanges, however, predated 1928. In 1904 and 1907, for instance, Parmentier visited Java to learn Dutch reconstruction techniques "which were more respectful of the original monuments".¹⁰⁶ Even earlier than Parmentier's visit, in 1899 Louis Finot spent two months in Java to foster close links with Dutch scholars.¹⁰⁷

Dutch scholars in Indonesia had acquired their knowledge of megaliths much earlier than the French, starting in 1842, when Justus Hasskarl (1811-1894) reported his finds on menhirs and terraced structures in Salakdatar, west Java. This site and further megalithic remains in the region were researched in the second half of the 19th century by other Dutch scholars.

On numerous occasions, French institutions in Indochina paid homage to European colonial efforts in South or Southeast Asia. For instance, in announcing the first edition of the *Atlas of Indochina* in 1920, Finot called it a notable achievement but one which did not quite reach the "level of perfection"¹⁰⁸ of Bartholomew's *Hand Atlas of India*. In current terms, therefore, the EFEO would be a "learning organization", an institution that continuously transformed and enriched itself by being open to new ideas and by paying homage to older research institutions for new or higher skills and for scholarly advancement.

3.6 The EFEO towards the Prehistory of Southeast Asia

Any criticism levelled at the EFEO for its late involvement in researching the Plain of Jars should be viewed in the context of comments made by Ian Glover, who has conducted archaeological excavations in Southeast Asia for 50 years:

In the Philippines Spanish colonists appear to have shown virtually no interest in antiquities [...] Even following the American takeover in 1898, progress was slow and the new colonial powers proved in no particular hurry to emulate the research of the French in Indochina, the British in Malaya, and the Dutch in the Indies.¹⁰⁹

¹⁰⁵ BEFEO 1932: 81.

¹⁰⁶ Clémentin-Ojha & Manguin 2007: 91.

¹⁰⁷ Goloubew 1935: 516.

¹⁰⁸ BEFEO 1920: 69. The *Hand Atlas of India* was compiled under the direction of J.G. Bartholomew (1860-1920) and published in London in 1893 by Archibald Constable & Company.

¹⁰⁹ Glover 1998: 18.

CHAPTER 4

MADELEINE COLANI AND THE PLAIN OF JARS

Prehistory was born in France and French Indochina has shown the world how to conduct prehistoric research in the Far East.

- P. Lévy. 1944. *Madeleine Colani (1866-1943) et la Préhistoire indochinoise*. Conference at the Louis Finot Museum, Hanoi, 6 December 1943.

The above quote by Paul Lévy is both a eulogy and a declaration of gratitude. Colani inspired several EFEO scholars from different disciplines to study Laos and its rich culture and Lévy (1909-1998), in charge of Prehistory and Ethnography at the Louis Finot Museum,¹¹⁰ was one of her putative disciples. In 1938 he visited Laos to study its prehistory and ethnography and to investigate its eastern frontier in relation to Colani's findings in Hoa-binh (Vietnam) and those to the west reported by Jacques Fromaget.¹¹¹ The EFEO's change of direction was facilitated by the nomination of Colani as a corresponding member, to research prehistoric sites in French Indochina. Colani's appointment coincided with the EFEO's newly-found interest in prehistory and field archaeology, in addition to its traditional subjects of languages, epigraphy and religious architecture. The planning process for the 1932 FEPA congress gave the EFEO the impetus for the first large-scale expedition to the Plain of Jars. Colani's explorations formed the backbone of her presentation at the congress. After the Hanoi congress, she was saluted at prehistorians' conferences in the region and her native France crowned her glory with an accolade to the Legion of Honour in 1937, on the eve of her seventy-first birthday. Her experience in prehistoric research carried out under the *ægis* of the GSI made a significant contribution to the EFEO's transition to research in the prehistory of Southeast Asia.

4.1 Madeleine Colani

Madeleine Colani was born on 13 August 1866 in Strasbourg, Alsace, NE France. Her father, Timothée (1824-1888), was a lecturer in the city's Protestant University but little is known about her mother, Josephe Maria Vincente Gauthey (1843-?), a housewife from Seville, Spain. Madeleine's childhood years were marred by the Franco-Prussian war, which erupted on 13 August 1870, her fourth birthday. Under the terms of the Treaty of Frankfurt signed in May 1871, Prussia annexed Alsace and part of Lorraine.

Unwilling to abide by the conditions of the treaty and in order to preserve their French identity, the Colanis left Alsace and settled in Royan, a coastal town in southwest France. A series of failed business ventures led to financial hardship and the family was forced to abandon Royan and move to Paris, where in April 1877 Colani senior started employment as assistant librarian at the Sorbonne University. Any residual resentment for the hardship the family endured after leaving Strasbourg, or for their reduced circumstances, were dispelled with the birth of Eléonore three months later, on 22 July. Aged 26, in 1903 Eléonore followed Madeleine to Indochina, working first as a telephonist¹¹² and later as her assistant on field trips.

Aged 18, in 1884 Madeleine qualified as a primary school teacher and taught in Parisian schools until 1898, when she applied for a teaching post in Indochina. Colani possessed the relevant teaching experience and her republican credentials were strengthened by her family ties, largely

¹¹⁰ CEFEO 1941/Q2: 2.

¹¹¹ CEFEO 1938/Q4: 7.

¹¹² AGIF 1924: 562. Eléonore entered the colonial service on 26/04/1903.

due to her father's involvement with Léon Gambetta (1838-1882),¹¹³ an influential statesman, in the aftermath of the 1870 Franco-Prussian conflict.

Colani was accepted and joined the overseas administration in the summer of 1898, while still in France. In December, she embarked on a month-long sea voyage to Vietnam, arriving in Hanoi on 7 January 1899. For a time she taught at a school north of Hanoi but following a promotion on 21 December 1899,¹¹⁴ effective 1 January 1900 she assumed a position as Adjunct Teacher at Hanoi's Municipal School, an all-girls' school where she taught German.¹¹⁵

From Vietnam, Colani pursued higher education by distance learning and returned to France to sit exams and to collect academic certificates. From September 1913 and for just over a year, she was in France, making her final preparations to sit the exams of the University of Paris, with a dissertation¹¹⁶ on *combretaceae*, a family of flowering plants widespread in tropical and subtropical climates. On her return to Indochina in December 1914, she was a 48 year-old newly-qualified graduate from a French university and the GSI offered her a position, initially as a volunteer. Jacques Deprat (1880-1935), the scientific head of the GSI who had joined the organisation directly from France in June 1909, was instrumental in the process. There was a tenuous family connection, in that Colani had been a pupil at the private school of Sainte-Barbe in Fontenay-aux-Roses, a suburb of Paris, where Deprat's father taught humanities.

For the next two years, Colani worked as assistant to Henri Mansuy (1857-1937), a palaeontologist who joined the colonial service in Vietnam in July 1901. They developed a strong professional bond, cemented by their shared life experiences. Mansuy's fierce intellect and dedication to the study of palaeontology allowed him to escape the humble beginnings of a labourer's background. Colani, for her part, knew about the difficulties inherent in reinventing herself as a mature apprentice in the male-dominated field of colonial geology, shedding a teacher's cloak after 28 years.

One rarely mentioned detail is the geographical closeness in the birth places of Colani and Mansuy. Colani was born in Alsace and Mansuy hailed from Lorraine, a province bordering Alsace. Their early years were disrupted by the 1870 conflict between France and Prussia. Mansuy, nine years older than Colani, was 13 at the time of the Prussian invasion and it is reasonable to assume that his young years would also have been disrupted.

Early in 1917, Mansuy accused Deprat of planting some European-sourced trilobites among the fossils that Deprat had collected in Indochina and parts of East Asia. Trilobites are a type of hard-shelled marine creatures (Fig. 4.1) that existed over 300 million years ago and became extinct long before the appearance of dinosaurs. Though well known in Europe, at that time these fossils had not been collected from anywhere else. The accusation rested on the important distinction that the suspect trilobites were not just *similar* in nature to others found in Europe, but the matrix in which they were embedded possibly originated in Europe, raising the possibility that they had not been collected in Asia. The alleged fraud was not conclusively resolved but, nevertheless, in February 1919 Deprat was repatriated to France, where he and his family endured financial

¹¹³ Gambetta played an important role in the creation of France's Third Republic.

¹¹⁴ AGIF 1903: 478.

¹¹⁵ AGIF 1900: 305, 381.

¹¹⁶ Colani 1914.

hardship until he established himself as a novelist. In 1926, he published a thinly-disguised, one-sided account of the scandal, under his *nom de plume* of Herbert Wild.¹¹⁷



Fig. 4.1. One of the suspect trilobites allegedly planted by Deprat in his collection of Asian fossils. Deprat & Mansuy 1912: pl. VI/2b.

The scandal did not hinder Colani's chances of a permanent position at the GSI and on 6 September 1917 she was hired as a trainee geologist.¹¹⁸ Her distance learning continued and in 1919 she returned to France for her final preparations on a doctoral thesis¹¹⁹ on fossil fusulinids, a family of microscopic marine organisms. The examining committee was presided over by Gaston Bonnier (1853-1922), Professor of Botanical Sciences at the Sorbonne University and founder of a laboratory of plant biology in Fontainebleau, France.

After collecting her doctorate, in February 1921 Colani returned to Hanoi and her search for a new professional assignment began in earnest.

At this time, the GSI sought to divest itself of Deprat's reputation, by revising all of his publications and not just those dealing with trilobites, which had led to his downfall. The purge was entrusted to Mansuy and Colani, who would separate Deprat's work "into what should be discarded from what should be retained".¹²⁰ Colani was asked to review publications on fusulinids, even though they had never been the subject of a controversy. According to Alex McBirney, a geologist who has published books on the Deprat controversy, for an institution to fully distance itself from the work of a discredited employee was a precautionary measure: "To be charged with dishonesty and betrayal of trust was a professional death sentence. All one's work would be discredited, and one would be ostracised from the scientific community".¹²¹

Her critique of Deprat's work on fusulinids¹²² was a weighty *opus* published in 1924. Though the review guaranteed her immediate employment, the threat of statutory retirement was ever

¹¹⁷ Deprat 1926. In 2005, a Vietnamese edition was published, titled *Mặc chó cứ sủa*, translated from the French by Ta Phuong, a geologist at the Museum of Geology in Hanoi.

¹¹⁸ AGIF 1918: 40.

¹¹⁹ Colani 1920.

¹²⁰ Jacob & Bourret 1920: 8.

¹²¹ McBirney 2004: 93.

¹²² Colani 1924.

present, but for a time she benefited from the Governor-general's generosity, who instructed the Minister for Colonies "to defer her retirement".¹²³

Colani was dispatched to prehistoric sites and in December 1923 started excavating at Chi-Ganh, in Vietnam's Ninh-Binh Province. Shortly after, with Eléonore, she documented the skulls at Lang-cuom, in Vietnam's Bac-Son Massif, a discovery which increased the elder Colani's standing as a prehistorian but for which she always shared the limelight with the younger sibling, expressing intolerance at erroneous attribution. In her review of *La préhistoire*¹²⁴ by André Vayson de Pradenne (1888-1939), for instance, she corrected the author for crediting Mansuy as the discoverer of the skulls: "I pay homage to the achievements of the late Mansuy, but I am duty-bound to state that, tired and ill, he never visited the extremely inaccessible village of Làng Cuom. The discovery was made by my sister, Miss E. Colani, and myself".¹²⁵

Between 1924 and 1927, Colani was able to defer retirement through a series of protracted negotiations but in October 1927, her request for a further two-year extension¹²⁶ was declined. Fernand Blondel (1894-1968), chief of the GSI, cited as reasons the "speculative nature" of research into the prehistory of Indochina and the questionable value of findings emanating from research conducted by a 60-year old when compared with discoveries by "younger scholars", and concluding that Colani's expertise in the prehistory of Indochina was a recently-acquired skill in the wake of Mansuy's "return to France".¹²⁷ Blondel also argued that Colani's publications were overrated – compiled largely from fieldwork conducted under Mansuy's guidance – and there was a dangerous precedent in allowing her to work beyond the statutory retirement age of 60.

But Colani persevered and in 1928 moderated her demands to an extension up to 31 December 1929, a request turned down first by the GSI's finance director and then by the Governor-general. In October 1928, she contacted Léonard Arousseau, who outlined the terms under which she might be considered for a position at the EFEO.¹²⁸ In a final attempt to win a reprieve, she was lionised in an anonymous article, alleging that her success was being overshadowed by the dark cloud of forced retirement: "It is hoped that the Indochinese administration, taking into account her services to the world of French science, will find the means to come to an agreement with her [...] The Prehistory of Indochina needs its best and expert workers".¹²⁹ No further contract extensions were granted and late in 1928 Colani's tenure at the GSI came to an end.

Shortly after, in the early part of January 1929, Arousseau's death and Finot's appointment as interim director brought Colani to the EFEO (Chapter 3.4). Within days, Finot asked her to join the French School as a corresponding member. He valued her work and was known to berate academics for overlooking her achievements, as when he castigated Paul Boudet and Remy Bourgeois for omitting Mansuy and Colani from the prehistoric section of their *Bibliographie de l'Indochine Française 1913-1926* (1928), "two savants who have brought to us the knowledge of the Bacsonian".¹³⁰ The omission may have been in part due to the GSI suspending publication of its *Mémoires* in 1923.

¹²³ Telegram of 29/10/1922 from Maurice Long to Albert Sarraut, Minister for Colonies.

¹²⁴ Vayson de Pradenne 1938. Vayson de Pradenne was a lecturer at the School of Anthropology, Paris.

¹²⁵ Colani 1938: 349, N1.

¹²⁶ Letter of 13/10/1927 from Madeleine Colani to Alexandre Varenne (1870-1947), Governor-general.

¹²⁷ Letter of 20/03/1928 from Fernand Blondel to the Governor-general.

¹²⁸ Correspondence in this period will be the subject of my further research at the EFEO in Paris.

¹²⁹ Article published in the 31/07/1928 edition of *Les Temps*, Hanoi.

¹³⁰ BEFEO 1929: 501-504, bulletin for the year 1928 published in 1929.

4.2 Colani joins the EFEO

It is now useful to analyse the circumstances surrounding Colani's first mission to the Plain of Jars. Table 5 and Map 4.1 illustrate the areas she surveyed in Xieng Khouang and Luang Prabang Provinces during her fieldwork in 1931-33 and 1940.

Table 5 – Sites visited or documented by Colani, 1931-33 & 1940

	Site/present name	Historical name	District	Jars ¹
1)	J1	Ban Ang (with J43)	Paek	339
2)	J2	Lat Sen	Phaxay	93
3)	J3	Ban Soua	Phaxay	247
4)	J4	Bergerie	Paek	3
5)	Q8?	Ban Na Manh	Phaxay	8
6)	J13	Na Nong	Khun	3
7)	QS16 ²	Ban Nakham	Khun	36
8)	QS22	Ban Hin	Kham	10
9)	J26	Ban Xot	Phoukood	11
10)	Ban Nakhouan	Ban Sak?	Phoukood	2
11)	J27	Ban Si (with J37)	Phoukood	4
12)	QS28	Ban Sieng Kieu	Kham	33
13)	J37	Ban Si (with J27)	Phoukood	8
14)	J38	Song Méng group	Khun	17
15)	QS39	Song Méng group	Khun	61
16)	J43	Ban Ang (with J1)	Paek	2
17)	J51	San Hin Oume	Phou Khoun	21
18)	Phou Soung	Phou Soung	Phoukood	38
19)	?	Jars on a plateau	Kham	25-30
20)	?	Eight jars (near Ban Ban)	Kham	8
21)	?	Isolated, single jar	Kham	1
22)	?	Eleven Jars	Phou Khoun	11
23)	?	Kéo Tane	Phou Khoun	3
24)	?	Kéo Tane South	Phou Khoun	3
25)	?	Kéo Tane East	Phou Khoun	1
26)	?	Sop Nam Miang	Phou Khoun	2

Source: reconstructed by L. Genovese from various publications

¹ Jar quantities at 2013 except for 19) to 26), which are historical quantities

² QS16 surveyed by M. Colani in 1940; all other sites surveyed in 1931-33

Three versions exist for the mechanics that led to Colani's first posting to the Plain of Jars, and I will now summarise each version, respectively as reported by Clémentin-Ojha & Manguin, Colani herself and Coëdès. In the first version, Clémentin-Ojha & Manguin depict Colani as the catalyst for the EFEO's shift towards scientific archaeology, alluding to the active role she played in initiating research at the Plain of Jars after inheriting Mansuy's mantle: "It was Madeleine Colani [...] who picked up where Mansuy had left off. She finally succeeded in persuading Finot to include prehistoric research among EFEO activities".¹³¹ I believe this version should be handled with caution for the following reasons. First, it accords Colani an inordinate degree of influence which is at odds with her status as corresponding member for the French School. Second, it does not take fully into account Finot's prominent role as interim director, a position

¹³¹ Clémentin-Ojha & Manguin 2007: 116.

he filled until September 1929, and his often stated wish that Laos should receive a fair share of EFEO research projects. Third, it would be out of character for Colani to instigate a project and to stipulate where to conduct her research. Although her actions in seeking contract extensions at the GSI may portray her as a tenacious, even pugnacious, employee, in French colonial mores the audacity to suggest what the EFEO should research could have been interpreted as an affront from a newly-appointed corresponding member. And a mature female one at that.



Map 4.1. The 26 sites listed in Table 5. Sites in the white circle are in Phou Khoun District, Luang Prabang Province. All other sites are in Xieng Khouang Province. GoogleEarth.

In the second version, Colani expresses her gratitude to Finot and Cœdès, deflecting credit away from herself and from any participation in the decision-making process: “our very sincere and profound gratitude to the late Mr Louis Finot [...] who advised us to study the monolithic jars of Tran Ninh; and to Mr George Cœdès [...] among other things for the excellent bibliographic data he so generously provided to us”.¹³² This version is more plausible because it accords well with Colani’s known reluctance to accept credit where she felt it was not fully deserved. Credit to Finot for steering the EFEO towards prehistory is also printed in the obituary written by Goloubew on Finot’s death: “For a long time in Indochina, [prehistory] was considered a branch of geology. Louis Finot resolved to break with this tradition and ensured the co-operation of an eminent prehistorian, Miss Madeleine Colani, Mr. H. Mansuy’s tireless associate”.¹³³ The chronological timeframe for this version is consistent with the dual directorship at the EFEO in the two years prior to Colani’s first survey in 1931, when both Finot and Cœdès were at the helm.

In the third version, Cœdès places Colani firmly at the centre of EFEO activities in Indochina’s prehistoric sites. Colani, he wrote, had studied prehistoric sites since her nomination as corresponding member of the EFEO and her investigations of shell deposits in northern Annam had yielded numerous valuable results. However, “owing to lack of the necessary funds this field of research has had to be abandoned. Mlle COLANI has consequently restricted her activity to

¹³² Colani 1935a, v1: 11.

¹³³ Goloubew 1935: 533.

another domain of studies, viz, the megalithic civilization of Upper Laos”.¹³⁴ Cœdès does not elaborate on the financial reasons that caused this shift in research focus.

After the initial nomination in 1929, her contract was renewed on 1 January 1930 for 12 months,¹³⁵ followed by a three-year term from September 1932 to September 1935.

From February 1929 to early in 1931,¹³⁶ Colani surveyed caves and rockshelters in Vietnam’s Tonkin and Annam regions. She is credited with coining the term ‘Hoabinhian’, a pebble industry characterised by flaked implements and tools, often worked only on one face, dating to between 10,000-5,000 BCE. The first paper published under the EFEO banner, *Quelques stations hoabinhiennes*,¹³⁷ detailed seven caves surveyed between March and May 1929. From the Lang Vanh rockshelter (Fig. 4.2) she collected stone tools, chisels and axes (Fig. 4.3).



Fig. 4.2. Lang Vanh, Hoa-binh, Vietnam. Cave surveyed by Colani in 1929.
L. Genovese (2009).

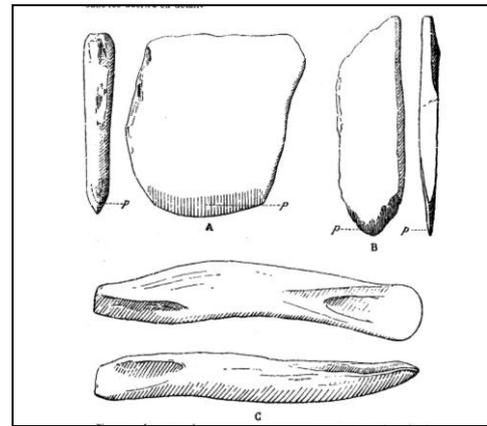


Fig. 4.3. Stone tools retrieved from Lang Vanh in 1929.
Colani 1929b: fig. 23.

The decision to showcase the Plain of Jars at the 1932 FEPA was made only in the early part of 1931, less than a year before the start of the congress. There may have been a realisation that French efforts in researching megaliths would be compared to those of Dutch academics attending the congress, triggering a desire to “match” their knowledge of megaliths with similar findings from Indochina. This may have been one reason for diverting Colani’s efforts from Neolithic rockshelters to the Plain of Jars.

The delay in researching the Plain of Jars has been remarked upon by several scholars, including Bernard P. Groslier, who stated that “The “jars” [*sic*] of Tran-ninh had also attracted attention at least as early as 1909. They were finally published by Madeleine Colani”.¹³⁸

4.3 First Mission (May-June 1931)

Colani studied vestiges of Bacsonian-Hoabinhian sites in Khammuan Province, central Laos, for traces of the Neolithic documented in October 1930 at Tha Khek, also in central Laos. From

¹³⁴ Cœdès 1934: 35, relating to the *Annual Bibliography of Indian Archaeology* for the year 1932.

¹³⁵ BEFEO 1930: 229.

¹³⁶ BEFEO 1929: 549.

¹³⁷ Colani 1929a.

¹³⁸ Groslier, B.P. 1966: 159.

Khammuan, she travelled to J1/Ban Ang, “the most important group”¹³⁹ of stone jars and “virtually the only one known to Europeans”.¹⁴⁰

Excavations at J1 were disrupted by the early onset of the rainy season and Colani resolved to return to the site the following year during the dry season, “to study the contents of some of the jars”.¹⁴¹ From the outset, Colani entertained the notion that the jars’ contents offered an uninterrupted chronological connection with the ancient people of the Plain of Jars: “Unfortunately, the monolithic urns have been emptied almost totally of their contents”,¹⁴² or, specifically for J3, she declared that: “The contents of 157 jars have been studied”.¹⁴³

J1 has an area of 28.5 ha. and Colani was daunted by the task of differentiating “countless stone barrels, whole or broken, barely rising above a jumble of grass”.¹⁴⁴ In images from the period, the tall jars are surrounded by tall grass (Fig. 4.4). In some of the jars, Colani found coloured beads, bones, teeth and ash from cremations, possibly belonging to several individuals of varying ages, due to some wisdom teeth appearing young and without “traces of wear and tear”.¹⁴⁵

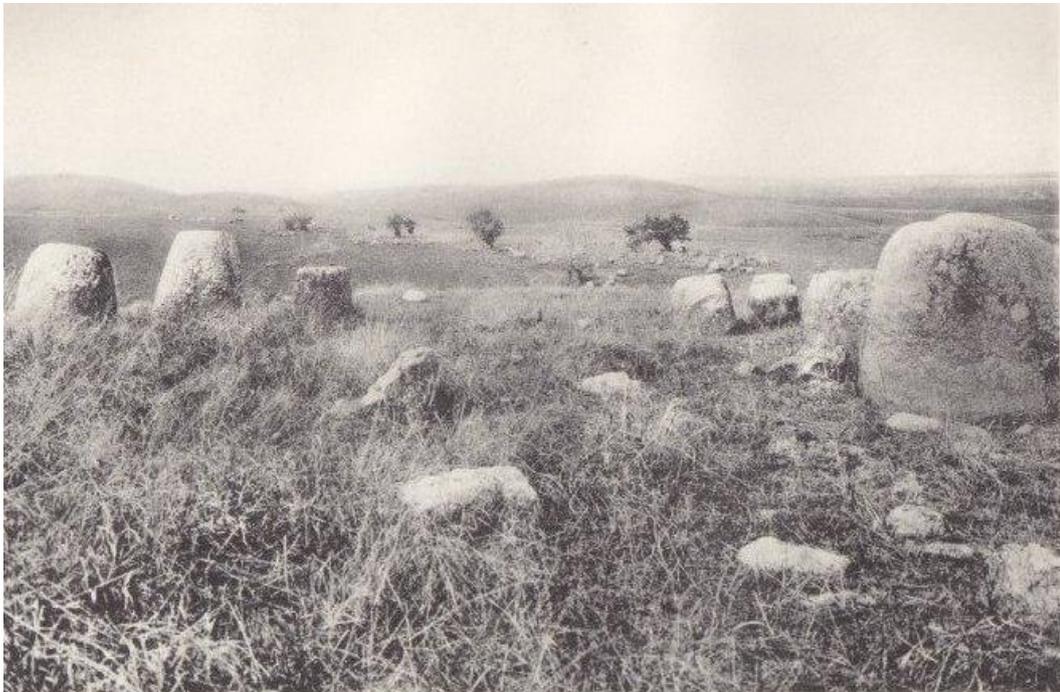


Fig. 4.4. J1, May-June 1931. Jars surrounded by grass at the time of Colani’s survey.
Colani 1935a, v1: pl. XIII.

The ashes enabled Colani to formulate an early conclusion: “These discoveries leave us in no doubt whatsoever about the funerary function of the jars”¹⁴⁶ but doubted whether cremated remains of “individuals of all social ranks”¹⁴⁷ had been placed in the jars. Although it remains doubtful whether the cremated remains in the jars dated back to the era of the Plain of Jars’

¹³⁹ BEFEO 1931: 330.

¹⁴⁰ Colani 1935a, v1: 227.

¹⁴¹ Colani 1935a, v2: 26.

¹⁴² Colani 1935a, v2: 33.

¹⁴³ Colani 1935a, v2: 31.

¹⁴⁴ Colani 1935a, v1: 6.

¹⁴⁵ Colani 1935a, v2: 28.

¹⁴⁶ Colani 1933d: 105.

¹⁴⁷ Colani 1933d: 105, N1 & N3.

stonemasons, a careful approach is endorsed by some contemporary researchers, who believe that rank is not the only factor in the size of the burial and mortuary accoutrements.

The argument relating the size of the burial vessel to the rank or status of the deceased is not espoused by some academics, who favour the inclusion of numerous elements in the analytical process for funerary customs. Studying burial practices of the Angami Naga, for instance, Jamir has observed that other factors play a part in the burial process:

To analyse the phenomenon of the stone jars, size is one of the parameters, in conjunction with age, sex and possibly clan distinction. Among some Naga communities in Nagaland, northeast India, secondary burial in a clay pot was the norm until people converted to Christianity. The size of the jar was adjusted consistently with the age of the deceased. A full-sized pot would be used for an adult and a small one for infants and young children. Design attributes in the funerary pots also varied in relation to the sex of the deceased.¹⁴⁸

At Jotsoma, in the state of Nagaland, NE India, for example, Jamir has observed that rank, as well as manner of death, can influence the burial process. Burials of smaller dimensions, when compared to the rest of the burials, may have been intended for cases of unnatural death, such as victims of war (more details in Chapter 7.6.1). This has prompted him to suggest that: “greater amount of energy expenditure during the burial process also rests upon the circumstances of death and may not always necessarily depend on the social identity of the deceased”,¹⁴⁹ with a caution that modest burials may not necessarily be indicative of low status.

Colani was the first researcher to propose that the Plain of Jars may have been in use across centuries by waves of successive communities, each with their own funerary customs, witness the affinities in artefacts like bronze bells (Fig. 4.5).

In November 1994, Nitta discovered a lidded 60 cm high clay pot (Fig. 4.6) coated with a resin-like brown substance and decorated with incised lines and a spiral pattern, near a sandstone jar at J1. His preliminary conclusions¹⁵⁰ were that the mortuary practices at J1 revolved around the stone jars, which may have housed the bones of the deceased, to whom the jar was dedicated. Family members of the deceased may have subsequently been interred either in a burial pit or in a ceramic burial pot near the stone jar. In his hypothesis, Nitta proposed that the ash in some jars at J1 reflected a later usage at the Plain of Jars, distinct from the pots buried near the jars and containing bones and grave goods. This late phase, he suggested, may have occurred around the late first millennium or early second millennium CE, after the original installation of the megalithic jars: “After the erection and abandonment of the stone jars, they were reused as urns for the burnt human bones”.¹⁵¹

The theory of long-time occupation of the Plain of Jars has been explored by other scholars: “the necropolis [J1] was abandoned for perhaps several centuries and later reused by people who were making cylindrical, resin-coated jars”,¹⁵² a theory Colani had already explored when suggesting a transition from “jar-carving”¹⁵³ to clay pots. The burial pots under the granite blocks at J1 differ from those found under the stone jars and presume a very different kind of dating.¹⁵⁴

¹⁴⁸ Personal communication of July 2014 from Tiatoshi Jamir, Dept. of History & Archaeology, Nagaland University, Kohima campus, Nagaland, India.

¹⁴⁹ Jamir 2006: 455.

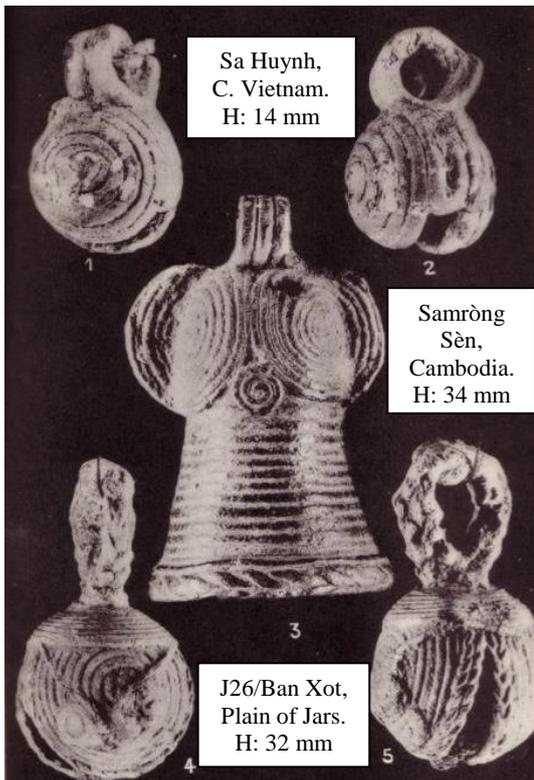
¹⁵⁰ Eiji Nitta has not conducted further excavations at the Plain of Jars since the mid-990s.

¹⁵¹ Nitta 1996: 17.

¹⁵² Sayavongkhamdy & Bellwood 2000: 107.

¹⁵³ Colani 1933d: 126.

¹⁵⁴ Sayavongkhamdy & Bellwood 2000: 107.



Sa Huynh,
C. Vietnam.
H: 14 mm

Samrông
Sên,
Cambodia.
H: 34 mm

J26/Ban Xot,
Plain of Jars.
H: 32 mm

Fig. 4.5. Bronze bells.
Colani 1935a, v2: pl. LXXIII.



Fig. 4.6. J1. Decorated pot.
Nitta 1996: pl. 5.

4.4 Second Mission (October-December 1931)

After surveying J1 and documenting related artefacts in Hanoi, in October Colani returned to the Plain of Jars to explore J2, set on two adjacent hills dissected by a road constructed during the French Occupation and the cause of “severe slope erosion and jar displacement”.¹⁵⁵

It was at J2 that Colani encountered the Recessed Inner rim (Fig. 4.7) for the first time, a rim type not carved on any of the hundreds of jars she had surveyed a few months earlier at J1. She remarked that on these grooved jars, “a lid could have rested”,¹⁵⁶ echoing Raquez’s theory from three decades earlier. Rim styles are discussed in detail in Chapter 5.2.



Fig. 4.7. J2. Recessed Inner rim on a sandstone jar.
L. Genovese (2011).

¹⁵⁵ Plain of Jars Archaeological-Landscape Heritage Management Plan, First Draft, February 2009, item 2.3.10.

¹⁵⁶ Colani 1933d: 115.

Some of the 14 discs at J2 are decorated with concentric rings (Fig. 4.8) cut into the stone. Seasonal slash and burn carried out in close proximity of the jars (Fig. 4.9) is a source of damage to their fabric, with the intense heat and smoke blackening the sandstone.



Fig. 4.8. J2. Sandstone disc decorated with concentric rings.
L. Genovese (2009).



Fig. 4.9. J2. Seasonal slash and burn around this sandstone jar.
L. Genovese (2011).

From J2, on 14 November Colani travelled to nearby J3 to study its jars, returning to Hanoi exactly one month later. The finds at J3 were similar to those in the western field at J2. Similarly to J1, in some of the jars at J3 Colani found ash from cremations and burnt human bones.¹⁵⁷

Not far from the main group of jars at J3, a small abandoned jar was found in the forest next to some quartz-rock. In the rice fields near the jars, Colani found fragments of the same rock as the jars, perhaps a rare instance of carving or trimming at the site.

After exploring fields of stones to the west, in Luang Prabang Province, Colani summarised the main difference between the two types of funerary settings, by reference to Thao Kham: “Very importantly, at Ban Ang [J1] and Ban Soua [J3], the human bones are found inside the megalithic jars: at the fields of funerary stones [Thao Kham, for instance], they are confined to the [buried] clay vessels”.¹⁵⁸ This statement can be refined by specifying that, in fact, Colani had also found human remains (bones, not ash) in buried clay vessels at J1 and J3. Other human remains at J1 in a lidded clay pot buried were discovered by Nitta in 1994 (Chapter 4.3).

4.5 Colani’s Contribution to the 1932 FEPA

On 14 December 1931, Colani returned to Hanoi to classify her material but, more importantly, to work on her presentations for the FEPA congress the following month. She was one of three academics representing Indochina, together with Victor Goloubew and Paul Rivet (1876-1958), director of the Museum of Natural History and curator of the Museum of Ethnography in Paris.¹⁵⁹ Post-congress, Rivet was instrumental in urging the EFEO to pursue research in prehistoric sites in Indochina. Colani and other delegates are seen in the group photo (Fig. 4.10).

¹⁵⁷ Colani 1935a, v2: 31.

¹⁵⁸ Colani 1933e: 361.

¹⁵⁹ BEFEO 1931: 658.

Three of the four papers Colani presented at the congress¹⁶⁰ were not as substantial as her fourth contribution, a presentation of 26 pages plus several plates and maps, titled *Fields of megalithic jars and funerary stones in the Tran-ninh*.¹⁶¹ At the 1932 FEPA congress, Colani established the funerary nature of the Plain of Jars, informing the audience about the “countless cremations”¹⁶² carried out in the limestone cave at J1.

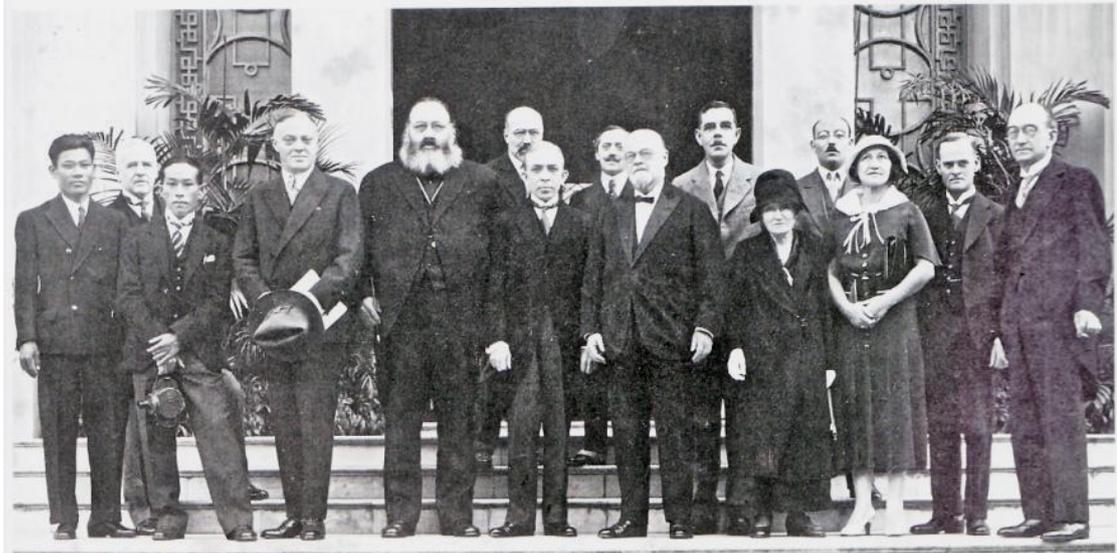


Fig. 4.10. Hanoi, January 1932, first FEPA congress. Front row: M. Colani and H. Parmentier (4th and 5th from right), G. Cédès and P.V. van Stein Callenfells (6th and 7th from right). Back row: V. Goloubew (2nd from left). Clémentin-Ojha & Manguin 2007: 116.

The cave at J1 was instrumental in shaping funerary connotations for the Plain of Jars, particularly on account of the clay vessels unearthed from its floor and containing human bones. Her geological training and experience gained at the GSI were valuable and allowed her to theorise about the stratigraphy of the cave floor, which at a depth of 2.5-3.0 m was brown and clay-like. Colani spent considerable time in studying the cave at J1, attempting to separate the “domestic” space from ritual connotations. The otherworldly visualisation of caves has fired the imagination of researchers and writers. Caves are seen as repositories of ancient behaviours, as storage units of fears and triumphs in humanity’s fight for its own space, as sanctuaries to keep predators at bay, in a shared habitat in the midst of time, “and the burden of proof typically lay in demonstrating that deposits were symbolic or ritual in nature”.¹⁶³

After the 1932 FEPA congress, the EFEO continued to finance research projects into the prehistory of Indochina, posting Colani to sites in Cambodia and Vietnam,¹⁶⁴ and appointing her as their representative at FEPA conferences in Manila (1935) and Singapore (1938).

¹⁶⁰ Colani 1933 a-c.

¹⁶¹ Colani 1933d.

¹⁶² Colani 1933d: 105.

¹⁶³ Moyes 2013: 3.

¹⁶⁴ Feb.-June 1936: Quang-binh and Quáng-trị (Vietnam); Feb.-May 1937: Upper Tonkin (Vietnam); Feb. 1938: Samròng Sèn (Cambodia); March 1938: Bay of Tonkin (Vietnam); July-Sep. 1938: Halong Bay (Vietnam); Jan.-March 1939: Samròng Sèn and Takeo (Cambodia); April 1939: Saigon and Dalat (Vietnam) to study prehistory, protohistory and ethnography.

4.6 Third Mission (February-May 1932)

In February 1932, immediately after the FEPA congress, Colani resumed her fieldwork at the Plain of Jars, starting with sites to the NE of Xieng Khouang. At Ban Hin (QS22) and Ban Sieng Kieu (QS28) came her first encounter with a *calotte*, a dome-shaped stone disc. At QS22, she instructed her porters to place one of these domes (Fig. 4.11) on a sandstone jar (Fig. 4.12), which “barely overhang the jar”.¹⁶⁵ Though unorthodox, the experiment illustrates that Colani never fully subscribed to the theory of the discs as lids for the jars. In May 2012, on my last visit to QS22, I found the dome upturned on the ground (Fig. 4.13). Dome-shaped monoliths were never as numerous as other stone discs and most of those documented at QS22 and QS28 have since disappeared from view.



Fig. 4.11. QS22. Dome on the ground, next to a jar. Colani 1935a, v1: pl. XXXIII/2.



Fig. 4.12. QS22. Dome placed on top of a jar. Colani 1935a, v1: pl. XXXIII/3.



Fig. 4.13. QS22. Upturned dome. The jar on which it rested is no longer at the site. L. Genovese (2012).

Colani’s surveys in Kham District were barely representative of an area which is revealing an increasing number of sites, also further east, in Nong Hét, towards the Vietnamese border. Jar quantities in some of these isolated sites often consist of one single jar or, at most, a handful of units. Their remote location makes them difficult to monitor and the stone artefacts are being depleted at an alarming rate. At QS47, for instance, only one limestone jar has survived but at the time of my survey, in May 2012, villagers informed me that a few months earlier two other limestone jars could be counted at the site.

Progressing in an anti-clockwise direction, in March 1932 Colani moved from Kham District to Phoukood District, in the NW of Xieng Khouang Province. At Ban Xot (J26), a field of jars and stones, she uncovered one of the richest deposits of funerary objects: “in excess of 200 glass beads, bronze bells, five iron bracelets [...] The larger jars measured 2 m or more”.¹⁶⁶ Excavations around the funerary stones produced an array of goods, including pots of various sizes, bronze bells (Fig. 4.5, Chapter 4.3 refers), utensils and iron jewellery, stone pendants, plain and decorated sherds, glass beads, fragments of a pseudo-Roman bead and a single carnelian bead.

¹⁶⁵ Colani 1933e: 358.

¹⁶⁶ Colani 1933e: 359.

From her early writings, Colani addressed the issue of design evolution, seeking to represent changes in jar size and aperture, by means of a diagram first published in her 1932 FEPA presentation¹⁶⁷ and included in her monograph and later publications. She also drew our attention to variations within the same site, by illustrating the three different styles for each of the three jar groups at J26 (Fig. 4.14). The third shape (9/o, in the red square) refers to a highly-polished boulder, with a small aperture to the side (Fig. 5.56 and Fig. 5.57, Chapter 5.3.3, refer).

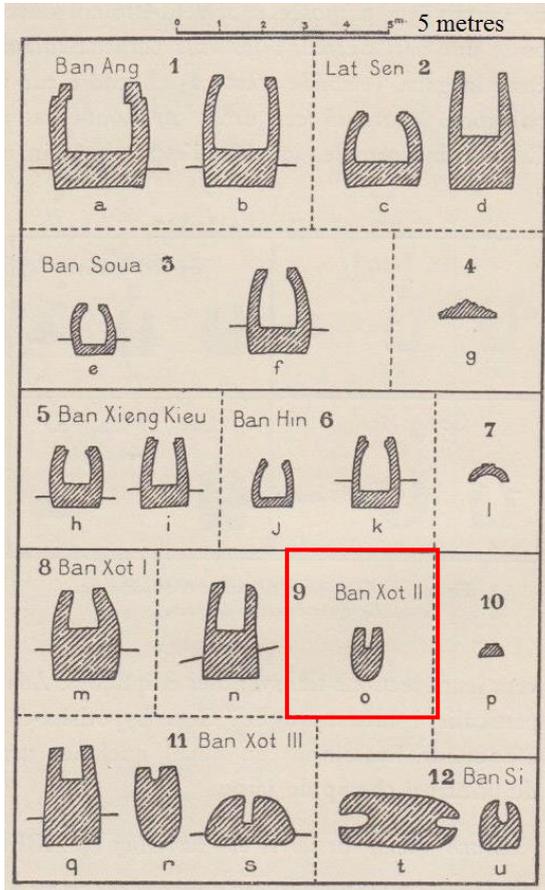
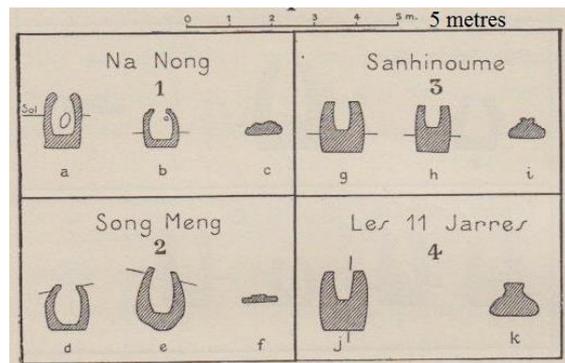


Fig. 4.14. Jar design evolution. Ban Ang (J1), Lat Sen (J2), Ban Soua (J3), Ban Xieng Kieu (QS28), Ban Hin (QS22), Ban Xot (J26), Ban Si (J27 & J37), Na Nong (J13), Sanhinoume (J51), Song Méng (J38 and possibly QS39). Les 11 Jarres, in Phou Khoun District (Luang Prabang Province), remains unidentified. Colani, 1935a, v1, 131, fig. 42 (left); v1, 132, fig. 43 (below).



4.7 Fourth (January-May 1933) and Fifth (March-July 1940) Missions

In January 1933 Colani excavated at the fields of standing stones in Hua Phan Province, NE of Xieng Khouang (see also Chapter 7.1.2), detailed in her 1935 monograph together with the Plain of Jars. On 12 March she left Hua Phan for Xieng Khouang Province, to explore granite sites in Khun District: Na Nong (J13) and the Song Méng area (J38 and possibly QS39). The sizeable field of granite jars at QS16, known as Ban Nakham and visited by Parmentier in 1912, was omitted from her 1933 expedition but was visited in 1940.

J13 is located NW of both J38 (19 km) and QS39 (16 km). In recent decades, J13 has suffered from rapid urbanization. From the 34 granite jars reported in 1935, barely the fragments of two units can be discerned among the debris and farming implements (Fig. 4.15 & Fig. 4.16). See also Fig. 6.12 (Chapter 6.2.3) for site plan.

¹⁶⁷ Colani 1933e: pl. X.



Fig. 4.15. J13 formerly housed 34 granite jars but now only two fragments remain.
L. Genovese (2014).



Fig. 4.16. The granite jars at J13 have suffered as a result of urbanisation.
L. Genovese (2014).

If the modest grave goods at J13 left Colani somewhat disappointed – stone axe, potsherds, glass beads, round-bottomed pots, incised bronze ring fragment, iron knives and charcoal – her dissatisfaction soon faded in the presence of a granite disc (Fig. 4.17 and Fig. 4.18) decorated with an anthropomorphic figure, weighing an estimated 200 kg. Colani was convinced the figure held an object between its palms (white circle, Fig. 4.17) but was unable to identify its nature.



Fig. 4.17. J13. Granite disc, strapped to a frame, ready for removal from the site.
Colani 1935a, v1: pl. LVI.

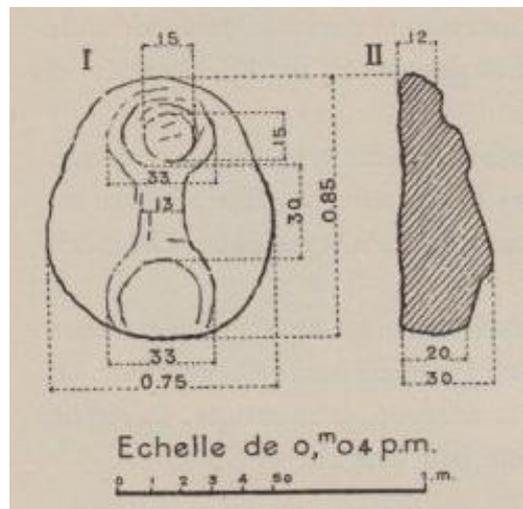


Fig. 4.18. J13. Colani's sketch of the unique decorated granite disc.
Colani 1935a, v1: 164, fig. 76.

On her instructions, the disc was strapped to a frame of bamboo poles and transported to the gardens of the French Resident's mansion in Muang Khoun, employing a method used by the Lhota in northern Assam (Fig. 4.19 and Fig. 4.20): "It is with a much smaller frame, but quite similar to that used by the Lhota, that in 1933 the Méo [Hmong] transported the Na Nong [J13] dome decorated with a human figure in bas-relief".¹⁶⁸

¹⁶⁸ Colani 1935a, v1: 128-9.

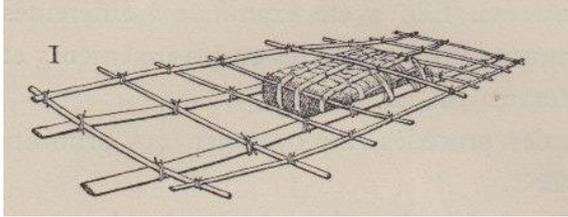


Fig. 4.19. Colani's sketch of a megalith strapped to a Lhota frame, based on a frame in J.P. Mills' photo documented by Hutton (see Fig. 4.20). Colani 1935a, v1: 128, fig. 40.

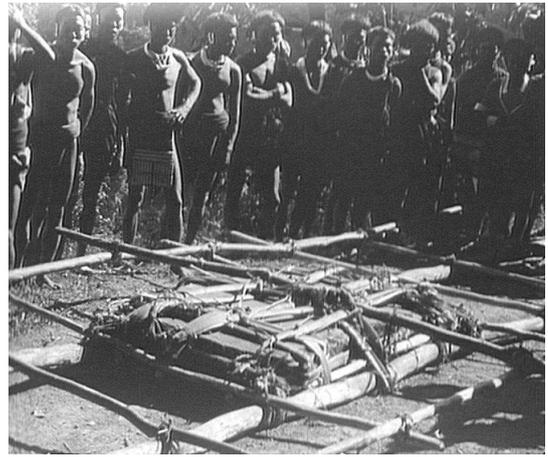
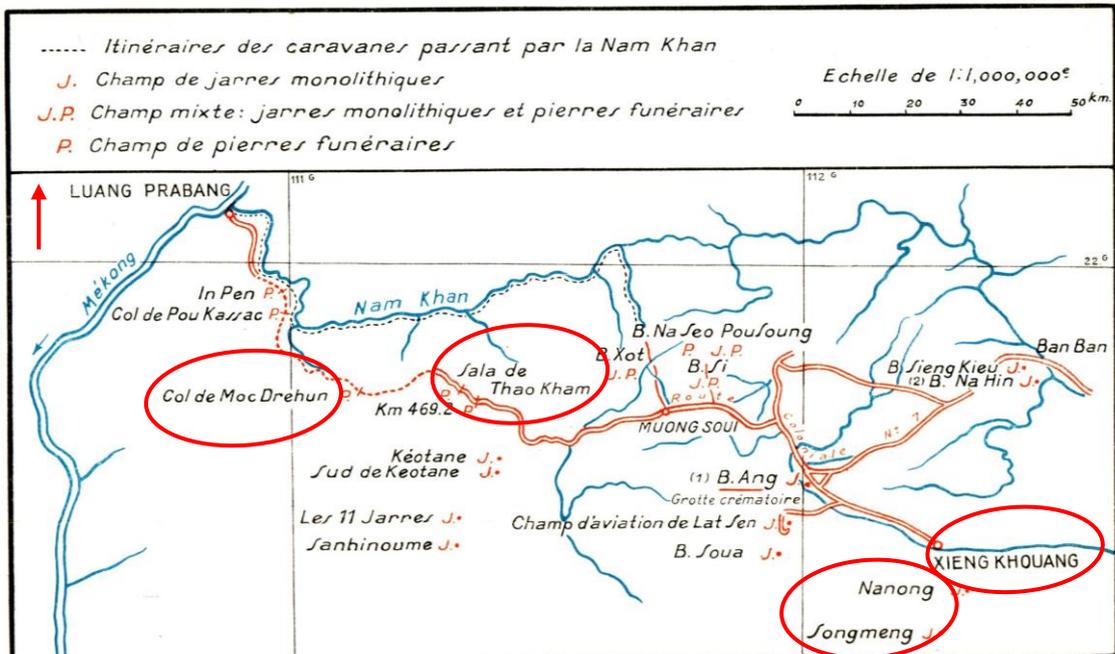


Fig. 4.20. Koio, Assam. Lhota stone-dragging ceremony. (J.H. Hutton photo). <http://himalaya.socanth.cam.ac.uk/collections/naga/mediaview/naga/millsphot/p47837.jpg>

Song Méng/J38, shown approx. 20 km SW of Nanong/J13 on Colani's map (Map 4.2), can now be reached via a sealed road.



Map 4.2. Song Méng/J38, shown approx. 20 km SW of Nanong/J13. Colani 1935a, v1: map VII.

At the time of Colani's visits, in 1933 and 1940, J38 could be reached only via an unpaved road which is impassable (Fig. 4.21) in the rainy season: "The small jar field of Song Méng is located approx. 20 km south of the Tran Ninh's regional capital, on the ancient route between Xieng Khouang and Thathom".¹⁶⁹

The sunken jars at J38 were "evenly shaped [...] this shows that they were not sunk into the ground by nature; the builders hollowed out pits and have buried the jars so that the top is barely

¹⁶⁹ Colani 1935a, v1: 210.

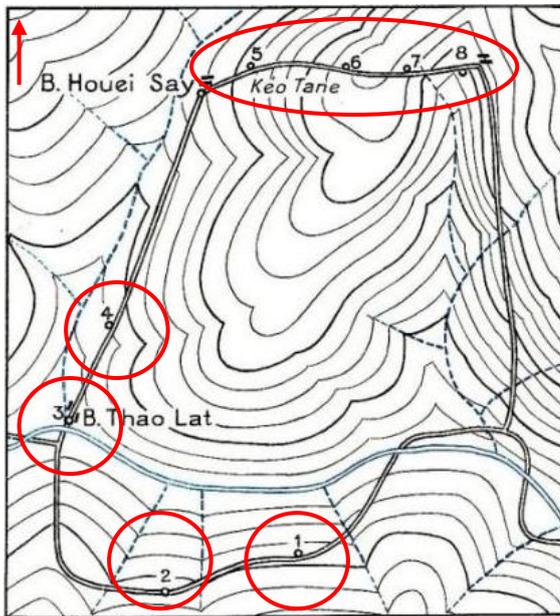
visible [...] then they filled the ground around the megaliths”.¹⁷⁰ The buried jars at J38 and at other sites are discussed in detail in Chapter 5.6.



Fig. 4.21. J38. On this particular outing, it took more than four hours to cover a distance of 20 km, from J38 to Muang Khoun.
L. Genovese (2012).

J38 is important not only because it is one of at least six sites (Table 8 Chapter 5.6) housing buried jars, but also because it is the only location that Colani surveyed twice, and it may be reasonable to assume that it held unique qualities she had not encountered elsewhere.

From Khun District, in early April 1933 Colani travelled west to survey J51, Eleven Jars and the three fields at Kéo Tane, all located south of Route 7. The Kéo Tane group consisted of eight points (Map 4.3) arranged in a circular path and housing stones, jars and several large sandstone discs decorated with zoomorphic figures (Fig. 4.22).



Map 4.3. Colani’s drawing showing the layout of jars and animal discs at Kéo Tane.
Colani 1935a, v1: map IX.

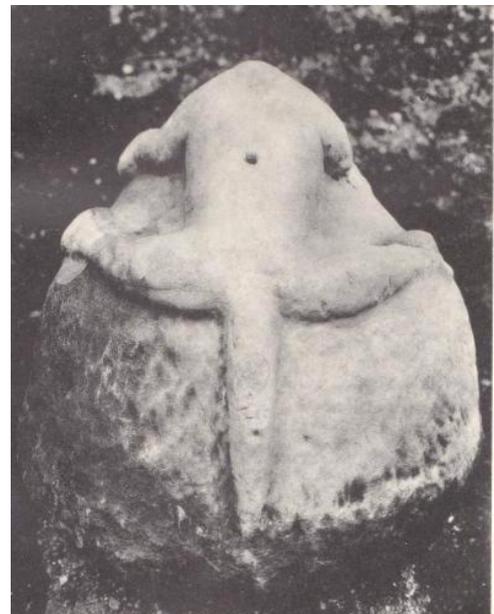
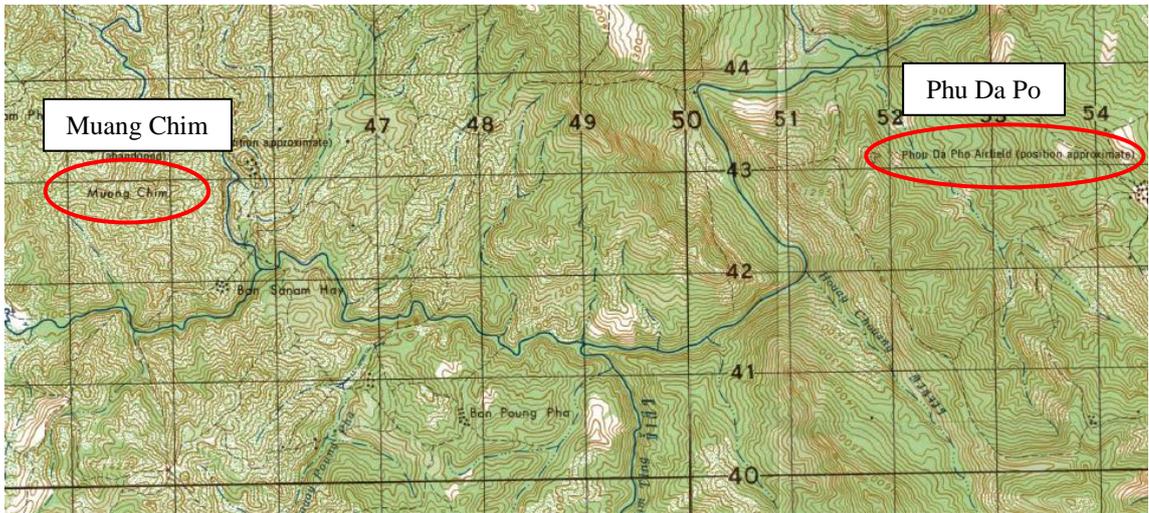


Fig. 4.22. Kéo Tane. Sandstone disc decorated with zoomorphic figure.
Colani 1935a, v1: pl. LIX.

J51 was known as San Hin Oume in Colani’s times but in maps from the 1960s, the name had already changed to Phu Da Pho (Map 4.4), its present name.¹⁷¹

¹⁷⁰ Colani 1935a, v1: 212.

¹⁷¹ Genovese 2014.



Map 4.4. Muang Chim (boat landing) and Phu Da Pho, formerly known as San Hin Oume (J51). Texas University Map 5547-IV, series L7015, 1965.

The jars at J51 are shallow and their height is around 120 cm and often the “base thickness is nearly equal and at times greater than half the height”.¹⁷² J51 hosts equal quantities of jars and discs – 21 of each – a unique instance at the Plain of Jars. At all other sites, the jars always vastly outnumber the discs and the possibility cannot be excluded that the historical quantity of jars at J51 was greater than first reported by Colani. The diameter of the massive mushroom-shaped discs can reach up to 87 cm (Fig. 4.23 and Fig. 4.24), with some units decorated with concentric circles or animal figures. Similar discs were found at the Eleven Jars site. Mushroom-shaped discs are typical of Phou Khoun District.



Fig. 4.23. J51. Mushroom-shaped, sandstone discs, found only in Phou Khoun. Colani 1935a, v1: pl. XLV.



Fig. 4.24. J51. A large quantity (21) of sandstone discs exists at this site. L. Genovese (2014).

An unusual example of evolution in funerary practices was proposed by Colani for the zoomorphic statues encountered at J51. One of the animal-decorated discs was found face down (Fig. 4.25) but was exposed during her excavations and is still found with the image facing skywards (Fig. 4.26). Colani theorised that the practice of burying grave goods near the jars was discontinued when rough-hewn animal representations became common. Her suggestion that the sculpted side of these zoomorphic discs was buried as part of “occult”¹⁷³ practices is an early

¹⁷² Colani 1935a, v1: 147.

¹⁷³ Colani 1934a: 339.

interpretation, however: “the paws pointing above, towards the sky, and the head directed below, towards the centre of the Earth”.¹⁷⁴

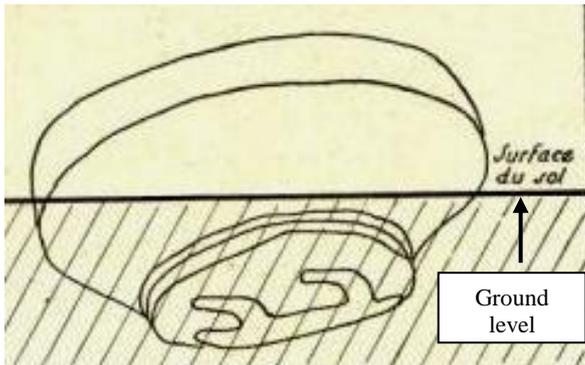


Fig. 4.25. J51. Animal-decorated sandstone disc Colani found face down. Colani 1934a: 13, fig. 7.



Fig. 4.26. J51. The animal-decorated disc (30 cm scale), with dia. of 1 m. L. Genovese (2014).

The richest goods were found at J51 and included polished stones, round-bottomed and mouth-to-mouth pots, as well as decorated and undecorated potsherds, iron knives and charcoal. Colani also retrieved mouth-to-mouth pots at Thao Kham (Fig. 4.27) and Moc Drehun (Fig. 4.28). Mouth-to-mouth pots have also been found at Lao Pako (Fig. 7.26, Chapter 7.1.4).

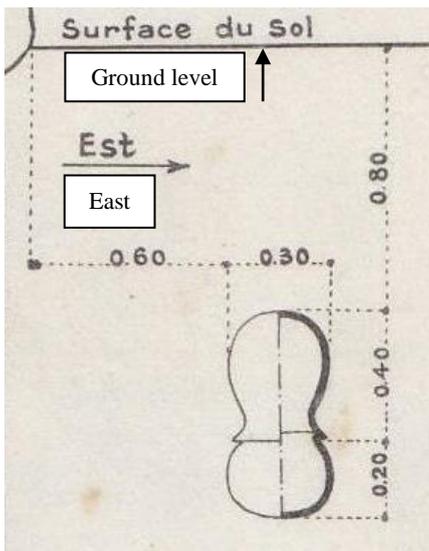


Fig. 4.27. Thao Kham, field of stones and burial pots. Colani 1935a, v2: pl. LXXXVIII/7.

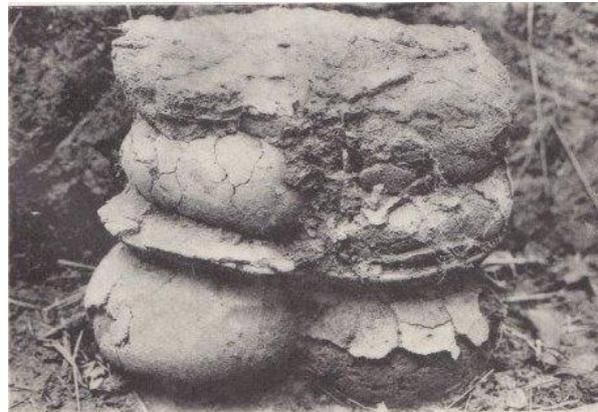


Fig. 4.28. Col de Moc Drehun, Luang Prabang Province. Mouth-to-mouth burial pots. Colani 1935a, v1: pl. XL.

In Mainland Southeast Asia, mouth-to-mouth burial pots have also been found at Ban Takhong, a mound in Buriram Province, NE Thailand.¹⁷⁵ In Island Southeast Asia, mouth-to-mouth pots have been documented at Gilimanuk and Plawangan, located respectively in Bali and central Java.¹⁷⁶ In East Asia, inverted pots have been found in SW Japan, dating to the Jomon and Yayoi periods (BCE 100-300 CE), with contact possibly established between the Japanese and Indo-Malaysian

¹⁷⁴ BEFEO 1940: 496.

¹⁷⁵ Moore 1992: 41.

¹⁷⁶ Soegondho 1994: 68-70.

archipelagic regions from the first millennium onwards,¹⁷⁷ and on Botel Tobago Island, Taiwan (Fig. 4.29). Burials in inverted pots have also been documented in Syria (Fig. 4.30).

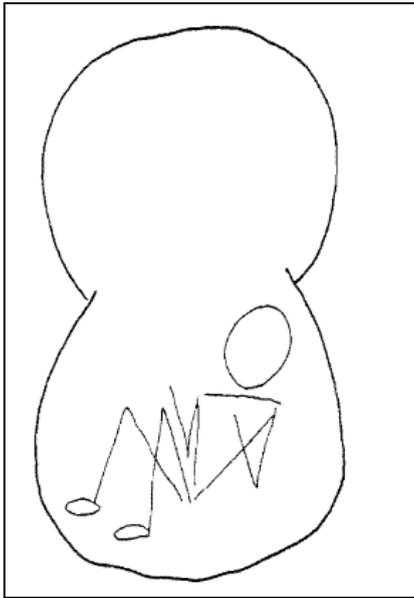


Fig. 4.29. Botel Tobago Island, Taiwan. Flexed body in pot inside inverted pot. Stamps 1980: 189, fig. 5.



Fig. 4.30. Sheikh Amad, Syria. Mouth-to-mouth burial pots, containing rich grave goods and the body of a 14 year-old female. Date: 100-200 CE. L. Genovese (2008).

Colani's second visit to J38, in 1940, was not financed by the French School but by the bursary she received in 1937 together with the Legion of Honour insignia. On this second visit, a third field was discovered, towards the west, traversed by the Ban Ban to Muang Khoun road and spread over both sides of the path: "Our excavations have uncovered numerous disc-lids, decorated on the lower side with an animal, generally a mammal, or with a large button [Fig. 5.86, Chapter 5.7] occasionally decorated with a head, human or monkey".¹⁷⁸ The granite discs, she suggested, had been upturned as a result of "occult"¹⁷⁹ practices. No discs, plain or decorated, were visible at the time of my July 2012 visit to both the west and east hills of J38. The present state of research cannot begin to establish the reason(s) for the disappearance of these unique discs, whether as a result of looting, erosion or other, such as soil displacement.

4.8 Monograph

After three years of intensive fieldwork, the task of documenting her findings began in earnest, with her monograph's original title *La civilisation mégalithique du Laos*¹⁸⁰ (The megalithic culture of Laos) changed to *Mégalithes du Haut-Laos* before going to print. The two volumes – over 600 pages, 233 figures, 102 plates, 12 maps and two watercolours – are a testimony to Colani's scientific treatment of the Plain of Jars and the standing stones of Hua Phan. Volume 1 deals with excavations at Hua Phan and the interpretation of artefacts, followed by details of jar sites in Xieng Khouang and Luang Prabang Provinces. Volume 2 deals with the interpretation of artefacts from the Plain of Jars, funerary rites, salt trade, the Iron Age in Mainland Southeast Asia

¹⁷⁷ Bellwood 1985: 316-317.

¹⁷⁸ CEFEO 1940/Q3: 11. Colani transported some of these decorated discs to Hanoi.

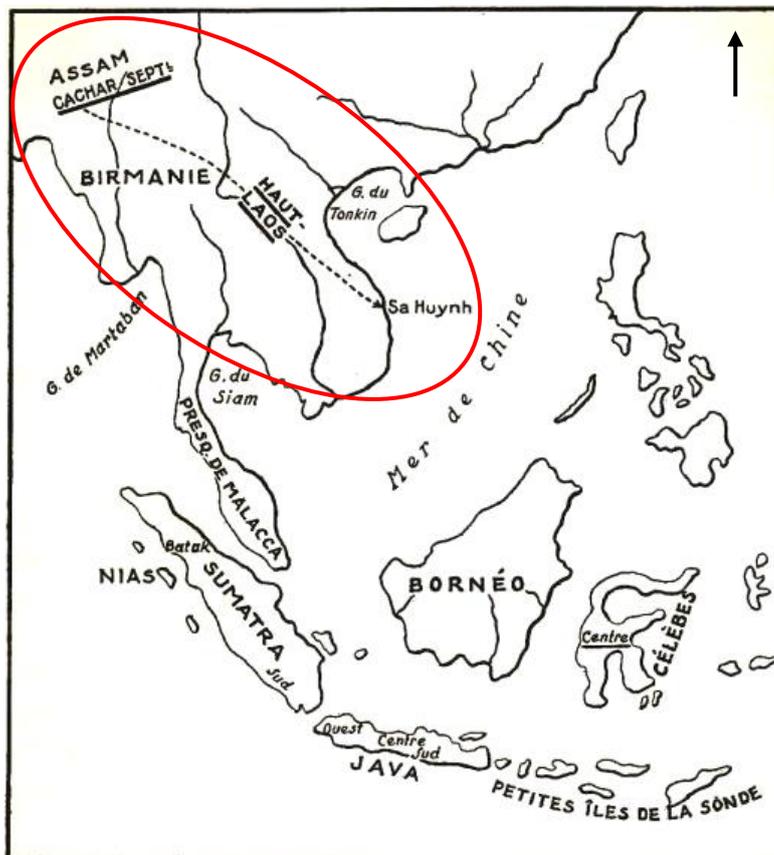
¹⁷⁹ Colani 1940b: 496.

¹⁸⁰ CEFEO 1934/Q4: 9.

and her theory that caravan trade traffic linked the Plain of Jars with Assam in NE India and central Vietnam to the east (Map 4.5):

If our interpretation is correct, we are dealing with a three-ring chain, with the middle ring at a distance of 1100 km approximately from the first and about 650 km from the last: ancient monoliths of the Northern Cachar, stone jars of the Tran Ninh and cemeteries in Sa Huynh. To our knowledge, to date no intermediate deposits of megaliths have been reported.¹⁸¹

Pivotal in this caravan traffic was the salt trade, which has been found to have generated considerable wealth in other parts of Mainland Southeast Asia: “Salt making must have been a source of considerable wealth to the Iron Age leaders in the Mun valley”,¹⁸² which was the inhabitants’ “own prize asset”.¹⁸³



Map 4.5. Visual representation of the three-ring theory, linking the Plain of Jars with Assam (west) and Sa Huynh (east). In Colani’s map, Célèbes (Sulawesi) is underlined to indicate the presence of megaliths. Colani 1935a, v2: 212, fig. 206.

In 1900, McCarthy reported that the 800 Chinese residents of Khorat (present-day Nakhon Ratchasima, northeast Thailand), controlled all the trade: “The city walls are surrounded by rice fields and to the north there is salt water from which large supplies of salt are obtained”.¹⁸⁴

The monograph is also valuable because it documents the excavated artefacts, believed to be in the custody of the National Museum of Vietnamese History in Hanoi since the early 1930s and inaccessible at the time of writing. An inventory of the objects entrusted to the museum in the 1930s is printed in volume 2 (pp. 330-338) of the monograph, detailing description, provenance, museum inventory number and related photographic plates.

¹⁸¹ Colani 1935a, v2: 242-243.

¹⁸² Higham & Thosarat 2012: 204.

¹⁸³ Higham *et al.* 2011: 264.

¹⁸⁴ McCarthy 1994: 27.

4.8.1 Reviews

Reviews were published in English, German and French. The August 1936 review by Edward Evans (1902-1973) found her two volumes “well-planned” and complimented Colani for the richness of the illustrations and contents of her voluminous work: “One experiences a feeling of shame on comparing this notable production with the available literature on the megalithic cultures of parts of Europe”.¹⁸⁵

A four-page review was published by Ivor Evans (1886-1957): “It is a great pleasure to welcome this important work upon the megaliths of Haut-Laos, French Indo-china – a *magnum opus* of the apparently delicate, but intrepid and indomitable little lady to whom we owe much for throwing light upon the prehistory of South-East Asia”.¹⁸⁶ I. Evans concluded his review with an analytical synopsis of Colani’s suggested dating of first century CE for the Plain of Jars, which he discussed with regional comparisons.

Two German reviews were published in 1937. The first, by Otto Fischer (1886-1948), remarked on the salt-caravan trade and the theory linking the Plain of Jars with the megaliths of Assam.¹⁸⁷ The second German review was by Robert von Heine-Geldern (1885-1968), which commented on Colani’s excavations at both the Plain of Jars and the standing stones of Hua Phan. After discussing her theory on Assam-Laos-central Vietnam link, von Heine-Geldern repeated Colani’s statement that the jars always outnumber the discs, with his final remarks centred on Colani’s theory that the jars may date back to the 1st century CE.¹⁸⁸

For the French Prehistoric Society (SPF), an organisation of which Colani was a life member, her monograph “will greatly assist the efforts of future scholars. It represents a work of which French science can be proud”.¹⁸⁹

The above reviews testify to Colani’s contribution in the field of Southeast Asian archaeology. The academics who delivered the reviews were practitioners in the fields of history, anthropology or archaeology and their comments carried weight. The first in-depth documentation of the Plain of Jars was long overdue and Colani’s work was hailed as a breakthrough for shedding light on the megalithic jars which had no equal in Mainland Southeast Asia.

A belated critique of Colani’s “monumental work” was published in 1943 by Erik Seidenfaden, with a review enriched with supplementary notes for readers “not proficient in the French language”.¹⁹⁰ Seidenfaden added his own comments to Colani’s views on the race-related argument that the Kha [Khmumu] may be afflicted by dolichocephaly: “If it is proved that the Khā of Mu’ang Phu-Eun [Xieng Khouang] are dolicocephalics, then a new vista opens”.¹⁹¹ Seidenfaden then offers an alternative to Colani’s statement that when a person is buried in areas of Upper Thanh-hóa (North Vietnam), “The pit is dug out, the coffin lowered, the *head to the north* [original emphasis]”,¹⁹² to which he commented: “Yes! [original emphasis] but it may also indicate the direction from which these people penetrated into

¹⁸⁵ Evans, E.E. 1936: 141.

¹⁸⁶ Evans, I.H.N. 1937: 688. British ethnographer, author of *The Negritos of Malaya* (1937).

¹⁸⁷ Fischer 1937: 289.

¹⁸⁸ Heine-Geldern 1937: 1023.

¹⁸⁹ BSPF 1937: 460.

¹⁹⁰ Seidenfaden 1943: 49.

¹⁹¹ Seidenfaden 1943: 50. The head of dolichocephaly sufferers is disproportionately long and narrow.

¹⁹² Colani 1935a, v1: 97-98.

Indo-China, and the Thai *did* [original emphasis] come from the north”,¹⁹³ neglecting to use the more appropriate “Tai”.

In a significant departure from Colani’s cautious approach, Seidenfaden made a definite statement on covers for the jars: “There were *real* [original emphasis] lids, however, to protect the contents of the jars, bones and ashes, but these were of hard wood, since rotted away”,¹⁹⁴ when Colani had merely suggested: “No lids: were they made of timber or wickerwork lined with hay and fastened by heavy stones? Simple supposition”.¹⁹⁵

The “male” and “female” connotations Colani suggested in reference to standing and recumbent megaliths were also discussed, as when she suggested that “each menhir as a male symbol, while the stones are the female counterpart”.¹⁹⁶ Seidenfaden fortified Colani’s tentative interpretation, declaring that “Mlle. Colani says that it may be that there were also “male” and “female” jars here, as well as sexed [*sic*] menhirs and discs in Huaphan, and the pointed stones on the Luang Prabang road, are they not lingas? [original emphasis]”.¹⁹⁷

Echoing Colani, Seidenfaden also envisaged megaliths spreading west-to-east, postulating that “the oldest megalithic monuments in the world are found in the lands of the so-called “fertile crescent”, i.e. the lands of Egypt, Syria, Asia Minor and Mesopotamia, where civilization was born” and for those who subscribe to the theory of diffusion, there can be no doubt “about the megalithic culture travelling from west to east and *not vice versa* [original emphasis]”.¹⁹⁸

In his final sentence, Seidenfaden exhorts would-be students of Asian prehistory to read Colani’s work: “this work is unique: it is a masterpiece of prehistoric research work, and as such will be of lasting value for all future students and research workers”.¹⁹⁹ These final remarks were prescient, for the monograph remains the only substantive publication on the Plain of Jars.

In comparing Colani’s original writing with Seidenfaden’s interpretations, I have sought to illustrate the state of knowledge in 1943, the year of her death. Her monograph was the first publication on the archaeology of the Plain of Jars, an obscure, if romanticised, destination. In the absence of good scientific data, writers drew regional parallels or made assumptions, essential stepping stones in the knowledge-building process. It is unlikely that Colani read Seidenfaden’s review, since she passed away in Hanoi shortly after its publication in Bangkok.

4.9 After the Monograph

Having completed her monograph, Colani was now free to follow other pursuits, including lectures. Recounting her years of fieldwork in north Laos, at a lecture in 1935 she lamented the scant printed literature on the Plain of Jars but also the destruction inflicted by roadworks, with Vietnamese labourers chastised for allegedly mutilating zoomorphic statues to destroy their magical powers. The truth, Colani informed the audience, is more mundane: “the head was too heavy for the neck and became detached”.²⁰⁰

¹⁹³ Seidenfaden 1943: 51.

¹⁹⁴ Seidenfaden 1943: 52-53.

¹⁹⁵ Colani 1935a, v1: 215.

¹⁹⁶ Colani 1935a, v1: 91.

¹⁹⁷ Seidenfaden 1943: 56.

¹⁹⁸ Seidenfaden 1943: 58.

¹⁹⁹ Seidenfaden 1943: 58.

²⁰⁰ Colani 1935b: 11.

Effective 12 February 1935, her contract as corresponding member was renewed for a further three years,²⁰¹ ensuring a smooth transition for future projects, in contrast to the turmoil that had characterised her tenure at the GSI. But there was sadness as well, for this was the year that Louis Finot passed away in France. She was undoubtedly grateful for his support, which enabled her to conduct excavations at the Plain of Jars, but her gratitude was expressed privately, for the honour of penning a lengthy obituary was bestowed on Victor Goloubew.²⁰²

4.10 Fieldwork and Budgetary Constraints

Thus, 1935 was a year of professional achievement for Colani. Her fieldwork was complete and the manuscript encapsulating three years of research was finalised in the summer. The final proofs were posted to Van Oest, the EFEO's trusted printers in Paris, and the two volumes would be available "in the second quarter of 1936".²⁰³

The artefacts from the Plain of Jars enriched the prehistoric sections of museums in Indochina, of which the Louis Finot Museum, completed in 1932, was the main beneficiary. Some dubious practices in artefact collection had been criticised within the ranks, however. Émile Pajot (1873-1929) was one of the targets of Gaspardone's excoriating criticism. Pajot, a customs officer, was entrusted with the excavation of the Dong Son village from 1924 to 1928, amassing "a rich, eclectic quantity of objects, where bronze, pottery, stone and iron of different ages and provenances were thrown together".²⁰⁴ Goloubew has also been criticised for his synthesis on the Bronze Age, deemed "ambitious as it was premature – it set back a proper understanding of this period for several years – an understanding which would later be recognised as crucial in establishing the identity of Vietnam and the whole of Southeast Asia".²⁰⁵

The length of time Colani was able to dedicate to each group of sites varied. For instance, at least a month was devoted to J1 (May-June 1931), but a little over two months (early October to mid-December 1931) was dedicated to the research and documentation of J2 and J3, a total of three fields due to J2 spread over two adjoining hills. Between February and May 1932, her explorations were shortened to weeks rather than months, excavating at fields in the NE (Q22 and QS28, as well as Eight Jars, Jars on a Plateau and the Isolated Jar, all of them in Kham District), from where she gradually moved west (J26, J27, J37, Ban Naséo and Phousung), ending with the funerary stones at Thao Kham and Moc Drehun further west, returning to Hanoi in early June.

The most ambitious programme was carried out in 1933. Setting off on 9 January from Hanoi, Colani reached the standing stones of Hua Phan on 24 January. Her survey at Hua Phan ended on 12 March, when she travelled south, reaching the former provincial capital of Xieng Khouang on 24 March. In Xieng Khouang Province, she surveyed the granite jars of J13 and J38 until April, from where she travelled west to J51, Eleven Jars and the Kéo Tane area (three fields). On 5 May, almost four months later, she returned to Hanoi.

Apart from climatic considerations caused by the heavy summer rains, which made fieldwork close to impossible, there may have been other reasons for this decreasing availability. First, the inverse relationship in the amount of time spent in each field may have been on the basis of its

²⁰¹ BEFEO 1935: 407, 581.

²⁰² Goloubew 1935.

²⁰³ BEFEO 1935: 408.

²⁰⁴ Gaspardone 1936: 622.

²⁰⁵ Clémentin-Ojha & Manguin 2007: 112. The synthesis in question is *L'âge du bronze au Tonkin et dans le Nord Annam* (Goloubew 1929).

perceived importance. For instance, Colani travelled to J1, J2 and J3 in 1931 without the aid of Morin's map, which she received only in December 1931. There was a body of literature and field notes about these three fields, prepared by Raquez, Parmentier (EFEO) and Dussault (GSI).

Second, as I have argued earlier in this chapter, administrative documents confirm that the scope of Colani's research was initially limited to J1 and possibly J2 and J3. A concern for funding may have driven research efforts towards substantial fields at the expense of smaller or remote sites, perhaps in the belief that larger sites represented, if not the Plain of Jars, at least areas populated with jars of the same rock type and either served by major roads or historical trade routes.

Third, in an effort to document the Plain of Jars as fully as possible, Colani encouraged the villagers in each district to reveal the whereabouts of fields in the vicinity, a strategy possibly dictated by time and/or budgetary constraints. In such instances, she could be unquestioning, as during the April-May 1933 survey of the Kéo Tane group of sites: "We did not have sufficient time to research the entire circuit; according to the locals, the archaeological remains are to be found exclusively in the area explored by us".²⁰⁶

At times, she placed an inordinate degree of trust in messages conveyed by villagers, relying on construction workers' verbal reports to assess a site's material culture, as in the case of Km 469.2, a field of funerary stones along Route 7: "We did not have the time to conduct any researches. No trace of funerary artefacts has been found in the vicinity, according to the construction workers".²⁰⁷

Having examined Colani's work at the Plain of Jars, it is now useful to place her theories in relation to theories expressed by other writers on megaliths and their development.

4.11 Colani's Theories

In 1932, after surveying J1, J2 and J3 but before visiting Sa Huynh, Colani reviewed the English translation of Hoop's *Megalithic Remains in South Sumatra*.²⁰⁸ She commented on his theory that the bronze culture of the megalith builders of south Sumatra appeared to be connected to the megalithic tradition of Tonkin and Laos. If Colani shared this theoretical approach, she was not influenced enough to repeat it in her monograph, formulating instead a theory that placed the Plain of Jars in the centre of an imaginary chain between Assam and Sa Huynh. Invisible corridors between the Plain of Jars and central Vietnam were not proposed, perhaps because Sa Huynh was envisaged as the last stage in the west-east megalithic development but also because the central Vietnamese burial tradition consisted of clay pots rather than megalithic jars. Although Colani would conduct research at Sa Huynh only in June 1934,²⁰⁹ barely a few months before the publication of her monograph, the EFEO possessed a considerable bank of data on its burial pots, having financed missions by Parmentier and Madame Labarre²¹⁰ in 1923.²¹¹

Later researchers have proposed maritime links for the Far East Asian burial tradition in ceramic pots, as discovered on Orchid Island, to the southeast of Taiwan. The German academic Inez de

²⁰⁶ Colani 1935a, v1: 217.

²⁰⁷ Colani 1935a, v1: 263.

²⁰⁸ Colani 1932 (review of Hoop 1932).

²⁰⁹ BEFEO 1934: 755.

²¹⁰ Madame Labarre was the wife of the customs officer for central Vietnam. After some training, in 1923 she was entrusted to lead excavations in Sa Huynh, before a final validation of methodology and documentation by Parmentier the same year.

²¹¹ Parmentier 1924.

Beauclair (1897-1981), who conducted research on the island in 1970, discussed the possibility of connections in relation to the island's position "along the trade route from China to the Philippines and Indonesia [...] within the course of violent typhoons".²¹² The theories proposed by Colani in the early 1930s and by Beauclair in the early 1970s were geographically enclosed, restricted as they were to trade movements within a confined region corroborated by historical trade routes.

A more radical theory was proposed by Sir Grafton Elliot Smith (1871-1937). Born in New South Wales (Australia), Elliot Smith became a renowned academic during his teaching career in England, first at the University of Manchester (1909) and later at University College London (1919). He was a proponent of the hyperdiffusion theory, which holds that, since megalithic architecture could not have been invented more than once, it must therefore have a common source, a single-place invention from which all other cultures descended, proposing that the ancient pyramids were the prototypes of the "megalithic monuments that are found, in a very wide diversity of form, all over the ancient world".²¹³ This concept was reprised and moderated by later academics, with Ian Glover writing that: "in the past the concept of a universal Megalithic Culture was elaborated and this, essentially colonialist, concept has bedevilled much of the writing on megaliths in Southeast Asia, making it necessary to look a little into the history of megalithic studies in the region".²¹⁴

As researchers of megaliths, Colani and Hoop engaged in professional exchanges. For instance, Colani's 1935 monograph bears a parallel with his notion that, in former times, human sacrifices were conducted near menhirs in south Sumatra: "Stones of this description are found in many other places in the Archipelago. Frequently they are intended for tying up the sacrificial animals (buffaloes) [*sic*] on the occasion of the funeral feast".²¹⁵ Colani entertained a number of possibilities for the stone discs, including their possible use in sacrifices: "If these discs were not lids, what was their function? [...] sacrificial slabs perhaps, for offerings; some ritual ceremonies unknown to us may have been practiced".²¹⁶

Burial location as a link between the living and the dead was suggested by Colani: "All fields are located along a mountain ridge, dominating the region and affording excellent views".²¹⁷ This statement echoed a similar concept expressed by Johan G. Andersson (1874-1960). In his *Children of the yellow earth*, which Colani reviewed in 1934,²¹⁸ and particularly Chapter 7 on *The living in the valley and the dead in the mountains*, Andersson wrote that in China's T'ao valley, a prehistoric site in Kansu province: "Each of the five grave sites is situated on one of the highest hills in the district" and that the settlers carried their dead 10 km or more from the villages up steep paths, from where the deceased could behold "the place where they had grown up, worked, grown grey and at last found a grave swept by the winds and bathed in sunshine".²¹⁹

Within the EFEO, the closest influence came from Parmentier's documentation of the burial sites of Sa Huynh,²²⁰ with borrowings²²¹ from his concepts and drawings.

²¹² Beauclair 1972: 172.

²¹³ Daniel & Renfrew 1988: 85.

²¹⁴ Glover 1998: 23-24.

²¹⁵ Hoop 1934: 44.

²¹⁶ Colani 1935a, v1: 168.

²¹⁷ Colani 1939: 93.

²¹⁸ Colani 1934b.

²¹⁹ Andersson 1934: 268-269.

²²⁰ Parmentier 1924.

²²¹ Colani 1935a, v2: 237-241.

4.12 Colani's Legacy

In the spring of 1943, Colani penned an article devoid of new theories, summarising facts and basic details on the Plain of Jars. The jars “often resemble large barrels in stone, with a maximum height of three metres, and set on the soil” and “Caravans passed through the Plain of Jars, a lucrative trade in salt from the west”.²²² The peaceful inhabitants of the Plain of Jars were led by weak rulers and suffered unspeakable atrocities at the hands of marauders from Yunnan who invaded the Tran Ninh plateau in the 1870s. There was nothing left to pillage and the beautiful pagodas became ruins of their former selves.²²³

The article was published in Hanoi's *Indochine* on 17 June, two weeks after her death. Colani had penned her own epitaph, a testament of her commitment and affection for the Plain of Jars.

A one-day conference ‘Madeleine Colani (1866-1943) et la Préhistoire indochinoise’ was organised by Paul Lévy at the Louis Finot Museum on 6 December 1943. Comparisons were suggested with Henri Mansuy, her mentor and supervisor at the GSI, with whom she shared a thirst for knowledge and a passion for geology. Lévy also curated a prehistoric exhibition at the Louis Finot Museum, inaugurated on 7 December 1943 by Vice-Admiral Jean Decoux, the French High Commissioner for the Pacific and Governor-general for Indochina.²²⁴ The prehistoric section in the museum's basement covered two rooms: one dedicated to prehistory in general and one devoted to the artefacts excavated by Colani in Indochina.

In the words of a renowned archaeologist, Colani was “one of the most prolific fieldworkers ever to work in Southeast Asia”.²²⁵ Together with Nguyen Ngoc Tran, EFEO's secretary-draftsman, in March 1938 Colani and Andersson (Fig. 4.31) visited Dong Mau, in the Bay of Tonkin. Before returning to Europe, and as a further testimony of her solid reputation in the field of prehistory, Andersson relinquished the residue of his budget to Colani, so that she may continue researching Indochina's prehistory.

Her knowledge of the field was sought for book reviews, including publications on mortuary practices. Between 1929 and 1938, she reviewed eight publications, ranging from the Palaeolithic in China²²⁶ to a bibliographical index on the prehistory of Indochina.²²⁷ Her reviews were detailed, rarely shorter than five pages and frequently more than ten in length.

Her energy levels were legendary and often the envy of younger colleagues, including Paul Lévy, who never imagined “the stamina and energy stored in such a frail body”,²²⁸ as he witnessed when they both travelled to the Third FEPA congress in Singapore in 1938. Fieldworkers of decades past, including some of Colani's contemporaries, conducted their research in inhospitable areas under difficult and challenging circumstances. Colani quoted extensively the work of J.P. Mills (1890-1960), described by Christoph von Fürer-Haimendorf (1909-1995) as a

²²² Colani 1943: III-IV.

²²³ Colani 1943: V.

²²⁴ CEFEO 1943/Q4: 2.

²²⁵ Bellwood 1978: 195.

²²⁶ Colani 1929a.

²²⁷ Colani 1938.

²²⁸ Lévy 1944: 2.

gentle and quiet soul, of “great personal courage, indifferent to discomfort and a physical toughness which put to shame men many years his junior”.²²⁹



Fig. 4.31. Together with Nguyen Ngoc Tran, EFEO's secretary-draftsman, in March 1938 Colani and Johan Andersson visited Dong Mau, an excavation site in the Bay of Tonkin.
Karlström & Fiskesjö 2002: 5, fig. 1.

Andersson founded the Museum of Far Eastern Antiquities in Stockholm and is credited with the discovery of Neolithic remains in central China's Henan Province, later renamed the Yangshao culture, after the village where they were first excavated. He also served as Director of the Geological Survey of Sweden and as Mining Adviser to the Chinese Government.

Colani was scrupulous and timely in her documentation and remained involved in research despite her advancing years. Her career spanned the fields of teaching, geology, archaeology and ethnography. Ian Glover, an archaeologist with fifty years of experience in Southeast Asia, acknowledges Colani as one of the researchers whose extensive fieldwork in geology was instrumental in the transition to archaeology: “In Burma, as in many other Southeast Asian colonial territories, geologists pioneered archaeological research. Later generations should remember with gratitude the work of Wray in Malaya; Mansuy, Colani and Patte, Fromaget, and Saurin in Indochina; and Van Es in Java”.²³⁰

She was aware that her research in remote areas of the Plain of Jars was affected by local beliefs, including superstition. She relied on information from district officers and villagers and although on occasions she expressed disappointment when villagers withheld directions to the sites, fearful of displeasing the spirits inhabiting stones or the soil, she refrained from causing overt offence. Frequently, she paid homage to local customs, as when she availed herself of two *tasseing*, or district chiefs, “to facilitate recruiting coolies and also to keep the peace with the spirits”.²³¹

Eléonore was at times dispatched to sites that Madeleine was unable to document and her role was acknowledged in the EFEO eulogy upon her death on 1 January 1943. Though never their employee, the French School praised her as her elder sibling's constant companion and enthusiastic colleague, sharing privations and sacrifices.²³²

Eléonore's contribution to her elder sister's success was acknowledged by Cœdès in his obituary on the death of Madeleine: “Accompanied by her sister Eléonore, her admirable companion who predeceased her by five months, [Madeleine Colani] tackled mountain trails often on foot,

²²⁹ Obituary by Christoph von Fürer-Haimendorf published in *The Geographical Journal*, CXXVI, 1960, quoted in Mey 2009: 9.

²³⁰ Glover 2001: 120.

²³¹ Colani 1935a, v1: 9.

²³² CEFEQ 1943/Q1: 14.

sleeping rough, surviving on bananas and a bowl of rice, reserving her resources for the excavations and fieldwork”.²³³ In his words, Colani was “the doyenne of Indochinese geology and prehistory”.²³⁴ Many were surprised to learn that Madeleine, the young prehistorian hurrying along the corridors of the Sorbonne, was in fact “over sixty years old”, a frail academic easily toppled by a gust of wind but who braved “the scorching dunes of Sa-huýnh and the Plain of Jars”.²³⁵ Conversant in several languages, in the autumn of her life she attained glory at international conferences, representing Indochina and the EFEO: “Her name deserves to be added to the roll of notable contributors of French science in Indochina and equally in France”.²³⁶

It is often the case that an explorer or archaeologist is linked to a site because they are responsible for its discovery or through their long involvement with its documentation. Mentions of the tomb of Tutankhamun, for example, are inevitably associated with the British explorer Howard Carter (1874-1939), while our early knowledge of the Easter Island statues is largely due to the 1914 expedition led by Katherine Routledge (1866-1935) and her husband William Scoresby. The association between the Plain of Jars and Madeleine Colani has continued over the decades. At a lecture in Hanoi in 1951, eight years after her death, Jean-Yves Claeys, her contemporary at the EFEO, reminded the audience that our knowledge of the Plain of Jars is “indissolubly linked with the work of Miss Colani”.²³⁷

Such was the breadth of Colani’s involvement in the research of Southeast Asia, that a 60th anniversary conference commemorating her death was organised in December 1993-January 1994, to celebrate her pioneering work on Hoabinhian sites. At the conference, Jean-Pierre Pautreau stated that the excavations at rockshelters and caves allowed Colani “to define the Hoabinhian” at the 1932 FEPA congress held in Hanoi.²³⁸

In EFEO anniversary publications, she was saluted as one of four scholars who spearheaded research in Laos: “As for Laos, research in various fields has been conducted by Parmentier, Colani, Lévy and Finot”.²³⁹ Her contribution was saluted in a 100th anniversary publication: “Her explorations of the vast megalithic fields of the Plain of Jars in Laos, which were not followed up for a long time afterwards because of the armed conflicts in the region, are still a point of departure for the work of archaeologists in the 21st century”.²⁴⁰

An anniversary publication dedicated to Ian Glover paid homage to Colani’s pioneering research in Laos and touched upon the theme of Laos as an under-researched area, with Källén and Karlström lamenting that: “To this day only a handful of archaeologists, native and foreign, have worked and published results on the prehistory of Laos”.²⁴¹

²³³ Cœdès 1943: II.

²³⁴ Cœdès 1943: I.

²³⁵ Cœdès 1943: II.

²³⁶ Cœdès 1943: II.

²³⁷ BEFEO 1951: 95.

²³⁸ Pautreau 1994: 175.

²³⁹ Pacific Affairs 1952: 295.

²⁴⁰ Clémentin-Ojha & Manguin 2007: 117.

²⁴¹ Källén & Karlström 2010: 301.

CHAPTER 5

THE JARS AND DISCS OF XIENG KHOUANG – DIFFERENT BY DESIGN

Jars have become an important element in the traditional cultures of the indigenous peoples, but they have not yet received enough attention from anthropologists. It may be said that jars form a rich and diverse world within the lives of these people, both tangibly and intangibly.

- L. Hung. *Introduction to Jars in the Life of Ethnic Groups in the Central Highlands of Vietnam*, 2008: 1.

This chapter focuses on under-researched aspects of stone artefacts at the Plain of Jars: carving sequence; lip rims; jars with reduced cavities; doubled-ended jars; stone discs; buried jars and recent discoveries in iconography. An analytical summary of hypotheses advanced for the function of the jars is also provided.

5.1 Techniques and Carving Sequence – A Suggested Sequence

Colani excavated at 26 sites and this enabled her to conclude, with a degree of certainty, that the absence of large quantities of fragments pointed to no substantial carving at the site: “Were the jars fashioned at the quarry? Yes, in the majority of cases, according to our observations”.²⁴²

With the exception of analyses on the direction of carving the boulders, either along the orientation of the bedding or against it, no microwear studies have been carried out on the megalithic jars of north Laos to determine their possible function. By studying the patterns of wear or damage on tools, microwear analysis (also known as use-wear analysis) can provide information on the way tools were used and also their past usage, based on Semenov’s theory that even the hardest types of stone retain traces of their past use, such as polishes and striations.²⁴³ For example, archaeologists studying the Mesolithic site of Meer II in Belgium, concluded after several seasons of excavations (1967-69 and 1975-76) that more than two people had worked at one particular concentration of stone tools. They based this assumption on the evidence that three of the 15 tools had been used in a counter-clockwise direction, making it very likely that at least one of the people was left-handed.²⁴⁴

To date, no tools have been recovered capable of being connected with the manufacture of the jars but this should be viewed in light of the limited excavations conducted at quarries, the workshops for the production of the jars. Iron implements have been documented only as grave offerings but Colani reported tools and implements in a variety of materials: “Their instruments must have been made of metal, iron; in effect, in the cave [J1] and below ground all around the monoliths, can be found bronze and iron fragments; very few polished or cut stone, and fewer still, stone tools. On the jars, the worker’s strikes are those produced by chisels or other iron instrument”.²⁴⁵ The gigantic statues of Easter Island may have been carved with hammerstone, of which thousands have been found on the island.²⁴⁶

The presence of scratches or striations on the rim could point to repeated use of the jar over a prolonged period of time, perhaps due to a stone lid placed and removed repeatedly. This test, however, is probably best carried out at sites which are set in remote areas, where the jars have

²⁴² Colani 1935a, v1: 125.

²⁴³ S.A. Semenov. 1964. Prehistoric technology; an experimental study of the oldest tools and artefacts from traces of manufacture and wear, quoted in Renfrew & Bahn 2004: 323.

²⁴⁴ Renfrew & Bahn 2004: 325.

²⁴⁵ Colani 1935a, v1: 134.

²⁴⁶ Renfrew & Bahn 2004: 322.

been left undisturbed for centuries and where the rim has not endured damage caused by tourist traffic or rapid urbanisation. Scratches or striations on the rim could potentially reveal whether a heavy object, such as a stone disc, has ever been placed on the jar, as would have been the case if the jars were used as primary-burial containers, sealed by a disc which was then removed to allow cremation or reburial of the skeletal remains. The answer may not be definitive but may be used as part of a bank of data for future studies.

Traces of user-wear differ in accordance with the type of stone used. At low magnification, the structure of tools shaped from sandstone - cohesiveness, texture and abrasiveness - can reveal micro-wear through distortions of the relief. Experiments conducted with sandstone tools on dry animal hide, for instance, have demonstrated that “sandstone was too fine to break the fibres and de-hair the hide”.²⁴⁷ These results could be useful in assessing whether the stone jars of north Laos were shaped with sandstone tools or with iron implements, as argued by some scholars.²⁴⁸

The following is a suggested sequence of manufacturing steps, from collection of stone to carving and possible quality control steps, ending in the transportation of the finished jar to its final destination. A sequence, or other *chaîne opératoire*²⁴⁹ of production traces, has never been suggested and I submit it here as a basis for discussion for future improvements and refinements.

Colani pondered often about sources of stone: “It would have been impossible to carve these large fields of gigantic jars without strong rock in the vicinity”²⁵⁰ but there is no record of her surveys extending to quarries. If her writings do not convey undue curiosity to discover where the stone came from, her photographic records confirm that she stumbled upon carving workshops. For instance, at Kéo Tane East, in Phou Khoun District, Colani documented a partially-carved jar (Fig. 5.1), captioned as a “Small subcylindrical pillar (65 cm high) [*sic*]; disc-shaped button”,²⁵¹ a “prism-shaped, quadrangular base where the upper side bears in the centre a very small disc”.²⁵² The disc-shaped button is the circular mass created by hollowing out the interior from the outside towards the centre. After removing the “central button” and digging deeper into the cavity, the “subcylindrical pillar” would probably have become a jar (Fig. 5.2), similar to others at J51, a site of sandstone jars in the same district.

This trimmed block also presents opportunities to explore the sequence of carving steps and is consistent with my theory, detailed below, that external walls were shaped first. However, while at other sandstone quarries the hollowing out followed a centre-to-walls movement, the motion in Fig. 5.1 suggests that other methods were employed, with the hollowing out process from the outside in, hence the circular central mass. The sandstone jars in the Kéo Tane area are small, frequently shorter than 160 cm. It may be possible that the small sandstone boulders in Phou Khoun dictated a modified carving sequence compared to other sandstone quarries. The sequence may also have been a local tradition in stone carving.

²⁴⁷ Hamon & Plisson 2008: 34.

²⁴⁸ See, for example, Colani 1933d: 114 or Cœdès 1966: 20.

²⁴⁹ Renfrew & Banh 2004: 327

²⁵⁰ Colani 1935a, v1: 116.

²⁵¹ Colani 1935a, v1: pl. 58/1.

²⁵² Colani 1935a, v1: 219-220.



Fig. 5.1. Kéo Tane East. Trimmed sandstone block with disc-shaped “button”.
Colani 1935a, v1: 219-220, pl. LIIX.

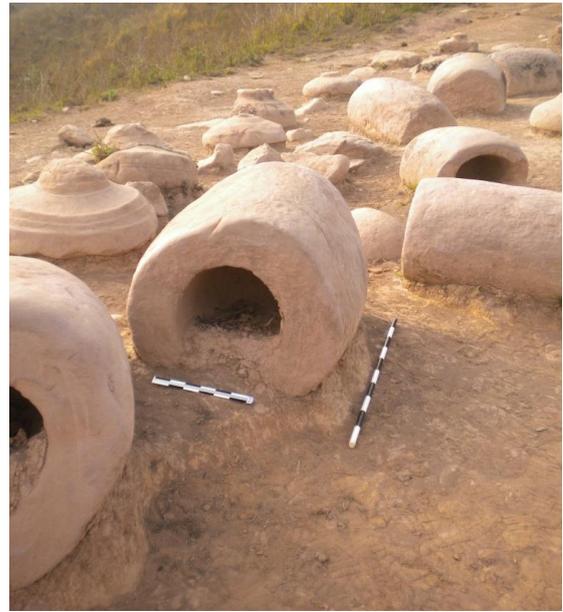


Fig. 5.2. J51. Sandstone jars and mushroom-shaped discs.
L. Genovese (2014).

In recent years, some aspects of carving at the Plain of Jars have been debated but mostly in geological terms. A possible sequence of carving steps, however, has never been published. It can help us establish which aspects of the process were carried out at the quarry or workshop and whether any final trimming was carried out where the jars were deposited. The fully-carved jars at Q8 (Fig. 5.3) or Q21 (Fig. 5.4), for instance, provide ample testimony that carving was completed before transport to the field. Furthermore, the masons were confident that their transportation method was sound and unlikely to inflict damage to delicate portions of the jar such as the rim. It is assumed that carving and handling skills were developed and honed over a long period of time and it is a legitimate question to ask where this long tradition of jar carving may have originated, since it has no equal in Mainland Southeast Asia.



Fig. 5.3. Q8. Jar with Recessed Inner rim.
L. Genovese (2011).



Fig. 5.4. Q21. Sandstone jar.
L. Genovese (2011).

The Plain of Jars masons were eminently practical artisans, adept at working with stone, be it a block quarried from a mountain or a loose boulder from a river bed. I will now detail my observations from the study and analysis of several quarries and quarry-sites.

Extracting a block from a quarry allowed the mason to determine the size of the block, commensurate with his skill and other technical considerations. This was an important factor when the mason intended to introduce or replicate a particular design or pattern. For example, the two almost identical massive jars on the eastern hill of J2 (Fig. 5.5), both over 2 m in length, bear similarities with the equally massive jar on the western hill (Fig. 5.6) of the same site, but also with the block of sandstone (Fig. 5.7) at Q8, its associated quarry. The uncarved block is 2.27 m long, comparable to both the two recumbent jars on the eastern hill of J2, and to the single massive reclining jar on the site's western hill. It is a matter of speculation whether the uncarved block at Q8 was intended to join this latter massive jar on the western hill of J2.



Fig. 5.5. J2. Twin sandstone jars. The jar on the left has a Flat rim and the jar on the right has a Recessed Inner rim. The distance between the two jars is 7 metres.
L. Genovese (2011).



Fig. 5.6. J2. Jar, 300 cm long (Fig. 2.3 Chapter 2.1 also refers).
L. Genovese (2008).



Fig. 5.7. Q8. Uncarved sandstone block, 2 m long, at this quarry in Phaxay District.
L. Genovese (2011).

Based on my observations, jars were carved at the quarry prior to transportation to the field and I offer the following comments. First, assuming that the exceptionally large jars were dedicated to a person of high rank or status, a block of stone of suitable size had to be collected and

“reserved” for such a personage. Second, to fashion a jar from a rock boulder would have required highly skilled masons to ensure that mistakes did not relegate the boulder to one of several abandoned jars visible at many quarries. It appears to be the case that extra care was taken with gigantic boulders because jars of this size have so far not been encountered at quarries, where the only abandoned jars are small or medium in size. Third, to transport a gigantic jar from quarry to site would have required careful logistics and commensurate manpower.

A trimmed block (Fig. 5.8) at QS35 shows that the external walls were trimmed first, followed by the hollowing out of the interior. A large splinter has become separated from the main block. Without appropriate analysis, it is not possible to surmise whether carving stopped because of this fracture or for other reasons, or indeed whether the fracture developed as an unrelated phenomenon after the partially-carved boulder was abandoned.

5.1.1 Carving the Exterior

Shaping the exterior was a crucial stage in the carving sequence because it gave the boulder a basic “clean” exterior and alerted the craftsman to structural defects likely to preclude further carving. This initial operation, therefore, prepared the stage for more demanding tasks and was an essential step for several reasons. First, exposing a structural flaw allowed the mason to judge whether to proceed with further carving (in the case of a minor flaw), or whether to abandon the block if the defect was likely to result in a sub-standard jar. Second, it facilitated handling by ridding the boulder of excess stone. Third, preliminary trimming allowed the mason to gauge the thickness of the walls and establish the diameter of the jar’s mouth. Fourth, the trimmed boulder allowed the mason to garner the overall shape of the jar.

The two-step procedure – trimming of the exterior and hollowing out of the interior – appears to have been carried out in this order at other quarries. On the slopes of Q21, for instance, an unfinished jar displays a trimmed exterior and a barely sculpted interior (Fig. 5.9).



Fig. 5.8. QS35. Trimmed sandstone block, with minimal aperture.
L. Genovese (2011).



Fig. 5.9. Q21. Jar with trimmed external walls and minimal aperture.
L. Genovese (2011).

The jars are notable for the almost total absence of iconography. The absence of inscriptions has prevented dating through the use of epigraphy. This is in stark contrast with the megaliths documented by Bonatz on the Jambi Highlands of Sumatra, where the solid menhirs’ drum-like ends are often decorated with a variety of patterns, including zoomorphic and anthropomorphic figures (Chapter 7.7.1). We may need to consider that the lack of iconography on jars may have been due to a careful consideration of the “risk” element inherent in impacting the exterior of the

jar, after it had been shaped and trimmed, a theory that raises the prospect that the Jambi megaliths were decorated because none of them were hollowed out or shaped into jars.

Carving a figure on the external surface, after removing redundant stone, could have impaired the finished jar and the mason would have had to allow for this on the surface of the trimmed block, while shaving the exterior. Some of the jars display a flat side (Fig. 5.10 and Fig. 5.11), which a recent geological survey classified thus: “The flat side(s) [*sic*] that are exhibited by some sedimentary jars are bedding discontinuities and are a natural feature”.²⁵³



Fig. 5.10. J2. Sedimentary sandstone jar. L. Genovese (2011).



Fig. 5.11. J25. Sedimentary sandstone jar. L. Genovese (2011).

5.1.2 Carving the Base

After trimming the exterior, the square block was given a flat base, as illustrated in this partially-carved jar at Q8 (Fig. 5.12), although some jars in Phoukood were left with a tapered end to avoid slicing off a considerable portion of the overall boulder (Fig. 5.13). It was easier and logical to execute these tasks in this order because trimming would have removed considerable amounts of weight from the external walls, reducing the weight of the partially-carved jar, which could now be inclined to trim the base, which was always the boulder’s wider end.

This was an important step in the carving process and reinforces the notion that, where the nature of the boulder allowed, the jars would be carved to stand upright on the ground. They were built for stability, witness the thick base which can account for up to 30% of the jar’s total height. At J1, Jar no. 2 lies in fragments but its base (Fig. 5.14) was 82 cm thick. Another example of a boulder with trimmed exterior and flat base is found at QS5, in Paek District. The boulder’s uncarved end is tapered (Fig. 5.15) and would presumably have become the mouth if carving had proceeded to completion. This unfinished jar confirms the norm that compared to the jar’s walls, bases are “usually thicker and vary from one quarter to one third of the total height”.²⁵⁴

²⁵³ Baldock 2008: 8.

²⁵⁴ Sayavongkhamdy and Bellwood 2000: 105.



Fig. 5.12. Q8. Trimmed sandstone block with flat base.
L. Genovese (2011).



Fig. 5.13. J25. Sandstone jar with neat front aperture and misshapen rear end.
L. Genovese (2011).



Fig. 5.14. J1. Fragmented Jar no. 2. Base is 192 cm wide and 82 cm thick.
L. Genovese (2011).

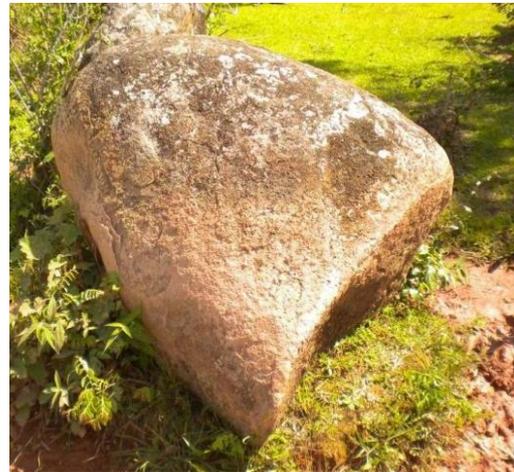


Fig. 5.15. QS5. Boulder with trimmed external walls, flat base and tapered mouth.
L. Genovese (2012).

5.1.3 Carving the Interior

In the carving process, the interior was hollowed out after the base and the external walls had been trimmed. The interior of the boulder was often scraped starting from the centre to the edges. It is reasonable to assume that structural flaws discovered during the chiselling out of the interior would have required adjustments in the thickness of the jar's walls so as not to compromise the entire boulder. In the reverse order, hollowing out the interior in a circular motion, from the edges to the centre, would have created a central mass similar to the one depicted in Fig. 5.1 earlier in this chapter. On soft sandstone, the circular motion from the centre to the walls resulted in the smooth interior which can be observed on numerous jars. J1 is home to a half-buried pink sandstone jar (Fig. 5.75 Chapter 5.6), with exceptionally smooth walls.

Another abandoned jar illustrates the "stepped" method of hollowing out the interior to make an opening. The jar is found at Phu Na Som, a section of Q18. The urn appears carved to completion (Fig. 5.16) but a flaw is visible, akin to a "shelf" (Fig. 5.17), approximately in the middle of the

jar. This jar is 150 cm tall and the “shelf” appears at 70 cm from the rim and therefore considerable effort had already been expended in hollowing out the interior.



Fig. 5.16. Q18. Sandstone jar with Collar rim.
Height: approx. 150cm.
L. Genovese (2011).



Fig. 5.17. Q18. “Shelf” at a distance of 70 cm from the rim (30 cm scale).
L. Genovese (2011).

In Phoukood, the boulder’s barrel shape may have convinced the masons that excessive carving of the interior could have resulted in thin walls, thus jeopardising the jar’s chances of survival. It is pertinent to ask whether the restricted volume of the jars in Phoukood could have allowed a practical function, such as housing an entire body. Although the vast majority of boulders were carved in an upright position (Fig. 5.8 Chapter 5.1 and Fig. 5.9 Chapter 5.1.1), images from partially-carved urns suggest that in Phoukood some jars were carved with the boulder horizontally on the ground. At QS42, for example, a trimmed sandstone boulder is found reclining, the likely position when carving began (Fig. 5.45 Chapter 5.2.8).

5.1.4 Finishing Touches

The squared walls had practical considerations during the carving process, because they facilitated handling. Squared walls are encountered on partially-carved jars at quarries like Q21 and quarry-sites like QS35 (Fig. 5.8 and Fig. 5.9 respectively in Chapter 5.1.1). The trimmed block at Kéo Tane East (Fig 5.1 Chapter 5.1) is another example. Rounding of the square walls was part of the finishing touches.

A finished jar could not be compromised by carving a motif or pattern on the walls, for which allowances would have had to be made in the early stages of the carving process. We cannot exclude that the few images found on jars were sculpted once the jar had reached its final destination at the field. Uncarved, high-relief sections of stone are occasionally visible on a jar with otherwise smooth walls.

There is limited variability in the basic shape of the jars, with the challenges presented by working with five different rock types, demanding that skills be adapted for the stone type being carved. An exercise on the likely number of days or weeks needed to bring a jar into being would be useful to reveal the scale of the commitment for this undertaking which, even after centuries of exposure to the elements and to other factors, has left us with more than 2,000 jars and in excess of 200 discs. For instance, it has been estimated that six masons using hammerstones would require up to a year to carve a 15 m high Easter Island statue.²⁵⁵ For even the tallest jars in north Laos, probably nothing like this timescale or human resources would be required but the exercise would be useful in building a comprehensive picture of activities and manpower at the Plain of Jars. I believe that once the likely scale of the undertaking is calculated, in working days and estimated manpower, we may be in a position to re-evaluate the likely function of the jars and whether the considerable effort required in their production could possibly justify their use as mere coffins for the decay of the body.

5.1.5 Transportation to the Field

The physical location of the carving has been debated but has now become a largely rhetorical question because, almost without exception, carving was carried out at the quarry or at quarry-sites. The importance of transporting the finished jar to the site was highlighted in a recent geological assessment, with the geologist stating that the rock mass, not the mason, dictated the maximum size of the jar, with transport considerations, from quarry to final destination, being the only limiting factor at quarries with gigantic boulders.²⁵⁶

Considerable resources had to be mobilised to bring a single jar into being, with community involvement highly likely in the transportation and dedication of the jar, as was practiced in recent decades by ethnographically documented societies in parts of Island Southeast Asia, with megaliths moved over considerable distances as a community effort, as shown in this image from South Nias (Fig. 5.18), Sumatra. According to Znoj, the transport of megaliths in Sumatra's Jambi Highlands "must have involved the participation of many hundreds of helpers".²⁵⁷

In the image from South Nias, community leaders don ceremonial robes, in stark contrast to the majority of the group, dressed in pared down, ordinary clothes for the arduous task of shifting a megalith strapped to wooden poles.

It was a legitimate quest for early visitors to the Plain of Jars to ask *where* the jars had been carved. James McCarthy, overwhelmed by their size, could not envisage the Herculean task of moving the jars from quarry to field, surmising that: "These vessels are such as could not possibly have been carried to their present position, but must have been made *in situ*".²⁵⁸ Colani placed her confidence in Dussault's report, who resolutely stated that the jars had been carved elsewhere and brought to their present location: "We have not come across any jars sculpted *sur place* [in the field]; this task would have created a significant number of splinters, of various sizes, of which no traces are found, either on the surface or below it".²⁵⁹

²⁵⁵ Renfrew & Bahn 2004: 322.

²⁵⁶ Baldock 2008: 11.

²⁵⁷ Znoj 2001: 302.

²⁵⁸ McCarthy 1994: 49.

²⁵⁹ Colani 1935a, v1: 126.

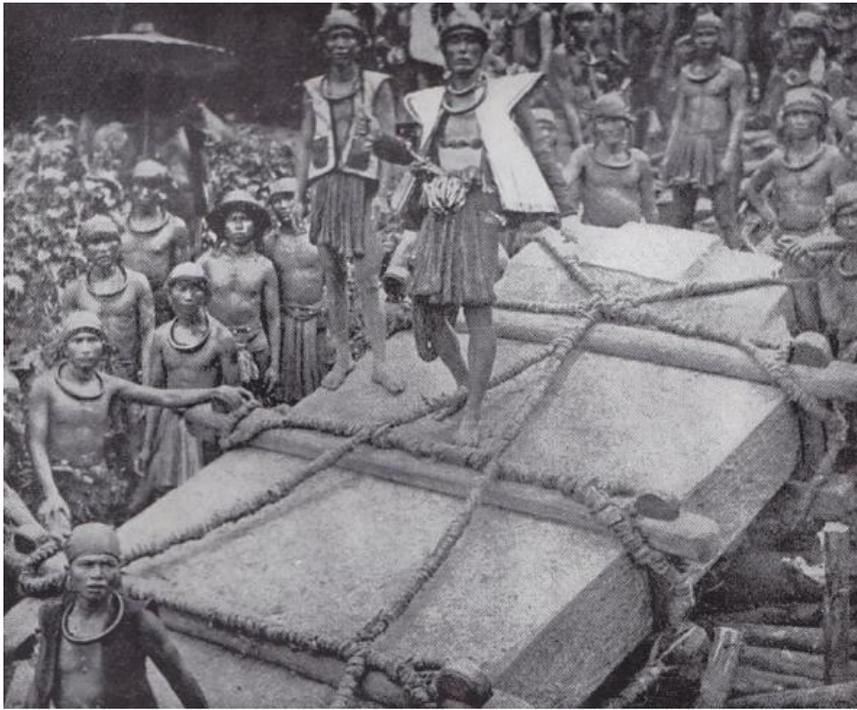


Fig. 5.18. South Nias, Sumatra. Megalith strapped to a frame of timber logs and bamboo poles and slowly dragged to its final destination, in this image from the mid-1930s. Schnitger 1939: pl. XXIV.

Colani studied at length the possible transportation method, suggesting that up to 300 men may have been required to shift a large jar, based on an upper limit of 50 kg bearable by a local porter, far higher than the French administration's "15 kg [as] the maximum allowable weight for a porter to transport in these mountain areas".²⁶⁰

Terrain is an important consideration. Most of the jar sites are located at 1100 m or higher, with the exception of the low-laying basin of Kham District. Love, who has researched the transportation methods for the Easter Island statues, has stated:

Whatever methods are tested, they are going to have to pay attention to the prehistoric road surfaces and the archaeological context of the great *moai* [statues]. Whatever contraptions are built for the *moai* moving processes, they will have to be able to accommodate both the flat fill surfaces as well as surfaces that are V-shaped.²⁶¹

Some of the methods employed in developing a transportation hypothesis for megaliths have involved modern techniques to compensate for the lengthy investigations and unfavourable ground conditions. Studying transportation techniques of Mesoamerican Pre-classic Olmec societies (BCE 1800 to approx. BCE 400), Hazell and Brodie employed GIS software to study the Colossal Heads of San Lorenzo, which can weigh up to 26 tonnes, with the use of rollers or wheeled vehicles (sleds) precluded by the ground conditions. The megaliths were transported over a distance of 80 km, across difficult landscape, from their source near Cerro Cintepec in the Tuxtla Mountains of Mexico, to their final destination at San Lorenzo. The authors established that gradient analysis using the GIS software enabled them to establish potential transport routes through the use of slope analysis in GIS, based on gradients that did not exceed 1:10 at any point. Cross-checking in the analytical stage showed "that the routes identified in the GIS study mirrored modern roads or tracks".²⁶² The authors have used this GIS exercise fully aware of its limitations, to contribute to research on the topic and in order to establish a starting point for investigating routes across the lowlands between San Lorenzo and the Tuxtla Mountains.

²⁶⁰ Colani 1935a, v1: 126.

²⁶¹ Love 2000: 118.

²⁶² Hazell & Brodie 2012: 3476-77.

Although few of the megaliths of north Laos may have been transported over distances in excess of 10 km and often considerably less, the method could be employed at the Plain of Jars, which presents uneven mountainous terrain and narrow paths. Together with Fitzpatrick, Hazell has also proposed transport hypotheses for Prehistoric megaliths in Micronesia, where Pacific islanders risked their lives “to acquire socially and economically important stone”.²⁶³

The skilled masons had mastered the art of transporting a finished jar without impairing its integrity. What might happen to a jar that suffered damage in transit belongs to the realm of speculation, pending scientific study. We do not know whether the defective jar was abandoned at the spot where the damage occurred or whether it was transported back to the quarry. The possibility has never been considered that some small groups of jars set at a distance from a main group might have been abandoned as a result of damage suffered in transport. Where the jars at such groups are damaged, it is not possible to ascertain how and when the damage arose or, conversely, whether these small deposits of jars arose as part of the overall arrangement of a site.

5.2 Lip Rims

In studying lip rim styles I have referred to other studies in the region, where differentiation is expressed in a set of uniform settings. In Neolithic burials at the West Mouth of Niah Cave, Sarawak, Insular Malaysia, Lloyd-Smith has studied “the arrangement of the limbs (Fig. 5.19) of primary flexed and extended burials”²⁶⁴ in the physical manipulation of the body. The analysis of 18 extended burials revealed that the bodies “displayed a limited number of standardised arm positions which appeared to correlate with the sex of the individual”.²⁶⁵ Twelve arm positions were documented, with the majority of extended burials displaying “one or two symmetrical arm positions, either with both hands resting on their respective shoulders or crossed over the chest”,²⁶⁶ displayed equally by males or females. The positions of the arms correlated with isotopic and demographic data, with one possibility being that some arm positions could “represent some form of social identifier”,²⁶⁷ for instance to identify a married woman.

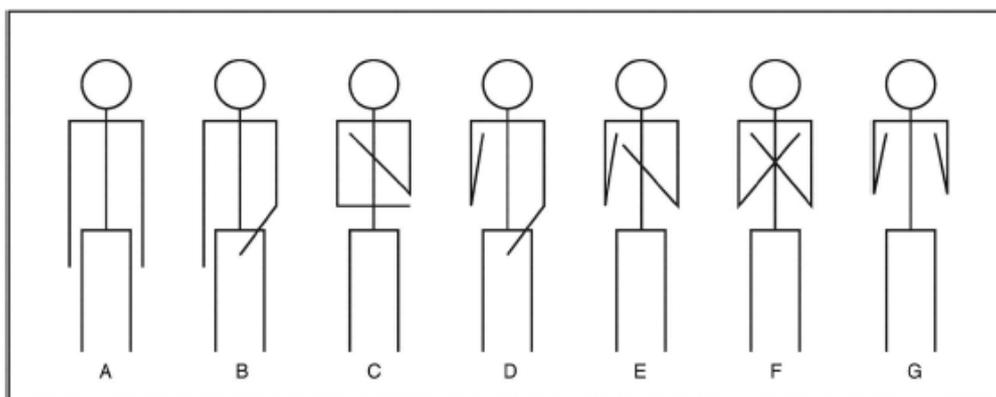


Fig. 5.19. – West Mouth, Niah Cave. Arm position on extended Neolithic burials. Lloyd-Smith 2013: 114, fig. 9.

²⁶³ Hazell & Fitzpatrick 2006: 12.

²⁶⁴ Lloyd-Smith 2013: 112. Between 1954 and 2004, a total of 170 burials have been documented at the West Mouth of the Niah Cave, comprising 89 primary burials, 79 secondary burials and two ‘multiple’ burials. It is the largest Neolithic cemetery in Southeast Asia.

²⁶⁵ Lloyd-Smith 2013: 112.

²⁶⁶ Lloyd-Smith 2013: 113.

²⁶⁷ Lloyd-Smith 2013: 121.

Wilén has also observed a pattern of uniformity and diversity in prehistoric burials in the Khorat Plateau, NE Thailand. Reviewing sites dated BCE 2000-300 CE, he discovered that the mortuary tradition shared similarities with that of other areas on the plateau but, in the Nam Phong piedmont zone along the eastern margins of the Phetchabun Mountains, geographic individuality was expressed with distinctive ceramics: “While many grave goods, especially exotic imports, iron tools and bronze ornaments, are stylistically virtually the same, the decorated ceramics found in burials tend to be restricted to specific geographic area[s]”.²⁶⁸ In the Nam Phong watershed, several ceramic styles can be identified, which appear to be cultural markers to express membership in a geographically restricted group.

This concept can be analysed by two constituent elements. First, a “fixed” element, the relatively uniform mortuary tradition and ordinary grave objects. Second, a “variable” element, the distinctively-decorated “cultural markers” of funerary ceramics. I suggest a parallel with the Plain of Jars, with the jar’s body as the “fixed” element and the style of the lip rim as the “variable”. My representation of this dual concept is illustrated in Table 6.

Table 6 – Fixed and variable elements in prehistoric burials and megalithic jars

Region	Fixed element	Variable element
Plain of Jars, Laos	Body of a stone jar	Style of the lip rim
Nam Phong, NE Thailand	Layout/construction of the mortuary feature and "ordinary" grave goods	Cultural markers: distinctively decorated funerary ceramics

Archaeologists are now exploring “the use of style as social markers and have found that when used in specific ritual contexts decorative style serves to distinguish between social groups”.²⁶⁹

Working with stone imposes limitations and can curb artistic expression, but carving different rim styles can offset some of these restrictions, by embodying the code that identified the individual, group or community. The rim, thus, conveyed diversity and helped to negate some of the uniformity in the jar’s barrel shape. A recent study on megalithic jars in Indonesia’s Sulawesi Island reached similar conclusions, where observed stylistic differences between sites and whole basins might be due to “individual or kinship differences within the population”.²⁷⁰

5.2.1 Six Rim Styles

I have identified six styles (Fig. 5.20, Fig. 5.21, Fig. 5.22, Fig. 5.23, Fig. 5.24 and Fig. 5.25).

Table 7 includes historical details for sites now difficult to analyse due to advanced state of erosion. For example, from Colani’s photographic plates we learn that, at least until the 1930s, J13 hosted granite jars styled with an Outer rim and a Recessed Inner rim (Fig. 5.41 Chapter 5.2.4 and Fig. 5.89 Chapter 5.8.2), but these jars have not survived.

²⁶⁸ Wilén 1998: 103, 109.

²⁶⁹ Kowalewski *et al.* 1983 (Boundaries, Scale and Internal Organization, *Journal of Anthropological Archaeology*, 2, pp32-56) and Pollock 1983 (Style and Information: An Analysis of Susiana Ceramics, *Journal of Anthropological Archaeology*, 2, pp354-390) quoted in Wilén 1998: 109.

²⁷⁰ Dwi Yani Yuniawati 2001. Stone Burials, one of the Megalithic Remains in Sulawesi, *Aspects of Indonesian Archaeology*, 26, p21, quoted in Kirleis 2012: 9.



Fig. 5.20. J1. Flat rim.
L. Genovese (2011).



Fig. 5.21. QS35. Recessed Inner rim.
L. Genovese (2011).



Fig. 5.22. J41. Outer rim.
L. Genovese (2011).

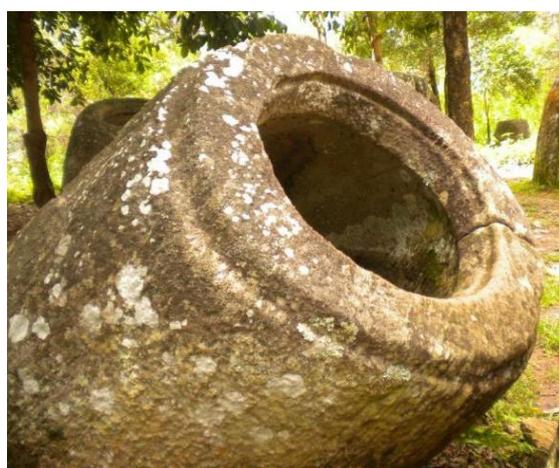


Fig. 5.23. J2. Recessed Inner rim + Outer rim.
L. Genovese (2011).



Fig. 5.24. J1. Prominent rim.
L. Genovese (2009).



Fig. 5.25. Q21. Collar rim.
L. Genovese (2011).

Table 7 shows that none of the 40 sites under consideration hosts all six rim styles.

Table 7 – Six rim styles at the Plain of Jars

Site no.	FR	RIR	OR	O-RIR	PR	CR	Stone
J1	✓		✓		✓		S
J2	✓	✓	✓	✓			S
J3	✓	✓	✓				S
J4	✓						S
QS5	✓						S
Q8	✓	✓					S
Q9	✓	✓	✓				S
QS11	✓	✓	✓				S
Q12	✓	✓	✓				S
J13	✓	✓	✓				G
QS16	✓	✓	✓				G
QS17	✓		✓				S
Q18	✓		✓			✓	S
J20	✓	✓					C
Q21	✓	✓	✓			✓	S
22QS		✓	✓				S
QS23	✓	✓	✓				B
J25	✓		✓				S
J26	✓	✓					S
J27	✓	✓					S
QS28		✓					S
J31	✓						S
J33	✓	✓					S
QS35	✓	✓					S
J36	✓	✓					L
J37	✓	✓					S
J38	✓	✓	✓				G
QS39	✓	✓	✓				G
J40	✓		✓				G
J41	✓	✓	✓				S
QS42	✓						S
J43	✓						S
J45	✓						S
J46	✓						S
QS47	✓						L
J48		✓					C
QS49	✓	✓	✓	✓	✓		G
J50	✓						S
J51	✓						S
J52	✓	✓					S
40 sites	37	25	19	2	2	2	

Rim type	Frequency	%	Sites	Frequency	%
FR	37	92.5%	12	1 rim	30.0%
RIR	25	62.5%	13	2 rims	32.5%
OR	19	47.5%	12	3 rims	30.0%
O-RIR	2	5.0%	2	4 rims	5.0%
PR	2	5.0%	1	5 rims	2.5%
CR	2	5.0%	0	6 rims	---
Total			40		

FR = Flat rim; RIR = Recessed Inner rim; OR = Outer rim;
 O-RIR = Outer + RIR; PR = Prominent rim; CR = Collar rim
 S = Sandstone; G = Granite; C = Conglomerate; L = Limestone; B = Breccia
 Source: Database L. Genovese

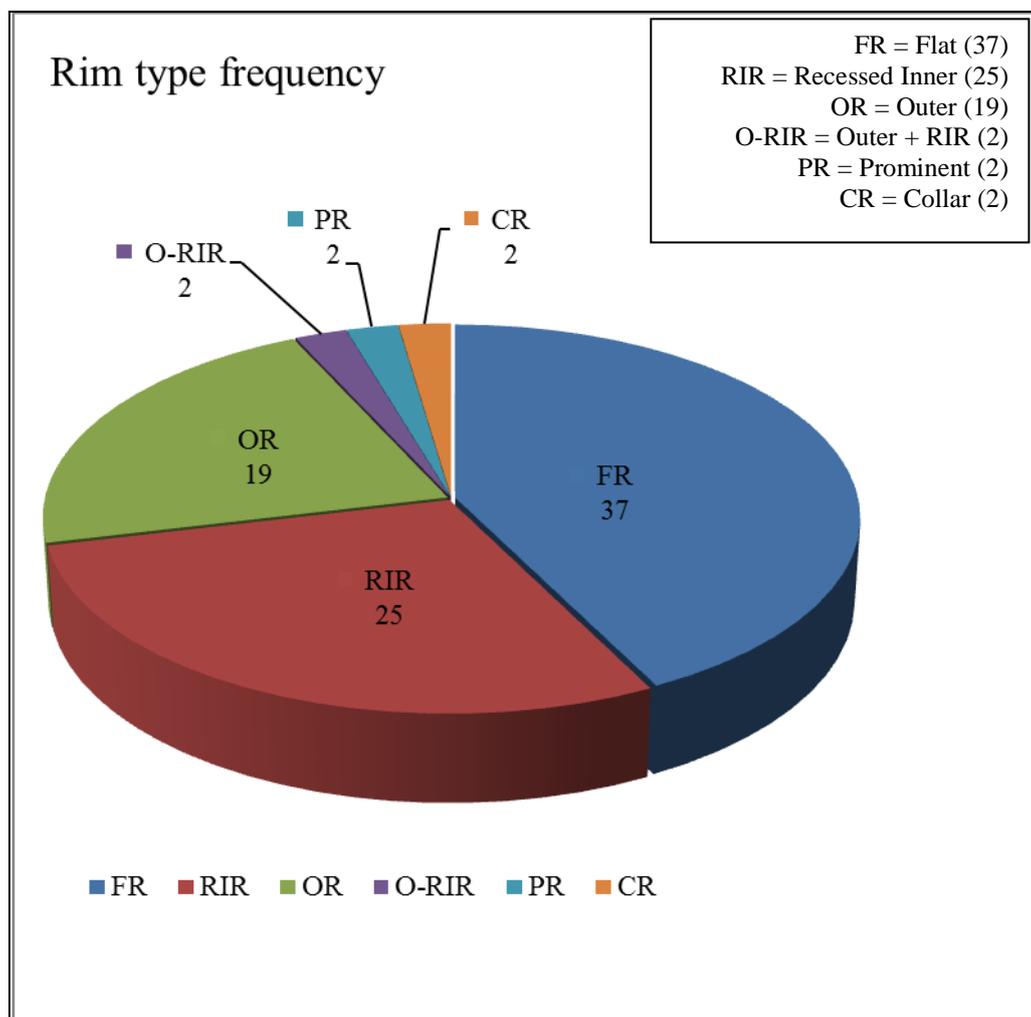
Various reasons prevent analysis on rim styles at some sites, chiefly the highly fragmented nature of some jars and the absence of jars, finished or incomplete, at quarries such as Q14 and Q15. Though rim styles are an under-researched topic, in one of their publications UNESCO

mentioned lip rims as a differentiating feature: “The jars are tubular with a height to width ratio of 1.5:1 and are mainly distinguished by their rim execution and stone type”²⁷¹.

The frequency for each rim style is: 1) Flat rim; 2) Recessed Inner rim; 3) Outer rim; 4, 5 & 6) Outer combined with RIR, Prominent rim and Collar rim. The Flat rim is the most prevalent, found at 37 of the 40 sites (92.5%). This is followed by the Recessed Inner rim, with 25 sites (62.5%) and the Outer rim with 19 sites (47.5%). The three least common styles are the Outer combined with the RIR, the Prominent and the Collar rims, with two sites each, or 5.0%.

The frequency of the individual styles shows that one or three rims are found at 12 of the 40 sites (30.0%), while jars with two rim styles are found at 13 sites (32.5%). Four rim styles (5.0%) are encountered at two sites, while only one site (2.5%) hosts five rim styles. A site with six rim styles has not been documented yet.

QS49 is the only site where five of the six rim styles are represented. The Flat rim at J50 reflects the rim style on the two sandstone jars recently relocated from a nearby site near a new hydropower station. The rim style on the remaining jars, which may have since been relocated to another location altogether, is not known. A chart visualises the frequency of the rim styles.

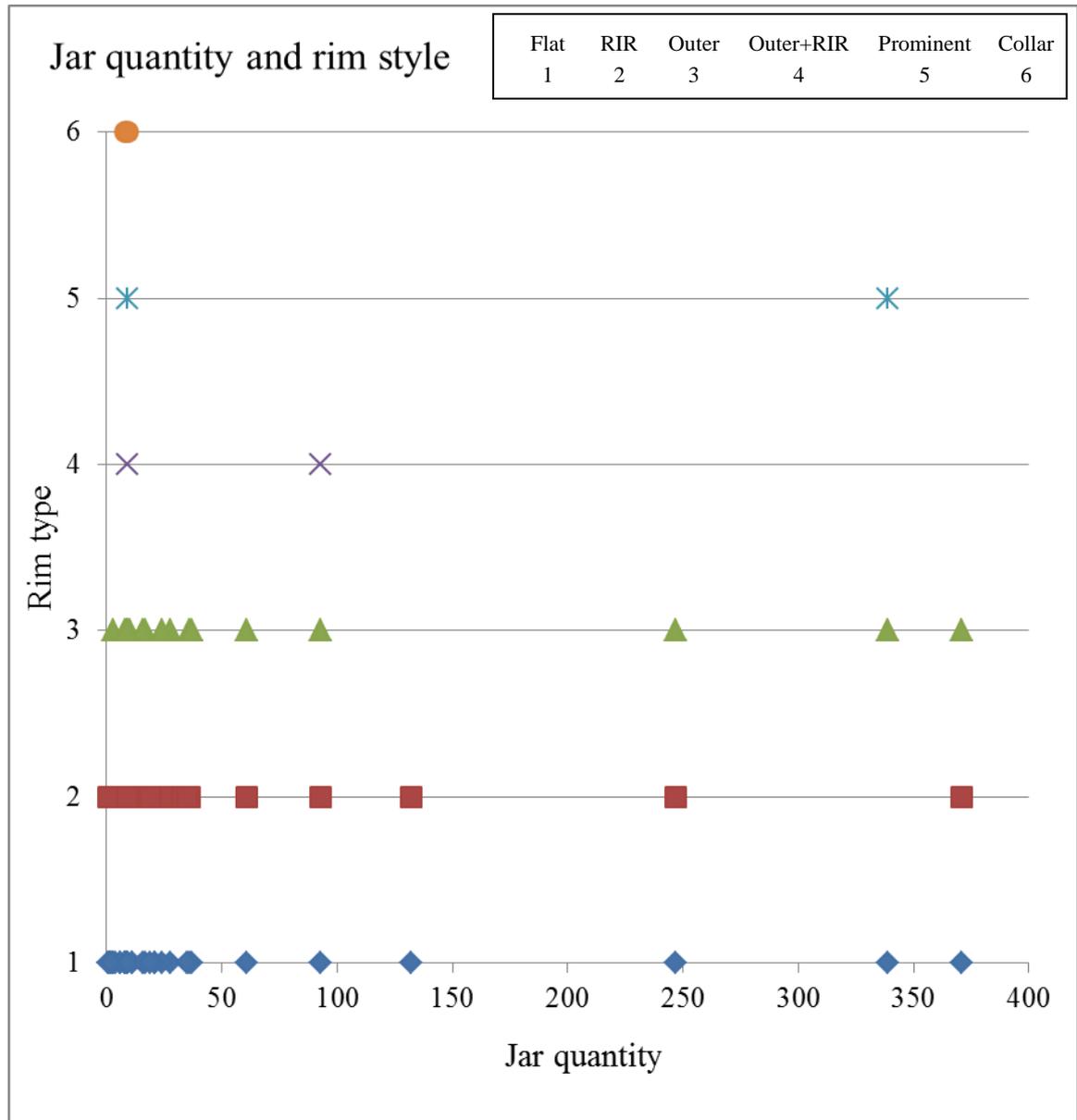


The histogram below has been developed by reference to the six rim styles but the total quantity of jars at each site replaces the number of sites where each style is found. There is no material

²⁷¹ UNESCO 2009: 21.

distortion in replacing sites with jars for two reasons. First, at nearly every site, the vast majority of jars are carved with a Flat rim. Second, elaborate rims, from Recessed Inner to Collar, are carved on an extremely limited quantity of jars, often only one jar and rarely more than one jar. The jar quantities are those listed in Table 1 (Chapter 1.9).

The highest concentration is found in the Flat rim, followed by the RIR and the Outer rim.



None of these styles has generated as much debate as the Recessed Inner rim for its potential to support a lid, consistently with the theory that jars may have been containers for the decay of the body, prior to secondary burial or cremation. It was perhaps inevitable that the discovery at QS35 of a pommel-decorated disc in the immediate vicinity of a jar carved with a Recessed Inner rim should corroborate this theory (Fig. 5.26 and Fig. 5.27).



Fig. 5.26. QS35. Disc with pommel near a sandstone jar.
L. Genovese (2011).



Fig. 5.27. QS35. Recessed Inner rim on a jar near a disc with pommel.
L. Genovese (2011).

Although one such disc has never been found atop a jar, this statement is not definitive because discs can be moved relatively easily. By way of example, a sandstone disc (Fig. 5.28, Fig. 5.29, Fig. 5.30 and Fig. 5.31) at J1 has seen a series of movements from the ground (1970s) to the top of a jar (*ca.* 1993), returned to the ground (2010) and re-positioned on the jar a few months later (2011), where it remains (April 2014).

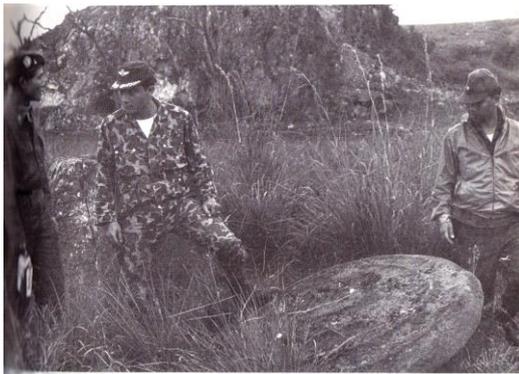


Fig. 5.28. J1, early 1970s. Disc on the ground. In the centre, Prince Mangkra Souvannaphouma of Laos.
Souvannaphouma 1976.

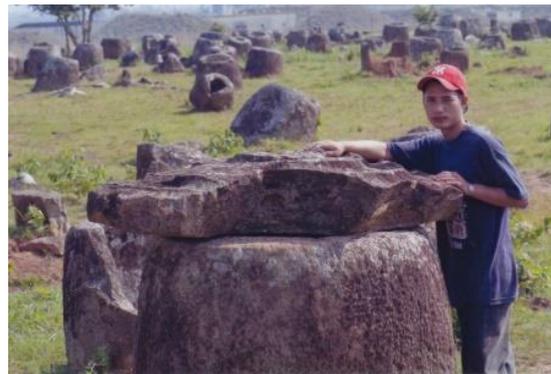


Fig. 5.29. J1, *ca.* 1993. Disc atop Jar no. 229 (Noud Petras, in the photo, was not involved in moving the disc).
Noud Petras, *ca.* 1993.



Fig. 5.30. J1, October 2010. Disc returned to the ground near Jar no. 229.
Brian Krause (2010).



Fig. 5.31. J1, June 2011. Disc appears, once more, atop Jar no. 229.
L. Genovese (2011).

After a summary of the six rim styles, I will discuss the Recessed Inner rim in detail, with past and present interpretations and my observations.

5.2.2 Flat Rim

The Flat rim is the most prevalent. At J1, for instance, it is carved on the vast majority of the site's 339 jars. On some jars, it has retained its well-sculpted shape (Fig. 5.32 & Fig. 5.33). This type of rim is found on both upright and reclining jars.



Fig. 5.32. J1. Flat rim on a sandstone jar.
L. Genovese (2011).

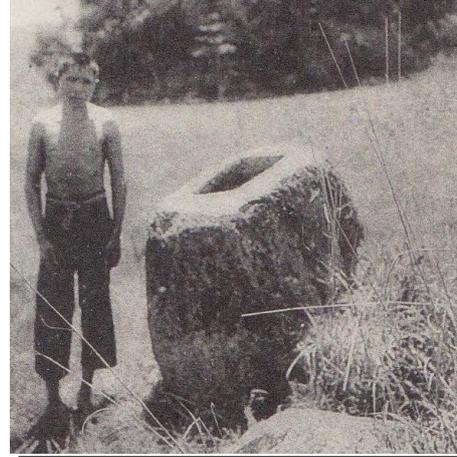


Fig. 5.33. J1. The same jar, in 1931.
Colani 1935a, v1: pl. XV.

5.2.3 Recessed Inner Rim

The Recessed Inner rim (RIR) is carved on medium- to large-size jars and very rarely on small-size or dwarf jars. Sculpted just below the lip, it has contributed to the notion that it functioned to support a lid. Though the second most prevalent style after the Flat rim, the RIR is found rarely on more than one or two jars at any given site. At J20, for instance, only one of 21 conglomerate jars (4.8%) displays a RIR (Fig. 5.34), with the remaining 20 jars (95.2%) carved with a Flat rim. Two notable exceptions exist, at J1 and J36. At J1, none of the 339 extant jars bears a RIR, while at J36 at least six out of 35 jars (17.1%) are carved with a RIR (Fig. 5.35). The RIR is found on both standing and reclining jars.



Fig. 5.34. J20. Recessed Inner rim on a conglomerate jar.
L. Genovese (2012).

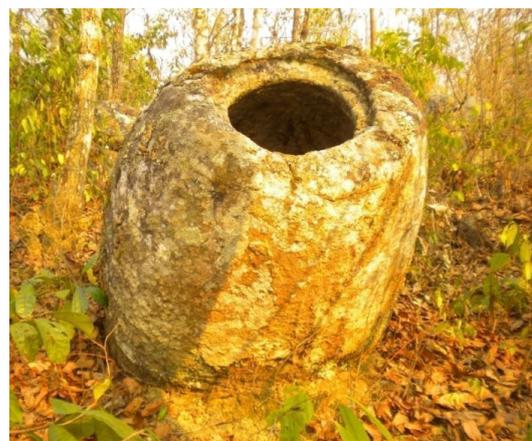


Fig. 5.35. J36 holds an unusually high proportion of jars with Recessed Inner rim.
L. Genovese (2012).

Numerous jars at J36 are in a state of fragmentation, often scarred by perforations intended to turn them into chicken coops (Fig. 5.36, Fig. 5.37 and Fig. 5.38).



Fig. 5.36. J36. Perforated jar.
L. Genovese (2012).



Fig. 5.37. J36. Perforated jar.
L. Genovese (2012).



Fig. 5.38. J36. Perforated jar.
L. Genovese (2012).

5.2.4 Outer Rim

The Outer rim is encountered on a range of jars, mostly of medium-size, especially at J1, and is rarely found on small jars, with one possible exception being the pink sandstone jar illustrated in Fig. 5.75 (Chapter 5.6). Colani remarked that the jars “often have a small external or internal rim”,²⁷² alluding to the Outer rim and the RIR respectively. In my classification, this rim type belongs to jars 170 cm or higher, although this measurement is scaled down for granite jars, which rarely attain a height greater than 160 cm. The Outer rim rises for up to 20 cm above the lip (Fig. 5.39 and Fig. 5.40).



Fig. 5.39. J1. Outer rim, sandstone jar.
L. Genovese (2009).



Fig. 5.40. J41. Outer rim, sandstone jar.
L. Genovese (2011).

As mentioned earlier, the Outer rim was also present at J13 (Fig. 5.41) but these jars have not survived. The Outer rim is found on both standing and reclining jars.

²⁷² Colani 1934a: 337.



Fig. 5.41. J13. Granite jar, 90 cm tall, with Outer rim. This jar is no longer at the site. Colani 1935a, v1: pl. XXVI/2.

5.2.5 Outer rim combined with RIR

An Outer rim combined with a RIR is exceptionally rare and I have encountered it only on two jars at two separate sites. The first instance is found on a sandstone jar in the eastern hill at J2 (Fig. 5.23 Chapter 5.2.1) and the second on a granite jar (Fig. 5.42) at QS49.



Fig. 5.42. QS49. Granite jar carved with Outer + Recessed Inner rim. L. Genovese (2012).

5.2.6 Prominent Rim

The Prominent rim rises for up to 35 cm above the jar's lip. I have documented three such instances, all of them at J1, respectively on Jar no. 1 (Fig. 2.11 Chapter 2.3.6) and Jar nos. 20 and

21.²⁷³ These last two jars have been displaced from their original position but Jar no. 1 stands, in a tilting position, on a hill at the entrance to the site. All three jars are over 2 m in height.

5.2.7 Collar Rim

The Collar rim is another rare style, its definition for the way it adorns the lip of a jar. I have encountered it only on two sandstone jars, at Q18 and Q21. The Collar rim is differentiated from the Outer rim because it is exceptionally flat, barely rising from the lip of the jar.

The jar at Q18 (Fig. 5.16 Chapter 5.1.3) is fully carved with a Collar rim. This jar has relatively modest measurements, approx. 150 cm high and a girth of 87 cm at its widest. The band of the Collar rim is 19 cm wide.

The shallow cavity of the jar at Q21 (Fig 5.25 Chapter 5.2.1), points to partial carving. Its walls are otherwise smooth and the rim is well crafted.

5.2.8 Recessed Inner Rim in Detail

If not the first, Raquez's mention in *Pages Laotiennes* was one of the first in print on the Recessed Inner rim, "a groove of 20 cm perhaps intended for a lid".²⁷⁴ To a degree, Colani concurred with Raquez's assessment: "The masons must have had a reason for manufacturing this device: it is not ornamental, it is not visible from the outside, except for the short jars or those sunk deep into the soil; it must have served to support a lid".²⁷⁵

Colani was stating the obvious in asserting that the RIR is not visible on tall standing jars. She vacillated in her conviction, however, noting that "some urns [are carved] with a small internal rim. What is it for? It could not support the heavy stone lids. Their diameter is not consistent with the internal diameter of the urns' aperture",²⁷⁶ a statement which contrasts with UNESCO's assessment that "the inside of the lids sometimes are shaped to fit the aperture of the jar",²⁷⁷ although no photographic evidence supporting this detail has ever been published.

Scholars have emphasized the RIR, because it provides a *raison d'être* for the stone discs found in the immediate vicinity of jars and their potential use as "lids". Proponents of this theory, however, have yet to address the question of how lids might have been fitted on the RIR of massive jars in Phoukood (Fig. 5.43) and at the Ban Phakeo assembly (Fig. 5.44), their horizontal position invalidating the use of a cover if the jars had occupied this position on the ground from inception. This is evident at QS42, where carving was abandoned but the beginnings of an aperture are visible (Fig. 5.45). At the same site, a few metres from this incomplete jar, another massive jar has been carved and is also found in a horizontal position (Fig. 5.46).

²⁷³ Thanks to the efforts of Lao and international archaeologists appointed by the Lao Government, at J1 the jars been numbered, including fragmented units.

²⁷⁴ Raquez 1902: 373.

²⁷⁵ Colani 1935a, v1: 150.

²⁷⁶ Colani 1935a, v1: 167.

²⁷⁷ UNESCO 2009: 74.



Fig. 5.43. J26. Massive sandstone jar with an estimated weight of 31 tons.
Baldock 2008: photo 2.



Fig. 5.44. J41. Recessed Inner rim on a recumbent sandstone jar.
L. Genovese (2011).



Fig. 5.45. QS42. Barely-impacted sandstone boulder, with minimal aperture.
L. Genovese (2012).



Fig. 5.46. QS42. Fully-carved sandstone jar with limited volume and narrow aperture.
L. Genovese (2012).

The RIR continues to be linked with the lid theory and this despite the discrepancy in the ratio of discs to jars at virtually every site, which Colani rationalised thus: “The limited quantity of lids (?) [*sic*] leads us to believe that covers in timber or perhaps thick wickerwork may have been used”.²⁷⁸ This suggestion is echoed by contemporary writers: “Few stone lids have been found. This may suggest that the bulk of lids have been fashioned from perishable materials”.²⁷⁹ The theory appears to have gained ground at other megalithic sites in the region. The authors of a recent study on the megalithic jars in the Besoa Valley of central Sulawesi, for instance, have pondered a similar scenario for the stone discs near the jars: “Whether the *kalambas* [large stone urns] were covered by lids cannot yet be determined; wooden discs or lids of braided plants might have existed and would have decomposed”.²⁸⁰

As already stated, none of the extant jars at J1 are carved with a RIR and one such jar was already absent in May-June 1931 at the time of Colani’s survey. At least one jar at Q21, its associated quarry, is carved with a style resembling a RIR (Fig. 5.47) and we cannot discount the possibility of deposits of jars being discovered in transit between Q21 and J1 and that some of these jars may display a RIR. The recently-discovered J43 holds two sandstone jars (Fig. 6.3 and Fig. 6.4 Chapter 6.2.1) which could have been transit jars for J1, located 1.7 km away, but their partially-carved status precludes identification of the rim style they may have had on completion.

²⁷⁸ Colani 1935a, v1: 212.

²⁷⁹ UNESCO 2009: 22.

²⁸⁰ Kirleis *et al.* 2012: 18.



Fig. 5.47. Q21. Sandstone jar carved with a basic Recessed Inner rim.
L. Genovese (2011).

Masons were prepared to carve a particular rim type on hard stone, like granite or conglomerate, with unpredictable results (Fig. 5.48 and Fig. 5.49).



Fig. 5.48. J40. Misshapen rim, granite jar.
L. Genovese (2011).



Fig. 5.49. QS16. Misshapen rim, granite jar.
L. Genovese (2011).

The Recessed Inner rim may have been an element in the differentiating features to denote distinguishing origins for the communities or clans who erected the jars. If the rim style were a decorative element, arguably more styles could have been devised, considering the lengthy period of time that has elapsed from inception to when the Plain of Jars ceased being used, judging by the considerable time needed to carve and transport well over 2,000 jars and more than 200 discs. Furthermore, the limited expressions of style I have documented connect with the limited, standardized arm-positions in burials at the West Mouth of Niah Cave, as detailed in Chapter 5.2.

The Recessed Inner rim appears to be a popular decoration in parts of Island Southeast Asia in domestic settings. In south Sumatra, Hoop documented domestic stone artefacts carved with this rim style (Fig. 5.50), similar to the Recessed Inner rim illustrated in this thesis.

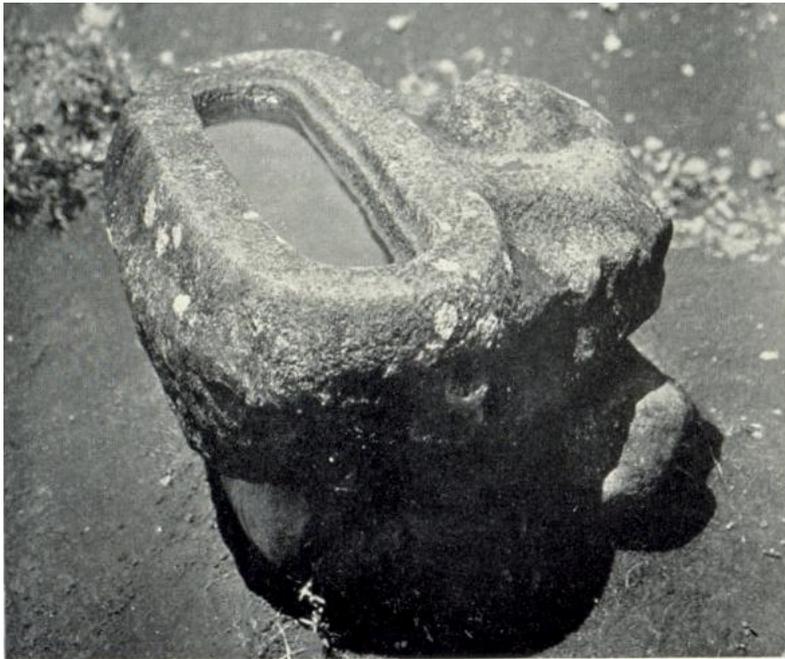


Fig. 5.50. South Sumatra. Stone artefact with Recessed Inner rim.
Hoop 1932: 26, fig. 44.

5.2.9 Statistical Analysis of Frequency of Lip Rims

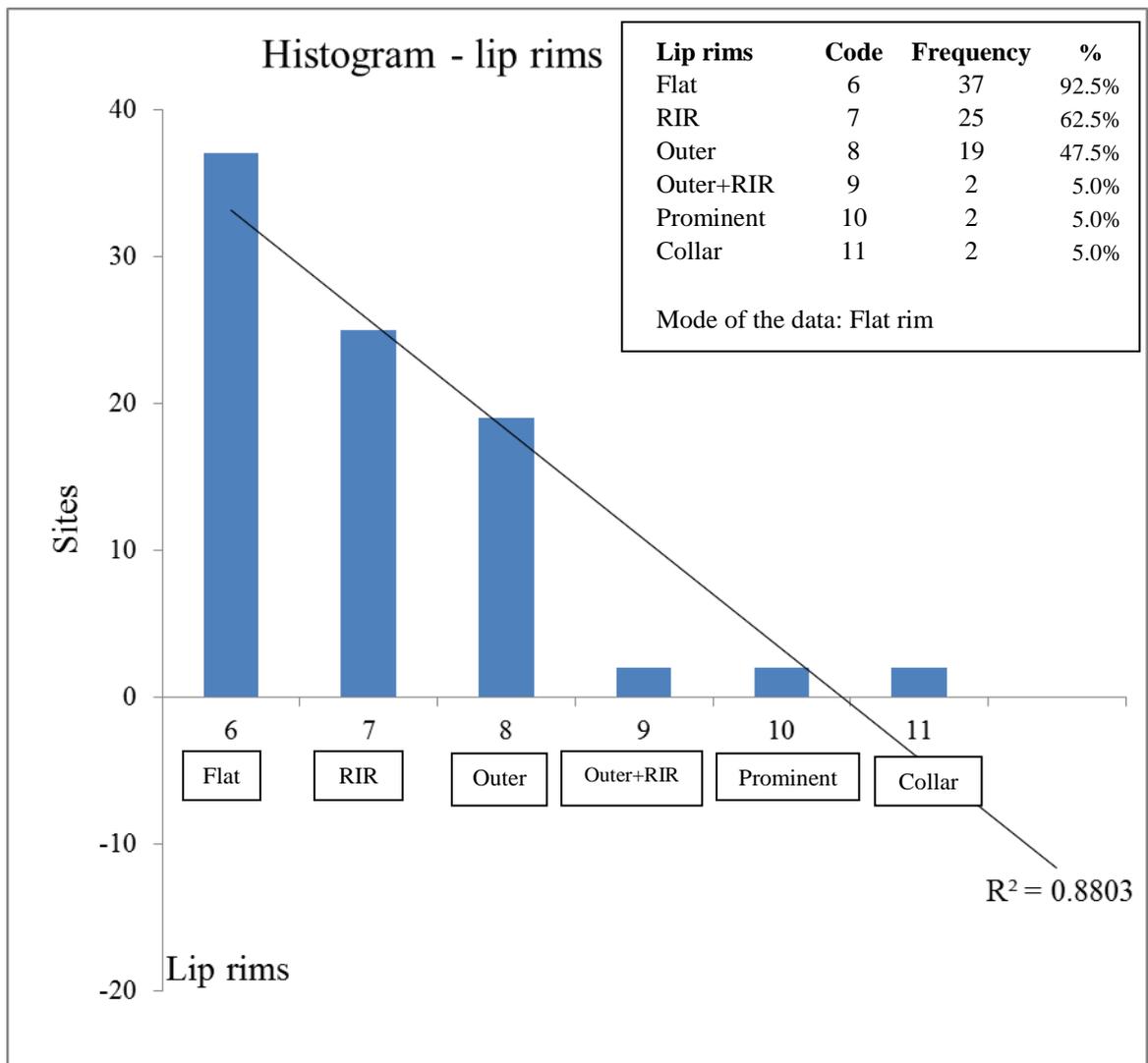
To the six rim styles (Table 7 refers), I have assigned a numerical identification, as follows:

6 = Flat; 7 = RIR; 8 = Outer; 9 = Outer + RIR; 10 = Prominent; 11 = Collar.

For the intervals in the histogram, I have used the digits from six to 11.

The single most-frequent score is the Mode of the data, which in this histogram is the Flat rim.

The R^2 value of 0.8803 (88.0%) is very close to 100% and indicates that the model explains a large proportion of the variability of the response data around its mean. The points are not scattered. There is a degree of confidence that we can predict the value of a variable. In this case, a site is highly likely to host jars with a Flat rim, followed by a RIR as a close second and an Outer rim as a distant third occurrence. However, there is a 12% possibility ($1.00 - 0.8803$) that our prediction could be erroneous.



5.3 Jars with Reduced Cavities

Colani noted that the jars in the NW of Xieng Khouang Province, chiefly Phoukood District, had reduced volume compared to others in the central areas: “On the confines of these new mortuary provinces, the modified monolithic container appears not to have had the same purpose than at the centre”,²⁸¹ the “centre” in opposition to “periphery” (Fig. 5.51). Her studies sought to reveal the funerary customs of the Plain of Jars and the jar’s cavity was instrumental in this quest. The size of the jar was linked to rank and status but could not explain funerary customs: “it is of little use keeping track of the size, which can vary according to the importance of the deceased, whereas the internal volume must have been related to the method of burial”.²⁸² The theory embodied the twin messages of jar size, as indicator of rank, and depth of carving, as indicator of funerary custom.

There was a belief that different burial expressions co-existed within the same community: “the inhumation method was not consistently uniform, the jar’s volume was adapted to the contents it would hold [...] several inhumation methods may have been practiced in the same cemetery”.²⁸³ This has been proposed in recent literature:

²⁸¹ Colani 1935a, v1: 148.

²⁸² Colani 1935a, v1: 150.

²⁸³ Colani 1935a, v1: 148.

Regional differences in jar shape have been noted, particularly in relation to Phukoot district in the north of the province. While these differences in most cases can be attributed [to] the rock source, differences in form, such as smaller openings and openings on both ends (double holed jars) have been recorded in Phukoot district only.²⁸⁴

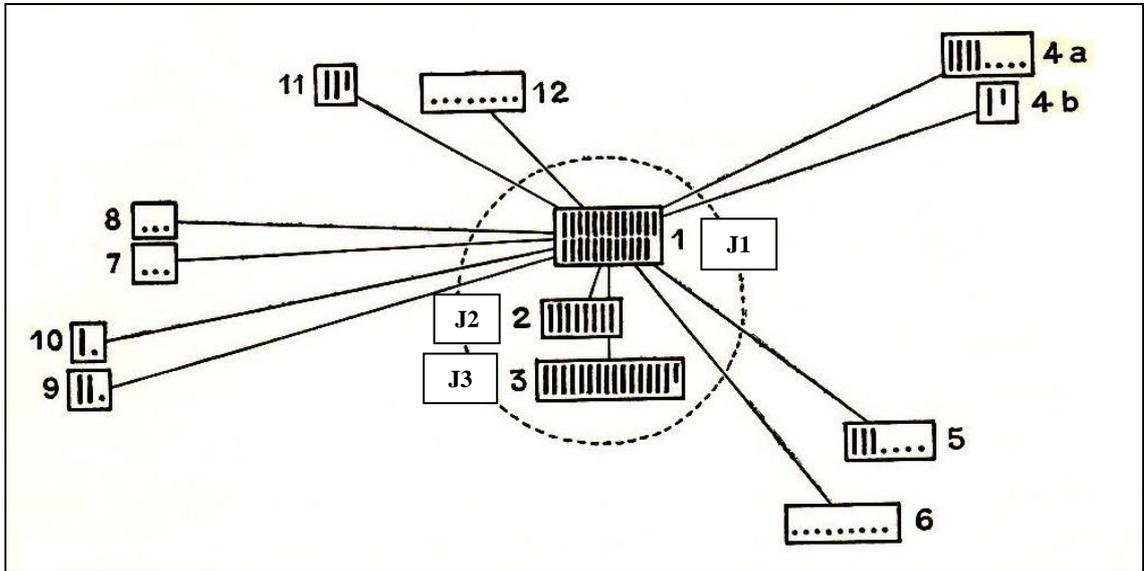


Fig. 5.51. Colani's representation of "centre" and "periphery" at the Plain of Jars.
 One vertical line = 10 jars; half a line = 5 jars; a dot = 1 jar.
 Colani 1935a, v2: 180, fig. 199.

To convey their size, Colani asked villagers to stand inside the jars, as these images illustrate (Fig. 5.52 and Fig. 5.53): "six men are inside the jar, with room for four more".²⁸⁵



Fig. 5.52. J1. Villagers standing either side of a gigantic jar on the hill at the entrance.
 Colani 1943: V (unnumbered image).

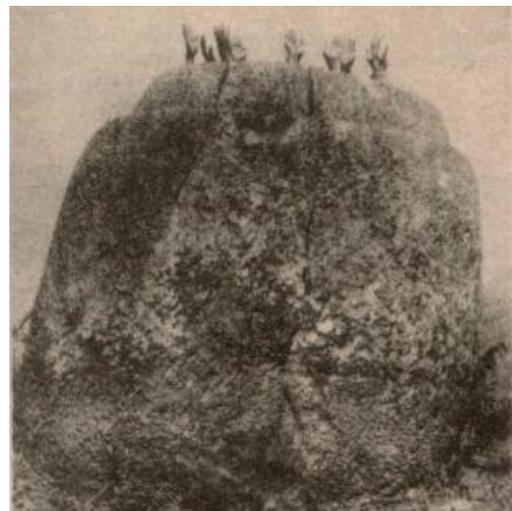


Fig. 5.53. J1. Six villagers standing inside the jar to convey its size.
 Colani 1943: V (unnumbered image).

This contrasts with the jars in Phoukood (Fig. 5.54) and in the Ban Phakeo assembly in Paek District (Fig. 5.55), home to numerous narrow jars carved to a shallow depth.

²⁸⁴ UNESCO 2009: 22. The end of the above statement omits the double-ended jar discovered in 2008 at Ban Namkun, Paek District, during a geological survey.

²⁸⁵ Colani 1935a, v1: pl. XV/1.



Fig. 5.54. J26. Massive sandstone jar with shallow cavity and narrow mouth. L. Genovese (2011).



Fig. 5.55. J41. Sandstone jar with long and narrow body. L. Genovese (2011).

The American archaeologist Lewis Binford (1930-2011) has been influential in the fields of archaeological theory and ethnoarchaeology. In his study of factors which can bear on the stability and continuity of mortuary practices over time, Binford writes that in regional studies “the citation of mixed practices is offered as evidence for contacts between cultures. It is implied that blending is the expected outcome of contacts between socio-cultural systems, each with its own “norm” [*sic*] of mortuary ritual”.²⁸⁶ The proposition which stipulates that changes in mortuary customs may have generated jars with reduced cavities in the NW of the province, therefore, should be tested against ethnographic data and population movements in the area: “Contacts are said to foster the exchange of “ideas” [*sic*] which may result in the modification of custom, of which changes in mortuary ritual might be one example”.²⁸⁷

Binford further postulates that variability in mortuary practices are commonly attributed to changes in the community’s belief system, with changes often brought about by “the cumulative experience of man in coping with his environment”.²⁸⁸ This notion must be weighed against the concept of cultural conservatism and its *dictum* that new knowledge is rarely obtained, so that new traits are likely to ensue from knowledge transmitted “from one unit to another”.²⁸⁹

Carving the interior of a jar only to a limited depth can be as a result of several reasons, some of which are dictated by the rock itself, but there may be other reasons at play. I will now discuss four possible reasons that may account for these reduced cavities: geological, ritual, functional and technical, based on my fieldwork and the study of related publications.

5.3.1 Geological

The Plain of Jars masons could transport a carved jar from quarry to site, for several kilometres. Such was their level of skill, that to carve a jar to a greater depth would have been entirely within their capabilities, as argued by a recent geological survey: “If the makers had exerted so much effort to quarry and move jars of this size [Phoukood jars] then to excavate a larger aperture would have been manageable”.²⁹⁰ A geological explanation can therefore be reasonably excluded as the prime motive for the narrow openings and shallow cavities.

²⁸⁶ Binford 1971: 12.

²⁸⁷ Binford 1971: 12.

²⁸⁸ Binford 1971: 13.

²⁸⁹ Binford 1971: 13.

²⁹⁰ Baldock 2008: 5.

5.3.2 Ritual

The practicalities of fitting a body inside a shallow jar have never been satisfactorily addressed and the suggestion has been made that the shallow cavities and small apertures of the Phoukood jars may reflect changes in funerary customs, as mentioned earlier. This theory is favoured by researchers who view the jars as receptacles for the decay process, prior to secondary burial or cremation: “The stone jars with a smaller opening may reflect the diminishing need to place an entire body inside”.²⁹¹ If the jars were used as receptacles for secondary burials, then the size of the apertures would have been adequate.

Lloyd-Smith, who has researched burial traditions in Island Southeast Asia, including the Niah Cave detailed in Chapter 5.2, states: “In ethnographically documented instances of secondary burials, the ‘primary burial’ most often takes place somewhere else than the final ‘cemetery’ site”.²⁹² In other instances, it has been suggested that where a few skeletal remains are found, this may be because they are easy to transport.²⁹³

This is consistent with the limited human remains found in the clay pots buried under or near the stone jars, which have consisted of teeth, fragments of skulls and few bones. This suggests that the Plain of Jars may have been a place for secondary burials and therefore jars with limited internal capacity would have been acceptable.

5.3.3 Functional

Issues of functionality could have determined the reduced cavities of the Phoukood jars, such issues entailing considerations that the jars did not fulfil a practical use. J26, for instance, in addition to jars and stones also hosts an exceptionally smooth boulder (Fig. 5.56), which Colani detailed as “rounded in the top, with small cavity hollowed out”.²⁹⁴ The boulder bears a neat, man-made opening to the side (Fig. 5.57).

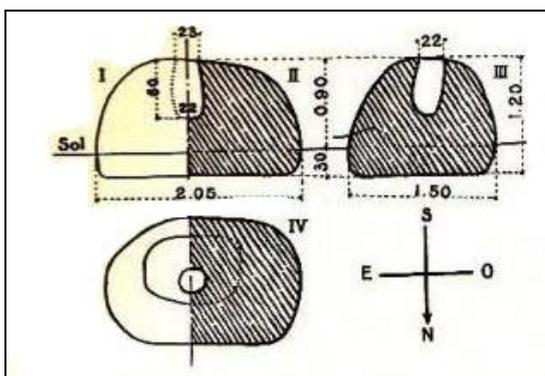


Fig. 5.56. J26. Exceptionally smooth boulder. Colani 1935a, v1: 253, fig. 133.



Fig. 5.57. J26. Small aperture into the side. L. Genovese (2011).

5.3.4 Technical

Technical considerations may underpin the decision to carve the jar’s interior to a shallow depth, stemming from factors which carving skills alone could not overcome. Having carved an aperture

²⁹¹ UNESCO 2009: 23.

²⁹² Personal communication, February 2013.

²⁹³ Binford 1971: 14.

²⁹⁴ Colani 1935a, v1: 253.

to a width of around 30 cm, the mason now proceeded to create the internal cavity, which in most jars in Phoukood is limited to a depth of 50 cm, even on boulders 200 cm or longer.

The carver was now presented with practical difficulties when attempting to crawl inside a narrow boulder to give the jar a depth greater than 50 cm. The diameter of the aperture would need to be twice as wide – 60 cm at least – to enable a mason to comfortably work deeper into the jar to increase its cavity. However, there was a real risk that widening the diameter of the mouth could make the jar’s walls unduly thin, thereby reducing its durability. Assuming the jar did not fulfil a practical purpose, a shallow cavity would have been acceptable if the jar was destined for ceremonial or commemorative purposes, rather than practical uses.

The massive jars in Phoukood are endowed with only a shallow cavity, which renders them far heavier than jars in other districts. For a Phoukood jar 200 cm high and a cavity of 50 cm, the jar’s uncarved portion would be 150 cm, or 75% solid rock (150/200), but for a jar of similar height in Phaxay District, for instance, the uncarved portion would be 50 cm or less, equal to 25% solid rock (50/200).

The reduced cavities of the Phoukood jars could have been dictated by the shape of the boulder, rather than changes in funerary customs. My hypothesis is based on the following reasons. First, the reduced cavities are found at J26 and QS42 (Fig. 5.43 and Fig. 5.46 respectively, Chapter 5.2.8), J27 (Fig. 5.58) and J37 (Fig. 5.59). The common features among these jars are their location in Phoukood District and a long and narrow body, but also a horizontal position, even for partially-carved jars.



Fig. 5.58. J27. Sandstone jar with narrow mouth and shallow cavity.
L. Genovese (2012).



Fig. 5.59. J37. Sandstone jar, with very narrow opening and shallow cavity.
L. Genovese (2012).

Shallow cavities and narrow openings are also found on a few jars in other districts, at sites like J41 in the Ban Phakeo group (Fig. 5.60).

Furthermore, Colani stated her conviction that jars in parts of Xieng Khouang were never intended to stand upright: “To the North and North-East of Muong Soui (in Ban Xot [J26], in Ban Si [J27 and J37], in Ban Na Séo [in Phoukood] for the first time we came across groups of jars which the builders had purposely rested on their side”.²⁹⁵

²⁹⁵ Colani 1935a, v1: 7.



Fig. 5.60. J41. Sandstone jar with long and slender body, restricted opening and shallow cavity. L. Genovese (2011).

The shape of the boulder, to a large extent, dictated the depth of carving and the resulting volume. Although narrow and shallow jars are typical of Phoukood District, other districts can host similar jars, as at J2, in Phaxay District. This site hosts several long and narrow jars, like the one illustrated in Fig. 2.3 (Chapter 2.1). The jar is over 300 cm long but has been carved to a depth of 180 cm, leaving at least 120 cm (40%) of solid rock. J2 is over 40 km distant from Phoukood District but the expedient employed in Phoukood appears to have been applied at J2, namely that a long and narrow boulder is likely to result in a shallow jar, the depth at which the mason can comfortably operate. The practice of carving jars to a shallow depth was therefore not restricted to a specific district and may not have been linked to ritual customs. Rather, I suggest that the decision to carve the jar to a shallow depth was dictated by technical considerations connected to the boulder's structure.

5.4 Double-ended Jars

Colani was the first to draw our attention to urns with two apertures, in Phoukood District, at J27 and J37, two sites formerly corresponding to the area known as Ban Si. Here, she found “a new type, two jars with two reduced cavities [...] one at each end”.²⁹⁶ As already mentioned, the third double-ended jar has since been found at Ban Namkun, Paek District, during the 2008 geological survey, with the report noting that the mason had attempted “to carve jar at both ends”.²⁹⁷

Both double-ended jars are arranged on the hill, suggesting that carving had been completed when the jars were transported from the quarry to the field, ready to serve their purpose.

The first double-ended jar is 220 cm long (Fig. 5.61), 60 cm wide at the front, with a neatly-carved, 24 cm wide front aperture. The rear-end (Fig. 5.62) has a width of 105 cm and a bulbous aperture 21 cm wide.

²⁹⁶ Colani 1935a, v1: 145.

²⁹⁷ Baldock 2008: Appendix III.



Fig. 5.61. J27. Sandstone jar, 220 cm long, with neat front aperture.
L. Genovese (2012).



Fig. 5.62. J27. Sandstone jar, 220 cm long, with bulbous rear end.
L. Genovese (2012).

On this first jar, the depth of internal carving is virtually identical: 56 cm for the front and 58 cm for the back. Specifically for this jar, three possibilities could be entertained on the function of the additional aperture. First, sculpting of the rear aperture was attempted but abandoned because the bulbous mass forced the mason to attempt a second aperture at the front. Second, the mason may have desisted from further carving of the rear aperture when structural flaws threatened to jeopardise the entire boulder, thus rendering it unusable. Third, the boulder's structural flaws were subservient to the requirements for two openings, because carving a massive jar carried a higher level of priority, as attested by the fact that both double-ended jars at J27 and J37 measure over 2 m in length. It is possible that after harvesting these massive boulders, there was a decision to endow them with an opening at each end, irrespective of any structural flaws that might be revealed. In my opinion, this third possibility is the most plausible.

The second double-ended jar has a length of 275 cm, with a front end 115 cm wide and an aperture of 30 cm (Fig. 5.63). The jar's rear end is 125 cm wide with an aperture of 20 cm. Unlike the 220 cm-long jar, the mason worked with a more evenly-structured boulder (Fig. 5.64), which has resulted in two apertures of broadly similar appearance but carved to different depths: 75 cm for the front and 47 cm for the rear.



Fig. 5.63. J37. Sandstone jar, 275 cm long, with neat front and rear openings.
L. Genovese (2012).

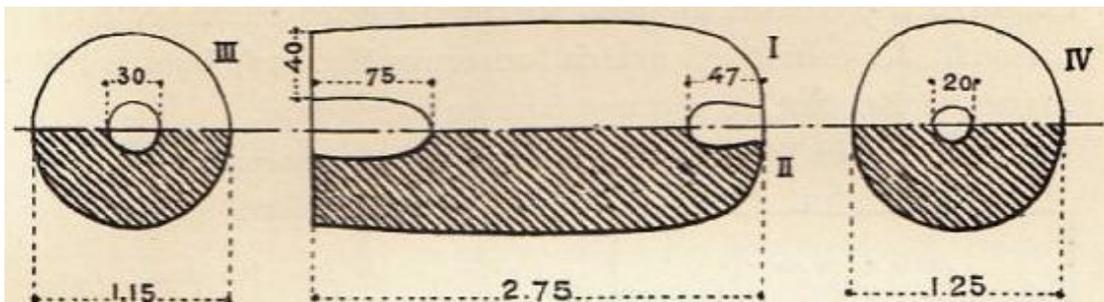


Fig. 5.64. J37. Colani's sketch for double-ended jar, 275 cm long.
Colani 1935a, v1: 255, fig. 139.

The sandstone boulders for the two double-ended jars at J27 and J37 are similar to others in Phoukood District, bearing a thick central body and tapered ends, carved with only one aperture like the one at QS42 (Fig. 5.46 Chapter 5.2.8). They are fully carved, despite deformities in the structure, as represented by a sandstone jar at J25, in the same district, where the distorted rear end has been left uncarved while the front end bears a neat aperture (Fig. 5.13 Chapter 5.1.2).

Colani suggested the two apertures could have been votive receptacles: "At Ban Si, in the jars with two symmetrical openings, they could have placed two offerings".²⁹⁸ In recent decades, there was a practice among the Konyak of Wanching, in the Indian state of Nagaland, to place a skull in a hollowed out stone (Fig. 5.65), as documented by von Fürer-Haimendorf in the 1930s.



Fig. 5.65. Wanching. Konyak, NE India. Skulls in hollowed-out stone. B&W photograph by Christoph von Fürer-Haimendorf, 1936-1937. <http://himalaya.socanth.cam.ac.uk/collections/naga/record/r60101.html>

A team led by Dominik Bonatz has documented instances of double decoration on megaliths in Sumatra's Jambi Highlands. The megaliths in question were conical in shape, between 205-232 cm in length and 55-77 cm in width. Their smooth surfaces indicated a possible origin from local river beds: "The upper surface and one or *both ends* [emphasis added] are carved in low relief with the iconic repertoire consisting of an intricate mixture of vegetal, geometrical, and anthropomorphic elements".²⁹⁹

²⁹⁸ Colani 1935a, v1: 149.

²⁹⁹ Bonatz *et al.* 2006: 505.

Stone coffins with two apertures have been reported in Island Southeast Asia. Frederic Schnitger (1900-?), who led archaeological and anthropological expeditions to Sumatra in 1935-38, noted that though stone coffins generally have one hollow, at Hoeta Gindjang [Huta Ginjang], on the western shore of Lake Toba's Samosir Island (Map 5.1) in north Sumatra, one coffin had two chambers: "In the foremost are kept the skulls of the radjas, in the rear those of the family".³⁰⁰



Map 5.1. Nias (circled) and Samosir, North Sumatra. GoogleEarth.

A parallel may exist with double-ended jars at the Plain of Jars, with the two apertures carved for separate uses or for separate individuals or groups of people.

A double-ended artefact can be interpreted by reference to life events. The anthropologist Hugo Bernatzik (1897-1953) documented a practice in parts of the Solomon Islands, of reuniting a dead man with one of his life's prized possessions. When an islander dies, some of his bones are placed "in a coffin, made of the two ends of a canoe belonging to the dead man, fixed together, one over the other".³⁰¹ By analogy, if the canoe is the man's whole life, when the central section is discarded, the two remaining ends represent birth and death, or the beginning and end of life. The discarded middle section represents the earthly life the person has just departed from. On the islander's passing, "birth and death" are figuratively joined together, while "earthly life" is discarded. The deceased is thus made 'whole' when the two ends of his canoe are joined together.

At the Plain of Jars, the two apertures on the jars may have been intended to "reunite" different individuals or family members, similarly to the effect of stringing the two ends of a canoe to form a "bridge" between life and death.

³⁰⁰ Schnitger 1939: 140. *Radja* is one of three castes and identifies the village founder and his male descendants. *Ripe* is for free and prominent citizens and *hatoban* is for the slave caste (Schnitger 1939: 134-135).

³⁰¹ Bernatzik 1935: 33.

The Dutch academic N. J. van der Hoop (1893-1969) reported *lesoengbatoes*, flat stone slabs with multiple hollows, always found in the vicinity of megalithic monuments in south Sumatra. Hoop discounted the possibility that they may have been rice mortars because the cavities – 15 cm wide and 15 cm deep – were too shallow for bruising rice during the husking process. Furthermore, the presence of wooden rice-mortars on the island invalidated the need for stone rice-mortars. He rationalised that since *lesoengbatoes* had been carved with the greatest of care, they could not have fulfilled a domestic or farming function but may have been “associated with some religious ritual”.³⁰²

Hoop documented *lesoengbatoes* in use by several families or even by a whole village: “In the villages in Dutch East India, one still finds large wooden rice mortars with several hollows, which do not serve one family but belong to the village community”.³⁰³ In the *lesoengbatoes* of south Sumatra, as in the double-ended jars at the Plain of Jars, the multiple cavities may entail communal, rather than individual, use.

Noud Petrasyl³⁰⁴ has suggested that the double-ended jars may have served as training blocks for novice carvers. This proposition needs further study, since it would be reasonable to assume that only a small boulder would be entrusted to the care of an inexpert carver. At both J27 and J37, the two double-ended jars are over 2 m in length. Moreover, the units at these two sites and at Ban Namkun remain the only three jars with double apertures discovered so far and it is pertinent to ask how novices in other districts might have exercised their carving skills and what might have been the by-product of these practice sessions.

5.5 Stone Discs: Lids, Markers or Musical Instruments?

The function of the stone discs scattered among the jars has been debated often but not resolved, just like the function of the jars themselves. Colani could not resolutely declare her affiliation for a theory that discs were lids for the jars, and vacillated in her assessment. My observations at several quarries – Q8 and Q21, for instance – have revealed no discs, either fully- or partially-carved. If any discs left at the quarry had been covered by centuries of wind-borne soil, arguably the same fate would have befallen the large quantity of discs found at jar sites today.

5.5.1 Stone discs as Lids or Grave Markers

After repeated expeditions, Colani wondered whether the discs were lids for the jars or whether they were created as decorative or commemorative megaliths. Shortly after surveying J2 and J3 in the autumn of 1931, the discs were “enormous covers cut from a single block of stone, at times decorated with concentric circles”³⁰⁵ (Fig. 5.66) but at other times they were, perhaps, “trays for offerings to the spirits and other uses which we ignore”.³⁰⁶ Such was her eagerness to convey the appearance of these discs, that in December 1931 she supervised the reproduction in concrete of “two jar lids”³⁰⁷ from her sketches, for display at the Louis Finot Museum. By her own admission, no stone disc has ever been found “sealing a jar”,³⁰⁸ echoed by UNESCO: “No lid has

³⁰² Hoop 1932: 103.

³⁰³ Hoop 1932: 104.

³⁰⁴ Personal communication, April 2012.

³⁰⁵ BEFEO 1931: 626.

³⁰⁶ Colani 1935b: 11.

³⁰⁷ BEFEO 1931: 567.

³⁰⁸ Colani 1934a: 337, N1.

ever been found in place on a jar”.³⁰⁹ In a recent study, UNESCO identified *stone discs* as undecorated flat stones: “They are grave markers which were placed on the surface to cover or mark a burial pit”,³¹⁰ while a *lid* is defined as a flat stone with a decoration resembling a pommel, similar to the one illustrated in Fig. 5.67.



Fig. 5.66. J2. Sandstone disc decorated with concentric rings.
Colani 1935a, v1: pl. XLIII.



Fig. 5.67. J2. Sandstone disc decorated with pommel.
L. Genovese (2011).

Other amorphous stones, such as the blocks of quartzite found at J1, are “unworked stones placed intentionally to mark a grave”.³¹¹ All three are illustrated in Fig. 5.68, Fig. 5.69 and Fig. 5.70.



Fig. 5.68. UNESCO definition: stone disc.
UNESCO 2009: 21.



Fig. 5.69. UNESCO definition: stone lid.
UNESCO 2009: 21.



Fig. 5.70. UNESCO definition: stone marker.
UNESCO 2009: 21.

Cœdès stated that the large round discs found next to jars appeared not to have served “as the lids of these jars. They are usually deposited on the surface of the earth and the side buried in the ground frequently shows an animal figure in relief”,³¹² a theory shared by Bellwood in one of his early writings on the subject, where the discs “do not seal tombs, and neither are they lids for the jars, as Colani has convincingly demonstrated”.³¹³

Instances of lids sealing vessels have been encountered at the Plain of Jars, but they have involved *underground pots*, rather than stone jars. The first lid (Fig. 5.71) consisted of a sandstone block with a weight of 6 kg and 26 cm dia., found at J26 at a depth of 40 cm, sealing a pot housing a smaller pot. The second lid (Fig. 5.72), also in sandstone, weighed 3.5 kg and measured 20.5 cm in diameter. It was found at J51, in Phou Khoun District, at a depth of 50 cm, sealing an individual clay pot. Both blocks had seen the work of human hands.

³⁰⁹ UNESCO 2009: 22.

³¹⁰ UNESCO 2009: 22.

³¹¹ UNESCO 2009: 22.

³¹² Cœdès 1934: 36.

³¹³ Bellwood 1978: 196.

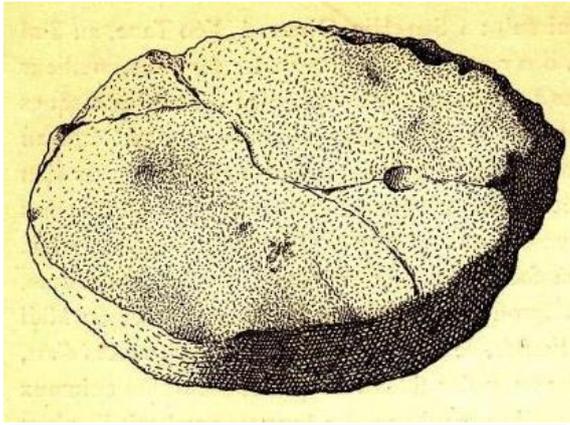


Fig. 5.71. J26. Block of sandstone, found sealing a pot within a pot.
Colani 1935a, v2: 208, fig. 204.

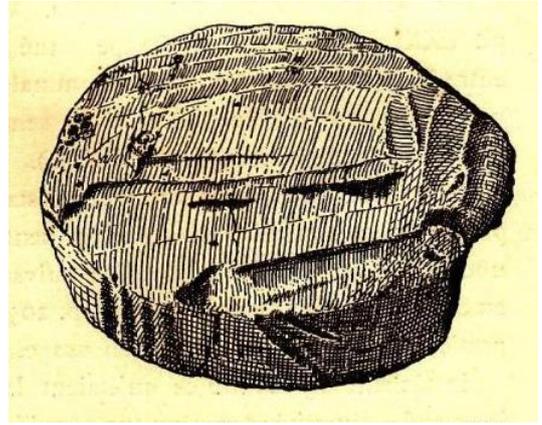


Fig. 5.72. J51. Block of sandstone, bearing traces of human work.
Colani 1935a, v2: 208, fig. 205.

Discs are in short supply also in other parts of Southeast Asia. At the Pokekea site in Sulawesi, for instance, a study of 15 sites with 93 megaliths (Fig. 5.73) reported that: “Some *kalambas* are situated very close to lids. This indicates that the specific lids might belong to a certain *kalamba*, although the 21 jars exceed the number of lids, of which there are only eight”.³¹⁴



Fig. 5.73. Besoa Valley, Pokekea site, Sulawesi, Indonesia. Stone disc near a *kalamba*.
Kirleis *et al.* 2012: 3, fig. 16.2.

5.5.2 Stone Discs as Musical Instruments

The discs at the Plain of Jars remained a constant theme in Colani’s search for their possible function, a quest she followed when her research interests widened. Aged 74, in 1940 she published *Gongs de métal et disques de pierre*, a paper enriched by research in the field of ethnography undertaken after her excavations in north Laos. The paper deals with the role of gongs in religious ceremonies and suggests that stone discs, similar to those found at the Plain of Jars, may have been used in funerary ceremonies. In parts of Southeast Asia, where gongs are played at funerals to praise the deceased and to chase away spirits intent on stealing his soul, the

³¹⁴ C. Kortemeier. *Tracing jars. The megalithic landscape of Central Sulawesi*. An archaeological overview and palynological investigations, in prep. (at 2012), pp25 & 32, quoted in Kirleis *et al.* 2012: 7-8. A *terminus ante quem* date of 830 CE is suggested for the *kalambas*.

higher intensity of the sound from a bronze gong was later preferred to the weak vibrations from stone discs, which caused their use to be discontinued.³¹⁵

To Colani, the absence of sounds or chants at funerals was unthinkable: “the deathly silence of the Plain of Jars”, where stone discs are scattered among the jars and where no object “vaguely resembling a musical instrument has been found”.³¹⁶ Colani became convinced that the stone discs had served as musical instruments, when a porter smiled knowingly while holding a stone disc in position, as if it were a gong, and proceeded to tap it: “while performing this familiar task [...] We were listening to musical sounds and not to random noises”.³¹⁷ Some of these discs, she declared, “were the musical instruments played at funerals”,³¹⁸ similarly to the gongs played in Sumatra at full-moon festivals before a *doppelgänger*, an inanimate incarnation of the deceased.

In Kerinci, in Sumatra’s Jambi Highlands, the name *batu gong* (batu = stone) “could be interpreted as a stone which produces a sound, but in this case it alludes to the most prominent motif on the megaliths, the concentric circles”,³¹⁹ the concentric circles being perhaps a figurative association with the waves from a sound.

In 1939, Schnitger reported that in Sumatra, the mushroom-shaped *niogadjis* are “made for the wives of important chiefs, and erected after birth or marriage [...] Each niogadji produces a musical sound when struck with the flat of the hand”.³²⁰ Schnitger also recounted that in Nias, in NW Sumatra, a man wishing to marry must first provide the girl’s family with a mushroom-shaped stone, with the groom’s father slaughtering a pig while the stone is being cut: “When the stone is completed, the girl’s father and the people of his village bring it to the village of the young man. Sometimes the girl sits on the stone”.³²¹ Schnitger also reported that discs decorated with the heads and tails of animals serve to commemorate feasts of merit. At the Plain of Jars, animal-decorated sandstone discs have been documented in Phou Khoun District (Fig. 5.74).

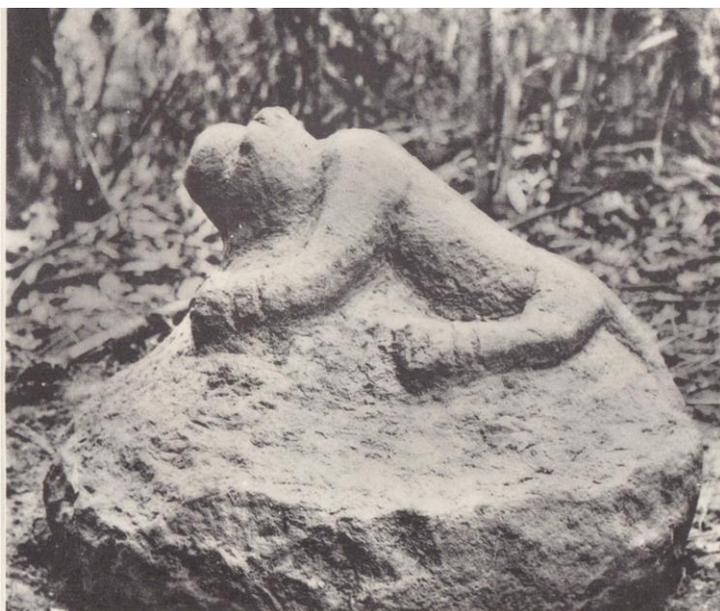


Fig. 5.74. Kéo Tane, Phou Khoun District. Animal-decorated sandstone disc. Colani 1935a, v1: pl. LIII.

³¹⁵ Colani 1940a: 6, N1.

³¹⁶ Colani 1940a: 7:

³¹⁷ Colani 1940a: 7:

³¹⁸ Colani 1940a: 7.

³¹⁹ Bonatz 2006: 509.

³²⁰ Schnitger 1939: pl. XXII. “After birth” as in the wife of an important chief giving birth.

³²¹ Schnitger 1939: 149.

The theory of stone capable of producing ritual sounds has been reprised in recent years by archaeologists from Bournemouth and Bristol universities, during acoustic tests on the bluestones of Stonehenge. Experts from London’s Royal College of Art reported that some of the stones produced a musical sound when tapped or hit with hammers. The results, reported in the *Journal of Time & Mind*, revealed a surprising new role for the megaliths transported from the Preseli Hills, in southwest Wales, to the Salisbury Plains, a distance of 320 km. The report also noted that the area is rich in Neolithic monuments because the sounds from the ringing rocks made the landscape “sacred to Stone Age people”.³²²

5.6 Buried Jars

Similarly to the double-ended jars, we owe it to Colani for first reporting the existence of buried units at the Plain of Jars: “Some of these [jars] are buried into the soil and as a result they appear short”,³²³ she noted after her survey at J3 in November 1931. The information for J13 was more encoded: “For various monoliths, a portion of the jar is buried into the ground”.³²⁴ Buried jars have been documented at other sites at the Plain of Jars but have not been visited by the author.

Table 8 is a summary of my findings through fieldwork and related readings on buried jars.

Table 8 – Buried jars at six sites

Site	District	Rock type	Buried jars
J1	Paek	Sandstone ¹	A few small jars
J3	Phaxay	Sandstone	A few small jars
J13	Khun	Granite	Small jars only
J38	Khun	Granite	Small jars only
QS39	Khun	Granite	Small jars only
J40	Khun	Granite	Small jars only
6 sites			
2/6 sandstone sites (this Table)			33.3%
4/6 granite sites (this Table)			66.7%
2/37 sandstone sites (Table 13, Ch. 6.3)			5.4%
4/7 granite sites (Table 13, Ch. 6.3)			57.1%

Source: Database L. Genovese

¹ A few jars at J1 are carved from conglomerate

Data in Table 8 confirm that the custom of burying the jars was not restricted to a particular area of the Plain of Jars. Two of the six sites (33.3%) are populated almost exclusively with sandstone jars, while the remaining four (66.7%) are populated with granite. The two sandstone sites with buried jars represent 5.4% of the 37 sandstone sites detailed in Table 13 (Chapter 6.3), while the four sites with buried granite jars account for 57.1% of the seven sites also detailed in Table 13. Therefore, the frequency of buried granite jars is greater than for buried sandstone jars.

All the sites listed in Table 8 are located above 1000 m elevation, spread over three districts and the buried jars are carved from sandstone or granite. The practice of burying jars is therefore unlikely to be area-specific or stone-specific. Small size is the common denominator among the

³²² Griffiths & Williams 2013.

³²³ Colani 1935a, v1: 236.

³²⁴ Colani 1935a, v1: 214-215.

six sites. Granite boulders for Khun District may have been sourced from river beds but the restrictions for granite are not known to apply to sandstone, of which ample supplies existed in the province.

At J1, only a few jars are buried, including a dwarf pink sandstone jar (Fig. 5.75). Further instances of buried jars were observed at Phou Naséo, Phoukood District, where some of the seven sandstone jars, with a diameter of 20-30 cm, were buried into the soil. Baldock has suggested that justification for burying the jars might be their thin walls but only excavating the ground near one of these jars “could determine if the hypothesis is correct”.³²⁵

We have not considered whether buried jars fulfilled the same function as exposed jars.

Colani wrote that the thickness of the jars’ base at J13 was “not very great”³²⁶ and the masons may have wished to increase their stability by burying them. This may have been a legitimate concern, since it has been observed that the extant jars in an upright position have thick bases (Chapter 5.1.2). If the masons took steps to stand the jars in a pit and then proceeded to fill the area with soil, then we can conclude that there was a concern to keep the jars upright.

It is at J38 and QS39 that buried jars are prevalent. At J38, Colani found buried granite jars³²⁷ with the rim barely visible (Fig. 5.76). In July 2012, the jars had disappeared further into the ground and were covered by a thick layer of soil and vegetation, but my two local escorts could identify their exact location underfoot. Through some superficial clearing, I exposed the rim of a jar (Fig. 5.77), which was buried in a neat upright position up to its neck.



Fig. 5.75. J1. Pink sandstone dwarf jar with highly polished interior, buried up to the rim. L. Genovese (2011).

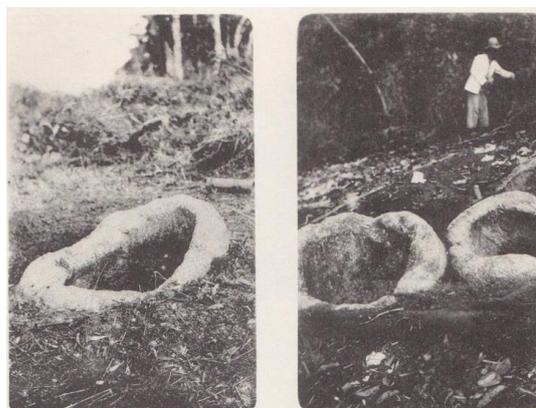


Fig. 5.76. J38. Small granite jars buried up to the rim. Colani 1935a, v1: pl. XXIV.

At J38, the jars were evenly spaced around the field and buried in an orderly fashion, suggesting that “they were not sunk into the ground by nature; the builders have made pits in the ground to bury them so that barely the top is visible”.³²⁸ Her excavations revealed that the jars rested on a bed of granite fragments. A similar practice was encountered during excavations in 1996-97 at Kunduran and Muara Betung, two Early Metal Age sites in south Sumatra. At Kunduran, 38 burial pots were discovered on a steep bank overlooking the Musi River. The burial pots, occasionally lidded, averaged 60 cm in height, often with a diameter of the same size. Ten

³²⁵ Baldock 2008: 6.

³²⁶ Colani 1935a, v1: 136.

³²⁷ Colani 1935a, v1: 211. Some of the granite jars were fragmented.

³²⁸ Colani 1935a, v1: 212.

kilometres away, another set of burial pots and a 2.3 m long stone slab were discovered at Muara Betung, overlooking the Betung River. At this site, the pots were larger, better fired and with a diameter of up to 130 cm. At both the Kunduran and Muara Betung sites, small- to medium-sized river stones had been used “to hold the jars upright”³²⁹.



Fig. 5.77. J38. Rim of buried granite jar exposed after some light clearing by the author.
L. Genovese (2012).

Exceptionally, a dwarf jar at J27 is not buried but lies on the ground, nestled against a gigantic jar (Fig. 5.78), an unusual and, to date, unique arrangement. The large sandstone jar next to it has been carved with a minimal aperture, in the style of the shallow Phoukood jars.

Buried jars are also found at J40 (Fig. 5.79), in Khun District. At the time of my visit in December 2011, the jars had been partially exposed, as reported by the 2008 geological survey: “[the jars] would have been level with the surrounding ground, the ground immediately alongside the jars has been excavated to expose the jar”³³⁰. Colani did not visit J40.

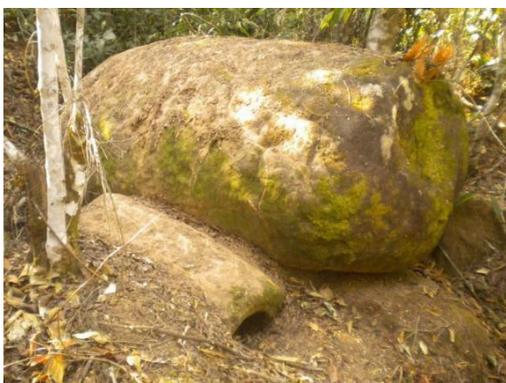


Fig. 5.78. J27. Dwarf sandstone jar next to a large jar with minimal aperture.
L. Genovese (2012).



Fig. 5.79. J40. Granite jar buried up to the rim.
L. Genovese (2011).

Buried stone jars have also been documented at Derebora, Assam, NE India. Mills and Hutton wrote that several of the 42 urns at Derebora were buried and this led them to suggest that they probably predated the other urns³³¹ but no justification was provided for this conclusion. However, unlike the small buried jars at the Plain of Jars, the Derebora jars (Fig. 5.80) are large and could easily host two standing people. It may be the case that the Assam jars were buried for a different purpose.

³²⁹ Soeroso 1997: 418-419.

³³⁰ Baldock 2008: 6.

³³¹ Mills & Hutton 1929: 291.



Fig. 5.80. Partially buried jar in Derebora, Cachar Hills, Assam, NE India. Mills & Hutton 1929: pl. 24, fig. 2.

Colani also documented buried jars at the two fields of Eleven Jars and Sop Nam Miang, both sites in Phou Khoun District. At Sop Nam Miang, she reported two isolated sandstone jars in a heavily wooded area. The larger jar, 130 cm tall, was “buried into the ground almost up to the neck”.³³² The jar was accompanied by a sandstone disc facing a south-east direction. Neither site has yet been identified to its present-day location.

5.6.1 Correlation: Buried Jars and Rock Type

The Correlation coefficient has been calculated as follows:

- A numerical identification has been assigned to rock types: 1 = sandstone and 2 = granite.
- For the buried jars, I have substituted the quantity of jars, the rationale being that a high jar volume is observed at sandstone sites, while granite sites for the most part host quantities rarely greater than 35 jars.

The correlation coefficient is: -0.969.

A negative relationship is observed. There is a high likelihood that buried jars are located at sites with granite jars. The height of the jars played a role as to whether they were buried or not. All of the buried jars I have observed at granite sites had a reduced height, compared to sandstone jars, and the buried jars at sandstone sites were also relatively short in size compared to the rest of the sandstone jars at the site. The jars may have been sunken into the ground for a number of reasons, including their reduced size and in order to preserve their integrity.

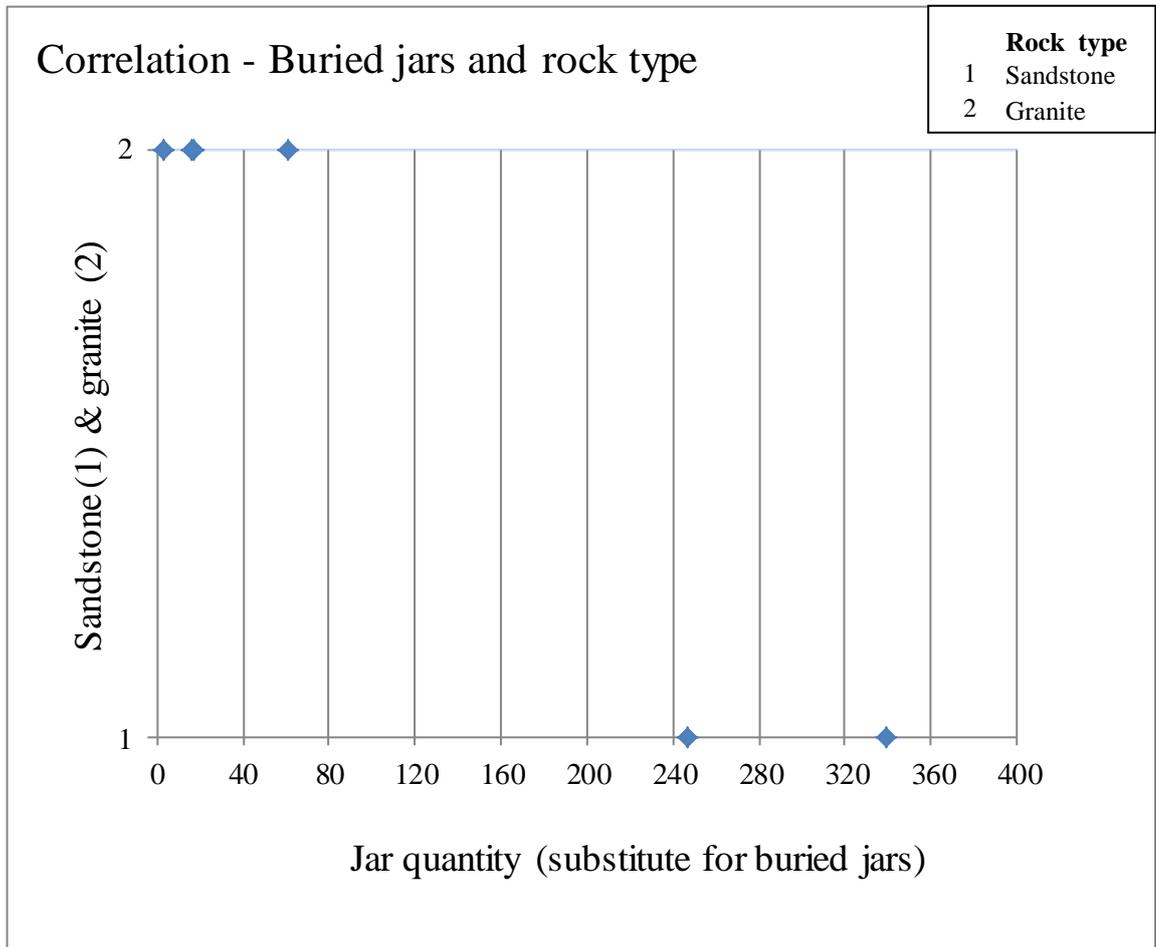
The jars may also have been deliberately carved from small boulders, in granite or sandstone, because they were associated with infants or children. For example, at Lang Vac, Imamura and Chu noted that ornaments of small size were associated with burial pots, suggesting that “the jar burials of Lang Vac were for children”.³³³ This custom has been documented in other parts of Southeast Asia, including early Iron Age of the Pre-Funan culture, where “jar burials are almost always used as graves for children”.³³⁴

³³² Colani 1935a, v1: 224.

³³³ Imamura & Chu 2004: 142.

³³⁴ Reinecke *et al.* 2009: 49-50.

More research is needed to try and understand the reason(s) for selecting a small boulder. If granite left the masons with few choices as to the size of a jar, the unanswered question is why the masons selected a small sandstone boulder when this rock type is abundant in three of the five districts analysed in this thesis.



5.7 Iconography and Recent Discoveries

It has been suggested that human figures on megaliths in parts of Island Southeast Asia represent a wish for continuity between generations, especially in some anthropomorphic figures “standing on top of each other”,³³⁵ a chain of human images to visually represent the bond between humans over time. Alternative interpretations include other poses:

While it is clear that the megaliths fulfilled a ritual-symbolic function and carried a certain prestige, schematic figures with bent legs and raised arms are widespread in the visual arts of the Pacific region and allow many interpretations, including the possibility that they represent a dancer’s, worshipper’s, or warrior’s pose. The symbolic importance of the images could also be to ward off evil.³³⁶

Spread-eagled human images (Fig. 5.81) are often found in Island Southeast Asia. In Sumatra, their depiction on megaliths was intended to unite political federations through a cult of the ancestors, with the human chain symbolising continuity between the generations. The megaliths

³³⁵ Znoj 2001: 302.

³³⁶ Bonatz *et al.* 2006: 511.

were erected three hundred years ago “to mark the founding villages of federations that controlled the trade routes between the highlands and the lowland markets”.³³⁷

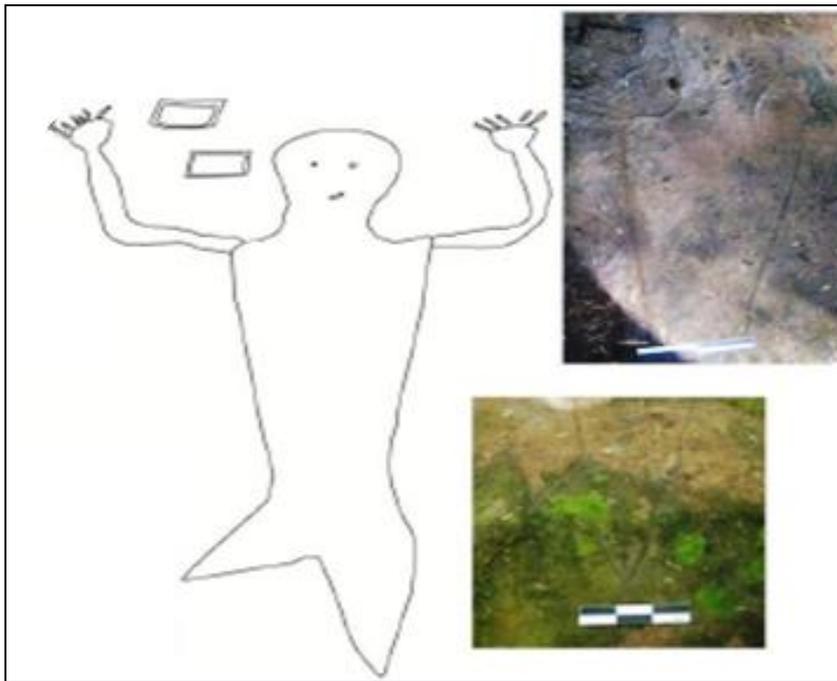


Fig. 5.81. Kampung Mook, Kinarut, Sabah, Insular Malaysia. Human figure carved with outstretched arms on a stone pillar. Mohd Rapi *et al.* 2013: 7, pl. 4.

The human figure with arms aloft is also found in the rock art of Mainland Southeast Asia. Human representations have been found at Khao Chan Ngam, in the Phetchabun Range, on the western side of the Khorat Plateau, and in Ubon Ratchatani Province, on the border with Laos’ Champasak Province. The rock art of Khong Jiam (Fig. 5.82 and Fig 5.83) bears depictions of humans and animals. According to Higham and Thosarat, these early sketches may represent “our first glimpse of the prehistoric peoples’ activities as they portrayed themselves”.³³⁸



Fig. 5.82. Khong Jiam, Ubon Ratchani Province, NE Thailand. Cave art depicting stylised humans and animals. L. Genovese (2008).

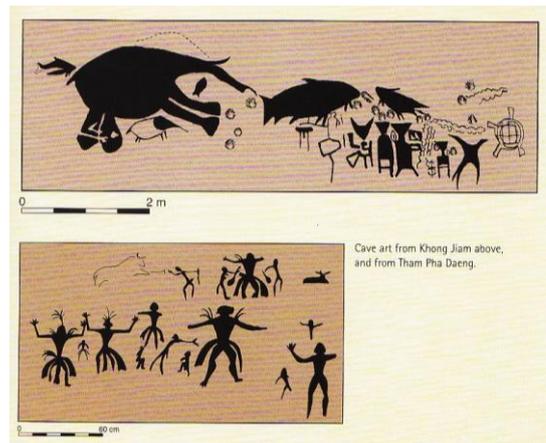


Fig. 5.83. Cave art from Khong Jiam (top) and Tham Pha Daeng (bottom), both sites in NE Thailand. Higham & Thosarat 2012: 165.

It took more than 60 years after Colani left the field for another image to be discovered, by Eiji Nitta at J1 in 1994, a spread-eagled figure (Fig. 5.84) resembling the one carved on a disc at J2

³³⁷ Bonatz *et al.* 2006: 511.

³³⁸ Higham & Thosarat 2012: 164.

(Fig. 5.85) and on the granite disc removed from J13 in 1933 (Fig. 4.17 Chapter 4.7). The legs of the image on the sandstone jar at J1 were “partially buried into the ground”.³³⁹



Fig. 5.84. J1. Human figure carved on Jar no. 217, discovered by Eiji Nitta in 1994. L. Genovese (2009).



Fig. 5.85. J2. Sandstone disc decorated with concentric rings and a human figure. L. Genovese (2009).

There has been no further study on some of the human representations documented by Colani. For example, in one of her last archaeological reports, filed in 1940, she stated that the large central button (Fig. 5.86) on some of the granite discs at J38 was decorated with “the head of a human or simian”,³⁴⁰ but this cannot be verified since no images were printed in the report. No decorated or undecorated discs were visible at the time of my survey to J38 in July 2012.

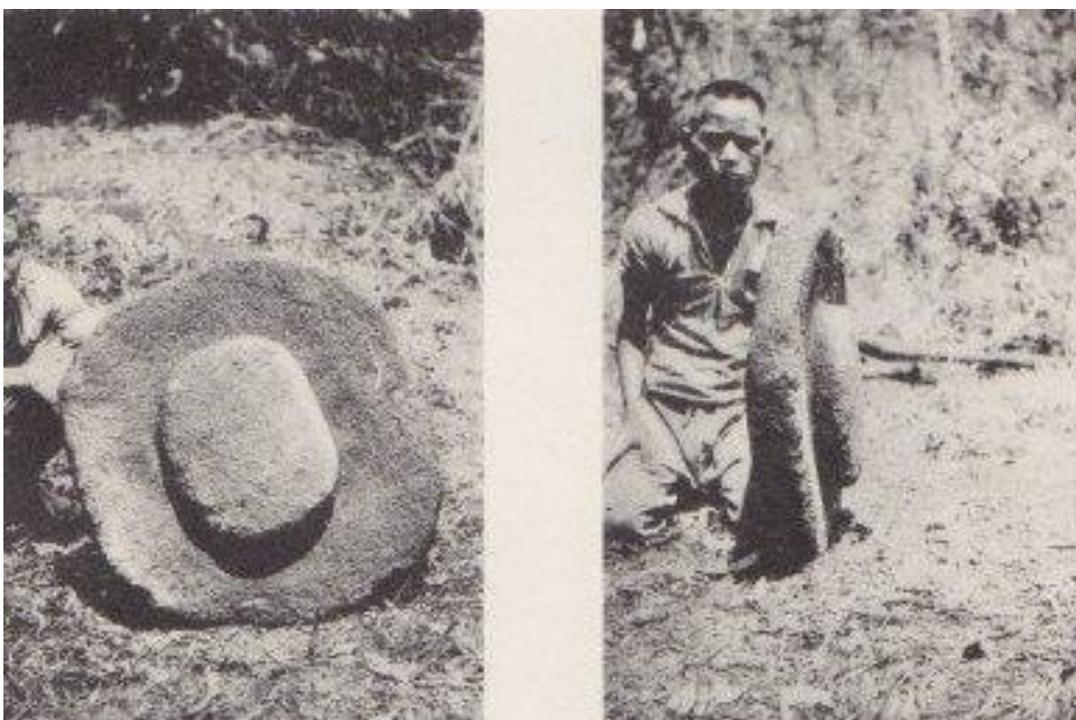


Fig. 5.86. J38 (Song Méng). Granite disc carved with a large central button. These discs are no longer found at the site. Colani 1935a, v1: pl. XXIII.

³³⁹ UNESCO 2009: 74.

³⁴⁰ CEFEO 1940/Q3: 11.

Colani's discovery at J38 has gone unnoticed for a few reasons. First, the weight carried by her 1935 monograph, the result of several archaeological expeditions over three years and treated as her most substantive on the Plain of Jars. Second, the report was published in the *Cahiers de l'EFEO*, the quarterly newsletter that started life in the fourth quarter of 1934 and is found very rarely even in established libraries in Southeast Asia. A complete set is found at the Institute of Social Sciences Information (ISSI) in Hanoi.

The few anthropomorphic representations discovered at the Plain of Jars since the excavations by Colani and Nitta have been enriched by two new discoveries. The first was discovered by the Lao archaeologist Thongsa Sayavongkhamdy and the second by myself. During his doctoral fieldwork at the Plain of Jars in the mid-1990s, under the supervision of Peter Bellwood, Sayavongkhamdy excavated at some test pits at J1, J2 and J3. At J1, he discovered a burial pit sealed by a granite slab, "the bottom part of which seems to have been engraved with schematic human figures representing a naked couple".³⁴¹

In the same context, Sayavongkhamdy also discovered two skulls in a burial pit, together with "four long bones (17 cm long) [*sic*] and more than 10 fragments of bones pile[d] up in the pit".³⁴² The bones were resting on a bed of charcoal, but showed no signs of burning, and were mixed with lumps of limestone to prevent destruction by the acidic soil of north Laos. At J1, Colani found a slab of limestone inside a pot containing human bones.³⁴³

The two skulls and the naked couple representation are distinctive discoveries at the Plain of Jars, for the following reasons. Firstly, they constitute a unique instance of two complete skulls found in one single pit. Secondly, the naked couple also constitutes a never before documented instance of humans *in pairs*, since the few representations found at the Plain of Jars consist of *single* human figures. Thirdly, this discovery takes further the argument raised by Colani in her 1935 monograph,³⁴⁴ of the special meaning for double representations, to which she first alerted us in connection with the double-ended jars (Fig. 5.61 and Fig. 5.63, Chapter 5.4) detailed earlier.

Within the funerary tradition in Southeast Asia, instances of male-female depictions are found also on a Dong-son sarcophagus (Fig. 5.87), discovered in 1961 in Dao Thinh, Tran Yen District, Yen Bai Province and now on display at the National Museum of Vietnamese History in Hanoi. Known as a *thap*, the sarcophagus is 81 cm high and it housed a smaller pot containing ash and human remains. The lid, decorated with a 12-ray sun, is fashioned like a truncated cone with handles in the shape of copulating couples "hinting at a reproductive symbolism".³⁴⁵ The male figures wear loincloths and their hips are adorned with daggers.

In August 2009, during preparatory fieldwork, I discovered a zoomorphic figure at J2. The image (Fig. 5.88), with a three-branched crown and wide, round orbits, is carved on a sandstone jar with Flat rim. The sharpness of the animal figure, which had first caught my eye in August 2009, appeared significantly eroded on my most recent trip, in the summer of 2012. The jar is 125 cm high and located on a path that connects the west hill to the east hill, towards its source of stone at Q8. The image faces south and its approximate measurements are height 38 cm and width 50 cm, with an additional 22 cm to the left of the main image difficult to distinguish. A tentative

³⁴¹ Sayavongkhamdy & Bellwood 2000: 106.

³⁴² Personal communication from Thongsa Sayavongkhamdy, April 2014.

³⁴³ Colani 1935a, v2: 103, 201, 202.

³⁴⁴ Colani 1935a, v1: 145.

³⁴⁵ Higham 2002: 176.

similarity is with a detail on a bronze bowl excavated at Nhan Nghia, Quang Ngai Province, central Vietnam. According to Nguyen Viet, founder of the Hanoi-based Center for Southeast Asian Prehistory, (CESEAP), the bowl dates to BCE 200-200 CE.

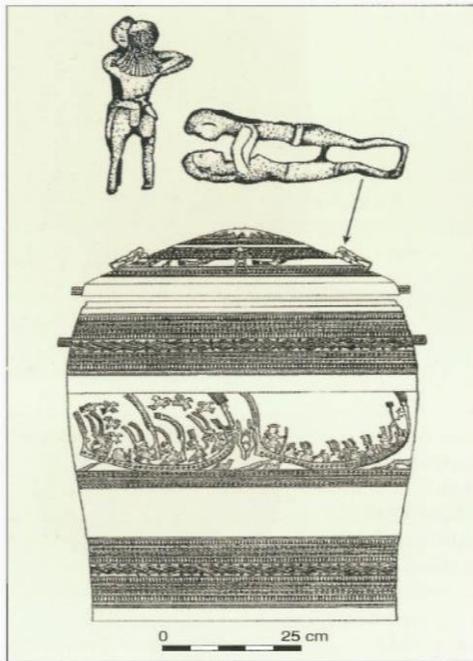


Fig. 5.87. Bronze *thap*. Lid is decorated with four copulating couples. Higham 2002: 176.

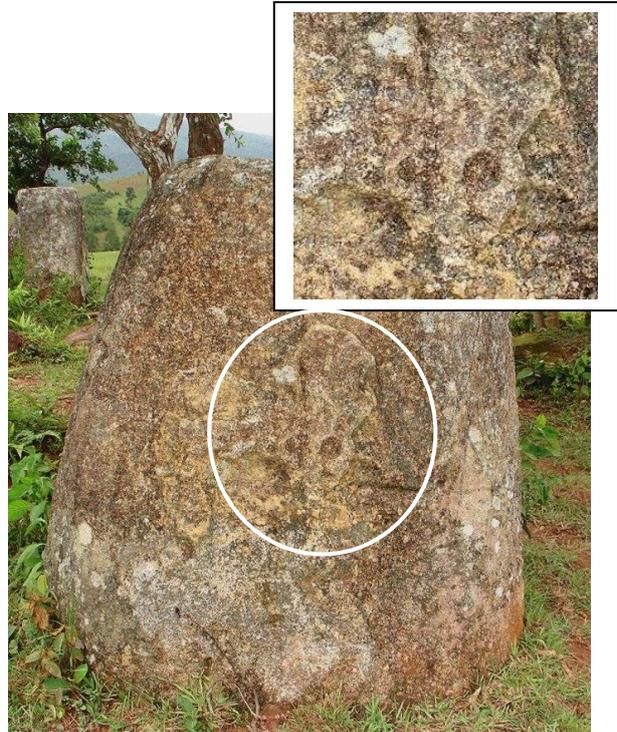


Fig. 5.88. J2. Zoomorphic figure discovered by L. Genovese in August 2009. L. Genovese (2009).

5.8 Hypotheses on Jar Function – An Overview

Perhaps not surprising due to Laos' position bordered by powerful neighbours, a legend about the creation of the jars relies on two neighbouring figures: a villain and a benefactor. The legend recounts that around the sixth or seventh century CE, Xieng Khouang was ruled by a Vietnamese king called Aeng-Ka. A Khmer ruler by the name of Khun Chuong-Fah-Thammaraj, or Khun Chuong,³⁴⁶ invaded the area to chase away the Vietnamese king. The victorious Khun Chuong ordered that gigantic cups be fashioned for the fermentation of rice wine, which was drunk in large quantities by the army and the population in a seven-month long celebration. The stone jars scattered in Xieng Khouang are these celebratory cups, states the legend. Although probably little more than local lore, surprising little has been achieved in the last 80 years, since Colani's first excavations, on advancing theories for the function(s) of the jars.

Though the broad consensus is that the jars evolved in the late Iron Age and for the next few centuries, the results of a test excavation at J1 point to a much earlier usage of the plateau, long before the first megalithic jar was deposited on its soil. Sayavongkhamdy and Bellwood reported that the results from an AMS³⁴⁷ analysis on a human skull fragment (OZD 770) from one of the burial pits "provides a hint that burial activity in the site might have commenced as much as 3000 years ago, but cultural materials definitely from this date, which would obviously be pre-iron, have not yet been identified".³⁴⁸ The AMS reading was 3410 ± 190 BP (Table 3 of the paper).

³⁴⁶ Also spelt Khun Jeung or Khun Jeuang.

³⁴⁷ Accelerator Mass Spectrometry, a carbon dating technique suitable for small samples of carbon.

³⁴⁸ Sayavongkhamdy and Bellwood 2000: 106. Table 3 is found on p. 108 of the paper.

Christie, who associated the Plain of Jars with Dong Son on the basis of their geographic proximity, proposed a dating as early as five centuries before the start of the Common Era: “The two cultures must therefore have been closely linked, and this gives us a clue to the date of the urns in the fields in Tran-ninh, if the analogy with Dong-son holds, and it is somewhere between the 5th and 1st centuries B.C.”³⁴⁹

If the function of the megalithic jars continues to be debated, the collective role of the sites at the Plain of Jars is also not well defined. Lack of settlement data prevents a study of the Plain of Jars either as a vast cemetery for local communities or as a regional ground for secondary burials by communities spanning from central Vietnam to the western reaches of present-day Laos, and possibly NE Thailand. The emphasis on the study of funerary arrangements over settlement patterns has also been noted at other archaeological sites. In her study of Pyu sites in Myanmar, Stargardt has remarked that settlement patterns are an understudied subject because they suffer from a bias towards the knowledge of funerary arrangements, connected to our study of megalithic sites. However, considerable details on capabilities and preferences can be gleaned from a society’s burial activities, and it is therefore possible to gain material insights “into the culture of the living through their arrangements of the dead”³⁵⁰.

This issue has also been raised in relation to the burial site of Nyaunggan, a cemetery “separate from habitation sites”,³⁵¹ as distinct from some Late Prehistoric burial sites which may have been used as “special-function cemeteries”.³⁵² The theory of ‘special cemetery’ could be applied to the Plain of Jars as a lens for the analysis of the arrangement of megalithic jars and buried clay pots. Rather than ‘special-function cemetery’, I advance the notion of ‘destination cemetery’, with communities from west and east of the Plain of Jars using the area for secondary burials, where some human remains were transported to be buried in clay pots and commemorated with a megalithic jar. If the Plain of Jars had ever served as a habitation settlement, we would have found skeletons in primary burials to support the bones and teeth found in clay pots near the stone jars, similarly to Pyu sites such as Halin, where skeletons³⁵³ unearthed from within the city’s structure have been studied in conjunction with the bones given secondary burials in urns scattered around the settlement.

One further point worthy of mention is the geographically restricted coverage of the more than 100 sites at the Plain of Jars, which contrasts sharply with the stone urns of the Pyu cities, discovered at numerous walled sites separated by hundreds of kilometres, like the cities of Halin and Sriksetra separated by a distance of 450 km. The Plain of Jars is closely set together and does not display the significant physical distances that characterise the geographically scattered stone jars of some Pyu cities in Myanmar.

A summary of the main theories advanced to date is provided below.

5.8.1 Jars as Storage Containers

Doubts about Raquez’s suggestion that the jars may have been storage containers for food or wine were expressed even earlier than Colani’s 1935 monograph. In the 1932 edition of his

³⁴⁹ Christie 1979: 247.

³⁵⁰ Stargardt 1990: 31.

³⁵¹ Hudson 2004: 152.

³⁵² Hudson 2004: 152.

³⁵³ Moore 2007: 134.

tourist guide, for instance, Madrolle wrote that the jars were sacred for the Laotians: “This veneration for the jars rules out any notion that in ancient times they could have been used as containers for rice wine”.³⁵⁴

Paul Le Boulanger (1884-1931) proposed that the jars may have been containers to catch rainwater or to store provisions for the nomads who travelled the ancient thoroughfare, but he also suggested that they may have been erected as commemorative monuments where offerings could be made “to the souls of the departed”.³⁵⁵

5.8.2 Jars as Funerary Containers

On the morphology of the stone jars, Bellwood has noted areas of similarity between the stone jars of north Laos and others in Island Southeast Asia. Though the Plain of Jars is a unique phenomenon in Mainland Southeast Asia, he believes there are “parallels in distant Sulawesi”.³⁵⁶

This echoes the findings from excavations conducted in the early 1980s by Haris Sukendar in the Bada Valley of Central Sulawesi, Indonesia, which showed that “the *kalambas* were used as multiple burial containers. Fragments of human skeletons, skulls, teeth and pottery were discovered. Later observation of the bones showed that at least ten individuals must have been buried in one jar”.³⁵⁷

That the jars may have been employed for the decay process was already suggested by Colani but the clues she interpreted for this purpose have since been invalidated. During her survey of J13 in 1933, she remarked that “four of the thirty jars have perforations visible near the base” and wondered whether the holes (Fig. 5.89) performed a function similar to the perforations made by the Kmhmu in the coffin’s base “for the drainage of bodily fluids”.³⁵⁸ However, reality has been found to be far less prosaic. The perforations were made in recent times when communities turned the jars into chicken coops.

One recent theory envisages the jars as stone coffins, similarly to other urns still in use for the “corpse of deceased Thai, Cambodian and Laotian royalty during the early stages of the funeral rites”.³⁵⁹ However, this theory only hints at the technical aspect of the burial process without encompassing the ritual described in Radcliffe-Brown’s theory.

The British anthropologist Reginald Radcliffe-Brown (1881-1955) analysed two fundamental components in mortuary rites: technical and ritual. The former is intended to deal with the practical task of disposing of a corpse destined for decomposition. By far the greatest importance, in his view, attached to ritual aspects of mortuary customs. This is because “ritual acts differ from technical acts in having in all instances some expressive or symbolic element in them”.³⁶⁰ Radcliffe-Brown argued that the meaning of actions within mortuary rituals carries more weight than purpose or reason, because “Whatever has a meaning is a symbol and the meaning is

³⁵⁴ Madrolle 1932: 70.

³⁵⁵ Le Boulanger 1930: 98, N1.

³⁵⁶ Bellwood 1978: 197.

³⁵⁷ Haris Sukendar. 1980a. *Laporan Penelitian Kependidikan di Sulawesi Tengah* [Research Report on the prehistory of Central Sulawesi], 1980b, quoted in Kirleis *et al.* 2012: 6.

³⁵⁸ Colani 1935a, v2: 202-203, N3.

³⁵⁹ Rogers *et al.* 2003: 473.

³⁶⁰ Radcliffe-Brown 1952: 143.

whatever is expressed by the symbol”.³⁶¹ To date, no studies have been carried out on the rituals connected with mortuary processes at the Plain of Jars.



Fig. 5.89. J13. Man-made aperture on the side of this granite jar (no longer at the site). Colani 1935a, v1: pl. XXVI/1.

Establishing a funerary function has also been problematic for other megaliths in the region. At Kerinci, in the Sumatran Highlands of Jambi, for instance, “A sepulchral context of the megaliths [...] cannot be proven”,³⁶² as noted by the team of researchers led by Dominik Bonatz. At Jambi, earthenware pots have been found buried near the megaliths but Bonatz and his team hesitate to conclude that these pots were part of the megalithic complex (pending further research). Thus we see a parallel of megaliths associated with buried earthenware pots.

5.8.3 Jars as Containers for the Soul

The Austrian anthropologist Hugo Bernatzik travelled to the Solomon Islands in 1931-32 to document the inhabitants’ pragmatic attitude towards death, with the living offering gifts of stone urns to the ancestors in return for blessings and rich crops: “The natives’ life is thus closely bound up with their dead”.³⁶³ This view recalls the theory of a Lao scholar, for whom the stone jars of north Laos represented a thread between the living and the dead, erected to protect the soul of the deceased, by appeasing the spirits in the next world, an act of merit which assures eternal life by building “funeral monuments, related to the worship of ancestors and dead chiefs”.³⁶⁴

Bernatzik underestimated the value placed on these special containers by some islanders, as he discovered when he tried to bring to Europe some stone urns from Choiseul, in the western Solomons. The village elder was reluctant to part with the urns but Bernatzik, not entirely selflessly, reminded him that the urns could be deemed heretic objects and might be destroyed by the missionaries. If he was allowed to take the urns to his ship, on the other hand, they would be “put up in a beautiful house and men of my tribe will pass reverently by them and honour the

³⁶¹ Radcliffe-Brown 1952: 143.

³⁶² Bonatz *et al.* 2006: 511, N35.

³⁶³ Bernatzik 1935: 34.

³⁶⁴ Phouvong 1954: 7. Phimmasone Phouvong, former Curator of Historical Monuments and former Director of Ecclesiastical Matters of the Royal Government of Laos.

souls of your ancestors”.³⁶⁵ The village elder relented and allowed Bernatzik to take only one urn, the most beautifully decorated (Fig. 5.90). The whereabouts of this decorated urn are unknown.³⁶⁶



Fig. 5.90. Choiseul, Solomon Islands. Stone urn decorated with anthropomorphic figures. The inhabitants believe that the souls of their ancestors are housed in these urns and for this reason they are reluctant to part with them. Bernatzik 1935: fig. 43.

The Western life-death cycle is diluted in parts of the world, where the living are active participants in their eventual mortuary rites, including the building of a funerary monument. In parts of Island Southeast Asia, stone monuments are sculpted as commemorative objects in the subject’s lifetime, thus allowing for the participatory community effort to plan for the task and minimise disruptions to farming duties in subsistence communities. A recent study argued that in the Sumatran island of Nias, megaliths marked the prestige of people of rank who, “with the setting of a stone and big feast associated with it, could achieve the status of ancestors already during their lifetime”.³⁶⁷ The object of the dedication can admire, in his lifetime, the stone monument that one day will commemorate his soul.

In Nias, the megaliths are said to be “of magnificent design and execution” and serve “as the final resting place for the founder’s soul. They are found by the hundred on the village square and the people of Nias know exactly to whom each belongs”.³⁶⁸ The villagers can connect the stone urns with the people to whom the megalith was dedicated because people live in their close proximity. At the vast Plain of Jars, however, distinguishing marks like rim styles may have been a necessity for communities or clans to express their “ownership” of jars.

Schnitger wrote that the carving of a stone coffin in the island of Samosir, in north Sumatra’s Batak country, entailed community effort (Fig. 5.18 Chapter 5.1.5) with considerable planning. The process could take several months, starting with the selection of a suitable stone in the mountains: “It is hacked roughly into shape and placed on a wooden sledge with rollers. Then hundreds of natives drag it down to the plains, a task which often takes months. Everyone is glad to help, for the radja gives them food and has a car[i]bou slaughtered every day”.³⁶⁹

³⁶⁵ Bernatzik 1935: 70.

³⁶⁶ Communication of 25/06/2014 from Sarah Chlebowski, Art Museum, Vienna, Austria.

³⁶⁷ Znoj 2001: 302.

³⁶⁸ Schnitger 1939: 150-151.

³⁶⁹ Schnitger 1939: 139.

5.8.4 Jars as Commemorative Creations – My Hypothesis

The stone jars may have been monumental creations to the non-physical elements of a person, the intangible manifestation of human beings. In the absence of a practical function, the jar's aperture and internal volume were subordinate to other considerations. The main concern was to create a stone monument, a lasting testament to man's non-corporeal features, his highest thoughts and concepts which are the sum of his total: they are in the physical realm but cannot be seen or touched and yet to them we ascribe our most noble acts and thoughts. The efforts expended in creating megalithic jars bear witness to the community's or family's regard for the deceased. In an early paper on the megaliths of Thailand, it is claimed that at Me Saleeum, Chiang Mai Province, the groups of stones were erected "to the memory of the more important inhabitants of the former Lawā settlement which existed in their neighbourhood".³⁷⁰

I have never interpreted the jars as containers but rather as commemorative creations. Assuming that the teeth and bones in the clay pots had been given primary burial in the stone jars, sequentially the clay pot could not be located under the stone jar but would have to be located elsewhere in the field. These were the findings by Eiji Nitta in the mid-1990s, when he reported that it had been possible to reach the buried clay pots without having to move the megalithic jars. In connection with the resin-coated clay pot (Fig. 4.6 Chapter 4.3) excavated at J1, Nitta commented that the jar immediately above the pot, was unlikely to be older but likely to be "as old as the burial pits or younger".³⁷¹

There is a possibility, however, that the stone jars were placed at random on a field where the clay pots had already been buried and their existence was unknown to the communities using the Plain of Jars. This assumption creates a chronological gap between the burial of the clay pots with human remains and the erection of the stone jars, casting doubt on the latter's viability as containers for the decay of the body prior to secondary burial in clay pots at the same field.

The viability of the jars as stone coffins is further called into question at several jar sites where Colani's excavations failed to reveal any clay pots with either bones or grave goods. At QS28, for instance, her excavations in 1932 produced extremely modest objects consisting of glass beads lodged in the stone jars, with nothing reported below ground.

My hypothesis on the Laotian jars as commemorative creations also draws on the study of the Sumatran megaliths: barrel-shaped, solid over their entire length and with the drum-like ends used for decorations, rather than being hollowed out. The commemorative function of these Sumatran megaliths is discussed at various points in this thesis and particularly in Chapter 7.7.1.

Pending further research on the Plain of Jars, we cannot exclude that the megalithic jars of north Laos evolved over a long period of time and that at some point the jars *may* have fulfilled a practical, rather than commemorative, function.

³⁷⁰ Hutchinson 1939: 180.

³⁷¹ Nitta 1996: 14.

CHAPTER 6

SPATIAL ANALYSIS AND JAR DISTRIBUTION

In these mountains, covered with woodland and tropical forest, in all probability are hidden unknown ancient monuments, often buried into the soil. Systematic and methodical researches may one day lead to the discovery of some of these monuments, and to locate other groups of stone jars.

- M. Colani. *Mégalithes du Haut-Laos*. 1935a, v2: 243.

The above quotation reflects Colani's belief that jar sites await discovery, perhaps hidden in the envisaged megalithic corridor between Laos and Assam. Her conviction has been validated by the numerous sites discovered in recent years. The desire to compile a database of Plain of Jars' sites predated Colani's efforts by 30 years, starting with Pierre Morin, responsible for the first sketch map of Xieng Khouang Province in 1903. More recently, the Lao government and UNESCO have made significant strides in building an inventory of sites.

6.1 Databases

Before delving into the spatial distribution and density of jars and discs, it is useful to acknowledge the efforts of institutions and individuals who have been instrumental in building up a list of Plain of Jars' sites. This inventory of sites is a dynamic document, a work in progress constantly updated and enriched with new sites reported by village and district authorities.

Table 9 lists the databases researched for this thesis. The first three (Morin, Parmentier and Colani) are more appropriately termed 'Inventory of Sites' or 'Tabulations' because they do not involve computerised data. These first three lists are in French and in the public domain, through publications and online websites.³⁷² The last three, compiled from 1998 to the present, are in English, computerised and of restricted access, as will be discussed.

Table 9 – Summary of Plain of Jars Databases (at December 2013)

Year(s)	Compiled by	Chapter(s)	Total Sites
1903	P. Morin	2.3.5	< 6 ¹
1926	H. Parmentier	2.4	6
1935, 1940	M. Colani	4.2 & 6.1.2	26
1998	UNESCO Bangkok/Lao government	6.1.3	58
1998-ongoing	XK branch, DoICT ²	6.1.4	74
2009-ongoing	Genovese	6.1.5	120 ³

Source: Compiled by L. Genovese

¹ Assumption based on the 1926 EFEO list, which consisted of just 6 sites

² Xieng Khouang branch, Dept. of Information, Culture & Tourism

³ Of which 52 discussed in this thesis

The ongoing decontamination of Xieng Khouang is attracting increasing numbers of travellers, eager to populate their internet travel journals³⁷³ with geographic coordinates for places hosting megalithic jars. Travel is, almost without exception, by motorcycle, which affords the freedom and flexibility to reach corners of Xieng Khouang beyond the capability of a four-wheel drive vehicle. Thus, the closely-guarded list of sites is becoming an open secret and although these

³⁷² The EFEO bulletins (<http://www.persee.fr/web/revues/home/prescript/revue/befeo>) and publications from the National Library (<http://gallica.bnf.fr/ark:/12148/cb32697929f/date.r=colanie.langEN>).

³⁷³ See, for example, <http://www.laosgpsmap.com/>; <http://hobomaps.com/PlainOfJarsMap.html>; <http://www.travelfish.org/blogs/laos/2013/05/03/plain-of-jars-phonsavan>.

adventurous bikers can rarely connect one of their “discoveries” with a location in one of Colani’s publications, the images uploaded on their travel websites are unmistakable in their portrayal of sites she visited, some of which have yet to be formally identified.

6.1.1 Inventory of sites by Morin and Parmentier (1903-1926)

Details for these two early tabulations have been provided in Chapters 2.3.5 and 2.4 respectively.

6.1.2 Inventory of sites by Colani (1935, 1940)

Colani’s inventory consisted of 26 sites, which I have reconstructed from various publications (Table 5 Chapter 4.2). Current research on the Plain of Jars is spatially broader than Colani’s but narrower in other respects. Broader because it seeks to survey new sites in the remote districts of Thathom, Mokmai and Nong Hét, but narrower because it omits sites populated with funerary stones and underground burial pots, set along westbound Route 7 in Luang Prabang Province. This narrow focus is a missed opportunity to explore shared features among all types of cemeteries and not just those populated with megalithic jars.

Colani’s inventory has been cited as low as 13 sites³⁷⁴ and as high as 30: “To date there are more than 40 recorded sites of stone jars in Xieng Khouang Province, 30 of which were visited by Colani”.³⁷⁵ The quoted figure of 30 sites was an upper limit estimate, but very close to the 26 sites I attribute to Colani. The undetermined total is due to a number of factors. Firstly, Colani’s writings are in French and have never been published into any other language.

Second, though in her publications most of the sites are listed under headings, details for some sites are printed in non-specific sub-headings or even printed on maps without a textual mention, as will be detailed below. To arrive at Colani’s total of documented sites, it is therefore essential to combine readings of relevant texts with analysis of her maps.

Third, Colani’s monograph is treated as the “cut-off” point for her explorations but it is not widely known that she undertook further fieldwork at the Plain of Jars after the 1930s. In 1940, for instance, she published papers and reports documenting her return visit to J38 and her first and only visit to QS16, both sites in Khun District.

Colani’s *opus* was, thus, more comprehensive than has been acknowledged. I have identified four levels of documentation in Colani’s publications, encompassing her 1935 monograph, subsequent publications and conference papers. The four levels of documentation are:

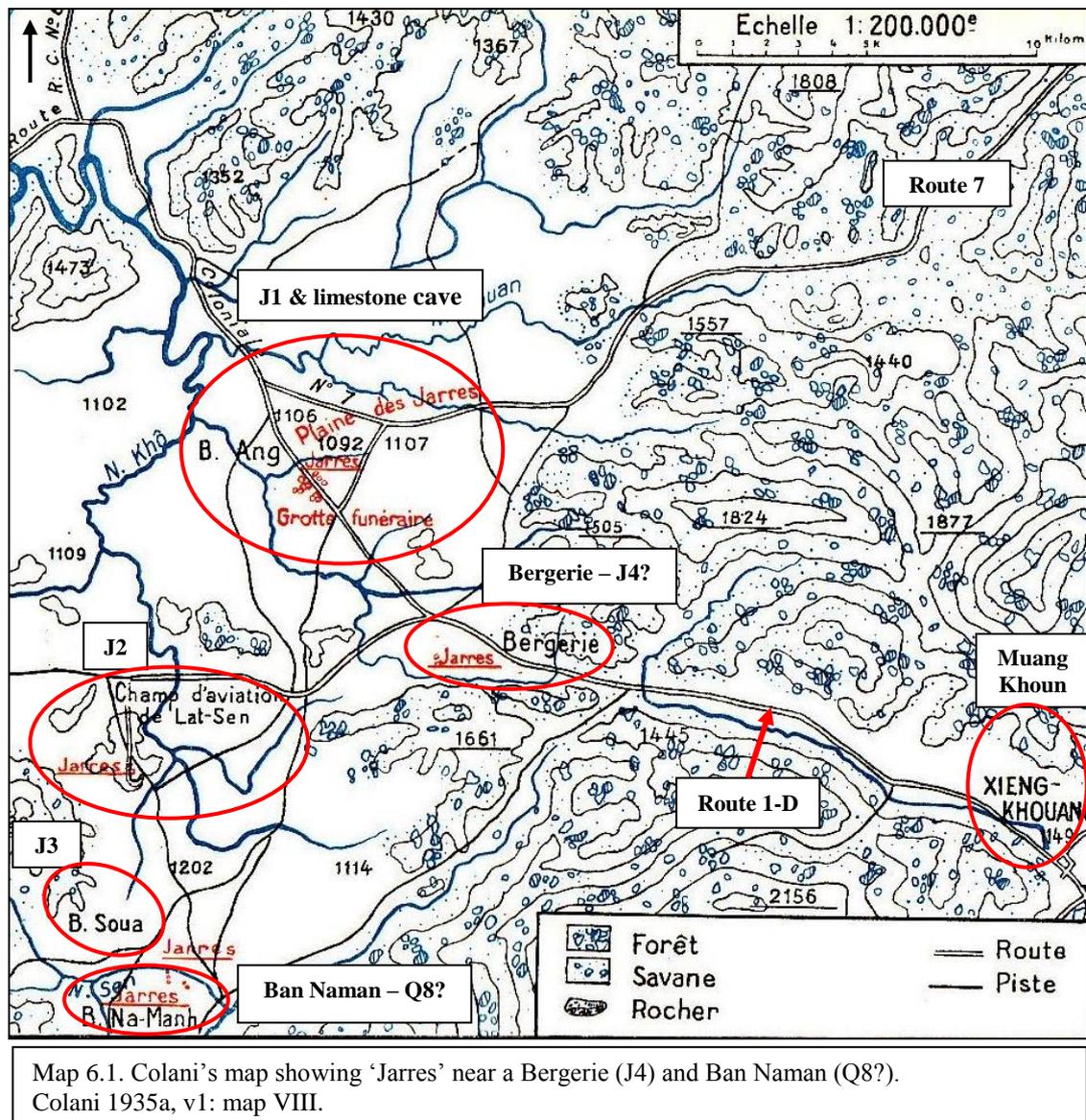
1. Sites detailed and mapped.
2. Sites mapped but not detailed.
3. Sites detailed but not mapped.
4. Sites mentioned (e.g. location name) but not detailed nor mapped.

The first type – sites detailed and mapped – include sites such as J1, J2 or J3, for which she provided ample details and positions in her maps.

³⁷⁴ Bergh 2008: 66.

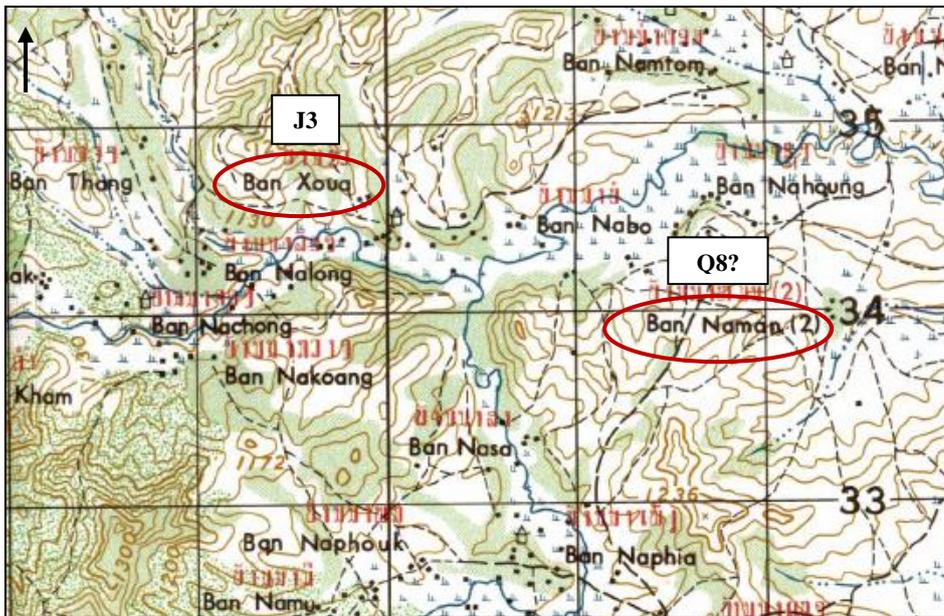
³⁷⁵ Sayavongkhamdy and Bellwood 2000: 105. The paper was published when the number of known sites was considerably lower than the present total.

The second type – sites mapped but not detailed – are not textually documented but appear in maps. For example, the jars at Ban Na Manh (Map 6.1), located approximately 1.8 km south of J3 (Ban Xoua or Ban Soua), cross-referenced to the Ban Naman in a 1966 map (Map 6.2).



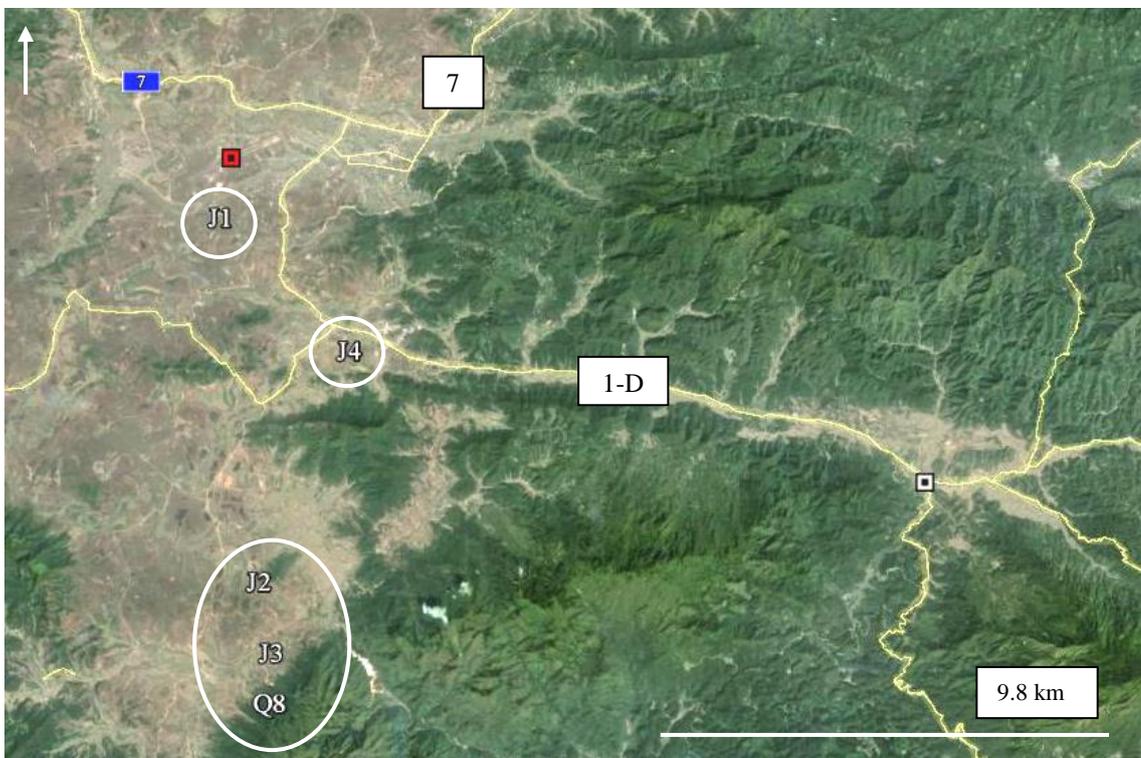
In mentioning Ban Naman, Colani may have been referring to one of the eight groups of jars now considered part of J3. She may also have been referring to jars at the Q8 quarry, where finished and partially-carved jars have been documented. For this second possibility, I cannot suggest the mechanics by which Colani might have known about jars at a quarry but her writings provide ample evidence of bringing to readers' attention sites whose existence she was aware of, but which she was unable to survey. For instance, in the autumn of 1931, while surveying J2, a *tasseing* (local district chief), informed her that a large field existed at San Kama, located some 20 km south of Thao Kham, and, apparently, populated with more than a thousand jars: "Even though we thought this quantity was overstated, we still had a great desire to visit this significant number of megaliths"³⁷⁶.

³⁷⁶ Colani 1935a, v1: 7. The likely location of San Kama is the Kéo Tane area.



Map 6.2. Ban Xoua (J3) and Ban Naman (Q8?).
Texas University Map, 5647-IV, series L7015, 1966.

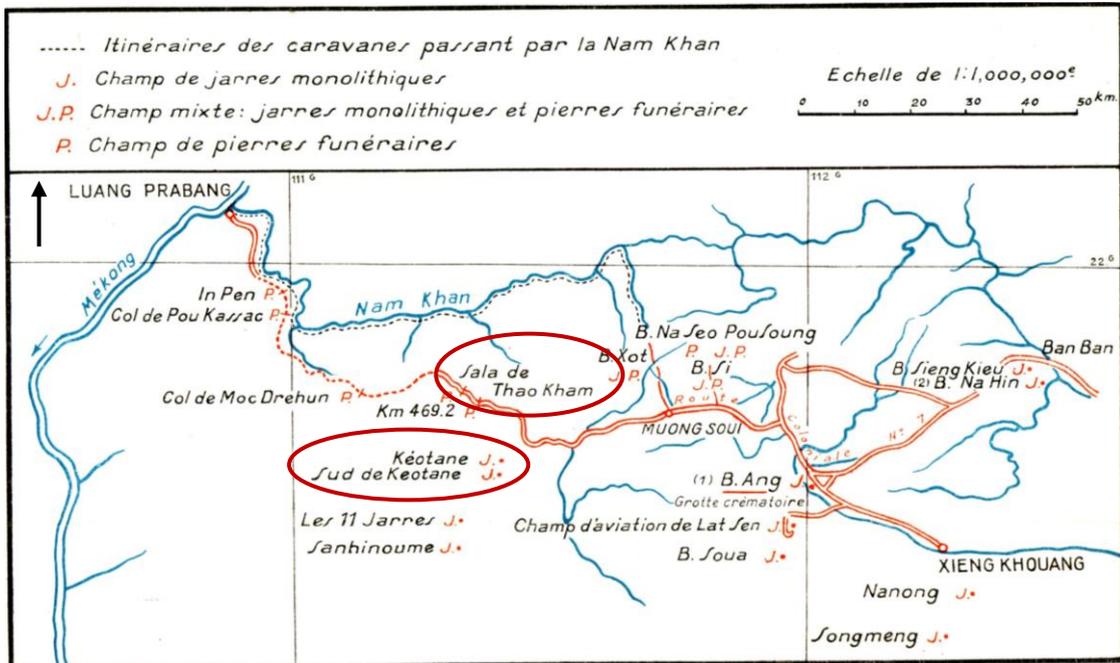
Remaining with Colani’s Map VIII (Map 6.1), there is another site in this ‘mapped but not detailed’ category, identified as the “Jarres” next to *Bergerie*, a guesthouse which no longer exists. Madrolle mentioned a *Bergerie* 21 km from Muang Khoun,³⁷⁷ close to where Colani shows *Bergerie*, past the junction where Road 1-D forks off into two directions: to the unpaved road for J2/J3 and straight on for Muang Khoun. The unnamed field of jars near the *Bergerie* in Colani’s Map VIII is around 20 km NW of Muang Khoun, which corresponds to J4 (Map 6.3).



Map 6.3. J4, corresponding to the ‘Jarres’ near the Bergerie in Colani’s map VIII (Map 6.1).
GoogleEarth.

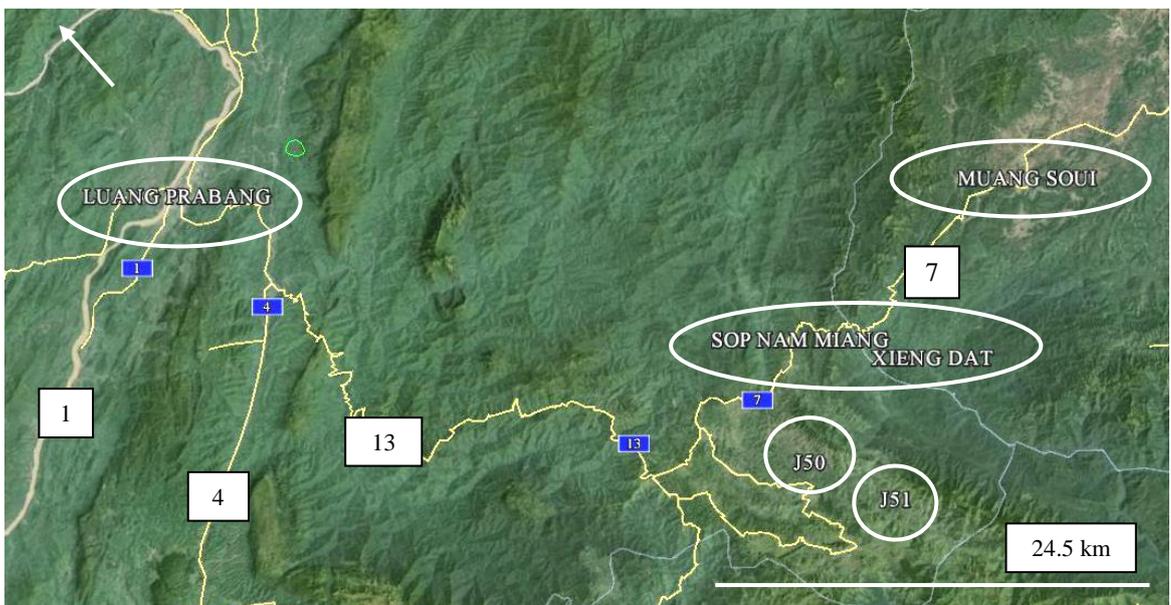
³⁷⁷ Madrolle 1925: 321 & Madrolle 1932: 309.

For the third type – sites detailed but not mapped – Colani provided summary descriptions but no mapping. One example is Kéo Tane East, omitted from her map (Map 6.4) detailing Kéo Tane and Kéo Tane South. Kéo Tane East was a field with “jars and discs”³⁷⁸ but also sandstone domes decorated with animal figures and possibly human figures: “A large boulder to the east bears a rather vague human face looking towards the jars; sheer illusion, no doubt”.³⁷⁹ It is at Kéo Tane East that Colani documented the partially-carved jar illustrated in Fig. 5.1 (Chapter 5.1).



Map 6.4. Map shows Kéo Tane and Kéo Tane South but omits Kéo Tane East. In Thao Kham, a field of stones and buried clay pots, Colani found an anthropomorphic statuette (Fig. 8.1, Ch. 8). Colani 1935, v1: map VII.

Another difficult to pinpoint field in this category is Sop Nam Miang (Map 6.5).



Map 6.5. Approx. position of Sop Nam Miang, Xieng Dat area. GoogleEarth.

³⁷⁸ Colani 1935a, v1: 219-220.

³⁷⁹ Colani 1935a, v1: 219.

Per Colani’s descriptions, Sop Nam Miang would be located in the Xieng Dat area, on the road to Muong Suoi, NW of Xieng Khouang and connected to Luang Prabang Province via Route 7 and Route 13. Two sandstone jars were found at Sop Nam Miang, separated by a distance of 40 m. They were empty and one of the jars was “buried into the ground almost up to the neck”.³⁸⁰

The fourth type – sites mentioned but not detailed nor mapped – consists of a very small number of sites, such as Ban Na Kham (also spelt Ban Nakham), which Colani surveyed in 1940 and for which she provided the briefest of details,³⁸¹ without positioning the site in any of her maps. The position of Ban Na Kham is shown in Parmentier’s sketch map (QS16 in Map 2.8 Chapter 2.4).

Colani’s maps show summary bearings because she herself was working with “incomplete directions”,³⁸² but they are a link to most of the sites she documented. There are other issues connected to the identification of sites visited by Colani, and consequently the perceived number of fields she visited or was aware of. For instance, she referred to “areas”, whereas in modern times we refer to individual “sites”. Colani’s “areas” often encompassed two or more sites, as was the case with Ban Si, which is now classed into two separate sites: J27 and J37.

There is an anomaly in the jar quantities reported by Colani, where jars at J1, J2 and J3 were estimated rather than counted. These discrepancies are illustrated in Table 10.

Table 10 – Quantities for sites J1, J2 & J3: 2013 & 1935 data

Site	Jars				Discs			
	2013	1935 ¹	Units	%	2013	1935 ¹	Units	%
J1	339	250	+89	+26.3%	30	11	+19	+63.3%
J2	93	82	+11	+11.8%	14	11	+3	+21.4%
J3	247	155	+92	+37.2%	45	22	+23	+51.1%
	679	487	+192	+28.3%	89	44	+45	+50.6%

¹ Colani 1935, v1: 266-267

Source: Compiled by L. Genovese

The highest jar discrepancy occurs at J3, with current inventory of 247 reported as 155, or 92 extra jars (+37.2%). This is also observed at J1, where the additional 89 jars result in an increase of 26.3%. A similar pattern occurs in disc quantities, with the largest discrepancy of 23 units (+51.1%) recorded at J3, followed by J1 with 19 units (+63.3%). At J2, the site with the lowest count, the inventory appears to have been carried out with more precision, resulting in the lowest discrepancy for both jars (+11, or +11.8%) and discs (+3, or +21.4%).

There are no records of large-scale inflows of jars to justify the increase, a task which would have been extremely difficult to accomplish for such large quantities, with logistical difficulties compounded by the unexploded devices from the 1964-73 Indochina war. Lastly, the inconsistency cannot be connected to different counting methodologies, since the current practice of including fragmented jars was also followed by Colani.

³⁸⁰ Colani 1935a, v1: 223-224.

³⁸¹ CEFEO 1940/Q4: 5.

³⁸² Colani 1935a, v1: 210.

6.1.3 UNESCO Bangkok/Lao government (1998)

‘Safeguarding the Plain of Jars’ is a multi-year project (1998-2010) jointly managed by the Lao Government and UNESCO Bangkok. Key elements are ground decontamination and the compilation of a database for a draft application seeking to inscribe the Plain of Jars onto the World Heritage (WH) List.³⁸³ The costly and labour-intensive ground decontamination began in 1998 and continues to this day, under the management of UXO-Lao, the national organisation that oversees ground-clearing operations.³⁸⁴

The project has adhered to its stated objectives of preservation over active research but the few items recovered during ground decontamination have provided insights into the Plain of Jars’ material culture. Strong links have been fostered with local communities, the day-to-day caretakers of these fragile sites. Revenue-sharing agreements exist at some sites, under the banner of community-based tourism (CBT).

The project’s main tenets:

- mapping using remote sensing technology (Phase I, 1998-2000)
- comprehensive heritage inventory in GIS for all archaeological sites (Phase II, 2000-2002)
- setting up of mechanisms to protect the Plain of Jars’ heritage (Phase III, 2003-2005)
- locating missing data for the WH application (Phase IV, 2006-2010).³⁸⁵

A geological survey by a UK-based consultancy in January-February 2008 resulted in two documents: a technical dossier and a magazine article. The technical report was submitted to UNESCO Bangkok as part of Phase IV and is not in the public domain.³⁸⁶ The dossier includes site name, rock type, condition of stone artefacts, and so on. The numerical sequencing (J1, J2, J3, etc., rendered as Site 1, Site 2, Site 3, etc.) was adopted in favour of village name, for clarity in an area where village names are frequently duplicated at province and district level. The database was the first to make use of GIS software in all four phases of the project. During Phase I, for instance, “the Unesco-Lao team mapped the entire plateau using remote sensing technology and created a computerized geo-referenced database using GIS”, while the comprehensive inventory for all sites in Phase II aimed at linking all information “to the GIS database”.³⁸⁷

The second document to emanate from this survey was a magazine article co-authored by Jeremy Baldock, who conducted the geological study, and Julie van den Bergh, UNESCO’s resident archaeologist at the time. Data collected on rock types and the jars’ geological structure, were intended to determine “if jar sizes and/or construction methods were influenced by geological factors”.³⁸⁸ The article concluded that though the jars are carved from five basic rock types, “80 per cent of the jar sites contain sandstone jars”,³⁸⁹ a statement consistent with my findings in Table 13 (Chapter 6.3).

³⁸³ More details available from: <http://www.unescobkk.org/culture/heritage/world-heritage-and-immovable-heritage/the-plain-of-jars-important-but-imperiled/safeguarding-the-plain-of-jars>.

³⁸⁴ <http://www.uxolao.org/>.

³⁸⁵ Bergh 2008: 67-70.

³⁸⁶ Baldock 2008.

³⁸⁷ Bergh 2008: 67.

³⁸⁸ Baldock & Bergh 2009: 145.

³⁸⁹ Baldock & Bergh 2009: 149.

Database UNESCO was developed with surveys supported by the Xieng Khouang branch of the Lao Department of Information, Culture and Tourism (DoICT), with some of the original officers, such as Khamleuan Aphaiyavong, still employed by the DoICT (at April 2014).

It is my understanding that in 2010, upon completion of the four-phase project, the Database-UNESCO detailing 58 sites went into two seemingly separate directions. One copy was delivered to the Lao Ministry of Information and Culture (MIC), with another copy retained by the DoICT in Xieng Khouang for ongoing updating.

It appears that the version delivered to the MIC has remained static. For instance, at a conference in May 2013, the Deputy Director-general of the Ministry of Information, Culture and Tourism (Dept. of National Heritage),³⁹⁰ stated that 58 sites had been surveyed at the Plain of Jars, well below the 74 listed in 2013 in the Database DoICT.

6.1.4 Database DoICT (1998-ongoing)

At July 2013, the Database DoICT included 74 sites, with a total of 1991 jars and 207 discs. The sites have been documented at varying levels of detail. At the most basic level, a sequential number is assigned to a new site, followed by the recording of GPS coordinates and an inventory of jars and discs. At the highest level, guidelines for the preservation of artefacts are distributed to the villagers and the village may have entered into a CBT agreement with the province. Sites open to the public are documented to the highest degree, decontaminated of UXO and with the necessary tourist infrastructure built anew or improved.

Quantities at newly-discovered sites are rarely significant, an exception being the discovery, in 2005, of the Ban Phakeo group (Table 2 Chapter 1.9). The theory of the jars as coffins has still not satisfactorily addressed the issue of why hundreds of megalithic jars were necessary to serve sparsely-populated regions such as Ban Phakeo.

Database DoICT bears the imprint and working method of archaeologists over the years. Only a portion of their field notes - a significant bank of data - has been digitised, leaving a considerable quantity of information on paper, in office binders. To my knowledge, there are no immediate plans to convert these field notes into digital format, and there should be a concern about the inherent risk that information recorded on paper could be permanently erased in the unfortunate event of fire or flood. Subject to relevant permits and funding, I plan to digitise these fieldnotes at a future date.

At April 2014, Database DoICT excluded numerous sites documented by Colani but not yet cross-checked to their current location. In Table 5 and related Map 4.1 (Chapter 4.2), these unidentified sites correspond to items 19) to 26).

Seminars are occasionally conducted in villages “to ensure understanding of heritage significance and community protection of the resources”.³⁹¹ Provincial officials have met with village headmen and district officers, who are responsible for reporting undocumented sites in their area. This participatory approach combines local knowledge with modern mapping. The practice is a key component in the assembly of an inventory system of resources, with the active participation

³⁹⁰ Luangaphay 2013. The conference paper omitted the inauguration of Q21 in January 2012.

³⁹¹ Luangaphay surveyed the Plain of Jars with UNESCO-appointed archaeologists until 2010. UNESCO 2009: 56-57.

of local stakeholders, who are geographically close to the resources and are thus empowered by virtue of their local knowledge. Maps play a critical role “in the distribution of resources and the allocation of power [...] the community owns the map, dictates what is mapped, and uses the map for their own advocacy”.³⁹²

According to Bauer, participatory maps are “a form of communication, an effective medium for breaking down entrenched power structures”, a democratic way of obtaining local knowledge from remote communities who are thus able to “strengthen the legitimacy of their customary claims on natural resources”,³⁹³ with the villagers assuming the mantle of custodians of their local heritage. However, Bauer warns that participatory mapping can be subject to “elite capture”,³⁹⁴ where influential members of a community dictate the terms and purpose of the documentation process. Specifically for the Plain of Jars, sites housing damaged jars may go unreported because of villagers’ concerns of potential repercussions for reporting damage caused by members of their community. An example of “elite capture” is the group of jars located past QS16, on the road to Muang Phan, allegedly smashed by villagers out of prejudice, and whose fragmented state was deemed unworthy of recording as a site.³⁹⁵

Community participation is central to the survival of cultural heritage sites and their involvement in preventing damage to the artefacts is rewarded with monetary incentives, like the CBT arrangement in place at J1, J2, J3, Q21 and J41. Increasing awareness of the importance of cultural heritage preservation is emphasising the role of local communities because of their immediate, physical connection with the sites and their local knowledge. According to Dan Thompson, communities at the Plain of Jars can enter into a “symbiotic relationship with the Jar sites nearby, wherein the community members provide protection to, and care for, the sites, and the sites – through increased tourism and archaeological research, for example – can provide the communities with additional revenue to fund community needs”.³⁹⁶

6.1.5 Database Genovese (2009-ongoing)

I have been compiling a database of sites since 2009, with data collected prior to my enrolment, during my doctoral fieldwork and from reading and analysis of related publications. Some of the data have been acquired while undertaking duties *pro bono* for the Xieng Khouang branch of the DoICT (writing archaeological, historical and promotional material) or undertaking surveys with members of the department. The database is a dynamic document, constantly updated with information on prospective sites. By way of example, the site known as Phu Da Pho became J51 in Database Genovese in February 2014, when it was identified as Colani’s San Hin Oume during a survey with Lao archaeologists from Luang Prabang Province (Fig. 6.1).

For this thesis, I will limit my analysis to the 52 locations I have visited and where I have recorded features such as lip rim style. My database also includes four sites currently omitted from inventories managed by the Xieng Khouang Branch of the DoICT. The four sites are: J48 (Ban Gnotpiát, Kham District), QS49 (Ban Naho, Khun District), J51 (Phu Da Pho) and J52 (Nam Phat), both sites in Phou Khoun District. The status of J50 (Ban Nanan, Phou Khoun

³⁹² La Frenierre 2008: 98. In 2007, La Frenierre provided GIS analysis and database management in support of the ‘Safeguarding the Plain of Jars’ project led by UNESCO Bangkok.

³⁹³ Bauer 2009: 234.

³⁹⁴ Bauer 2009: 235.

³⁹⁵ Personal communication from Thongsa Sayavongkhamdy, April 2014.

³⁹⁶ Personal communication, October 2013. Dan Thompson is Director, Global Projects & Global Heritage Network, Global Heritage Fund (<http://www.globalheritagefund.org>).

District) is unclear. This site consists of two jars and two discs relocated when their original site came under threat from the Nam Ngum 5 Hydropower Project. I visited this newly-established site in May 2012 and February 2014 but I am not listing it here as a difference.



Fig. 6.1. J51 Phu Da Pho, formerly San Hin Oume. Surveying this remote site with members of the Luang Prabang Province Archaeology Dept. L. Genovese (2014).

Alongside present-day site number and modern name, Database Genovese also lists the name by which the site was known in Colani's period and the historical jar and disc quantities. This significant detail can widen the historical context of a site, particularly where jars have suffered damage and erosion. The database includes quantitative data as well as qualitative details, such as lip rim style and whether any buried jars are found at the site. It is also accompanied by a comprehensive set of narratives, detailing individual features such as historical background and objects excavated by Colani and by subsequent researchers.

Table 11 is a list of the sites I intend to survey in the near future. For most of these seven sites, I have established a contact in the village. Information has been collected in a variety of ways, including conversations with villagers during fieldwork. Details for site 6-Pak Ou are sketchy but I am in contact with archaeologists in Luang Prabang Province, who have visited the site, where around 45 sandstone jars are located.³⁹⁷

Table 11 – Undocumented sites (extract)

	Name	District	Jars ¹	Stone	Approx. location/coordinates
1)	Ban Phan	Paek	?	Sandstone	19.364045 & 103.039031
2)	Pho Tsa Nghem	Paek/Khun	?	Sandstone or granite	19.30432 & 103.22863
3)	Ban Tam Ang	Khun	?	Granite?	9-10 km from J40 ²
4)	Ban Khek	Khun	?	Granite?	19.216667 & 103.6
5)	Ban Phoung	Khun	10	Granite	19.256816 & 103.277181
6)	TBA	Pak Ou ³	45	Sandstone	4-5 hour trek from Pak Ou village
7)	Ban Sopma	Kham	12	?	accessible from J20

Source: Database L. Genovese

¹ Quantities are estimated

² Accessible only by motorbike in the dry season

³ Luang Prabang Province

³⁹⁷ Personal communication from Norseng Sayvongdouane, February 2014.

The high number of quarry-sites (Table 12) confirms that there was contiguity between the rock source and the workshops where the jars were carved, prior to removal to their final destination.

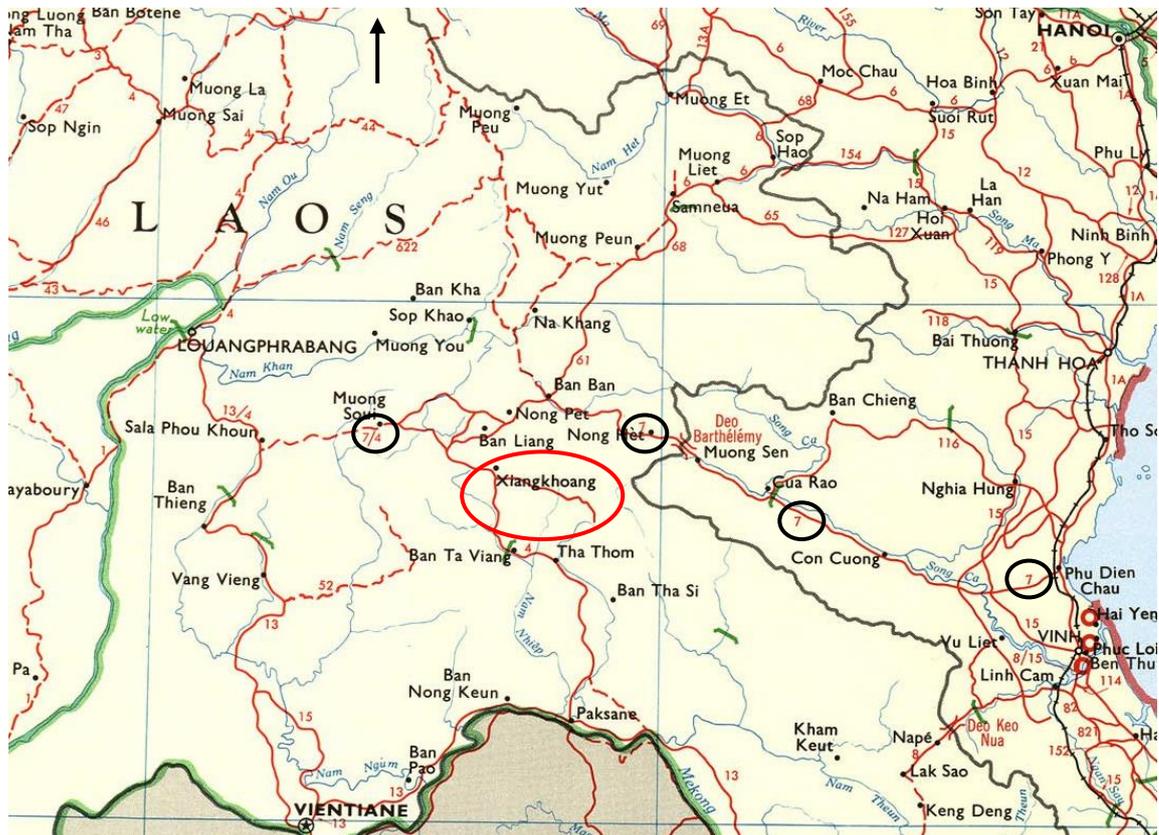
Table 12 – Breakdown of 52 sites

Description	No. of sites	%
Jar sites (J)	29	55.8%
Quarry-sites (QS)	14	26.9%
Quarries (Q)	9	17.3%
Total	52	

Source: Database L. Genovese

6.2 Site Distribution

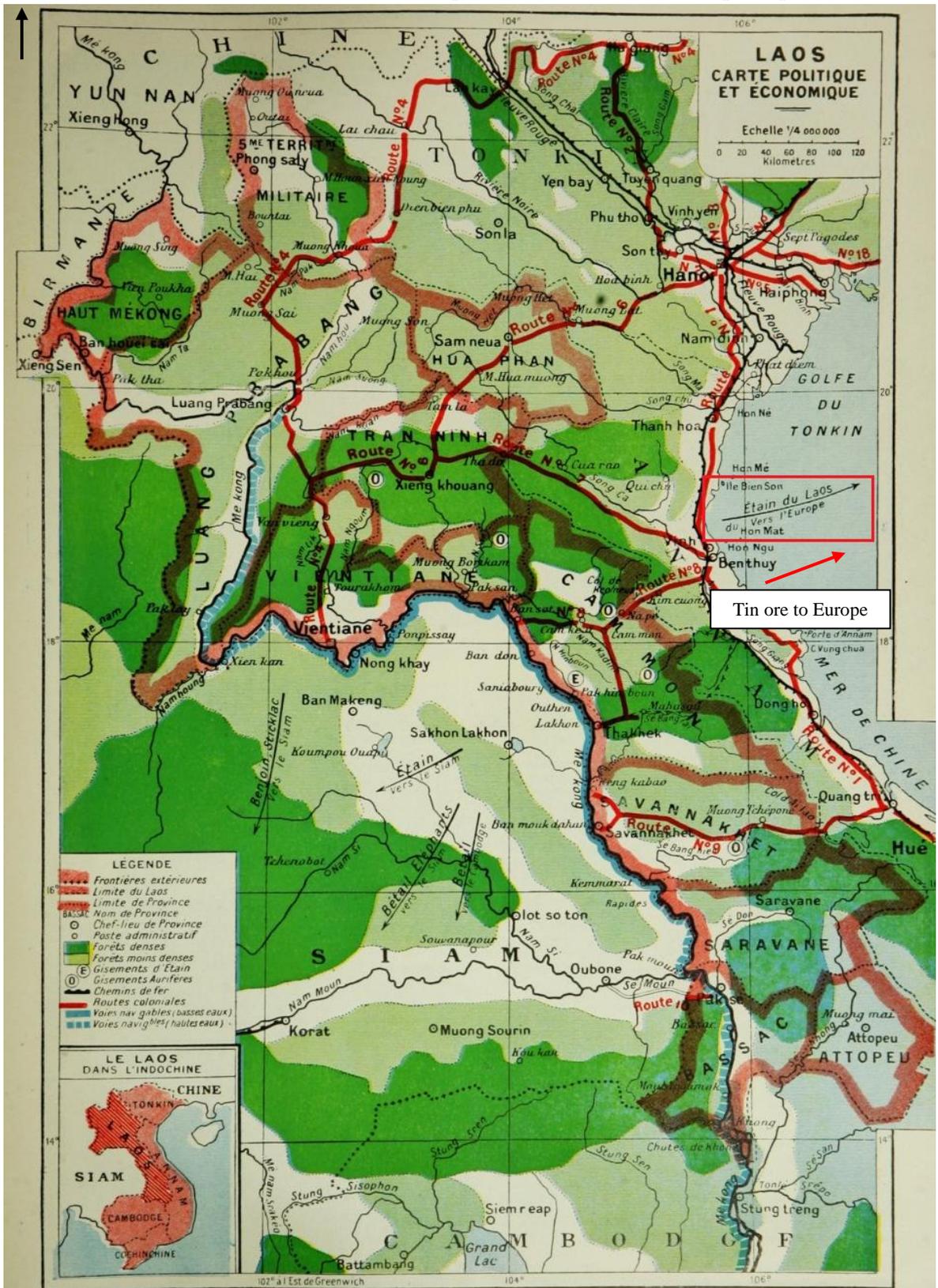
The site distribution and density analysis for jars and discs that follow are based on sites listed in Table 1 (Chapter 1.9). Altitude (Map 2.1 Chapter 2.1) played a significant role in both the stone available for carving and the quantity that could be quarried. Route 7 is a main artery that connects north and west Laos with central Vietnam (Map 6.6).



Map 6.6. Black circles identify Route 7, from Phu Dien Chau, via the Plain of Jars, to Muong Soui, Luang Prabang Province. The red circle identifies Route 1-D, connecting Route 7 from Phonsavan (the new provincial capital not shown in this historical map) with the south of the province. Texas University Map, Indochina Transportation, http://www.lib.utexas.edu/maps/indochina_atlas/txu-oclc-1092889-78334-8-70.jpg.

Stretching from Phu Dien, in the Gulf of Tonkin, to Sala Phou Khoun, in Luang Prabang Province, its construction replicated historical routes that had provided economic advantages for centuries. Construction began under French rule in the early part of the 20th century, initially

reaching only as far as Phonsavan, with the extension to Sala Phou Khoun built in 1937. At its westernmost point, Route 7 connects with Route 13, from Luang Prabang to Vientiane. During the French colonial period, Route 7 was used for the transportation of Laos' rich mineral resources to central Vietnam and thence to Europe, as indicated in a 1931 map (Map 6.7).



Map 6.7. The white circles identify gold (O) and tin (E) mines. The red square, south of the Gulf of Tonkin, indicates tin ore sourced in Laos and shipped to Europe from Vietnamese ports. Russier 1931: 65.

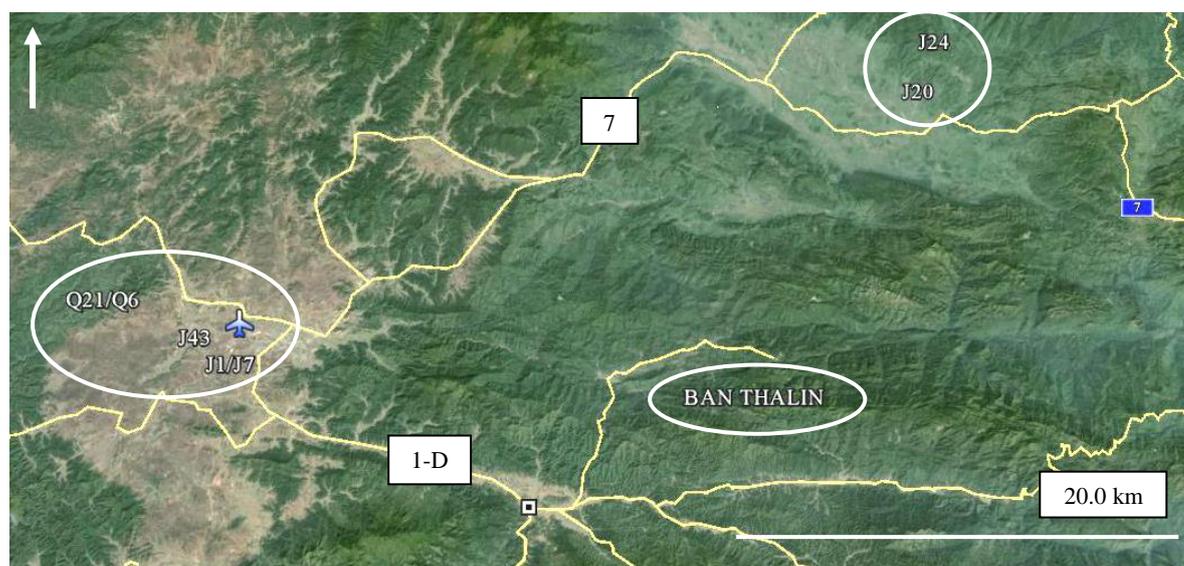
Roads played a significant role, connecting communities and facilitating trade along the well-travelled thoroughfares that linked coastal central Vietnam with NW Laos and beyond. Historical trade routes convey far more than goods, as demonstrated by the Silk Road that connected the Mediterranean with the eastern reaches of China, where acts of devotion took the shape of manuscripts, votive tablets, Buddhist statuary and murals, alongside the traditional trade in silk, gold, ivory, exotic animals and even plants. According to a recent study of megaliths in Sumatra’s Jambi Highlands, “not one [megalith] is far off an old trading route”.³⁹⁸

In Map 6.7, white circles identify gold (O = or) or tin (E = étain) mines. Tin sourced in Laos was shipped to Europe via Vietnam. Transport routes were vital for commerce, particularly Route 7 through Xieng Khouang Province, which hosted some gold ore deposits, and Route 8, close to the gold and tin ore mines of Khammuan Province, central Laos.

I will now analyse the 52 sites (Table 1 Chapter 1.9) in relation to road connections, terrain and other factors.

6.2.1 Sites J1/J7, Q21/Q6 and J43

Sites J1, J7 (limestone cave within J1) and J43 are close to both Route 7 and Route 1-D. Route 1-D connects Phonsavan with Muang Khoun. The sites are set at altitudes of 1100 m, with the exception of Q21/J6, which are set at 1200 m. Q6 is part of Q21. Map 6.8 shows their location.



Map 6.8. The new Phonsavan airport near sites J1, J7 and J43.
GoogleEarth.

J1 hosts 339 jars, predominantly sandstone but with a few conglomerate units. Though Q21 has been established as the sandstone quarry for the jars at J1, the source of the few conglomerate jars at J1 has not been established. A few sites with conglomerate jars are located in Kham District, like J20 and J24, which are around 60 km distant from J1 on a straight line. Another site not captured in the 52 sites in Table 1 is Ban Thalín, 38 km from J1 and hosting 85 jars in conglomerate, granite and sandstone.

³⁹⁸ Znoj 2001: 303.

Though the distance of 9 km from the quarry at Q21 to J1 would have entailed transportation challenges, the terrain is relatively flat and at altitudes of 1100 m or lower. This is confirmed by the two national airports built in the province, with the old one (now decommissioned and turned into a sports, hospitality and entertainment centre) built in the heart of Phonsavan town, and the new airport built 6 km out of town, on the way to J1.

Several bodies of water are found in the area, of which the largest is Nong Nam Ngum (Lake Nam Ngum), a man-made lake. Lake Sadat Jiao Supanouvong is another man-made lake named after Prince Supanouvong, first president of Lao PDR. The provincial jail was located near this lake but has since been moved.

The well-developed road connections and advantageous position close to historical routes and bodies of water would have entailed benefits for communities using J1, with access to imported objects from west and east. The richest haul of objects at the Plain of Jars has been found at J1.

J43 is a small site discovered in recent years. It is located within the militarised area that comprises the new Phonsavan airport and therefore access is restricted (Fig. 6.2), by special permission only from the provincial authorities. In 2012 I was granted permission to visit J43.



Fig. 6.2. J43, set within a restricted area and therefore difficult to access. Visits are escorted and require a permit from the provincial authorities. L. Genovese (2012).

On a straight line, J43 is set 7 km from Q21 but it is unlikely to have been a stand-alone site because today it hosts just two partially-carved jars (Fig. 6.3 and Fig. 6.4). It may have been a workshop for the larger deposit of sandstone jars at J1, located 1.8 km away. It would be reasonable to expect a longer “trail” of finished and incomplete jars between Q21 and the final destination at J1. However, J43 raises a number of points. First, that at least two jars may have been transported from Q21 to J1 in an unfinished state, being two notable exceptions in the norm where jars are taken to their final destination fully carved. Second, where the sandstone for the two jars at J43 was not sourced from Q21, that there may be an unidentified source of sandstone near to both J1 and J43. Future research may identify small fields of jars between Q21 and J1, or

possibly modify the status of some small, stand-alone sites as transit jars to J1.³⁹⁹ However, this is unlikely, since the area around J1 is one of the best studied at the Plain of Jars.



Fig. 6.3. J43. Partially-carved jar.
L. Genovese (2012).



Fig. 6.4. J43. Reclining, partially-carved jar.
L. Genovese (2012).

One possibility is that the two jars at J43 were previously inaccessible, perhaps even located in a nearby village but not reported to the provincial authorities. A major tourism development is planned near J43, to provide “new amenities for local residents”,⁴⁰⁰ as part of the overall infrastructure to host the 11th National Games in Xieng Khouang Province in 2017. In 2012, at the time of my visit, the parkland in the immediate vicinity of J43, earmarked for development, contained only two fish farms (Fig. 6.5).



Fig. 6.5. View from J43. Parkland earmarked for development, to coincide with Xieng Khouang Province hosting the 2017 Lao National Games.
L. Genovese (2012).

³⁹⁹ This has been established for a few jars at J3 which, though 0.4 km distant from the main group, they now form part of the site’s eight groups, rather than being assigned stand-alone status.

⁴⁰⁰ Latsaphao 2014.

Q21 is one of the largest quarries at the Plain of Jars, with an estimated surface area of 20 ha. The finished and partially-carved jars at the quarry allow visitors to follow the various stages of the sculpting process. The source of rock for the jars is located on the mountain's steep hills. Despite a newspaper article claiming that Q21 had only recently been identified as the source of sandstone for the jars at J1,⁴⁰¹ it appears that its association with J1 was known early in the last century, as this account attempts to prove. In December 1931, Sidney and Gertrude Legendre, an American couple, sojourned in Muang Khoun during their year-long travels through Indochina. The villagers informed the Legendres that Q21 was already known as the source of sandstone for the jars at J1: "For a great many years the source of this supply was unknown, until finally a native discovered the long unused quarry thirty-six kilometers away".⁴⁰² Q21, therefore, may have been known as the source of sandstone for the J1 jars at least as early as 80 years ago. The Legendres visited J1 (Fig. 6.6) but their accounts do not convey the notion that they ventured farther than J1. The distance between Muang Khoun and Q21 is 35 km on a straight line.



Fig. 6.6. J1, December 1931. (L-R) Sidney and Gertrude Legendre (USA visitors), and Mr. Emmanuelli, French Representative for Xieng Khouang Province. By permission from the Gertrude Sanford Legendre family papers, Special Collections, Addlestone Library, College of Charleston, Charleston, SC, USA.

Q21 was inaugurated for tourism on 18 January 2012 and its opening announced in the national press.⁴⁰³ A brick and cement staircase has been built as part of the overall tourist infrastructure, allowing the study and photography of previously inaccessible sections of the quarry. In December 2011, I documented a partially carved jar at 1337 m of altitude, at least 200 m higher than the main workshop area which hosts most of the unfinished jars. The archaeological value and future potential for academic research may be diminished by a number of tourism-led projects planned for Q21. A recent newspaper article reported that Xieng Khouang Province is looking for investors to build a cable car to enable visitors to appreciate the quarry's sweeping views over Phoukood.⁴⁰⁴ According to Sorsisoulin Bounyatham, Destination Marketing and

⁴⁰¹ Latsaphao 2010.

⁴⁰² Legendre 1936: 205.

⁴⁰³ Chandara 2012.

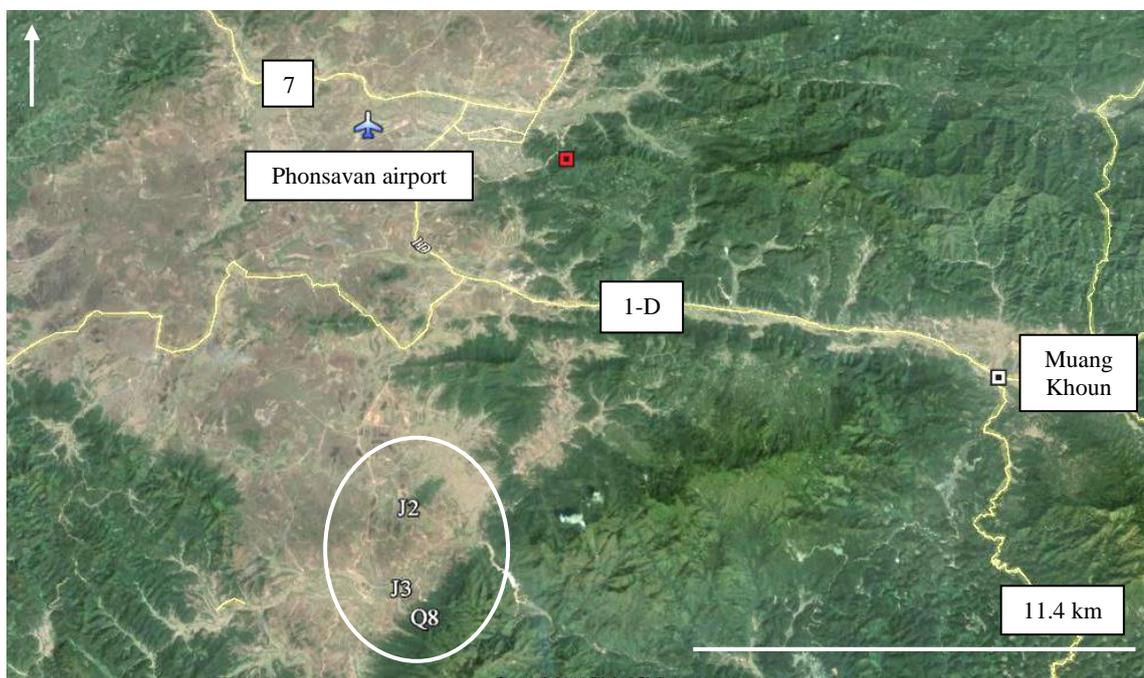
⁴⁰⁴ Phaymanivong 2014.

Promotions Manager for Xieng Khouang Province, the cable car would extend from the ticket office to the top of the mountain.⁴⁰⁵

6.2.2 J2, J3 and Q8

J2 and J3 are close to Q8, their associated quarry. J2 and J3 are set at 1100 m, while Q8 is set at 1200 m. To reach all three sites, it is necessary to travel on Route 1-D from Phonsavan and then turn right into an unpaved road. J2 is reached after 10 km and a further 10 km are necessary to reach J3. This last stretch is in poor condition and is best negotiated with a sturdy vehicle, particularly in the rainy season. J2 and J3 are open to the public but Q8 is not part of the circuit.

This is one of the closest arrangements at the Plain of Jars. J2 and J3 are connected by a path that runs for 2.3 km. Q8 is located to the south of both J2 and J3, distant respectively 4 km from J2 and 1.2 km from J3 (Map 6.9).



Map 6.9. The close arrangement that connects J2, J3 and Q8. GoogleEarth.

J2 and J3 are connected to Muang Khoun by means of historical routes. At present, the villages around J2 and J3 are sparsely populated. The area near J2 was previously known as ‘Champ d’Aviation de Lat Sen’ (Map 6.1 Chapter 6.1.2), on account of a landing strip in the vicinity.

J2 spans two hills dissected by a path, with the two hills identified as east and west, the latter closest to the quarry. The site’s location is further enhanced by trees growing on the eastern field and was a popular leisure spot with French colonial families, when it was known as Phu Sala To (phu = mountain, sala = resthouse and tò = table).

The pre-colonial path that dissects J2’s hills (Fig. 6.7) was widened by the French, resulting in erosion and jar displacement.

⁴⁰⁵ Personal communication, April 2014.



Fig. 6.7. J2. Road dissecting the two adjoining hills, populated with jars and discs (circled).
Colani 1935a, v1: pl. XVII.

We may never know with certainty whether the jars and discs were laid out as a continuous arrangement over a hill which has since undergone transformation also on account of road-building works. Analysing the site in its present twin-hill arrangement requires caution until such time as it can be established that the separation into west and east hills was historical and, indeed, intentional. What is certain is that the jars in the eastern hill are more numerous and stylistically more varied. For Colani, J2 held a special significance, for this is where in October 1931 she encountered the Recessed Inner rim for the first time, a feature she had not encountered at J1, which she had surveyed a few months earlier in May 1931.

There are fewer jars on the western hill and they are not as distinctive as those on the eastern hill. Two almost identical jars, around 2 m in length (Fig. 5.5 Chapter 5.1), one with a Flat rim and the other with a Recessed Inner rim, are found in the eastern hill of J2.

Several jars on the eastern hill are accompanied by a disc and although the western hill houses a rare disc decorated with an anthropomorphic figure (Fig. 5.85 Chapter 5.7), the surviving discs on the eastern hill are decorated with various motifs which include concentric circles (Fig. 4.8 Chapter 4.4) and a pommel (Fig. 5.67 Chapter 5.5.1). It may be the case that the eastern hill was populated first and when space became scarce, the western hill became the final destination for the jars. There is a practical consideration, too, in that it is necessary to go through the western hill to reach the eastern hill.

J3 is the third largest site at the Plain of Jars, second only to J41 at Ban Phakeo (371 jars) and J1 (339 jars). The 247 sandstone jars at J3 are spread over eight groups and such is the degree of dispersion that visitors are normally escorted to the main group located near the rice fields. The remaining seven groups are rarely visited. The main group is located to the south of the present village and includes 158 jars and 33 discs, arranged on lower hill slopes overlooking the surrounding countryside. The distance between the groups is in the region of 0.6-0.7 km, with the exception of a group on the way to the quarry, set 0.4 km from the main group on the south of the site. Several of the jars in this isolated group are fragmented.

The jars at J3 continue to play a role in the beliefs and rituals of the local communities. In a recent survey, UNESCO reported that one of the jars at J3 contained ceramic Buddha statues: “The villagers feel strongly about these statues and believe that if removed sickness and bad times will befall the village. They constructed a spirit house at the site to protect the Buddha’s [sic]”.⁴⁰⁶ The report notes that the statues (Fig. 6.8) may have been placed inside the jars in the

⁴⁰⁶ UNESCO 2009: 81.

late 19th century and this would be a reasonable assumption since Xieng Khouang was ravaged by bands of armed rebels from Yunnan in the last quarter of the 19th century (Chapters 2.3.1, 2.3.2, 2.3.4 and 2.3.6).

There are other instances of jars invoked as protectors of reliquaries. Buddha statues and gongs were placed inside a sandstone jar at Ban Boua village, near both QS17 and Q18, during bombings in the 1964-73 conflict. On returning to a destroyed village several years later at the end of the hostilities, the inhabitants found the sacred objects, unscathed, still inside the jar. Bouapha Douangsouliya, a native of Ban Boua, was a novice in the local monastery at the time and witnessed the village placing the holy relics inside the jar (Fig. 6.9).



Fig. 6.8. J3. Buddha statues placed by the community inside a sandstone jar. Heritage Office, Phonsavan Tourist Office.



Fig. 6.9. QS17. Bouapha Douangsouliya, near the jar that protected the Buddhas. L. Genovese (2011).

Virtually identical objects were found in the 1930s at J2 and J3 but sub-surface graves were found only at J3 and on the western hill of J2, closest to J3 and Q8.

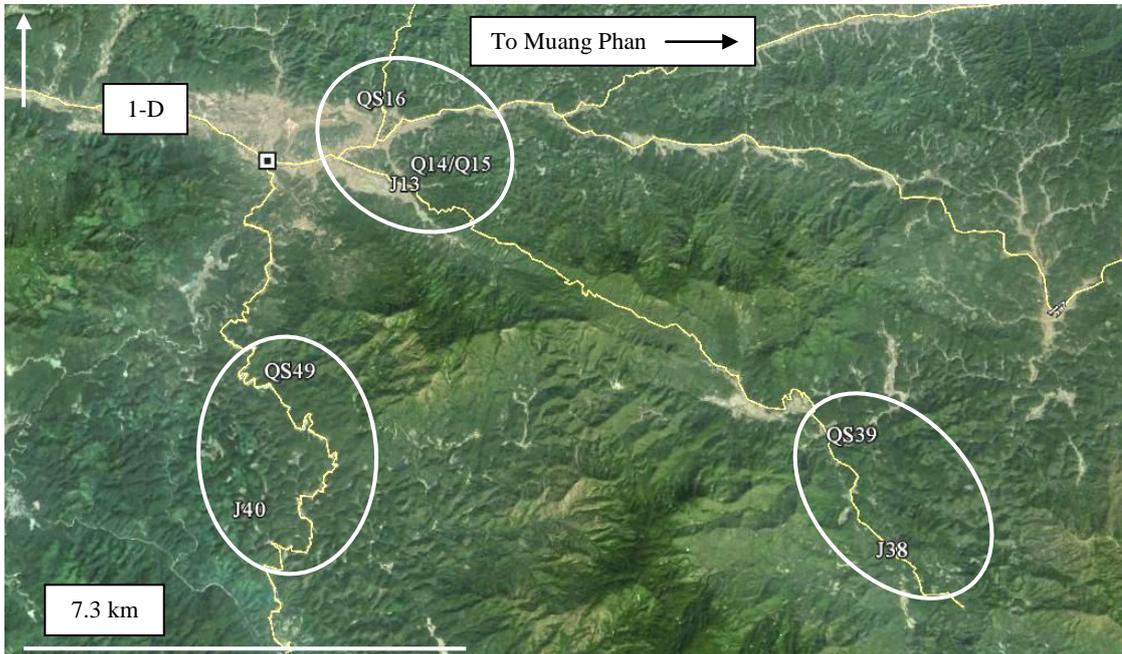
6.2.3 J13, Q14, Q15, QS16, J38, QS39, J40 and QS49

The eight sites in this group (Map 6.10) are in granite-rich Khun District. J13, Q14, Q15 and QS16 are set closely together, separated by distances of 1-3 km, while a distance of 2.8 km separates J38 from QS39. A distance of 4.5 km separate J40 from QS49. All eight sites can be visited from Muang Khoun, combined with a sturdy vehicle and some moderate treks at altitude. Even the contiguous J13, Q14, Q15 and QS16 can present logistical difficulties on account of the uneven terrain and the unpaved roads that connect them. The eight sites are set at altitudes ranging between 1055 m and 1250 m.

In this area, Colani surveyed and documented J13 (1933), J38 and QS39 (1933 and 1940) and QS16 (1940). Earlier than Colani, Parmentier left us a legacy of a comprehensive documentation of QS16⁴⁰⁷ as part of his survey of the province's religious buildings in 1912, which is particularly valuable since Colani's descriptions of her 1940 visit provide only summary details.

⁴⁰⁷ Parmentier 1954: 17-18.

Colani held J13 and J38 in special affection, the former for its unique human-decorated granite disc (Fig. 4.17 and Fig. 4.18 Chapter 4.7) and the latter for its greater archaeological potential than she was able to explore. She documented J13 in some detail, including the advanced state of erosion of some jars, which were found to have been "significantly altered by the elements".⁴⁰⁸



Map 6.10. Granite sites and potential quarries in Khun District. GoogleEarth.

Route 7 runs NW of the area, connecting with Route 1-D in Phonsavan, on its southern journey to most of the sites in this group. All the sites are set along well-travelled ancient routes but are difficult to access. The difficulties are not exclusively logistical but also cultural, especially in the southernmost sites (J38, QS39 and J40). Foreign visitors need to tread with caution to avoid offending the customs and sensibilities of the local ethnic minorities. A separate difficulty relates to disputes between rival ethnic groups. Except for QS16, open to tourists, excursions to the jar sites require a permit from the provincial authorities and on the few occasions that I have been granted permission, the *naiban* (village chief) stipulated that a minimum of two villagers should accompany me, with one or both of them armed (Fig. 6.10), with their *per diem* payable by me in addition to all other admin fees. Inevitably, all such visits are intense because time is of the essence, since one of the conditions stipulated by the *naiban* is that I must return to base well before sunset to prevent involvement in the not infrequent tribal disputes, with firepower often traded between ethnic groups and/or law-enforcement agents.

The last curfew imposed in Phonsavan was in May 2012 (Fig. 6.11), following a dispute between insurgents from ethnic minorities and the Lao army, resulting in several casualties.

⁴⁰⁸ Colani 1935a, v1: 214.



Fig. 6.10. J38. (L-R): *naiban*, villager, local teacher/armed escort, Lia Genovese. L. Genovese (2012).

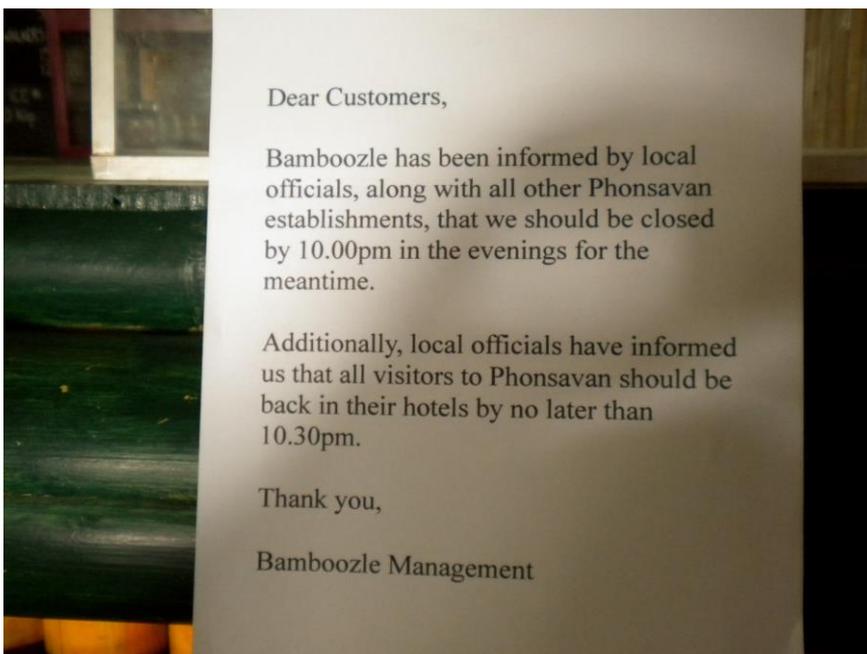
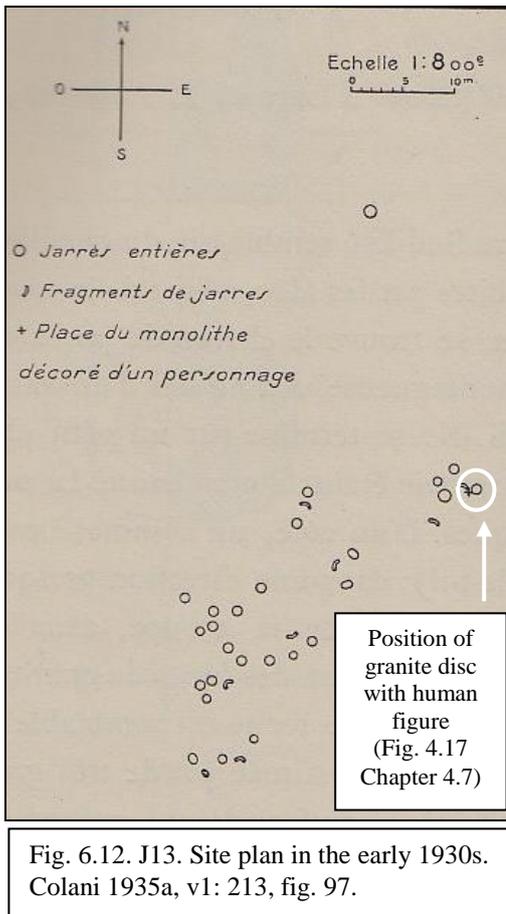


Fig. 6.11. Curfew notice posted at a restaurant in Phonsavan in May 2012. L. Genovese (2012).

As recently as 80 years ago, when Colani surveyed the area, both J13 and QS16 were important sites for their material quantity of granite jars. Though never as numerous as at sandstone sites, jars in granite have dwindled to the point of extinction. J13, for instance, is unrecognisable from its once well-stocked field (Fig. 6.12) populated with 34 units,⁴⁰⁹ the two jar stumps (Fig. 6.13) a shadow of the site's former self. The area around J13 is now settled with farming communities, and the jars are forced to share the space with debris and farming implements.

⁴⁰⁹ Colani 1935a, v1: 166.



The relatively isolated position of QS16, on a slight promontory and flanked by a ravine, may have spared it from the effects of urbanisation. The site is located 5 km from Muang Khoun, along a difficult and uneven road that leads to Muang Phan, at the crossroads of a number of ancient routes. QS16's inventory has decreased at the rate of one granite jar every few years, since only 36 jars have survived from the 43 documented by Parmentier in 1912.⁴¹⁰ QS16 is open for tourist visits but J13's dilapidated state makes this a remote possibility, despite its undeniable research value illustrated in Colani's monograph.⁴¹¹ A visit to the granite jars of QS16 is often combined with a day-trip to the historical attractions of Muang Khoun.

There have been no specific studies to identify the source of granite boulders for the jars in Khun District. Petrographic or spectrum analysis could assist in this task, by pointing to the possible routes travelled by the jars to their final destination, and perhaps even the transport methods dictated by technology, manpower and terrain obstacles, with options defined by GIS analysis.⁴¹²

Q14 and Q15 have been suggested as potential quarries for a number of factors. Firstly, the availability of rock at these two locations. Secondly, their geographical closeness to the jar sites, Q14 being 0.3 km from J13 and 3 km to QS16, while Q15 is 0.5 km from J13 and 3 km from QS16. This was noted by the British geologist Jeremy Baldock: "All of the granite jars are located where granite was available in the immediate vicinity".⁴¹³

⁴¹⁰ Parmentier 1954: 18.

⁴¹¹ Colani 1935a, v1: 128, 132, 142, 146, 150, 164, fig. 76, pl. LVI, etc.; v2: 34, 78, etc.

⁴¹² Personal communication of 03/05/2014 from Les Hazell, La Trobe University, Melbourne.

⁴¹³ Baldock 2008: 6.

No abandoned or partially-carved jars have been documented at Q14 or Q15. Two blocks of sandstone at Q15 raise the prospect that it may have served as a workshop, a factor corroborated by the presence of one single sandstone jar at QS16, among 35 granite jars.

A recent geological survey concluded that though the site's open tectonic joints would have formed cubic or rectangular blocks suitable for quarrying, there was no direct evidence of quarrying at the site.⁴¹⁴ The same reservations have been raised about Q15, whose morphology has prevented unequivocal classification as a quarry. Although granite blocks in a river bed at Q14 (Fig. 6.14) could be carved into jars, removing suitably-sized blocks from the two 6 m high slabs at Q15 (Fig. 6.15) would have presented significant difficulties. The 2008 geological report noted that the masons "may have used blocks of granite that had been extracted along the tectonic joints from sites such as Ban Natad [Q14] or Huay Fa Par [Q15], thus no residual surfaces would remain".⁴¹⁵ The report further noted that the widely-spaced tectonic joints at Q14 and Q15, between 2 m and 6 m, would have produced large individual blocks, far larger than any of the jars found today at J13 or QS16, the two jar sites nearest to both quarries.

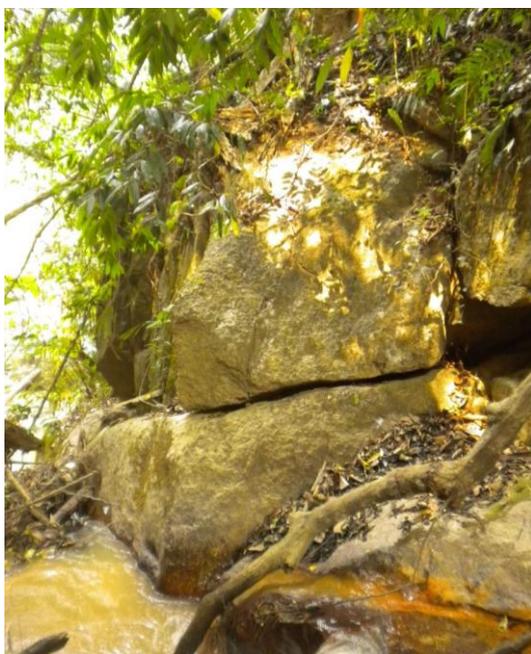


Fig. 6.14. Q14. Potential granite quarry.
L. Genovese (2014).



Fig. 6.15. Q15. Potential granite quarry.
L. Genovese (2011).

J38 and QS39 are located 20 km further south along the unpaved road from J13. This ancient road can be difficult to negotiate in the rainy season (Fig. 4.21 Chapter 4.7) and a longer but sealed road now connects these two sites with Muang Khoun. Numerous jars at J38 are buried (Fig. 6.16 and Fig. 6.17).

J40 is located 2 km east of the village. The site can be reached via a long and tortuous journey but, without own transport, a visit requires around three days, as was my experience in 2011 when I was granted permission to visit the site. The granite jars at J40 (Fig. 5.48 Chapter 5.2.8) are small and often buried.

⁴¹⁴ Baldock 2008: 7.

⁴¹⁵ Baldock 2008: 7.



Fig. 6.16. J38. Buried granite jar.
L. Genovese (2012).



Fig. 6.17. J38. Buried granite jar.
L. Genovese (2012).

At December 2013, QS49/Ban Naho was not listed in the inventory of sites managed by the DoICT. I acquired information on this site during my fieldwork and was able to document it in May 2012. The site is located near the Hmong village of Hoy Phu Mee, at 1130 m but at the time of my visit at least one jar had been displaced and was lying in a water-logged rice field in the village at the foot of the mountain (Fig. 6.18). QS49 is an awe-inspiring site for the variety that characterises its jars, some of the tallest and most imposing in granite (Fig. 5.42 Chapter 5.2.5) but also because it is the *only* location, in the 52 sites under consideration, where I have documented five of the six rim styles listed in Table 7 Chapter 5.2.1, including several jars with a Recessed Inner rim (Fig. 6.19). The area near QS49 is undergoing transformation related to the Nam Ngiep 2 Hydropower Project. There are four cemeteries in the village near QS49.



Fig. 6.18. QS49. Granite jar set in water-logged ground in the rice-planting season.
L. Genovese (2012).

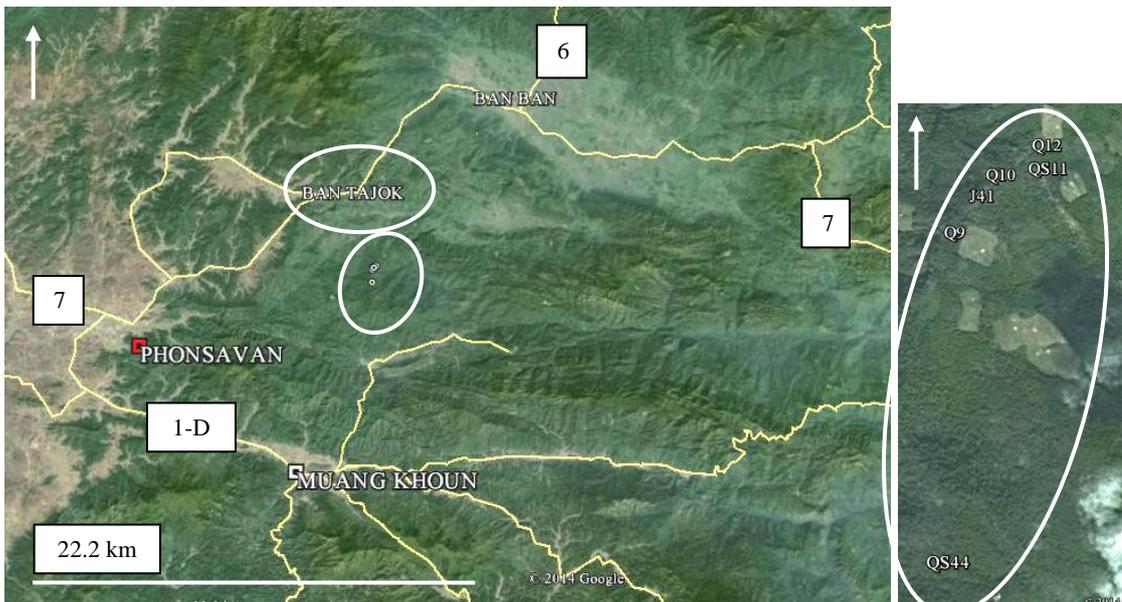


Fig. 6.19. QS49. One of several jars carved with a Recessed Inner rim at this site.
L. Genovese (2012).

6.2.4 Q9, Q10, QS11, Q12, J41 and QS44

Discovered in 2005,⁴¹⁶ the Ban Phakeo group (Map 6.11) is one of the most important discoveries since the 1930s. It is the largest assembly at the Plain of Jars, with a unique spatial arrangement. The group consists of quarries Q9, Q10 and Q12, quarry-sites QS11 and QS44, and the large jar site of J41, which alone accounts for 371 jars, the highest quantity in any single site, rivalling the 339 jars at the much-visited J1, in the same district of Paek.

⁴¹⁶ Communication of 22/11/2013 from DoICT, Xieng Khouang branch.



Map 6.11. White circle in the main image identifies the Ban Phakeo group. The image to the right details the position of the six individual sites. GoogleEarth.

The physical separation between quarry/workshop and deposits of jars is blurred and visitors are unaware of crossing from one to the other, such is the compact nature of this group. Distances are in the region of 0.5 km, the only exception being QS44, located 1 km south of the group.

The assembly is set at some distance from ancient trade routes but is relatively close to Route 6, which connects Hua Phan Province with Route 7, the latter on its long journey from coastal central Vietnam to Luang Prabang Province, whence it connects with Route 13 to Vientiane capital city and the south.

Ban Phakeo offers abundant supplies of sandstone. Massive boulders were carved into jars, many of which display the narrow aperture and shallow cavities observed in Phoukood District. However, whereas Phoukood and sites such as J26 are set alongside Route 7 to the west of Laos, Ban Phakeo is set around 10 km from a main road.

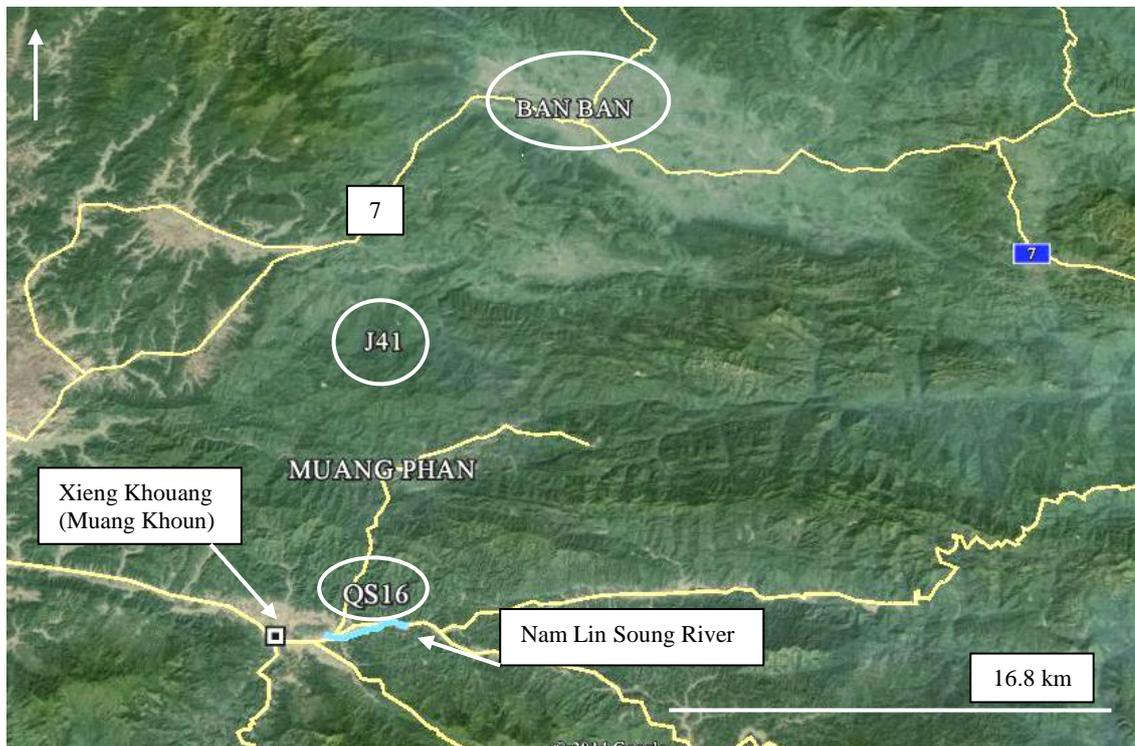
There is no direct vehicular access to the group and visits require a drive and a trek. Two popular options are a drive from Phonsavan to Ban Tajok along eastbound Route 7, followed by a 7 km trek over relatively moderate terrain, while a longer and more challenging alternative is a trek from Muang Khoun to Ban Phakeo village.

Ban Phakeo is one of the eight sites open to the public. The province places much store in the site's ability to attract tourists eager to experience a simple, if Spartan, homestay in a Hmong village surrounded by hundreds of jars and 98 discs, of which 96 discs at J41 alone. The high quantity of discs may be due to the closeness of sites to the quarries or to other factors.

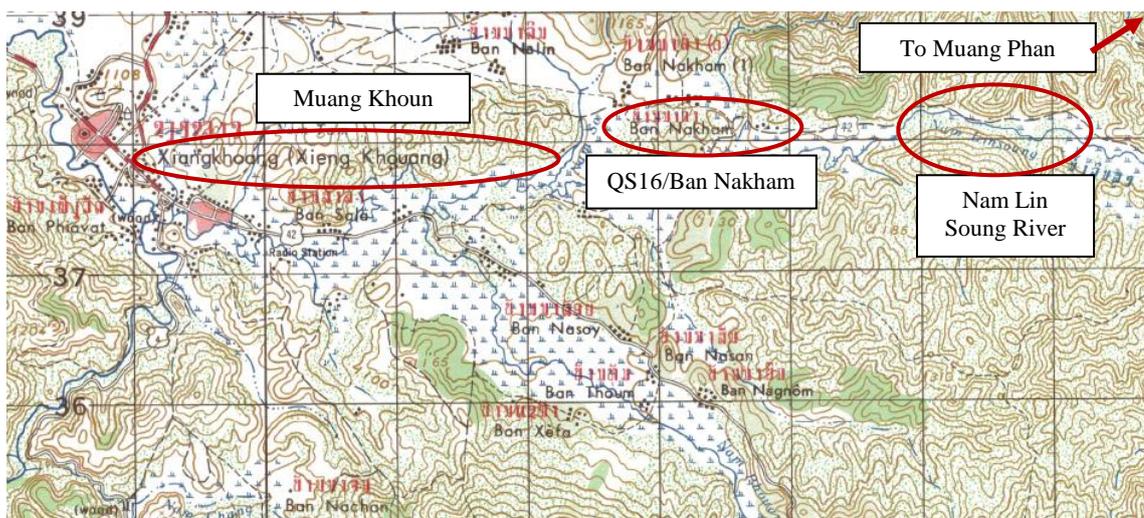
New communities in Ban Phakeo practice subsistence farming, with animals and produce from the forest featuring in the villagers' daily diet. The stone artefacts have undergone fragmentation: "Several of the jars have been smashed and the groups are littered with sandstone fragments"⁴¹⁷.

⁴¹⁷ Plain of Jars Archaeological-Landscape Heritage Management Plan, First Draft, February 2009, item 2.3.63.

Colani did not visit Ban Phakeo but, according to Michel Lorrillard,⁴¹⁸ she may have been aware of its existence. In her monograph, she mentioned an important site around “28 km from Ban Ban, to the south-west, near Muang Phan [...]. This important group of monoliths is spread along the path, or near it, joining the depression followed by Colonial Road no. 7 to the Nam Lin Soung River, near Muang Khoun”.⁴¹⁹ In an alternative interpretation, Colani may have been referring to QS16. By reference to Map 6.12, only QS16 is close to Muang Phan, the Nam Lin Soung River and Muang Khoun. J41/Ban Phakeo is quite distant from both Muang Khoun (19 km) and the Nam Lin Soung (approx. 18 km). This can also be verified from Map 6.13.



Map 6.12. The position of various points close to QS16, Muang Phan and Muang Khoun. GoogleEarth.



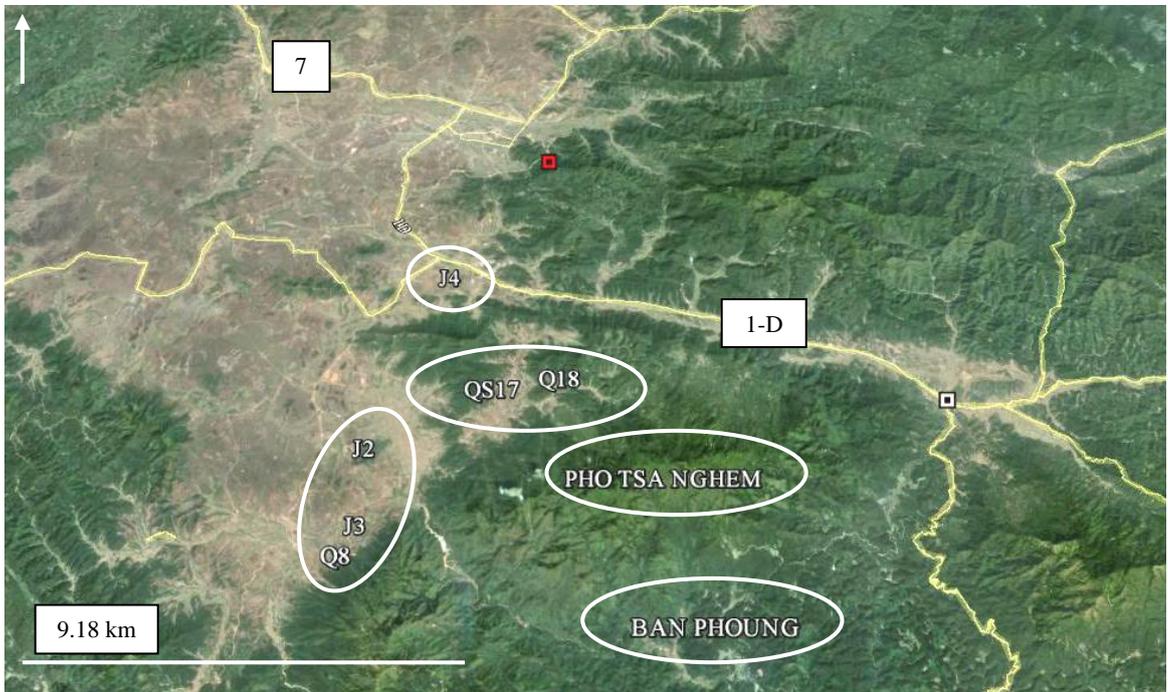
Map 6.13. QS16 in relation to the Nam Lin Soung River and Muang Khoun. Texas University Map 5647-I, series L7015, 1971.

⁴¹⁸ Personal communication, 25/04/2014.

⁴¹⁹ Colani 1935a, v1: 244-245.

6.2.5 J4, QS17 and Q18

The three sites in this group (Map 6.14) host distinctive sandstone jars. None of these sites are open to the public, despite their proximity to the tourist amenities of Phonsavan. The altitudes above sea level are 1130 m for J4, 1180 m for QS17 and 1200 m for Q18.



Map 6.14. Sites J4, QS17 and Q18. Map shows the approximate location of Pho Tsa Nghem. GoogleEarth.

J4 is relatively easy to access from Phonsavan on Route 1-D, with the jars located on one of several hills. QS17 and Q18 can also be accessed relatively easily from Phonsavan, although the final 6 km, after leaving Route 1-D, can only be negotiated with a four-wheel drive vehicle, especially in the rainy season. The ground at J4 was decontaminated in 2011 (Fig. 6.20).



Fig. 6.20. J4. Ground decontamination by UXO-Lao team. L. Genovese (2011).

Remnants of jars and discs surround the two extant jars at J4. Local communities have started to erect graves (Fig. 6.21 and Fig. 6.22) on hills adjacent to the jar site. The practice of erecting memorial stupas near megalithic jars recalls the recent custom of incising a recently-departed person's name, birth and death dates, in Lao script, on menhirs in Luang Namtha Province.⁴²⁰



Fig. 6.21. J4. Stupa built on a hill close to the sandstone jars.
L. Genovese (2011).



Fig. 6.22. J4. Newly-built stupa bearing the date: 30-10-2011.
L. Genovese (2011).

J4 is 6 km away from Q18 but this quarry has not been suggested as a potential source of stone for its jars. The extant jars at J4 (Fig. 6.23) are also carved in sandstone and, visually at least, it is reasonable to suggest a possible link with the jars at QS17 (Fig. 6.24), served by Q18. Furthermore, no other potential sources of stone have come to light near J4.



Fig. 6.23. J4. Sandstone jar.
L. Genovese (2011).



Fig. 6.24. QS17. Sandstone jar.
L. Genovese (2011).

QS17 and Q18 are located in Khun District. The sites are spread over a wide area but Q18 can be reached from QS17 over a moderate walk. A historical route, known to the villagers, connects the village of Ban Boua, near QS17, with Muang Khoun.

Q18 is the quarry associated with QS17, which itself bears signs of dual site-quarry. Q18 consists of several sources of stone, of which the two main sections are Phu Na Som and Phu Ban So. At Phu Na Som, set on a steep mountain difficult to negotiate even in the dry season, there are

⁴²⁰ Personal communication from Guido Sprenger, May 2014.

complete and partially-carved jars. The Nam Pek is a rivulet that runs from the foot of Phou Na Som mountain to Ban Boua, where in recent decades wildlife was known to dwell.⁴²¹

The stone heritage in this group is difficult to monitor. The painted graffiti I documented on my first visit in 2011 (Fig. 6.25) was no longer visible on a subsequent visit later in the year.



Fig. 6.25. QS17. Graffiti sprayed on a sandstone jar. L. Genovese (2011).

In 1999 or 2000, two sandstone jars were moved from QS17 to the village entrance. A villager, who witnessed the event, recalls how the two sandstone jars were in turn chained to an elephant and dragged for approximately 400 m, over uneven terrain, ostensibly to grace the community temple in the village. If not the removal *per se*, the unorthodox transport technique caused catastrophic damage, with the larger jar breaking in two widthwise (Fig. 6.26), while the smaller jar suffered a fracture to the rim (Fig. 6.27). Both jars were patched up with cement.



Fig. 6.26. QS17. Sandstone jar patched up with cement after unorthodox removal from its original location to the village. L. Genovese (2011).



Fig. 6.27. QS17. Smaller sandstone jar suffered a fracture to the rim during removal from its original location. L. Genovese (2011).

⁴²¹ Communication of December 2012 from Bouapha Douangsouliya, a native of Ban Boua village.

As part of the 2008 geological survey mentioned earlier, details were collected from Q18 for a 3D model of the terrain which, when matched with profiles from the current quarry face and those of the adjoining slopes, provided an estimate of the likely number of blocks that could have been extracted: “When joint orientations and rock wastage is taken into account, a maximum of 57 No. suitable sized blocks could have been extracted”,⁴²² a finding which compares reasonably well with the 45 jars documented at the two sites, respectively 37 at QS17 and eight at Q18.

However, the low jar quantities at QS17 are difficult to reconcile with the significant sources of sandstone available at Q18. It is likely that further jar sites will come to light in future. By way of example, in December 2011 I was informed by a villager at Ban Boua that a large deposit of jars they call “Pho Tsa Nghem” exists on steep slopes some 4 km from Q18, the section called Phu Na Som. The villagers’ descriptions convey a view that Pho Tsa Nghem is set in a densely wooded area and requires clearing over its entire course prior to surveying. As such, it can only be inspected in the dry season. In March 2012, I attempted to locate Pho Tsa Nghem with the help of some villagers but I was unsuccessful because the site’s location is known to one particular villager who was on farming duties on the day of my visit. From conversations with the villagers, I gather that several dozen jars may be found at Pho Tsa Nghem. Q18 is located in Khun District, just across the border from Paek District. It is unknown whether the jars at Pho Tsa Nghem are in sandstone or granite. From the villagers’ description, the likely location of Pho Tsa Nghem may be to the east of Q18, slightly deeper into Khun District. If the jars are found to be carved from sandstone, then three possibilities could be that 1) they were produced with rock from Q18 or 2) from an as-yet unidentified sandstone quarry in the area; 3) if the jars are carved from granite, then this would corroborate the notion that granite sites in Khun District are some of the most dispersed at the Plain of Jars, because this new field of granite jars would be located just over 7 km from Ban Phoung, the nearest granite site in Khun District. Pho Tsa Nghem and Ban Phoung are two of the sites I have earmarked for future fieldwork.

6.2.6 J25, J26, J27, J37 and QS42

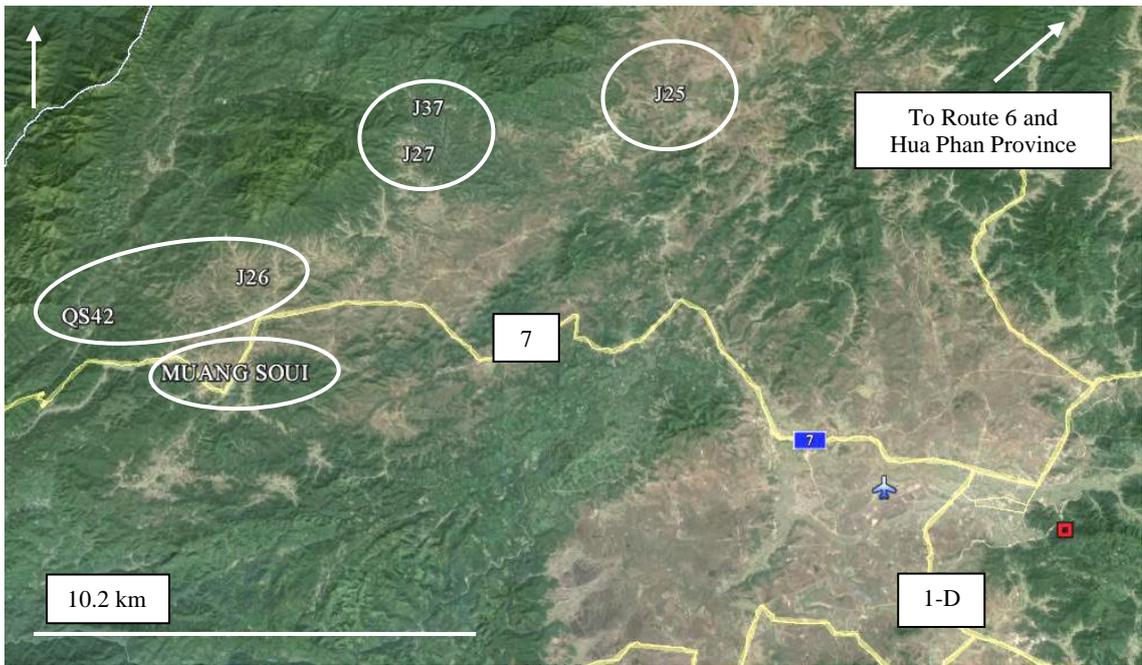
J25, J26, J27, J37 and QS42 (Map 6.15) are all set at points north of Route 7, towards Luang Prabang Province. Of these, J25 is the most isolated but, unlike difficult-to-reach QS42, it is located in the immediate vicinity of a village. This group of sites is also connected to traffic from central Vietnam, via Route 7, and the extreme northeast of Laos through Route 6, which connects with the standing stones of Hua Phan.

The sites in this group are difficult to access. By public transport, a visit to any of the sites requires three days, since there is only one bus that departs Phonsavan mid-morning bound west along Route 7, followed by another stretch on local vehicles for several kilometres.

In 1932, as part of her third season of excavations, Colani surveyed J26, J27 and J37. Twenty years earlier, Parmentier surveyed the district’s religious architecture and described a group of jars near the village of Thong Hac (Table 4 and Map 2.8 in Chapter 2.4 refer).

The majority of the jars are in sandstone and carved with shallow cavities and narrow apertures.

⁴²² Baldock 2008: 10.



Map 6.15. Position of sites in Phoukood District. GoogleEarth.

J25 is set 10 km north of Route 7, the longest distance from the main road for any of the sites in this group. It is located on undulating hills close to the current village, with expansive views over the Phoukood plains, including an ancient stupa to the SW. During my visit, Mr Thitkhamphane (Fig. 6.28), a village elder, recalled that in 1969 the villagers were evacuated to Vientiane during the bombing raids. Ten years later, on their return, the new huts and houses were built not in the spot where they had originally stood but in a slightly different area that allowed a greater gap between the jars and the villagers' homes.



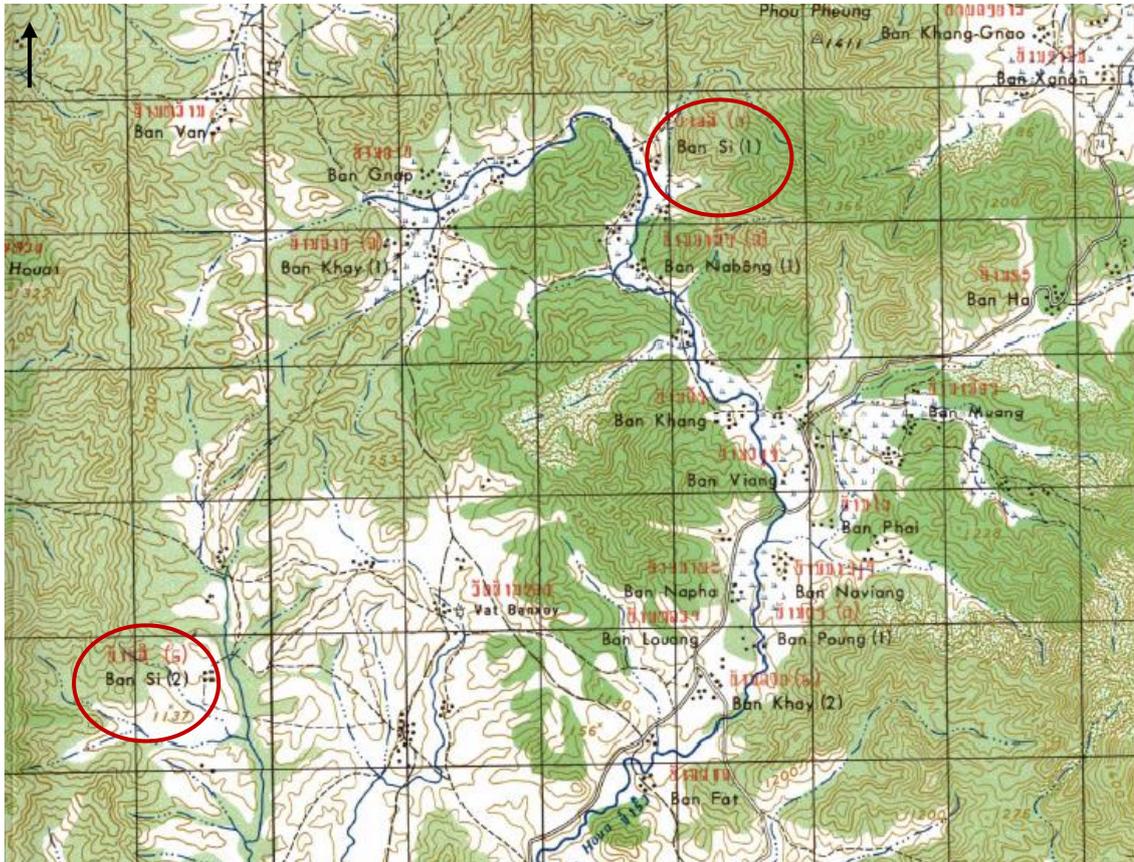
Fig. 6.28. J25. Mr Thitkhamphane, one of the village elders. L. Genovese (2011).

J26 is located 2 km from Route 7, one of the most accessible sites in this group. Its jars have a homogeneous texture, “exhibiting no bedding planes or discontinuities”.⁴²³ Another peculiarity at J26, first reported by Colani, was an exceptionally smooth and round boulder, with a small aperture on the side (Fig. 5.56 and Fig. 5.57 Chapter 5.3.3). Consistently with other sites in this area, unworked stones are scattered in the field, almost always of the same

⁴²³ Baldock 2008: 5.

rock type as the jars. Rather than an evolution in mortuary practices, Colani’s interpretation was of a first stage in a western-bound progression where the megalithic jars gradually disappear, supplanted by funerary stones.

J27 and J37 are separated by a distance of 1.7 km. At the time of Colani’s visit in 1932, the area was known as Ban Si, a name that identified it until recently (Map 6.16). At Ban Si Colani encountered the double-ended jars (Fig. 5.61, Fig. 5.62, Fig. 5.63 and Fig. 5.64 Chapter 5.4) and the unfamiliar formation of recumbent jars accompanied “by carefully arranged stones”.⁴²⁴



Map 6.16. The black circles identify J27 and J37, two sites forming Ban Si in Colani’s times. Texas University Map 5648-III, series L7015, 1965.

QS42 hosts two massive jars, one of which is partially carved. This site is difficult to access, particularly the 2 km of unpaved road that lead to Khum Vangkham, the village near the jars. Villagers note, with a degree of harmless glee, that it is not unheard of for visitors to be stranded in the village for a few days, when their vehicles cannot negotiate this exceptionally steep stretch in order to re-join Route 7. During my visit of June 2012, the sturdy four-wheel drive vehicle hired for the trip could barely muster the power for this short but steep stretch, with the terrain still reasonably dry despite the early onset of seasonal rains.

The two jars at QS42 are located at a moderate trek from the village, with dangers of its own in the rainy season because of the rickety makeshift bridge (Fig. 6.29) suspended over a wide and fast-flowing river (Fig. 6.30) that leads to the jars in the north of the village.

⁴²⁴ Colani 1933e: 360.



Fig. 6.29. QS42. Makeshift bridge connecting Khum Vangkham with the two jars north of the village. L. Genovese (2012).

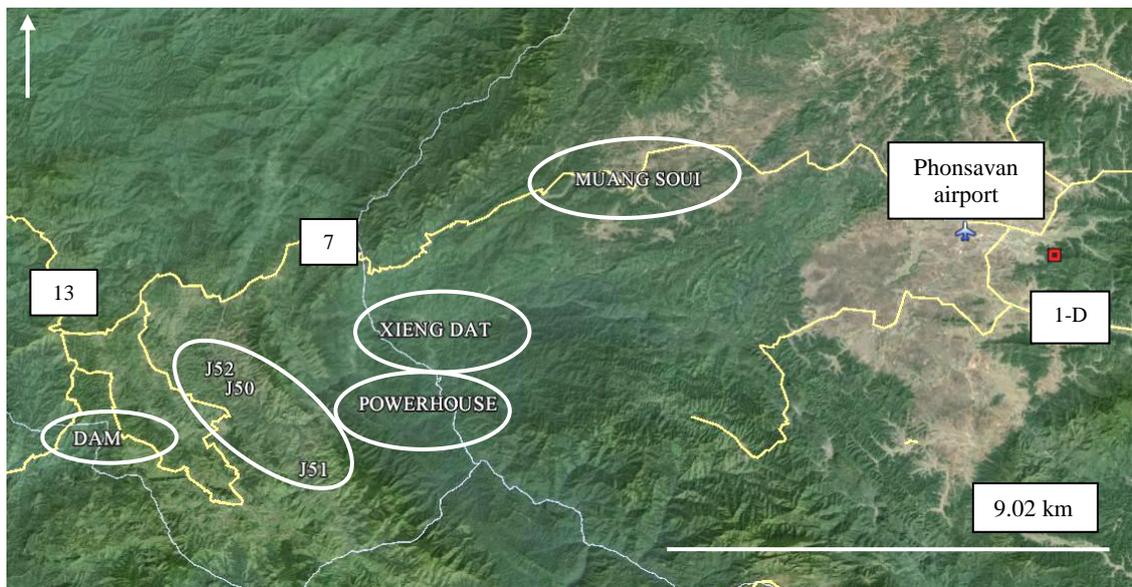


Fig. 6.30. QS42. A fast-flowing river can be crossed as an alternative to the makeshift bridge (Fig. 6.29) to reach the two sandstone jars in the north of the village. L. Genovese (2012).

The village of Khum Vangkham is the starting point for Ban Vangkham, an extremely inaccessible site located on a steep mountain slope a five-hour trek from QS42. Ban Vangkham hosts one single sandstone jar. During my visit to QS42, the villagers informed me that this site has been surveyed only once, as part of the first phase of documentation of the Plain of Jars, in the mid-1990s. I do not have co-ordinates for this site.

6.2.7 J50, J51 and J52

J50, J51 and J52 (Map 6.17) are located in Phou Khoun District, Luang Prabang Province, south of Route 7. J50 and J52 are at 1110 m of altitude and J51 at 1180 m.



Map 6.17. Three sites in under-researched Phou Khoun District. GoogleEarth.

J50 and J52 are separated by a distance of 0.8 km. Access to J51 is by means of a four-wheel drive vehicle, a trek to the boat landing at Muang Chim, a fairly long stretch on a narrow boat on the rivers Sout and Ting and ending with another trek to the jars and discs.

Barring J50 and J52, which can be reached via an unpaved road 8 km south of Route 7 from the village of Ban Nanan, access to J51 has presented historical difficulties. Colani accessed the site from Ban Hua Ting, the village closest to an affluent of the Nam Ting River: “The field of jars at San Hin Oume [J51] is in Tran Ninh, roughly to the north of Vang Vieng (Vientiane province) [*sic*], three and half days’ march from it, south-west of Xieng Dat”.⁴²⁵

The stone artefacts of Luang Prabang Province, including those in Phou Khoun District, are outside the jurisdiction of Xieng Khouang Province, although the megaliths in both provinces are under the control of central government. Phou Khoun District is located within a large expanse of land now commissioned for the Nam Ngum 5 Hydropower Project. Following the construction of a dam and powerhouse, some jars and discs have been relocated to dry, high terrain and there should be a concern that the movement of artefacts will permanently alter the archaeological record and impair researchers’ ability for future studies. The sites in this area are under-researched and though basic documentation is arranged prior to relocation (Fig. 6.31), reports are rarely circulated beyond provincial and national government levels. The sites in Phou Khoun District are populated with distinctive jars and discs (Fig. 6.32). Some of the sites surveyed by Colani in the 1930s are located in Phou Khoun and have not yet been cross-checked to their present-day equivalent.



Fig. 6.31. J52. Archaeologists documenting sandstone jars and discs in Phou Khoun. Photo: Norseng Sayvongdouane.



Fig. 6.32. J52. Sandstone jar and what appears to be a disc placed on top. L. Genovese (2014).

The redeployment of stone artefacts (Fig. 6.33) is a potential cause of damage (Fig. 6.34). Furthermore, when excavations resume at a future date, it will be impossible to analyse grave goods with the stone artefacts now redeployed. All three sites are difficult to access and none are open to the public. When I applied for permission to inspect the jars and discs at J50, in May 2012, a permit was issued by Phou Khoun District Office upon payment of a fee.

⁴²⁵ Colani 1935a, v1: 221.



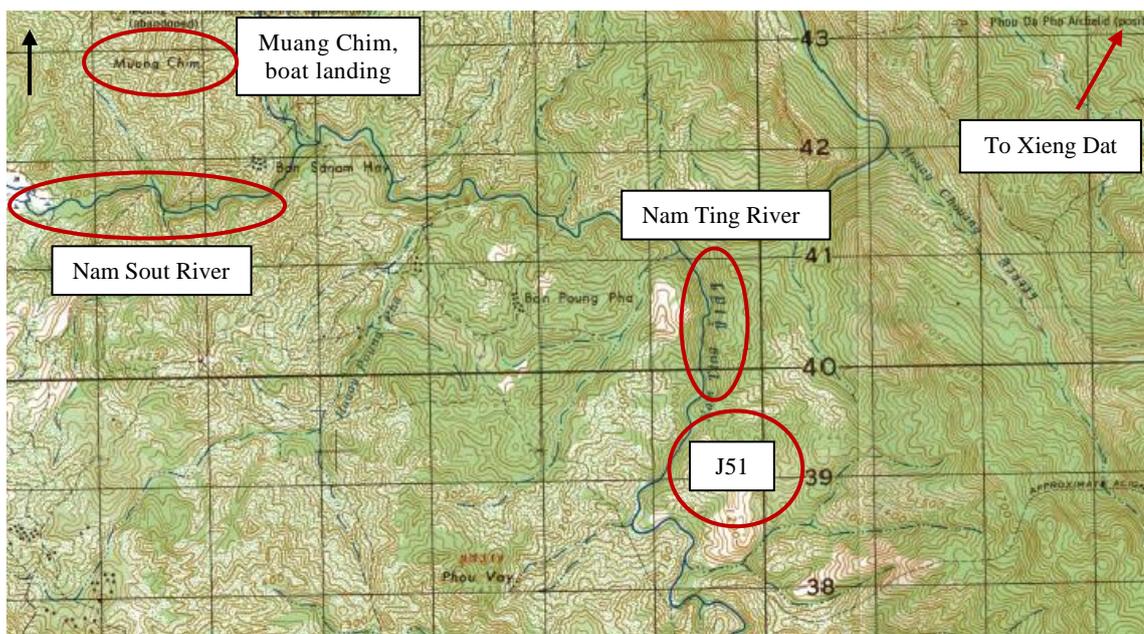
Fig. 6.33. J50. Mushroom-shaped disc being removed from the site. Archaeological report of 28/02/2012, Lao Ministry of Information and Culture.



Fig. 6.34. J50. Disc relocated to higher ground to prevent damage from a hydropower station. L. Genovese (2012).

J50 consists of two jars and two discs, all in sandstone, relocated from an area slightly to the south of their current position.⁴²⁶

In the spring of 1933, Colani documented J51 (Map 6.18), a small site located in a dramatic setting at the bottom of a steep hill.



Map 6.18. The setting of J51, formerly known as San Hin Oume, a site of difficult access. Texas University Map 5547-IV, series L7015, 1965.

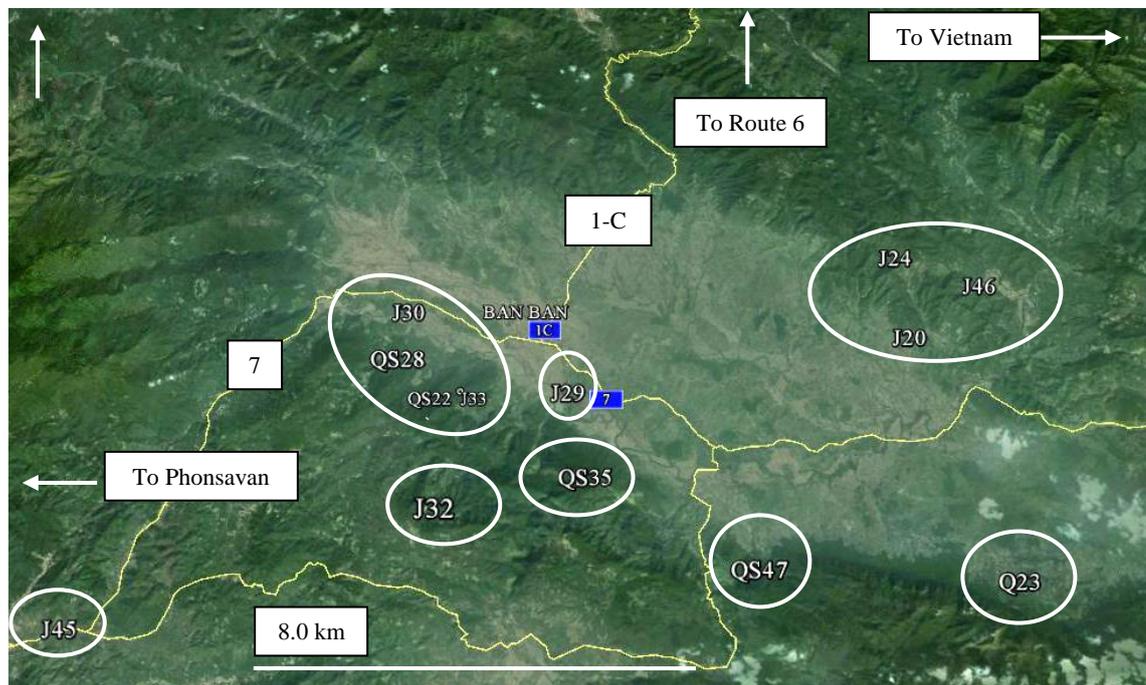
It is highly likely that J52 corresponds to one of several sites surveyed by Colani during the same mission but I was unable to establish this with a degree of certainty at the time of my first visit in 2014.

The custom of animal-decorated discs (Fig. 4.22 and Fig. 4.26 Chapter 4.7) was prevalent at sites documented in this area, a distinctive feature of Luang Prabang Province. The details Colani provided are now increasingly important as the sites present logistical and administrative complications for research.

⁴²⁶ Personal communication, February 2014, from Norseng Sayvongdouane.

6.2.8 J20, QS22, QS23, J24, QS28, J29, J30, J32, J33, QS35, J45, J46 and QS47

All the sites (Map 6.19) are located in Kham District, a low-laying basin at average altitude of 800 m. The sites are close to Route 7 or Route 6.



Map 6.19. Sites in the eastern reaches of Xieng Khouang Province. GoogleEarth.

In this group, only QS23 is open to the public, the only site at the Plain of Jars with units in breccia. The site, close to the tourist attraction of Baw Nyai hot springs, is located at a short but fairly challenging climb up the mountain, which houses finished and partially-carved jars. This site is particularly dangerous to survey in the rainy season on account of the steep and narrow ascent flanked by a ravine. The hot springs near J29 are smaller than those near QS23.

In 1932, Colani surveyed a total of five sites in this group: QS22 and QS28, plus three as-yet unidentified sites known as ‘Jars on a plateau’ (25-30 jars), ‘Eight Jars’ and ‘Isolated Single Jar’. I plan to locate and survey these sites as part of future fieldwork. In 1912, Dussault surveyed the geological richness of Kham District. The 1925 Madrolle Guide mentioned that limestone is found towards “Muang Thé”,⁴²⁷ (Map 2.10 Chapter 2.4).

The relative closeness to major transport routes appears not to have materially affected the type or quantity of objects found buried near the stone jars. As in the remaining sites at the Plain of Jars, except for a few test pits, no excavation programmes have been undertaken in recent years and no artefacts have been collected in addition to those discovered by Colani at QS22 and QS28, known in her time as Ban Hin and Ban Sieng Kieu respectively.⁴²⁸

At QS22, the current path does not dissect the jars into two sections, as illustrated by Colani, when the path ran north to south (Fig. 6.35). The present path runs east to west, relegating the few surviving jars to the west, where they are often scarred by knife sharpening (Fig. 6.36).

⁴²⁷ Madrolle 1925: LIII.

⁴²⁸ Colani 1935, v1: 14, 113, 131, 144, 150, 153, etc.; v2: 32, 34, 37, 240, etc.

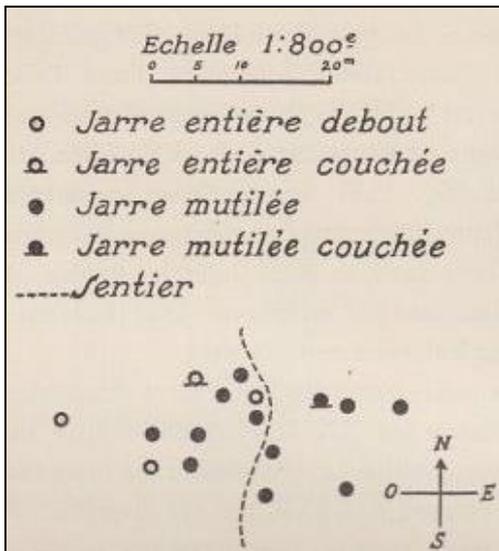


Fig. 6.35. QS22. Site sketch.
Colani 1935a, v1: 242, fig. 119.



Fig. 6.36. QS22. Rim used as whetstone.
L. Genovese (2012).

QS28 is located 4 km west of Ban Ban and 2 km from Route 7. The site is reached via a moderately difficult walk, made dangerous by a stream that must be crossed and which can swell up to waist level in the rainy season. There is intense farming at the site and the jars are surrounded by crops and farming equipment. One pommel-decorated sandstone disc documented by Colani in 1932 (Fig. 6.37) has survived (Fig. 6.38).



Fig. 6.37. QS28. Sandstone disc.
Colani 1935a, v1: pl. XXXII.



Fig. 6.38. QS28. Sandstone disc still at the site.
L. Genovese (2011).

Of particular significance in this group is QS35, with 132 jars carved from sandstone. After J41 (371 sandstone jars), J1 (339 sandstone jars) and J2 (247 sandstone jars), this is the fourth largest site at the Plain of Jars, all the more remarkable because it is located in Kham District, rather than Paek District like J1 and J41. The site includes partially-carved and finished jars and some pommel-decorated discs (Fig 6.39).

J46 exemplifies the difficulties inherent in monitoring remote sites. Its six jars are set in a field planted with corn. Local farmers are known to collect jar fragments, which they then pile up into a cairn to increase the arable land at the site. The jars are in a state of fragmentation (Fig. 6.40). The Nam Mat River runs along the site and flows to Vietnam.



Fig. 6.39. QS35. Disc decorated with pommel-like feature.
L. Genovese (2011).

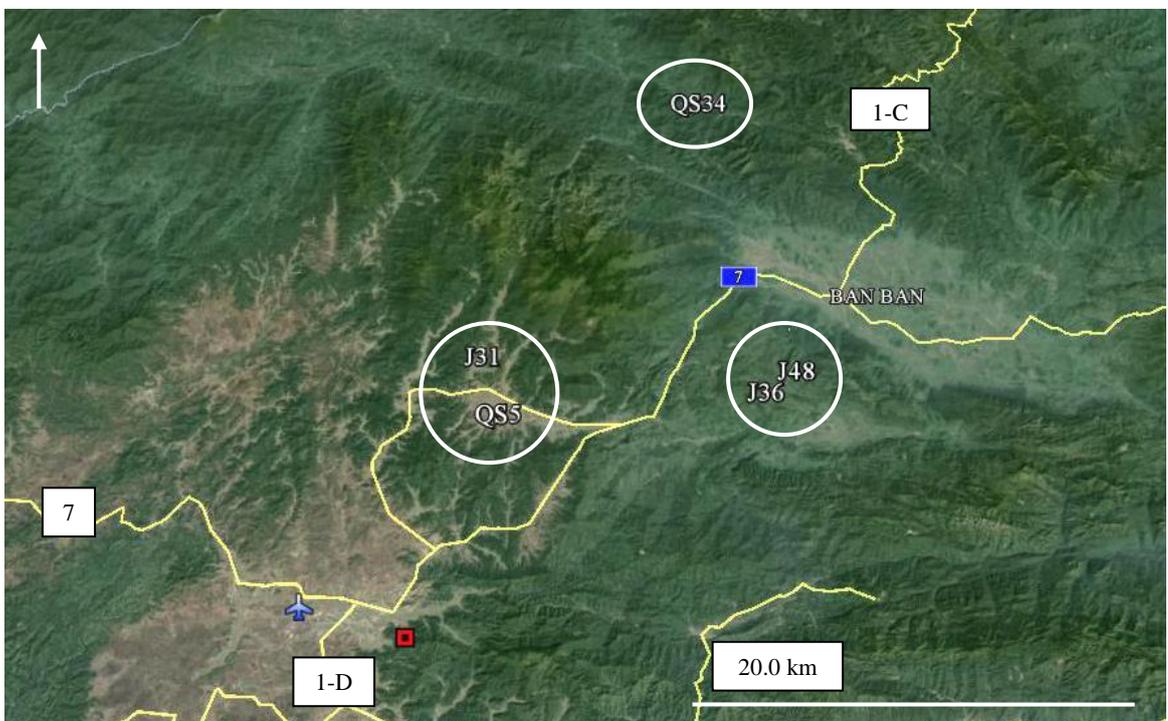


Fig. 6.40. J46. Jars at this site are in a state of fragmentation.
L. Genovese (2012).

Only one limestone jar (Fig. 2.14 Chapter 2.4) remains at QS47, although as recently as May 2012, at least two more units could be found at the site. The limestone rockface protrudes at the site and is close to the surviving jar. The site is located on a hillock, a 2 km steep walk from the village of Phou Huay Xang Kaen. It is likely that the limestone jars documented by Dussault in San Tiau (Table 4 Chapter 2.4) were located close to QS47.

6.2.9 QS5, J31, QS34, J36 and J48

QS5, J31, QS34, J36 and J48 (Map 6.20) are unusual in their remote settings and, with the exception of J36, for their low jar count, ranging from one single jar (J31 and QS34), to 11 jars (QS5) and 35 units (J36). Only two discs have been found, in QS5.



Map 6.20. Sites in Kham District.
GoogleEarth.

QS5 and J31 are set around 2 km from Route 7. Distances to Route 7 are 14 km for QS34 and 10 km for J36. J48 is located 1 km from Ban Gnotpiát village and 3 km from J46 (detailed earlier).

The common feature among these sites is their setting in close proximity to a village. QS5, for instance, consists of four groups of jars. The first group, totalling three jars (Fig. 6.41), is set in a vegetable garden in the village. It is not known if the jars in the village, which are in very poor condition, were formerly located on the hill. The remaining three groups are set on a hill, around 0.4 km from the village. They consist of eight jars (Fig. 6.42), both finished and partially-carved, and an unworked boulder measuring 240 cm (Fig. 6.43).



Fig. 6.41. QS5. One of three sandstone jars in a vegetable garden in the village. L. Genovese (2012).



Fig. 6.42. QS5. Finished and incomplete jars on a hill 0.4 km from the village. L. Genovese (2012).



Fig. 6.43. QS5. Block of sandstone 240 cm long on the hill, 0.4 km from the village. L. Genovese (2012).

QS34 consists of a single, dilapidated limestone jar (Fig. 6.44). It is one of the most isolated sites and the jar itself is located 13 km from Ban Tha village.



Fig. 6.44. QS34.
Fragmented limestone jar.
L. Genovese (2011).

It is likely that Dussault ventured as far as Ban Tha during his geological survey of 1912, to study⁴²⁹ the area's limestone deposits (Fig. 6.45). Dussault also indicated the direction to Ban Hin (Map 6.21), present-day QS22, a site of sandstone jars 19 km to the south (Chapter 6.2.8).

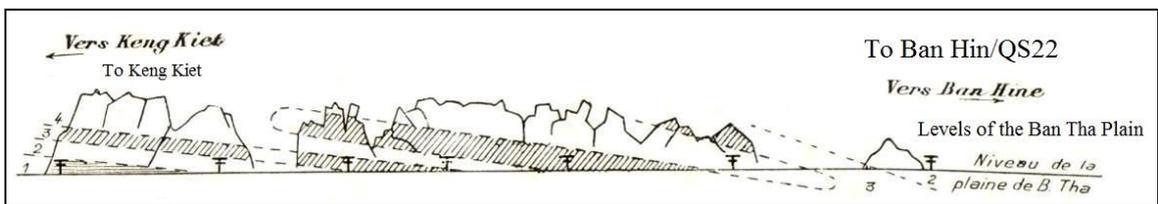
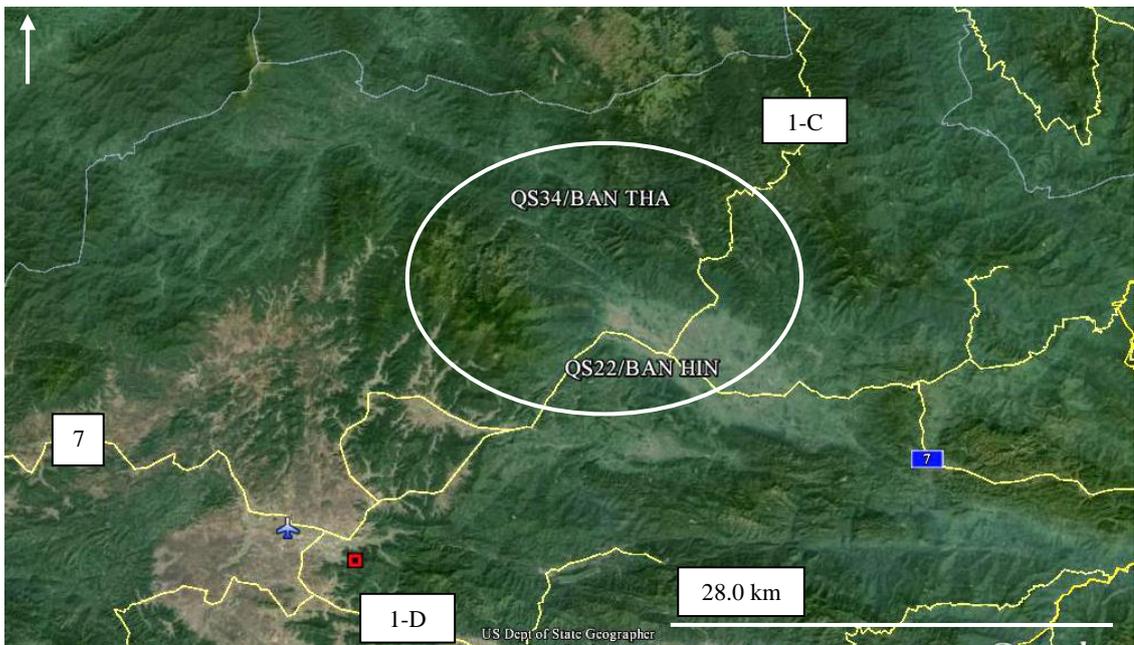


Fig. 6.45. QS34. Dussault's representation of limestone-rich Ban Tha.
Dussault 1919: 21, fig. 7.



Map 6.21. QS34 (limestone) studied by Dussault in 1912.
GoogleEarth.

⁴²⁹ Dussault 1919: 21.

The setting of J36 is unique. Its 35 jars in sandstone and limestone can be inspected via a circuitous journey entailing travel by bus or pick-up truck from Phonsavan to Ban Thajok, followed by a 10 km ride on a narrow unpaved road to Pakhom village and ending with a short trek to the jars. The site's remote setting presents monitoring challenges and the majority of the jars have suffered damage in recent years, because rice was cultivated in close proximity of the jars and holes are drilled into the jars (Fig. 5.36, Fig. 5.37 and Fig. 5.38, Chapter 5.2.3) to turn them into chicken coops. J36 is characterised by a unique feature, in that at least six of its 35 jars (17%) have been carved with a Recessed Inner rim. It is possible that more jars were historically carved with this type of rim but identification is negated by the dilapidated state of numerous jars. The site hosts some dwarf jars but none have been carved with a Recessed Inner rim.

J48 is located in an arid area. Although only one jar (Fig. 6.46 and Fig. 6.47) is found at the site today, at the time of my visit in 2012 villagers informed me that at least three more units could be counted at the site in recent months. The surviving jar is imposing, 150 cm high and carved with a Recessed Inner rim.

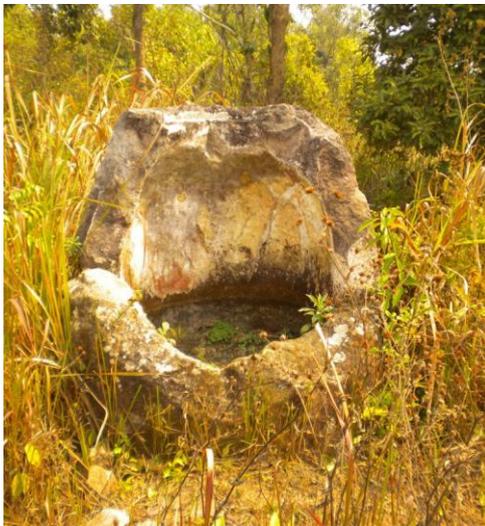


Fig. 6.46. J48. Large jar with Recessed Inner rim.
L. Genovese (2012).



Fig. 6.47. J48. Only one large unit remains at this site of conglomerate jars.
L. Genovese (2012).

6.3 Statistical Analysis

At the Plain of Jars, four sites host jar quantities in the hundreds: J41 (371), J1 (339), J3 (247) and QS35 (132). The remaining 48 sites discussed in this thesis house quantities ranging from one jar to a few dozens. Three quarries (Q10, Q14 and Q15) do not host any jars. In her study of Japan's Early Kofun Polities (mid-3rd to mid-4th centuries), Barnes has suggested that, where good data for settlement hierarchy is lacking, it is possible to hypothesize that tomb size acts as a proxy "for political centres and sub-centres".⁴³⁰ For the tomb at Hashihaka, for instance, with its size greater than two times the size of even the biggest medium-sized tomb, Barnes proposes that it may have acted as a primate centre, a leading centre whose size is disproportionately greater than other centres in an urban hierarchy. A similar assumption for the Plain of Jars would mean that large sites may have acted as leading sites, with size commensurate with their importance,

⁴³⁰ Barnes 2007: 136.

recalling Zipf’s analysis on predictability⁴³¹ and the possibility to arrange the largest sites based on their jar stock.

Table 13 provides a breakdown of the 52 sites by rock type, for jars and discs.

Table 13 – Sites, jars and discs by rock type (52 sites)

Rock type	Sites	%	Jars	%	Discs	%
Sandstone	37	71.2%	1527	87.8%	221	99.1%
Granite	7	13.5%	106	6.1%	1	0.4%
Limestone	4	7.7%	44	2.5%	0	0.0%
Conglomerate	3	5.8%	34	2.0%	1	0.4%
Breccia	1	1.9%	28	1.6%	0	0.0%
Total	52		1739		223	

Source: Database L. Genovese

Sandstone accounts for 87.8% (1527/1739) of the jars in the 52 sites, followed by granite (13.5%), limestone (7.7%), conglomerate (5.8%) and breccia (1.9%). Erosion has caused severe damage to limestone jars’ porous structure and has contributed to low jar quantities.

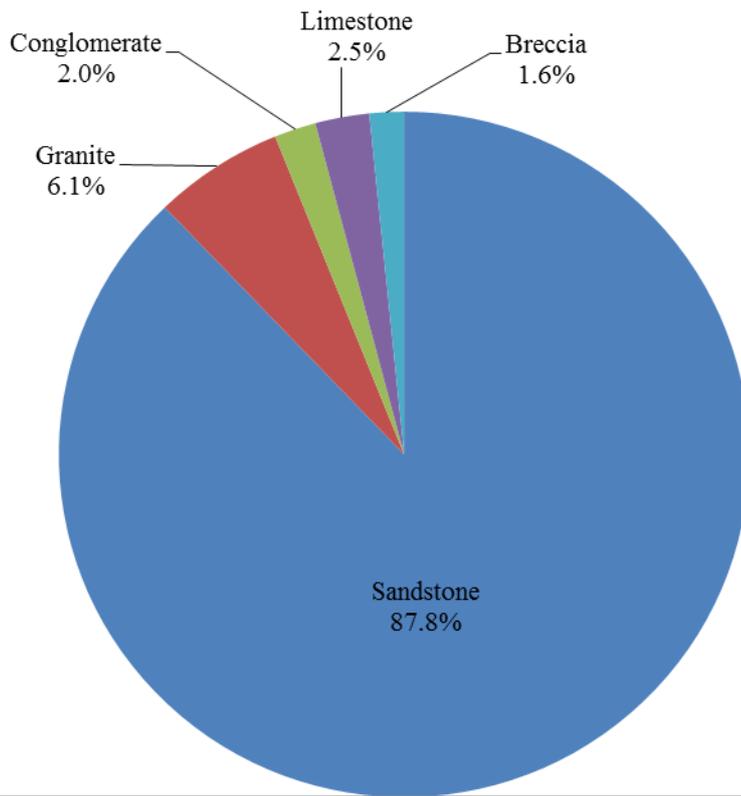
Despite abundant supplies, masons refrained from using mudstone. Also called mudrock, mudstone has an inherently weak structure and its non-use indicates a high degree of care in the selection of suitable rocks for the jars: “Attempts to construct a jar from these weak mudstones would have failed by regular fracturing along the well-defined bedding planes”⁴³².

Sandstone accounts for 99.1% (221/223) of all discs, followed by granite and conglomerate, each with 0.4%. No discs in limestone or breccia have been documented.

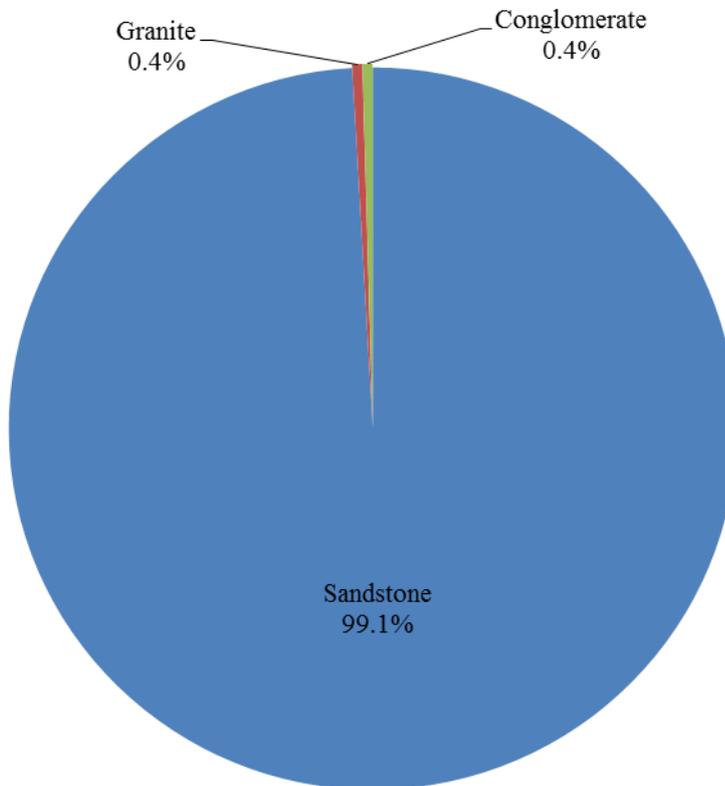
⁴³¹ Zipf 1949.

⁴³² Baldock 2008: 8.

Jar quantity by rock type



Disc quantity by rock type



For the statistical analysis, I will use the following tools:

- a. Histograms, to calculate individual and cumulative frequencies for a variable. The histogram tool requires that Bin numbers be specified, representing the intervals that the tool will use for measuring the input data. The single most-frequent score is known as the Mode of the data.
- b. Correlation analysis, to calculate the correlation coefficient and establish whether two or more sets of variables tend to move together. The value of any correlation must lie between -1 and +1. In a positive relationship, a high value in one variable is matched by a high value in the other variable. Conversely, a negative value would result from an increase in one variable not matched with an increase in the other variable.
- c. The value of r^2 (r squared) is a goodness-of-fit test of how linear is the relationship between two sets of variables. When r^2 equals 1.0, all points are set on a straight line, with no scatter.

The close proximity of manufacturing to resources has been observed at the Plain of Jars. Clustering can “result from a variety of different causes apart from the effects of uneven fieldwork and site survival. One of these is clustering due to the localisation of resources or the decision to build near an “important site such as a major town or religious centre”.⁴³³ Moreover, a survey of 118 archaeological sites on the eastern shores of Lake Urmia, NW Iran, found that “the selection of sites by the original inhabitants was at least partially based on a set of favorable environmental factors, such as distance to water or topographic setting”.⁴³⁴

Some of these theoretical considerations can be applied to the Plain of Jars, where the sites with the highest jar quantities are local to one or more sandstone quarries, located a few hundred metres to a few kilometres away. For instance, the masons transported several hundred jars over a distance of 9 km from Q21 to J1. Shorter distances were involved in the transportation of the sandstone jars from Q8 to J2 and J3. Several hundred sandstone jars at J41, in the Ban Phakeo group, were transported from three quarries less than 0.5 km away.

These considerations have implications for future studies on settlement patterns at the Plain of Jars, for it is evident that sites arose in close proximity of quarries, the prime consideration being access to sources of stone. Other considerations appear to have included trade routes, as has been discussed in the spatial analysis earlier in this chapter.

The current assumption is that discs may have been manufactured with rock from the same quarry as the jars. It is in this area that large discrepancies exist, where J1 and J41 house several hundred jars, but J1 (30 discs) houses fewer than a third of the 96 discs found at J41, even though the jar quantities are comparable between the two sites, being 371 jars for J41 and 339 jars for J1. We cannot discount the notion that the accessible position of J1 has contributed to its vulnerability to damage and misappropriation, while the remoteness of J41 has preserved its disc stock. However, low disc quantities may not be connected to physical settings or trade routes, but perhaps to cultural or ritual factors, which we ignore. Below I will discuss my reluctance for an assumption that links low disc numbers to their manoeuvrability and therefore removal from the archaeological site.

⁴³³ Hodder & Orton 1976: 85.

⁴³⁴ Niknami 2009: 261.

6.3.1 Histogram - Jar Quantities

The stone for the jars was sourced from various elevations. At times, the relationship between jar shape and raw material is evident, as in the block of stone (Fig. 6.48) at Q18, which suggests it could have been carved into one of the finished jars at QS17 (Fig. 6.49), if extraction and carving had proceeded to completion.



Fig. 6.48. Q18. Partially-extracted sandstone block, comparable to jar in Fig. 6.49 at QS17. Baldock 2008: photo 10.

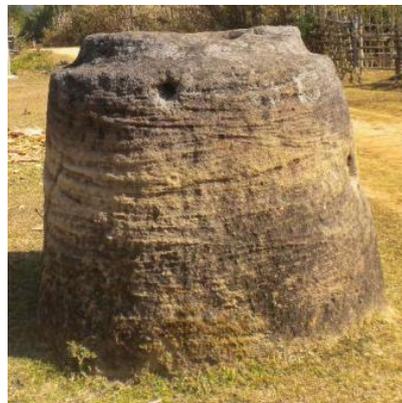


Fig. 6.49. QS17. Sandstone jar, compares to block in Fig. 6.48. L. Genovese (2011).

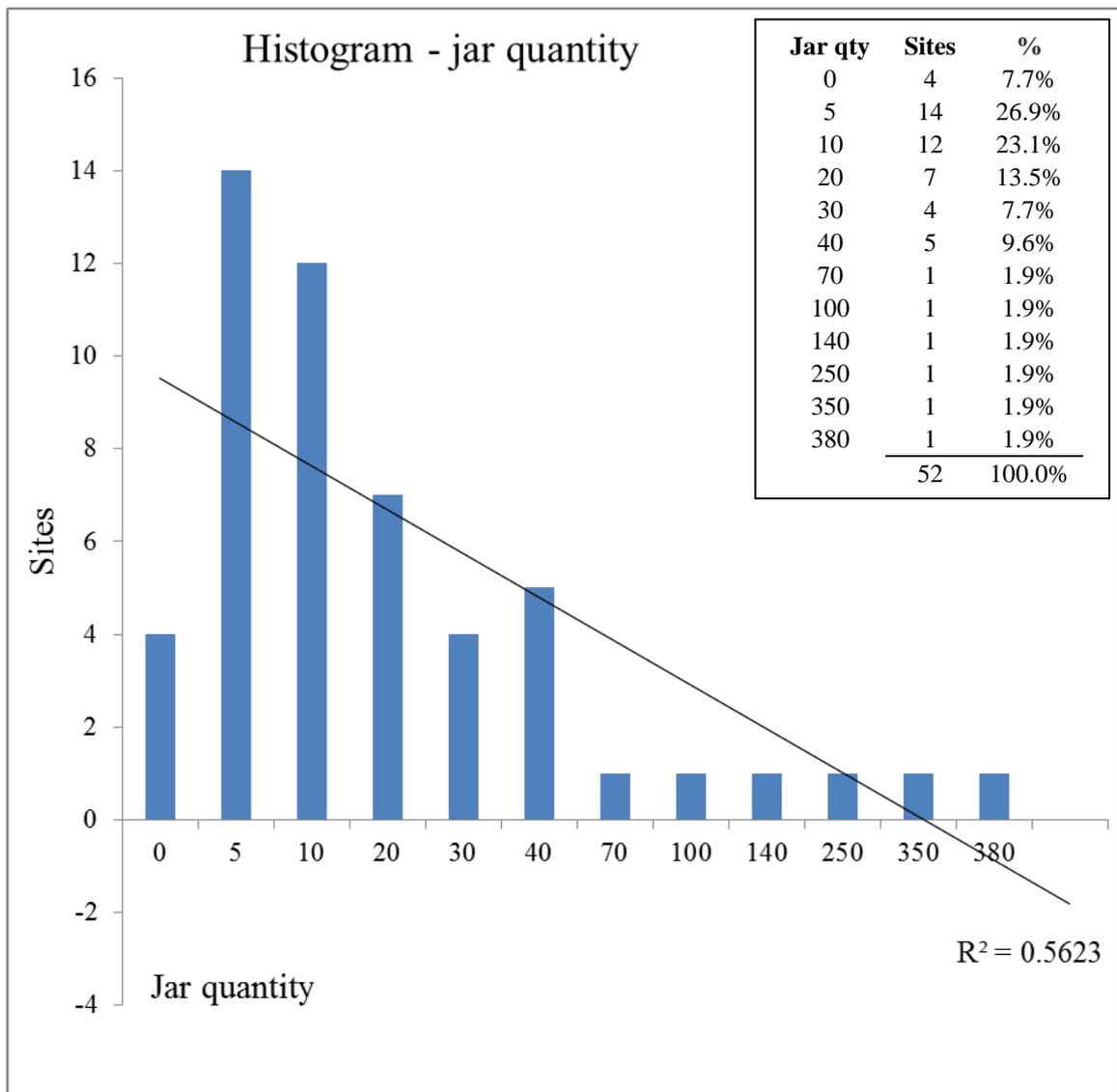
For the Jar quantity histogram, I have selected intervals that reflect the low jar count at numerous sites, between zero and 20 jars. The Mode of the data is 1-5 jars.

No jars have been encountered at four of the 52 sites (7.7%). Fourteen of the 52 sites (26.9%), or just over a quarter, stock between one and five jars, while 12 sites (23.1%) house up to ten jars. Seven of the sites (13.5%) have up to 20 jars, four sites (7.7%) host a maximum of 30 units and up to 40 jars are found at five sites (9.6%). Individual frequencies are encountered for jar quantities up to 70, 100, 140, 250, 350 and 380 units, each instance accounting for 1.9%.

The 14 sites with stocks up to five jars are a predictable outcome in a scenario where individual, densely-populated sites are at the opposite spectrum of numerous, thinly-populated sites.

The five sites with up to 40 units are more numerous than the four sites with up to 30 units, pointing at a critical mass but also to other factors, such as the function(s) the site might have fulfilled. The five sites in question are the quarry at Q12 (34 jars) in the Ban Phakeo group, the three hybrid sites of QS16 (36 units), QS17 (37 jars) and QS28 (33 jars) and J36 (35 units). With the exception of QS28, the other four sites have jar quantities between 35 and 37 units, verging towards the 40 units for my chosen interval. Three of the five sites are quarry-sites.

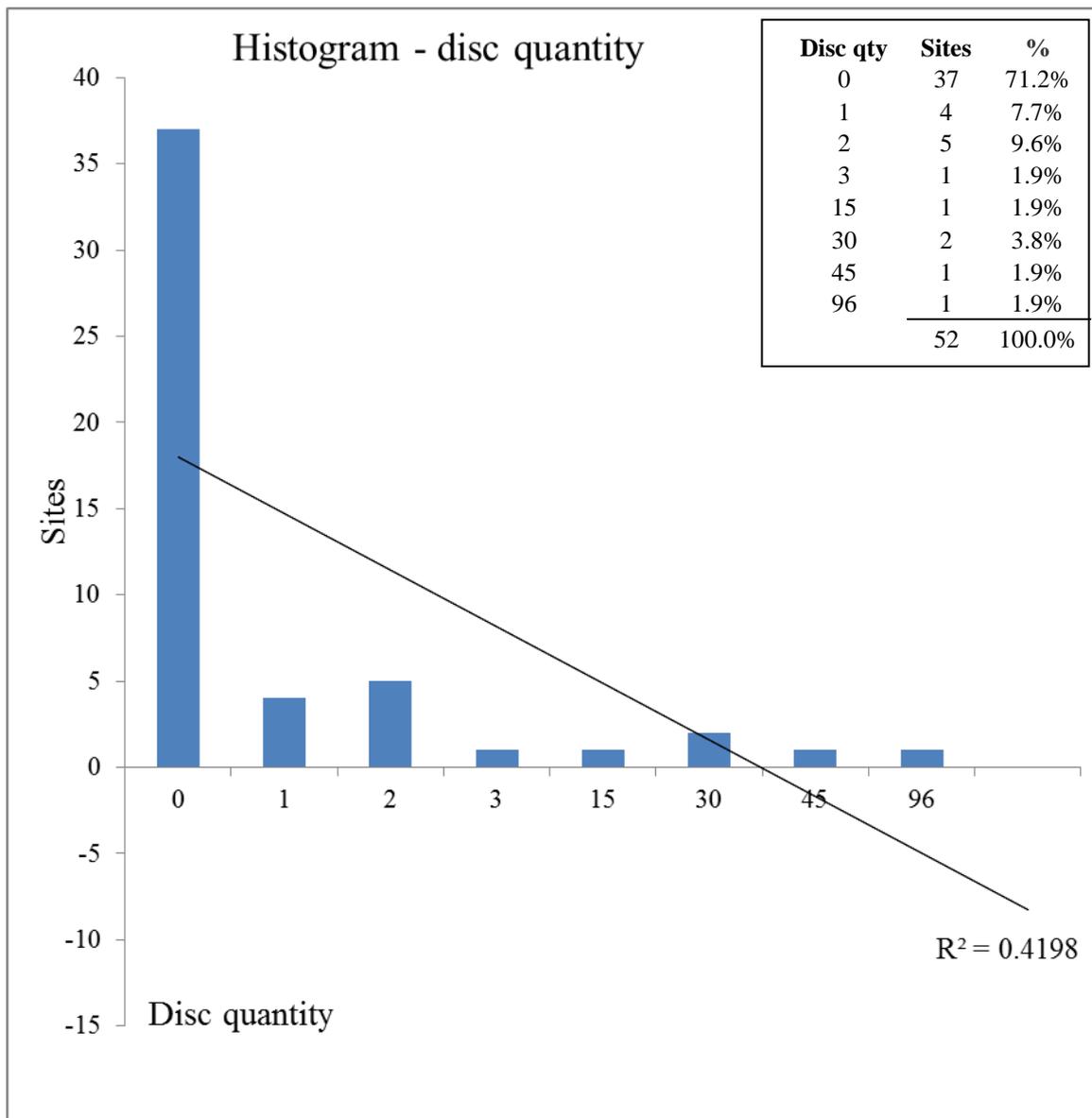
The R^2 value of 0.5623 is just over halfway between 0.0 (relationship is not linear) and 1.0 (linear relationship). A relatively high R^2 value indicates that the model provides explanations for a large proportion of the variability of the response data around its mean. The points on the chart are quite scattered. There is only a medium degree of confidence that we can predict the value of one of the variables, in this case, the quantity of jars at a particular site. There is a 43.8% possibility ($1.00 - 0.5623$) that our prediction will be erroneous.



6.3.2 Histogram - Disc Quantity

The histogram for disc quantities presents a radically different picture, in that 37 of the 52 sites (71.2%) do not host any discs. Four sites host one disc (7.7%), while another five sites (9.6%) house up to two discs. Four individual sites house respectively up to three, 15, 45 and 96 units, corresponding to 1.9% each. Two sites (3.8%) hold up to 30 discs.

The R^2 value of 0.4198 is less than halfway between 0.0 (relationship is not linear) and 1.0 (linear relationship), as confirmed by the scattered points. The inventory of discs is highly polarised. A low R^2 value indicates that the model fails to explain a large proportion of the variability of the response data around its mean. There is only a low-to-medium degree of confidence that we can predict the value of a variable, in this case, the quantity of discs at a particular site. There is a 58% possibility ($1.00 - 0.4198$) that our prediction will be erroneous.



Disc density is skewed and, unlike with the jars, there appears to be no central core where density is highest. The two sites with disc quantities up to 30 units (J1 and J51), the one site with up to 45 units (J3) and one site with up to 96 units (J41), have correspondingly high jar quantities, the only exception being J51, which hosts an equal number of jars and discs (21 of each). J41, in the Ban Phakeo group, enjoys the highest jar quantity and the highest disc quantity of the 52 sites under consideration.

Comparing the two sets of data, nine times more sites have zero discs than sites with zero jars (37/52 for the discs vs. 4/52 for the jars). The last three sites, with 30, 45 and 96 discs (total: 171 units), account for 76.7% of all disc quantities (171/223). There is polarisation in the jar quantities but it is more gradual, moving from four sites (4/52, or 7.7%) with zero jars (including several quarries), to a site with 371 jars (J41) via a middle section where quantities vary between 30 and 132. There is no definite middle section in the disc quantities. Although finished and partially-carved jars have been found at quarries, like the eight units at Q8 or the 23 units at Q6/Q21, discs have not been found at quarries, a notable exception being the two discs at Q12, part of the Ban Phakeo group. The polarisation in the disc quantities is thus significantly more pronounced than in the jar quantities.

Although only a few sites are known to have hosted discs which have since disappeared, such as the two granite discs documented at J38,⁴³⁵ formerly known as Song Méng, it is likely that historical quantities were broadly comparable to their current levels. Though, according to Barnes, ease of handling increases the likelihood of discs removed from a site,⁴³⁶ for more than a century it is the jars that have been removed, as first reported by Raquez in 1902⁴³⁷ and followed by numerous examples in recent decades.⁴³⁸ Two recorded instances of discs removed from their original location were at the hands of Colani. The first concerned the human-decorated unit in granite⁴³⁹ (Fig. 4.17 and Fig. 4.18 Chapter 4.7). The second involved the removal in 1940 of some decorated granite disc from J38 (Chapter 4.7, N177).⁴⁴⁰ Unlike the jars, which are often removed altogether, discs are liable to being deployed *within* a site, as demonstrated (Fig. 4.11 and Fig. 4.12 Chapter 4.6; Fig. 5.28, Fig. 5.29, Fig. 5.30 and Fig. 5.31 in Chapter 5.2.1).

Jars and discs are megalithic sculptures but jars have the additional ability to “hold” something, be it ash, grave goods or healing water.⁴⁴¹ A disc is far less imposing than a jar, which can reach a height of 3 m. With three known exceptions, jars are devoid of decoration or other form of “personalisation”, lending themselves to individual interpretation. The function and meaning of discs is as undefined today as it has been for over a century, since they were first reported. The supposed function of a jar, however, can be extrapolated from its shape and aperture, as repository for reliquaries, water or even human remains.

The aperture on the jar connects with other objects in everyday life, from domestic settings (cups or drinking glasses) to ritual places (a fount for holy water in a Christian church). The individual can “interact” with a jar. Personal beliefs, aspirations or petitionary prayers can be expressed near a jar, as when visitors drop coins (Fig. 6.50 and Fig. 6.51) into the sandstone jar on display at the temple-museum of Wat Phra Kaew in Vientiane. With a jar, it is possible to replicate practical and ritual tasks familiar to the visitor, an opportunity difficult to accomplish with a stone disc.



Fig. 6.50. Wat Phra Kaew temple-museum, Vientiane. Sandstone jar originally from J1. L. Genovese (2011).



Fig. 6.51. Visitors regularly drop coins and banknotes into the sandstone jar in Fig. 6.50. L. Genovese (2011).

⁴³⁵ Colani 1935a, v1: 167, 211.

⁴³⁶ Communication from Gina Barnes, April 2014.

⁴³⁷ Raquez 1902: 379.

⁴³⁸ See, for example, the jars at the National Museum in the Lao capital, or the jar airlifted to the USA and now in the inventory of the Smithsonian Institution, or the 10 sandstone jars on display in the grounds of the Department of Information, Culture and Tourism in Luang Prabang city.

⁴³⁹ Colani 1935a, v1: 9, 164 (fig. 76), 184, pl. LVI.

⁴⁴⁰ CEFEO 1940/Q3: 11.

⁴⁴¹ At J25, for example, the water from a jar is believed to cure sick children.

On the basis of the above comments, I suggest that it is likely that low or zero disc quantities may be an historical feature for numerous sites at the Plain of Jars.

6.3.3 Correlation - Altitude and Rock Type

The Correlation coefficient has been calculated as follows:

- 1) A numerical identification has been assigned to rock types, as indicated.
- 2) Altitude has been inserted in metres.
- 3) The Correlation value has been calculated in Excel (CORREL function).

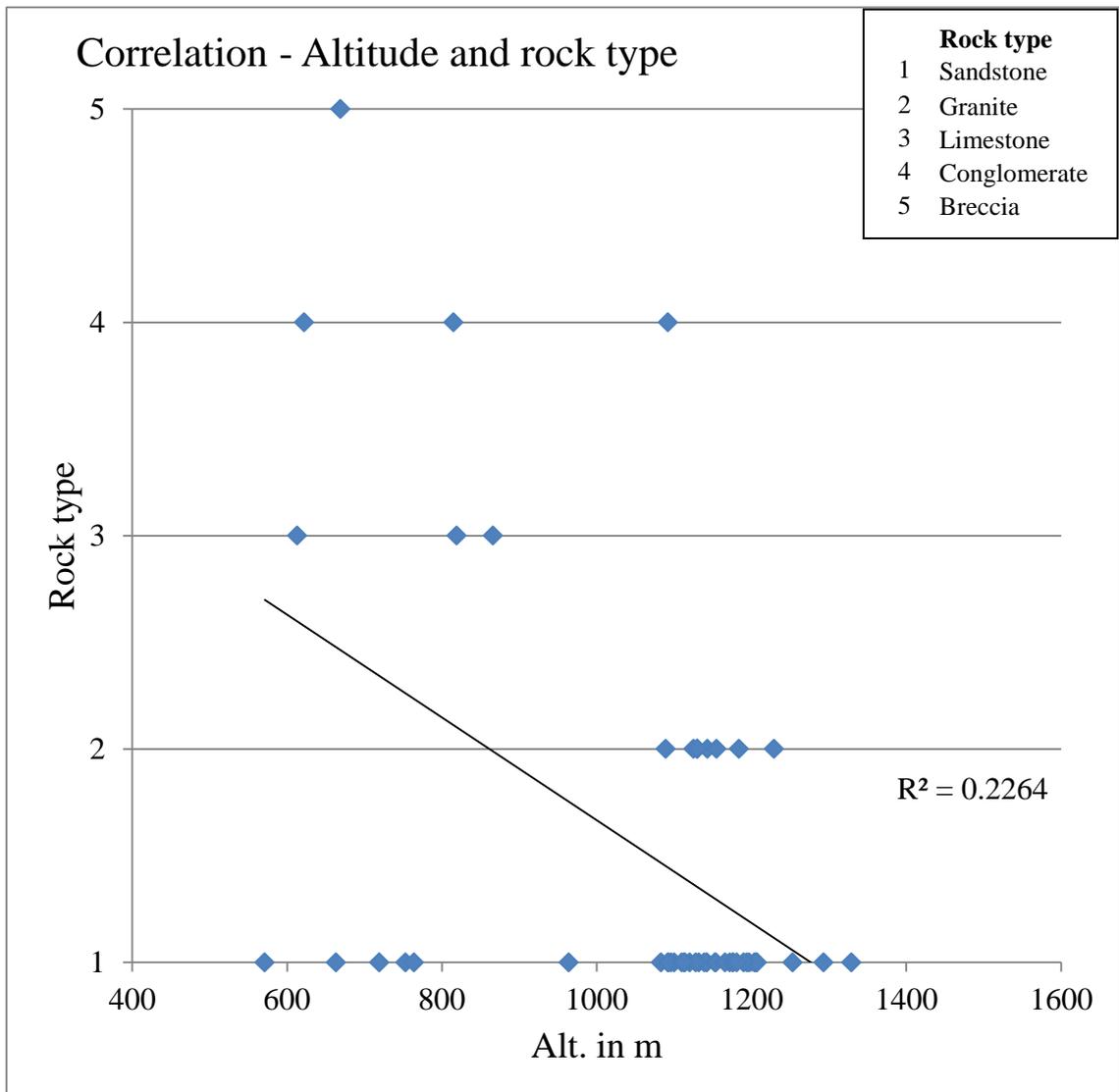
The Correlation index is -0.476, indicating a negative relationship.

The R^2 value of 0.2264 (22.64%) is materially removed from 100% and the model fails to explain a large proportion of the variability of the response data around its mean. The points are not aligned on a straight line but are scattered. There is a very low degree of confidence of being able to predict the value of a variable, with a 77.36% possibility ($1.00 - 0.2264$) of erroneous prediction.

At altitudes of 500-800 m, masons could harvest limestone, conglomerate and, in one single instance, breccia (QS23), formed when rocks are crushed in fault zones. The Kham District area is characterised by hot temperatures all year round, even when the rest of the province enjoys cooler weather in the winter months. Several of the sites in Kham are set in inhospitable areas with difficult access. Wildlife was known to dwell in the area in recent years.

At 900-1000 m, these same rock types are found but no breccia, and above 1000 m, sandstone is prevalent, followed by granite and conglomerate. Higher altitude, therefore, results in fewer and different rock types but with abundant sandstone, which carried the potential to carve thousands of jars from this relatively soft stone. These findings are consistent with the geological survey carried out in 2008, which concluded that: “all structurally massive jars are located above 1100m. No massive jars are located on the Plain or in the low lying north eastern district of Kham”.⁴⁴²

⁴⁴² Baldock 2008: 5.



6.3.4 Correlation - Altitude and Jar Quantity

The Correlation coefficient has been calculated as follows:

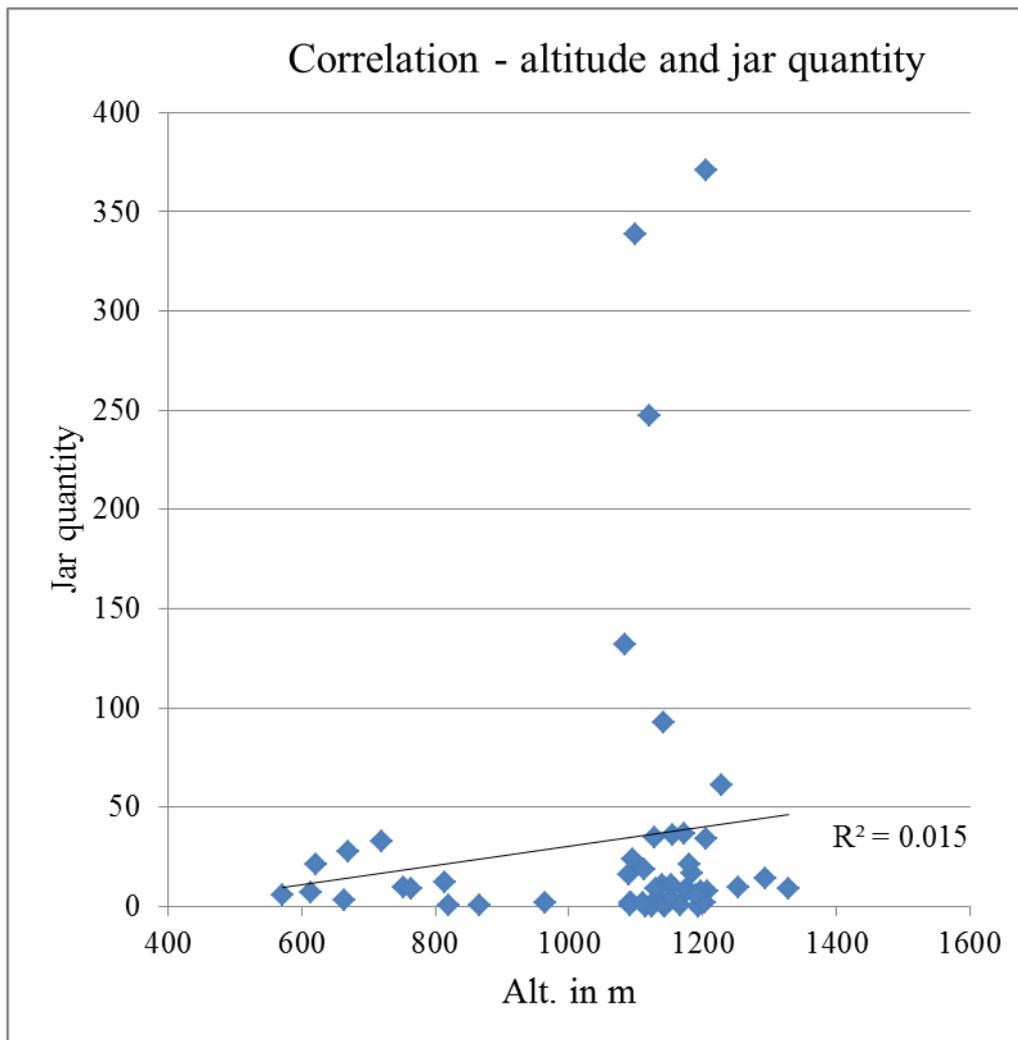
- 1) Altitude in metres, as per previous correlation.
- 2) Jar quantities in units, including zero values.
- 3) The Correlation value has been calculated in Excel (CORREL function).

Correlation coefficient: +0.108.

A positive relationship exists, with jar quantities increasing at higher altitudes. This is consistent with the earlier graph (Altitude and rock type), where sandstone is prevalent at high altitudes. The density is highest between 1100-1200 m, where the majority of the sites are located. The positive relationship is consistent with the largest quarries at the Plain of Jars, set at altitudes between 1176-1200 metres and all of them sources of sandstone.

The R^2 value of 0.015 confirms that the model explains a small proportion of the variability of the response data around its mean. The points on the chart are quite scattered. There is only a low

degree of confidence that we can predict the value of one of the variables. There is a 98.5% possibility ($1.00 - 0.015$) that our prediction could be erroneous.



6.3.5 Sandstone Quarries and Jar Density

The 1107 sandstone jars (Table 14) represent 63.7% of the total jars for the 52 sites in question. It is therefore difficult to overestimate the influence of altitude, and consequent access to abundant sources of sandstone, on jar density.

Table 14 – Sandstone quarries

Quarry	Rock type	Alt. in m	Source of rock for	Total jars
Q9/Q10/Q12 ¹	Sandstone	1200	QS11, J41 & QS44	426
Q21	Sandstone	1176	J1 ² & J43	341
Q8	Sandstone	1207	J2 & J3	340
Total for five sandstone quarries				1107
% out of 1739 jars for all 52 sites (Table 1 Ch. 1.9)				63.7%

¹ The total of 426 jars include 10 units at Q9 and 34 units at Q12

² A few conglomerate jars are found at J1

Source: Database L. Genovese

6.4 Jars in transit

There is a chronological consideration for jars “in transit”, generally small groups of jars which can be added to a main site, only if discovered at the same time as a large group in its vicinity. If discovered later, these jars in transit will be classed as stand-alone sites, with the inherent anomaly that they carry more importance than may have been intended. Conversely, analysing these transit jars within a main site can devalue their original importance if intended as independent groups from larger assemblies.

6.5 Three sites with the highest jar quantity

Three locations totalling 957 jars are detailed in Table 15. Collectively, they are responsible for 55.0% of all jars, with the remaining 49 sites totalling 45.0%.

Table 15 – Jars and discs at the three largest sites

Site	Rock type	Jars	%	Discs	%	Quarry	Distance
J41 (Paek)	Sandstone	371	21.3%	96	43.0%	Q9/Q10/Q12	0.5 km
J1 (Paek)	Sandstone	339	19.5%	45	20.2%	Q21	9 km
J3 (Phaxay)	Sandstone	247	14.2%	30	13.5%	Q8	1.2 km
Total for 3 sites		957	55.0%	171	76.7%		
Remaining 49 sites		782	45.0%	52	23.3%		
Total for 52 sites		1739		223			

Source: Database L. Genovese

Two of the locations are in Paek (J1 and J41), while J3 is in Phaxay. The three sites share several features. They are served by one or more large quarries and, with the exception of a few conglomerate jars at J1, sandstone has been used throughout. In all cases, the source of rock has been established with certainty, respectively Q9, Q10 and Q12 for J41, Q21 for J1 and Q8 for J3.

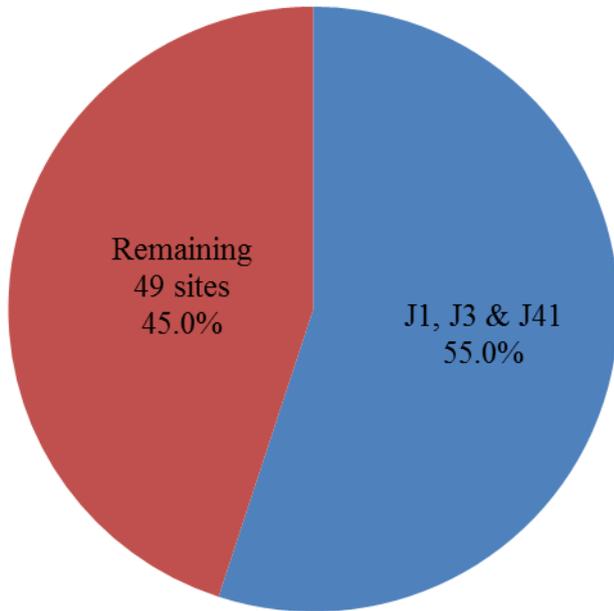
However, each site is also characterised by individual features. For instance, there is considerable disparity in the distance from quarry to field: 9 km from Q21 to J1, 1.2 km from Q8 to J3 but only a few hundred metres separate J41 from its quarries. Furthermore, whereas J1 is located on relatively flat terrain close to historical routes, J3 and J41 are set in relatively isolated areas.

The capacity of Q8 was of the same order as Q21, in that it also served J2 (93 jars). Therefore, the jars carved with sandstone from Q8 amount to 340 (Table 14 Chapter 6.3.5), virtually identical to the 339 jars at J1 quarried from Q21.

Some conclusions can be drawn. First, a distance of up to 9 km from quarry to field had little or no impact on total jar quantities because the masons had mastered the skills to transport the finished jar to its final destination. Second, if access to sources of stone was the primary consideration, doubts are cast over the supposition that sites arose near settlements. Third, if J1 arose because it is situated close to historical trade flows, it is difficult to see how these same trade flows could have influenced J3, located 21 km from the main road, or J41, located 9 km from the main road.

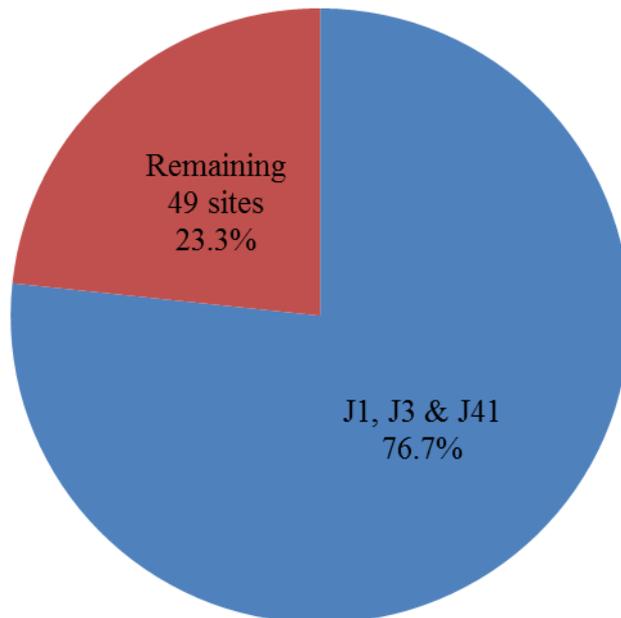
Jars at the three largest sites

- J1, J3 & J41
- Remaining 49 sites



Discs at the three largest sites

- J1, J3 & J41
- Remaining 49 sites



6.6 Five single-jar sites

The five single-jar sites in Table 16 constitute 9.6% of all the sites in this database (5/52) and account for 0.3% of all jars (5/1739).

Table 16 – Five single-jar sites

Site	District	Jars	Discs	Rock type	Quarry	Distance from quarry
J19	Paek	1	0	Sandstone	Unknown	Unknown
J31	Paek	1	0	Sandstone	Unknown	Unknown
QS34	Kham	1	0	Limestone	Unknown	Unknown
QS47	Kham	1	0	Limestone	Unknown	Unknown
J48	Kham	1	0	Conglomerate	Unknown	Unknown
5 sites		5	0			
5 sites as a % of 52 total sites (Table 1 Ch. 1.9)					9.6%	
5 jars as a % of 1739 total jars (Table 1 Ch. 1.9)					0.3%	

Source: Database L. Genovese

The five sites share several features. They are all isolated and relatively difficult to visit, often at considerable distance from a main road and are close to villages where the population amounts to a few hundred souls at most. Identifying the source of rock for the jars has presented difficulties and no discs have been documented at any of the sites.

The five sites are spread over two districts (Paek and Kham) and host jars carved in three different rock types (sandstone, limestone and conglomerate).

It is possible that the individual sites' historical quantities were higher. Methods of verification can include canvassing the villagers, as a first port of call for an assessment of any jars that might have disappeared in recent years, like the villagers' report (Chapter 6.2.8) that two limestone jars have disappeared from QS47 in recent months. In recent years, a similar fate has befallen at least three jars at J48 (Chapter 6.2.9).

Ground surveys, another method of verification, could reveal the presence of large-size fragments but this is a costly and labour-intensive approach with uncertain outcomes, due to the villagers' reluctance to admit that fragments of jars, or indeed the jars themselves, have been employed in domestic or farming settings. The area around these individual jars has not been examined for the presence of large-size fragments to establish whether the jars were carved where they are found today, rather than at the quarry or other workshop.

Since the source of rock for these five sites has yet to be established, we cannot calculate the distance travelled by the jars from the quarry, but there are no known major quarries in the vicinity of any of the single-jar sites.

Lack of knowledge about the source of rock precludes estimates as to whether the masons exploited the quarry's full potential. Because of the minimal jar count at these sites, little consideration has been given to the possibility that the single jar they hold today could have been transported from a larger site.

We should also consider the possibility of flawed classification, where stand-alone status has been assigned to jars "in transit" to a main field. For example, in Phoukood District a distance of 0.9 km separates the site at San Phu Niathau (one jar) from Ban Chomsy (nine jars and one disc),

while the other single-jar location at Ban Naséo is 2 km from J37 (eight jars). Also, the example at QS5 (Fig. 6.41, Fig. 6.42 and Fig. 6.43, Chapter 6.2.9) confirms that jars currently located in domestic or industrial settings may have been dislodged in recent years.

The discussion on the five single-jar sites serves perhaps as a reminder of the drawbacks inherent in focusing on the large elements in a study, at the expense of numerous small components.

CHAPTER 7

THE PLAIN OF JARS IN THE CONTEXT OF SOUTH AND SOUTHEAST ASIAN ARCHAEOLOGY

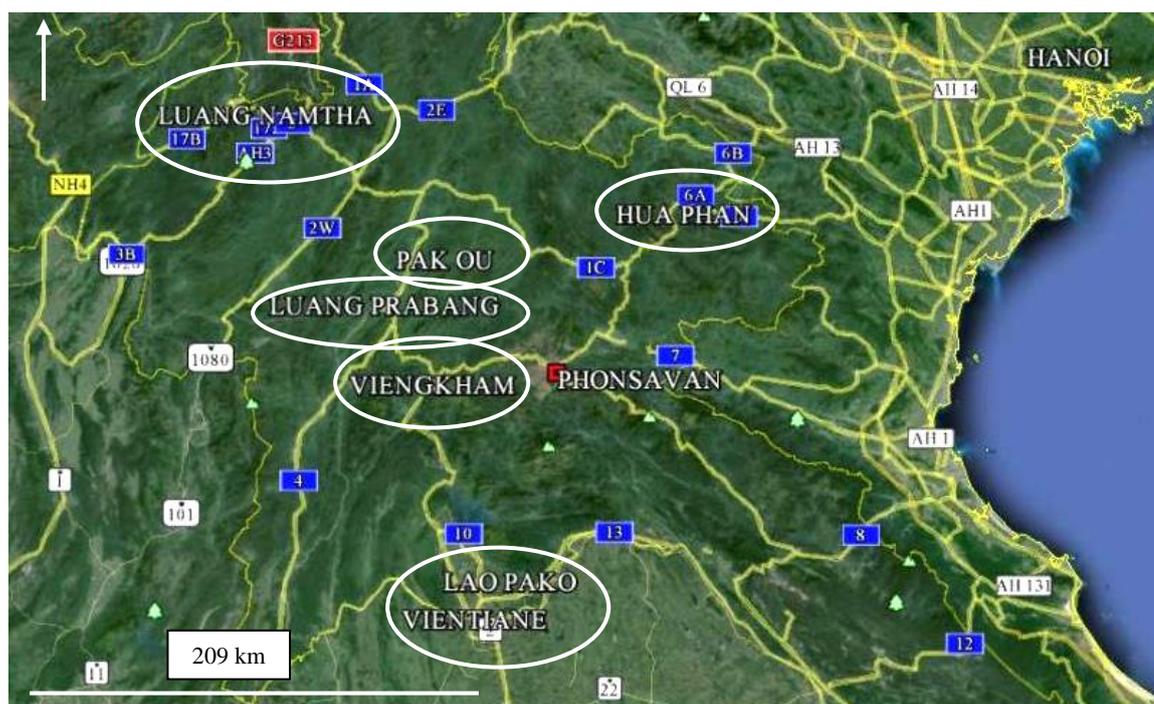
Stylistic comparisons are used less frequently now but theorists maintain that visual analogy to arrive at typological identification is still a valid tool which continues to serve its purpose: “Even if today we do not place much emphasis on the particular form of artifacts as a reliable chronological indicator, it remains true that these were and are the basic means by which humans act upon the external world.

- C. Renfrew & P. Bahn. *Archaeology: Theories, Methods and Practice*, 2004: 317.

This chapter connects the Plain of Jars with other megalithic sites, and related material culture, in South and Southeast Asian archaeology.

7.1 Laos

Within Laos (Map 7.1), a comparative analysis can be carried out on the stone artefacts and the material culture. Most of the stone jars are found in Xieng Khouang and Luang Prabang Provinces. In Hua Phan Province only standing stones are found but a comparison of stone discs bears useful results. In Luang Namtha Province, the megaliths consist of decorated standing stones still different from the plain stones in Hua Phan. There are no stone jars or standing stones in Lao Pako but affinities in the material culture have been documented.



Map 7.1. Luang Namtha, Luang Prabang, Hua Phan and Vientiane Provinces, with Lao Pako. Shown also are the districts of Pak Ou and Viengkham, Luang Prabang Province. GoogleEarth.

7.1.1 Luang Prabang Province

In February 2014, Norseng Sayvongdouane, Deputy Director of the Department of Culture, Luang Prabang Province, allowed me to inspect some stone artefacts stored in the city's museum. The artefacts had been collected from the province's Pak Ou and Viengkham Districts and it is my understanding that they have never been on public display. Both districts enjoy good

connections with national roads, including Route 7 east to Xieng Khouang (and thence to central Vietnam) and Routes 10 and 13 south to Vientiane and Lao Pako.

A stone drum (Fig. 7.1), found in Pak Ou, is decorated with spirals and a rayed sun enclosed in a circle. Lines bordered by an 'S' shaped motif (Fig. 7.2) have been etched perpendicular to this circle. A simple inverted 'V' pattern (Fig. 7.3) has been incised all around the drum's edge. Another stone drum, also from Pak Ou, was stored in the same cabinet at the museum but I was unable to properly document it. Both stone drums bear remarkable similarities to a stone drum retrieved from Luang Prabang Province and stored at the National Museum in Vientiane capital city (Fig. 7.18 Chapter 7.1.3).



Fig. 7.1. Pak Ou District, Luang Prabang Province. Decorated stone drum (10 cm scale).
L. Genovese (2014).



Fig. 7.2. 'S' shaped spirals and rayed-sun motif (Fig. 7.1 detail).
L. Genovese (2014).



Fig. 7.3. Pattern on the border of a stone drum (Fig. 7.1 detail).
L. Genovese (2014).

At the Luang Prabang Museum, I was also shown two lightly-decorated stone artefacts from Viengkham District. The first consists of a reddish block of stone, light enough for me to lift. The block is unworked, with the exception of a central area on the upper face, decorated with a hand-

drawn circle encased within a pattern of multiple-pointed motifs (Fig. 7.4). The Lao script below this central section states that the block of stone was “found in Paviengkham in 1983”.⁴⁴³

The second artefact, also from Viengkham District, resembles a zoomorphic figure, possibly a turtle (Fig. 7.5), with a ‘zig-zag’ motif (inset) etched on the head. Although it has not been established whether the figure on the stone is man-made or a natural occurrence, the villagers in Viengkham District deemed this block to have special qualities and asked the authorities to remove it from its original location for safekeeping in the provincial capital’s museum.



Fig. 7.4. Viengkham District, Luang Prabang Province. Stone block decorated with circle and modern Lao script (10 cm scale). L. Genovese (2014).



Fig. 7.5 Viengkham District, Luang Prabang Province. Zoomorphic figure with ‘zig-zag’ motif etched on the head (10 cm scale). L. Genovese (2014).

7.1.2 Hua Phan Province

Hua Phan is deemed to be “the birthplace of the Lao People's Democratic Republic”,⁴⁴⁴ after Pathet Lao forces based themselves in the province during the Second Indochina War. Hua Phan borders Xieng Khouang and Luang Prabang Provinces and, like Xieng Khouang Province, it has an international border with Vietnam.

Though contiguous, the landscapes of Hua Phan and Xieng Khouang are markedly different. Xieng Khouang is characterised by the central plateau of Tran Ninh, while most of Hua Phan is densely forested, hosting the national biodiversity conservation area of Nam Xam (850 m) and

⁴⁴³ I am grateful to Manithaphone Mahaxay (Noi) for help in translating this text.

⁴⁴⁴ Northern Uplands Development Program (NUDP), <http://www.nudplao.org/where-we-work/houaphan-province> (accessed June 2014).

the national protected area of Nam-Et Phou Louey (1000 m). A number of ethnic groups dwell in Hua Phan, including Lao-Tai (56%), Mon-Khmer [Khmhu] (18%) and Hmong-Mien (26%).⁴⁴⁵

The province is relatively easy to access from Xieng Khouang Province or from North Vietnam, but journeying there in Colani's times presented severe logistical challenges, with two weeks required to reach Hu Phan from Hanoi in January 1933,⁴⁴⁶ a distance of 300 km. Dussault, Colani's contemporary at the GSI, carried out a geological assessment of the area.⁴⁴⁷

The study of the standing stones (Fig. 7.6 and Fig. 7.7) of Hua Phan was not part of Colani's original research mandate from the EFEO but after several missions to the Plain of Jars, she sought to widen her remit and approached Cœdès for the necessary resources "to research other groups of monoliths".⁴⁴⁸ This approach exemplifies her belief that jars and standing stones are best studied in the wider megalithic context of north Laos.

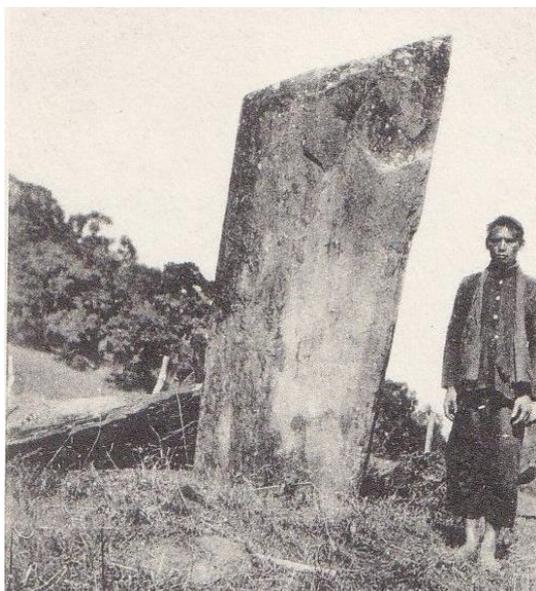


Fig. 7.6. San Kong Phan, Hua Phan. Menhir, 340 cm tall. Colani 1935a, v1: pl. IV.

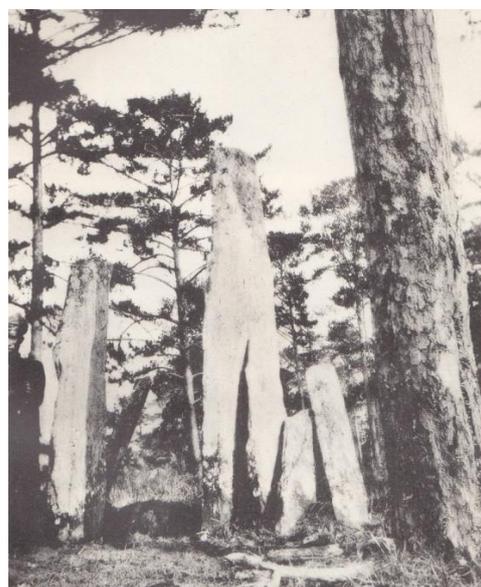


Fig. 7.7. Hua Phan. Menhirs at Tham Ban, a site of 51 menhirs and 30 discs. Colani 1935a, v1: pl. VIII.

The sites Colani surveyed were: San Kong Phan, Kéo Hin Tan, Tham Ban, Phac Ko Mong, Dong Mut, Kang Dong, Keo Bouac Khouai and Vieng Noc Khoum. The location of some of these sites is shown in Map 7.2 but the historical names have since changed. The richest assemblages were retrieved from Kéo Hin Tan, San Kong Phan and Dong Mut. Human remains (bones and teeth) were found only at San Kong Phan. At Dong Mut, Colani collected pottery vessels, some small lime containers in bronze and a few items of relatively modern manufacture.

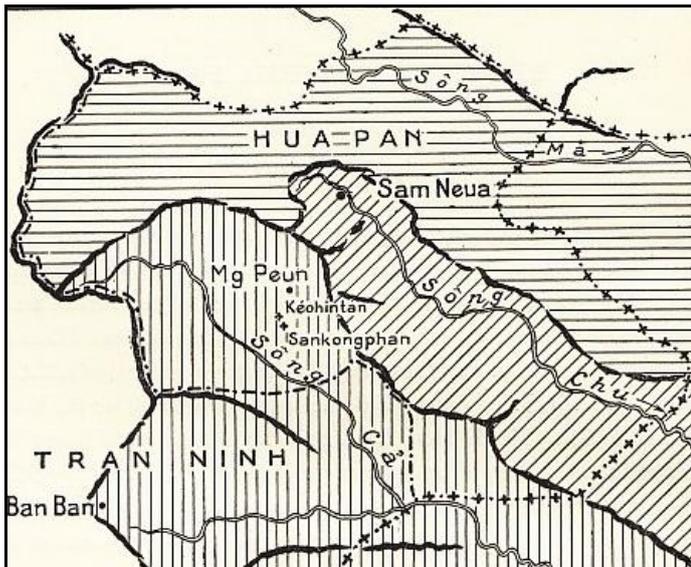
Colani highlighted affinities in grave goods between the Plain of Jars and Hua Phan. Objects similar to both areas include pendants (Fig. 7.8 and Fig. 7.9), which she retrieved from several sites at Hua Phan but also from the Plain of Jars, mainly at J1 (Fig. 7.10) and QS22 (Fig. 7.11). The pendants from Hua Phan have a dia. of 30-40 mm, are 8-10 mm thick and are nearly always decorated on both faces with a star.

⁴⁴⁵ Northern Uplands Development Program (NUDP), <http://www.nudplao.org/where-we-work/houaphan-province>, accessed June 2014.

⁴⁴⁶ BEFEO 1933: 1138.

⁴⁴⁷ Dussault 1920.

⁴⁴⁸ Colani 1935a, v1: 5.



Map 7.2 - Hua Phan, with Sam Neua as its provincial capital. Colani 1935a, v1: map IV. Map originally drawn up by Dussault and printed in his 'Exploration géologique de la Province de Sam Neua', *BSGI*, 9/2, 1920.

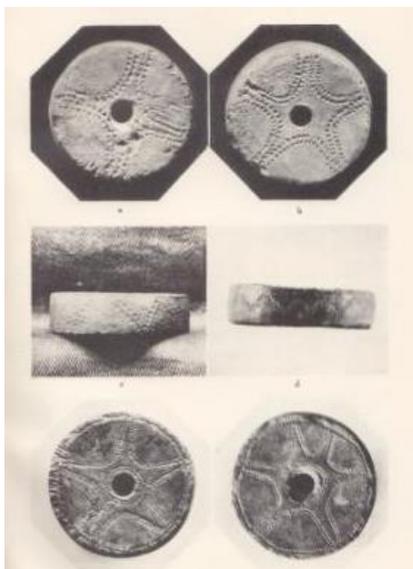


Fig. 7.8. Hua Phan. Pendants. Colani 1935a, v1: pl. LXVIII.



Fig. 7.9. Hua Phan. Pendants. Colani 1935a, v1: pl. LXIV.

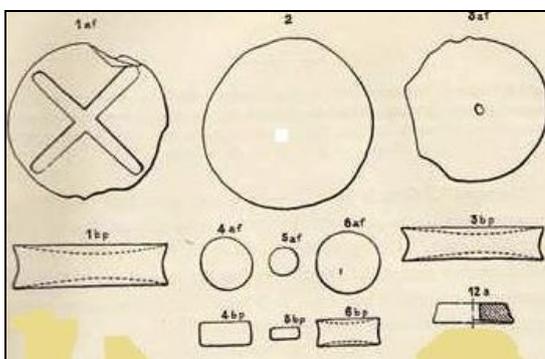


Fig. 7.10. J1. Pendants. Colani 1935, v2: 45, fig. 160.



Fig. 7.11. QS22. Perforated pendant. Colani 1935a, v2: pl. LXXI.

Colani formed the view that the pendants found at Kéo Hin Tan, San Kong Phan and Dong Mut were contemporaneous with the menhirs: "Judging by their appearance, these pendants date back to the same period as the menhirs. Despite the manufacturing differences, they

appear contemporaneous”.⁴⁴⁹ Pendants similar to those recovered in Hua Phan have also been documented at Samròng Sèn in Cambodia. Despite excavations limited to eight fields, the quantity and variety of pendants Colani recovered from Hua Phan is far greater than pendants she collected from her numerous Plain of Jars excavations.

More recently, the standing stones have been studied by Thongsá Sayavongkhamdy, as part of a project sponsored by the Lao Ministry of Information and Culture, Department of Museums and Archaeology.⁴⁵⁰ Subsequent studies have also been undertaken by Anna Källén.⁴⁵¹ In recent years, focus on Hua Phan has shifted from archaeology to ecotourism.

I have arranged Colani’s data in Table 17.

Table 17 – Historical fields of menhirs in Hua Phan Province

Name	Rock	Surface finds	Burial pits	Menhirs	Discs
Kéo Hin Tan and neighbouring fields	Mica schist	Bronze ring, pendants, pots, sherds	Bronze container, pendants, pots, decorated sherds	147	25
San Kong Phan and neighbouring fields	Mica schist	Pendants, pots, sherds	Bronze jewellery, pots, sherds, bones, teeth	119	75
Dong Mut and neighbouring fields	Mica schist		Bronze lime container, bronze rings, decorated bronze lid, pendants, pots, glass beads, sherds, Chinese vase fragments ¹	45	5
Tham Ban	Mica schist	Sherds		51	30
Kéo Bouac Khouai	Mica schist	Sherds		14	4
Phac Ko Mong	Mica schist	Sherds		12	2
Kang Dong	Rhyolite			9	
Vieng Noc Khoum	Mica schist			1	1
Approximate totals				398	142

Source: reconstructed by L. Genovese

¹ Colani (1935a, v1: 42) found similarly decorated fragments at Ban Na Kho/Site 2, Plain of Jars

Though the 398 menhirs and 142 discs cannot be confirmed with absolute certainty, they are materially more accurate than the quantities reported by recent studies.⁴⁵² The totals in Table 17 are likely to be understated, since Colani admitted being unable to reconstruct into whole units the considerable quantity of fragmented menhirs. Moreover, at times groups were not quantified, as in the case of the “seven groups of a few menhirs, each forming a small field of its own”⁴⁵³ found along the footpath that connects Kéo Hin Tan with Ban Koute.

The height of menhirs, not taking into account the portion sunken into the ground to keep them upright, is between 40 and 350 cm. The thickness shows great variety, ranging from 4 cm (San Kong Phan) to 45 cm (fields near Dong Mut). The rhyolite menhirs of Kang Dong are thicker

⁴⁴⁹ Colani 1935a, v1: 81.

⁴⁵⁰ Sayavongkhamdy 2002.

⁴⁵¹ Källén 2006 and Källén 2013.

⁴⁵² Both Keosopha (2006: 148) and Murphy (2010: 370) report 150 menhirs for the Hua Phan sites.

⁴⁵³ Colani 1935a, v1: 45.

than the mica schist units in the other fields. None of the Hua Phan menhirs are decorated and the sides are at times coarsely shaped.

On the ground, among the tall grasses, Colani found “large and very thin discs of schist”,⁴⁵⁴ larger than most of the supposed jar “lids” documented at the Plain of Jars. The menhirs required little fashioning and are undecorated. The Hua Phan discs display evidence of manual work, as can be seen from the smooth unit at San Kong Phan (Fig. 7.12).



Fig. 7.12. San Kong Phan, Hua Phan. Disc with dia. of 190 cm. Colani 1935a, v1: pl. V.

The small field of Kang Dong is remarkable because it is the only one to host menhirs in rhyolite, an extrusive rock. In this 1977 geological map of north Laos, Workman identifies Hua Phan, with Sam Neua as the capital, rich in rhyolites (Fig. 7.13).

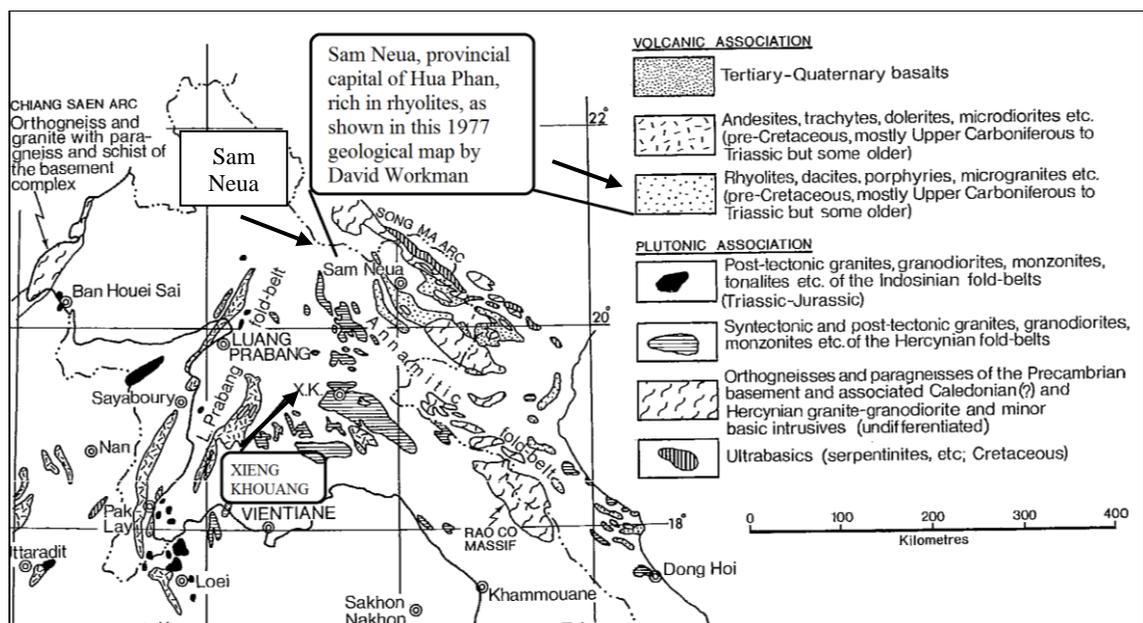


Fig. 7.13. Geological map showing deposits of rhyolite in the Sam Neua area of Hua Phan. Workman 1977: 26, fig. 13.

⁴⁵⁴ Colani 1935a, v1: 30.

The use of rhyolite could have been dictated by lack of schist in Kang Dong but this is difficult to justify because of its location, barely 1 km east of San Kong Phan, where abundant schist supplies resulted in 119 menhirs and 75 large discs, with a further 51 menhirs and 30 discs at Tham Ban, 2 km from San Kong Phan. Moreover, the use of rhyolite confirms that the Hua Phan masons had attained the necessary skills to quarry and shape rhyolite into menhirs. The use of rhyolite, therefore, appears to have been deliberate, rather than dictated by exhausted supplies of schist, particularly in view of the small quantity involved (nine menhirs). This feature of Kang Dong bears a parallel with the Plain of Jars, and particularly the custom of bringing extraneous stones to a site. At J25, for instance, andesite boulders were brought from 8 km away, to share the space with several dozen sandstone jars. Another instance concerns the blocks of quartzite brought to J1, a field of sandstone and conglomerate jars.

Colani believed that other rhyolite menhirs existed near Kang Dong but was unable to reach them despite repeated requests for directions. The Kmhm villagers, she wrote, displayed a “remarkable unwillingness to reveal the location of the menhir fields. The promise of remuneration is not of much help”.⁴⁵⁵

Though in some instances the function of stone discs at Hua Phan is markedly different from that at the Plain of Jars, some common ground can still be found. At the Plain of Jars, their use is still a matter of debate and little progress has been made in establishing whether they were lids, stone markers or commemorative stones. Furthermore, the variety in shape and decoration of the Plain of Jars discs (Fig. 4.23 and Fig. 4.26 Chapter 4.7, Fig. 5.85 and Fig. 5.86 Chapter 5.7, for instance), is not found at Hua Phan, where discs are, without exception, undecorated.

Some of the Hua Phan discs rested on a thin layer of soil whose hollow sound, when tapped with an iron bar, indicated the presence of underground trenches. Of these trenches, 42-43 turned out to be burial pits.⁴⁵⁶ More than 140 discs were created, far in excess of the quantity needed to seal the burial pits reported by Colani. Even these imperfect figures cannot mask the fact that, whereas jars in Xieng Khouang always vastly outnumber discs, a radically different discs:burial pits ratio exists in Hua Phan. Most of the Hua Phan discs, therefore, appear to have been created for purposes *other than* as covers for burial pits. Around 100 discs, or 70% (100/142), were scattered on the ground, seemingly at random, and not sealing any of the 42-43 pits.

Another shared feature with the Plain of Jars concerns the chronology for the positioning of discs. At Hua Phan, the specific function for around 30% of the discs (43/142 discs employed as covers for burial pits), means that they sealed the pit after the human remains or grave goods had been buried. Likewise, at the Plain of Jars, stone jars have occasionally been placed directly on top of buried clay pots containing mortuary goods and bones, to the extent that it has been possible to reach the clay pots without dislodging the stone jars. For instance, excavating at J1 in 1994, Eiji Nitta noted: “The bottom of No. 217 stone jar is on the surface of the layer where the burial pits were dug into the ground. This means that No. 217 stone jar is as old as the burial pits or later than the latter”.⁴⁵⁷

The similar way in which discs have been used at the Plain of Jars and at Hua Phan perhaps casts doubt on the function of discs as lids, the common denominator being their seemingly random

⁴⁵⁵ Colani 1935a, v1: 51.

⁴⁵⁶ Colani 1935a, v1: 34-40. Colani stated 3-4 burial pits for Dong Mut, hence the undetermined total.

⁴⁵⁷ Nitta 1996: 16.

position on the ground. A disc, therefore, may not necessarily have functioned as cover for a jar (Xieng Khouang) or for a burial pit (Hua Phan).

For Hua Phan, it is pertinent to ask what might have triggered the production of discs far in excess of those needed to seal underground pits. For clues, it may be useful to refer to Dussault's geological survey: "The particular nature of the gneiss [mica schist] and rhyolite of these lands, found in deposits with a good stratigraphy, have afforded [the masons] the opportunity of large flat slabs of stones".⁴⁵⁸ My interpretation is that surplus discs at Hua Phan were created in response to a number of factors, including the abundant availability of rock, the mastery of the masons' skills in shaping megaliths and, perhaps more importantly, the desire to create eternal monuments in stone irrespective of other, unquantifiable considerations. The local mica schist allowed the masons of Hua Phan a high degree of flexibility in the creation of gigantic discs, such as the San Kong Phan unit illustrated in Fig. 7.12. By comparison, at the Plain of Jars the diameter of discs rarely exceeds 100 cm, even when using sandstone, the rock from which over 99% of the discs are carved (Table 13 Chapter 6.3). The only possible exception being the animal-decorated stone domes in Phou Khoum District (Fig. 4.22 Chapter 4.7).

A few comments are now in order. Firstly, for Hua Phan, we have yet to discover the intention underpinning the creation of a large quantity of discs, far in excess of the amount needed for practical purposes, to seal 42-43 burial pits. Secondly, communities at the Plain of Jars and at Hua Phan placed great store in the creation of stone discs and their masons could muster the necessary resources to harvest the rock, shape it and transport hundreds of discs to their final destination. Thirdly, the discs:jars ratio at the Plain of Jars is radically different from the discs:burial pits ratio at Hua Phan. At the Plain of Jars, the 223 discs for the 1739 jars listed in Table 1 for 52 sites (Chapter 1.9) means that one disc was created for every 7.8 jars. At Hua Phan, however, these proportions are reversed, in that at least 142 discs were created for 43 burial pits, resulting in 3.3 discs for every burial pit.

The chronology for usage of the Hua Phan sites has been the subject of discussion, starting with Colani who proposed a Bronze Age dating for the Hua Phan menhirs,⁴⁵⁹ and a younger, Iron Age for the jars of Xieng Khouang. This theory has gained ground in current official literature. At the National Museum in Vientiane, for instance, the panels on Hua Phan state: "The nearby Plain of Jars in Xieng Khouang Province was made by a younger megalithic culture and is another necropolis consisting of massive burial urns sculpted out of single pieces of stone".⁴⁶⁰ Källén, however, casts doubt on this chronological assessment, arguing that Colani overlooked the numerous "indications throughout the report [1935 monograph] that the sites had been used and possibly even created in much more recent times".⁴⁶¹

Keosopha has proposed a new chronology, envisaging an east-to-west evolution, from Xieng Khouang to Hua Phan and thence to Luang Namtha, raising the prospect, diametrically opposite to Colani's theory, that the stone jars may predate the menhirs of Hua Phan: "An analysis of form and design indicate a possible development from Xieng Khouang, through Hua Phan, to Luang Namtha".⁴⁶² Next, Keosopha reprises the theme that associates the megaliths of north Laos with stone artefacts in central Thailand, by further developing a sequence "to link the menhirs to the more geographically, and generally common *bai sema* stones, or border markers, which were

⁴⁵⁸ Dussault 1920: 14, quoted in Colani 1935a, v1: 29-30.

⁴⁵⁹ Colani 1934a: 352.

⁴⁶⁰ Vientiane National Museum, August 2008.

⁴⁶¹ Källén 2013: 129.

⁴⁶² Keosopha 2006: 153.

significant for the Dvaravati Culture”.⁴⁶³ Murphy’s recent doctoral thesis, however, contests this theory as untenable, arguing that a “Diffusionist argument”⁴⁶⁴ is being invoked when the *sema* stones of central Thailand are proposed as derivatives of the Lao stone jars.

Doubts about a common origin for megaliths have been expressed by other academics, including Ian Glover, who has researched the archaeology of Southeast Asia for the last 50 years.⁴⁶⁵ For Glover, an analysis of the distribution of megaliths in Southeast Asia reveals that: “they are mainly in the mountainous inland regions, away from the more fertile lowland river valleys”.⁴⁶⁶ Although some of the reasons are purely practical, due to lack of large stones in the alluvial river valleys, Glover also cites a response to “different economic opportunities of the environments”⁴⁶⁷ as reasons for the absence of megaliths among stable and permanent Neolithic farming communities. Megaliths were prevalent in highland areas but “not in existence in the lowlands or the Khorat Plateau” so that the geographical distances involved did not warrant “that the megaliths from northern Laos had any direct bearing on *sema*”.⁴⁶⁸

The notion that the megalithic jars of north Laos may have given rise to the *sema* of central Thailand, therefore, has attracted a few supporters but mostly doubters. It is improbable for the spread of megaliths to leapfrog over the Khorat Plateau before reappearing in central Thailand.

The Xieng Khouang-Hua Phan-Luang Namtha-central Thailand transmission theory is not viable for the following reasons. Firstly, it does not propose any justification for the absence of skills of a higher order that would be expected of a development chronologically later than Hua Phan and the Plain of Jars. This would have to be manifest, possibly, in elaborate decorations, where, instead, basic stone carving and decoration skills are at work, such as the rayed sun (Fig. 7.17) or the dotted circle (Fig. 7.18) in Chapter 7.1.3.

Secondly, the theory also implies that the skills mastered by the Plain of Jars masons – carving and transporting gigantic stone jars – would have been enhanced by subsequent masons. What we witness at Luang Namtha, instead, are severely scaled-back skills with little or no evidence of something resembling a progression from megalithic jar carving to accomplishments of the same order or even higher.

Thirdly, the argument falters in plausibility on the southern journey of this theory, because, notwithstanding the beauty of the *sema* stones, it is difficult to argue that their creation entailed technical accomplishments comparable with the carving and transportation of stone jars, the heaviest of which (Fig. 5.43 Chapter 5.2.8), documented at J26, weighs an estimated 31 tons.⁴⁶⁹

The rich artefacts from the main sites at the Plain of Jars were not encountered at Hua Phan, where objects were found on the surface and in some of the pits. It is not known how these objects came to be scattered on the ground among the menhirs, but the area suffered from incursions late in the 19th century, when bands of Yunnanese rebels laid waste to entire villages

⁴⁶³ Keosopha 2006: 153.

⁴⁶⁴ Murphy 2010: 371.

⁴⁶⁵ To celebrate Prof. Glover’s half a century of fieldwork in Southeast Asia, a book of essays was published in 2010, edited by B. Bellina *et al.* (Bellina *et al.* 2010).

⁴⁶⁶ Glover 1998: 28.

⁴⁶⁷ Glover 1998: 28.

⁴⁶⁸ Murphy 2010: 371.

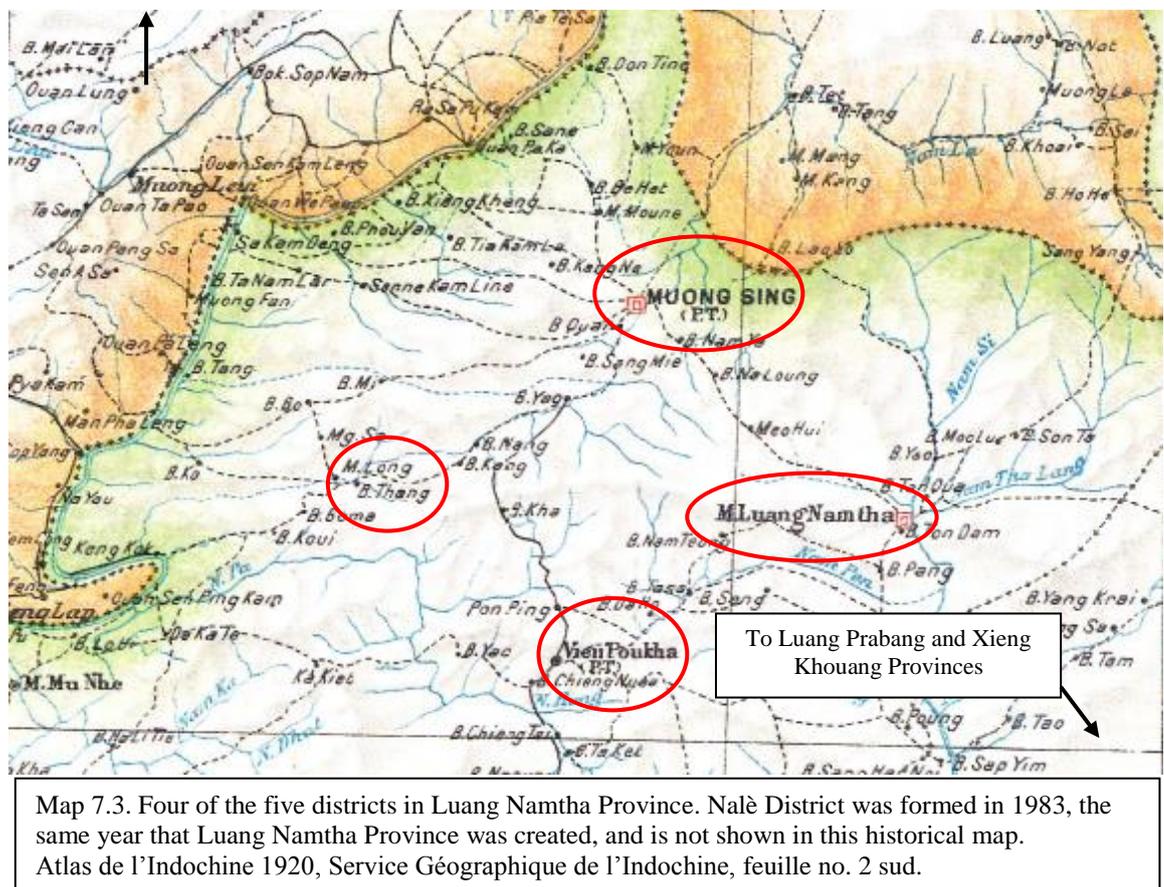
⁴⁶⁹ Baldock 2008: 5

(Chapters 2.3.1, 2.3.2, 2.3.4 and 2.3.6). Colani mentioned instances of looting at Dong Mut⁴⁷⁰ but it is unknown whether the damage was at the hands of these invaders or by subsequent hordes.

At Hua Phan, human remains were found only in burial pits at San Kong Phan but at the Plain of Jars, Colani found ash from cremations inside stone jars at J1 and J3, while pots buried near the jars contained teeth and bones (but no cremated remains). Though at the Plain of Jars a recent wave of users may have deposited objects and ash in some stone jars, no evidence was found at San Kong Phan of human remains scattered on the surface.

7.1.3 Luang Namtha

Luang Namtha Province borders with Bokèo and Oudomxai Provinces in Laos, and internationally with Myanmar and China. It is separated from Hua Phan and Xieng Khouang Provinces by Oudomxai and Luang Prabang Provinces. There are five districts in the province: Namtha, Nalè, Vieng Phoukha, Long and Sing (Map 7.3). On the basis of stone tools found in the Nam Jook River Valley (Vieng Phoukha District), as well as the cliff paintings near Nalé District, it is believed that “Luang Namtha Province was inhabited as early as 6,000 years ago”.⁴⁷¹



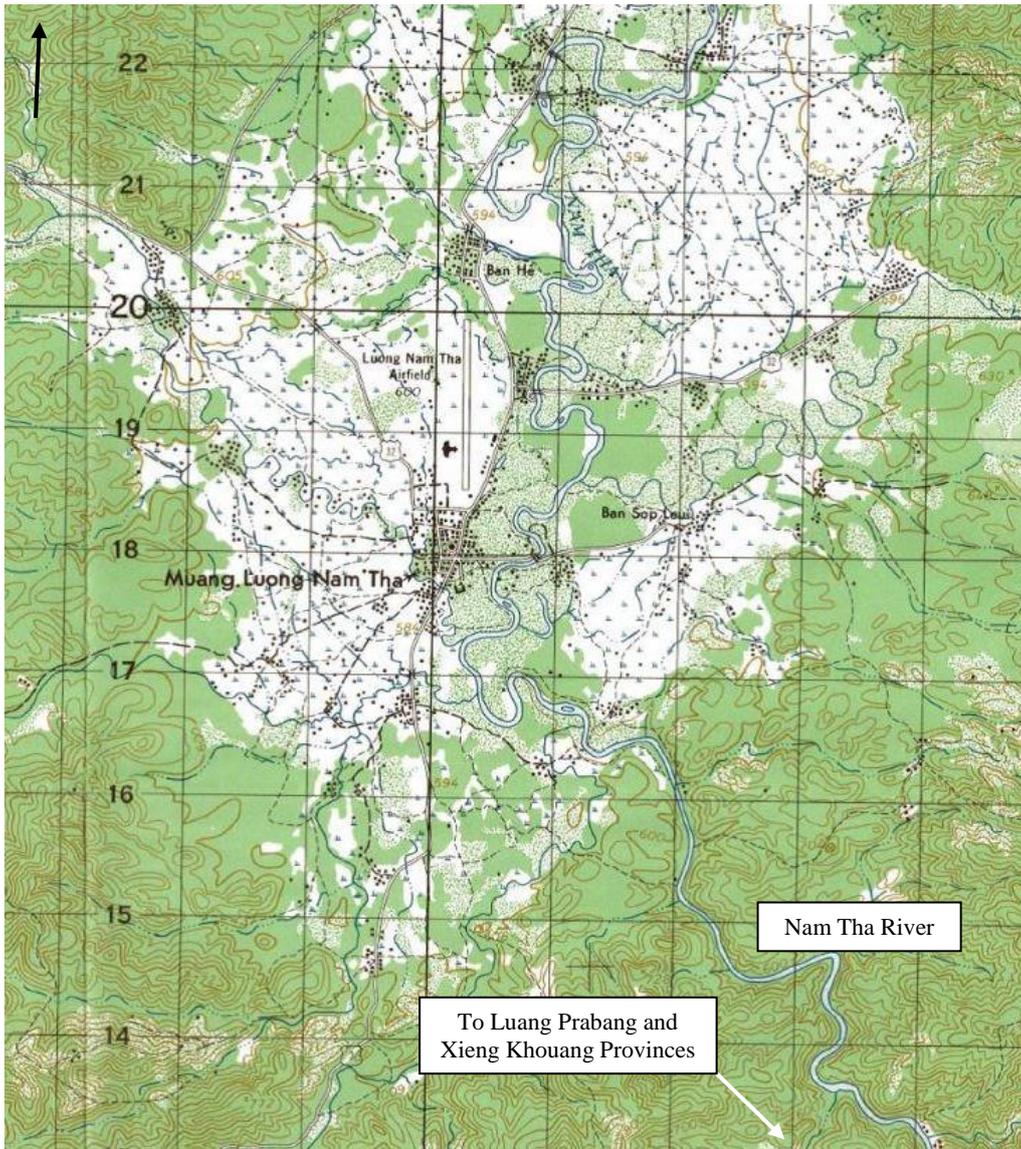
The Nam Tha River (Map 7.4) has its source 15 km north of Luang Namtha, the eponymous provincial capital, and flows for 325 km before reversing into the Mekong. Since 2004, the province has undergone profound transformation due to foreign investment in rubber plantations, a development set to strengthen the Lao government’s strategy of “rural development”.⁴⁷² A

⁴⁷⁰ Colani 1935a, v1: 41, 66.

⁴⁷¹ Tourism Lao (http://www.tourismlaos.org/show_province.php?Cont_ID=413), accessed in May 2014.

⁴⁷² Pholsena 2008.

planned high-speed electric rail service will link China with Luang Namtha, Luang Prabang and Vientiane capital city, a journey of 420 km.⁴⁷³



Map 7.4. Luang Namtha Province and Nam Tha River.
Texas University Map 5250-I, series L7015, 1965.

Luang Namtha’s natural attractions include waterfalls and caves. Its many rivers offer the possibility of boat trips and the rugged scenery is a favourite for trekking visitors. The province’s megaliths have only attracted tourists in small numbers and these modest figures are likely to decrease now that the province has embraced ecotourism as a poverty-alleviation policy.⁴⁷⁴

The province is home to 20 different ethnic communities, the largest groups being the Akha (25.1%) and the Kmhmu (24.5%).⁴⁷⁵ The Tai Dam (Black Tai), which together with the Tai

⁴⁷³ Fernquest 2013. The project will be financed with a USD 7 billion loan from a Chinese bank.

⁴⁷⁴ In 2001, the province’s Nam Ha Ecotourism Project, developed by UNESCO with the Lao National Tourism Authority and the Ministry of Agriculture and Forestry, won the UN Development Award “for successfully introducing ecotourism as sustainable development in a region plagued by poverty” (*New Frontiers*, Briefing on Tourism, Development and Environment Issues in the Mekong Subregion, 12/3, May-June 2006).

⁴⁷⁵ Schipani 2008: 9. On 27/03/2014, the KPL Lao News Agency announced the next census for March 2015 (<http://www.kpl.net.la/english/news/newsrecord/2014/March/27.03.2014/edn1.htm>).

Daeng (Red Tai) and Tai Khao (White Tai) account for 10.1% of the population, settled in Luang Namtha Province shortly after the Thai-Franco Treaty of October 1893, when the French colonial power took control of the Northeastern part of Luang Prabang.⁴⁷⁶

The Lamet speak a Mon-Khmer language and account for 2.9% of the population in the province. They practice swidden agriculture, predominantly in Nalè District. Stones feature prominently in the funerary rites of the Lamet. The anthropologist Guido Sprenger has documented the Lamet custom of placing personal effects in the burial ground. A close male relative places inside a cloth bag “useful things such as a comb, a razor, soap, a notebook, a pen, tobacco, chewing tea”,⁴⁷⁷ to accompany the deceased to the afterlife. In contemporary Lamet mortuary rites in Luang Namtha, the deceased is placed in a coffin and buried in a graveyard, normally located in the forest. A cairn of “seven small stone slates”⁴⁷⁸ is then arranged in a row on the grave.

The megaliths have been recorded only in Nalè District, in the province’s southeast, close to the border with Oudomxai Province. In the present state of our knowledge, megalith building appears to have bypassed Oudomxai Province, positioned between Luang Namtha to the west and the stone jars of Phou Khoun District to the east.

The standing stones of Luang Namtha differ considerably from those in Hua Phan. The former are smaller but, unlike the latter, they are decorated with stars, circles, geometric designs as well as figures of humans and animals. The menhirs consist of sheets of slate and attain a height rarely greater than 100 cm. Unlike the stone jars of Xieng Khouang or the standing stones of Hua Phan, the menhirs of Luang Namtha have not been adequately researched, although they have been cited in various studies.⁴⁷⁹ No discs have been found among the megaliths of Luang Namtha.

A recent paper by Keosopha states that the standing stones of Hua Phan and Luang Namtha reflect a burial tradition associated with megalith building for people who lived in the area in the late centuries BC and perhaps the early centuries of the Christian era.⁴⁸⁰ However, another recent study documents the influx of disparate ethnic groups settling in Luang Namtha over the centuries, in response to migrations, repopulation policies or for political strategy.⁴⁸¹ As early as 1888, for instance, groups of Tai Dam were encouraged to settle in Luang Namtha as reward for supporting French colonial rule.⁴⁸² Any claims of unbroken continuity between the original megalith builders and the present dwellers of the province require investigation.

In 2001, villagers in Ban Chomsi informed visiting officials from the National Museum of Vientiane that they had found a bronze drum in Luang Namtha. Numerous bronze drums are on display in the provincial capital’s museum, which also hosts Buddha images, ceramics and textiles.⁴⁸³ Bronze drums have been found in Luang Namtha but none have come to light at the Plain of Jars or Hua Phan, which are geographically much closer to North Vietnam, the likely source of these drums. Fourteen bronze drums⁴⁸⁴ have been discovered in the south of Laos,

⁴⁷⁶ Chiemsisouraj 2011: 52.

⁴⁷⁷ Sprenger 2006: 88.

⁴⁷⁸ Sprenger 2006: 90. If a buffalo is not killed, only six stones are arranged on the grave.

⁴⁷⁹ See, for example, mentions by Tara Gujadhur in Schiphani 2008, particularly p. 23.

⁴⁸⁰ Keosopha 2006: 151.

⁴⁸¹ An overview of population movements is provided in Chiemsisouraj 2011, particularly pp48-53.

⁴⁸² Chiemsisouraj 2011: 52.

⁴⁸³ http://www.guide-to-luangnamtha.com/luangnamtha/lnt_info/Luang_Namtha_Museum.html (accessed May 2014).

⁴⁸⁴ *Vientiane Times*, 23/03/2008.

including the one found in Savannakhét Province, which I was able to photograph (Fig. 7.14) in 2008, shortly after its transfer to the National Museum in Vientiane for restoration work.



Fig. 7.14. National Museum, Vientiane. Bronze drum found in Savannakhét Province. L. Genovese (2008).

Decorated menhirs have been redeployed from Ban Chomsi village to three different locations: a few menhirs to Ban Dornthip (a village in Nalè District), a few others to Luang Namtha Museum⁴⁸⁵ and a few to the National Museum in Vientiane (Fig. 7.15 and Fig. 7.16 later in this section). A road connects Ban Chomsi to Ban Dornthip, a village touched by the Nam Tha River.

In August 2008 I was able to photograph some of the menhirs relocated to the National Museum in Vientiane.⁴⁸⁶ The smaller units are decorated with a ten-pointed star but the star on the large menhirs has 12 branches. The star is enclosed in a circle with short lines running perpendicular to a band around the star, whose branches are regularly spaced. The distance between the branches is unequal, though the length of the branches themselves is virtually identical. The stars are carved with care and precision.

One of the menhirs at the Vientiane Museum is curved at the top (Fig. 7.15) and decorated with a minimum of three, ten-pointed stars on one face. According to the Lamet ethnic group, the encircled stars represent bronze drums and the rectangles are silver bars.⁴⁸⁷ At times, a band of longer lines has been etched on the lower section of the menhir. The outline of an animal figure is carved on the lower section of a small menhir next to this curved menhir. It is poorly-executed, in

⁴⁸⁵ Personal communication of May 2014 from Guido Sprenger.

⁴⁸⁶ In August 2008, during the museum's closure due to flooding, I was granted permission to inspect the artefacts temporarily stored in a dry and windowless room.

⁴⁸⁷ Personal communication from Guido Sprenger, May 2014.

stark contrast with the neatly-carved stars on the menhir's upper section and may represent a recent addition. The oval-shaped patterns are mostly carved on the sides of the menhir and are unevenly spaced and sized (Fig 7.16). Some of the oval motifs are also found near a ten-pointed star on a menhir still in place (Fig. 7.17) in the village of Ban Dornthip, Nalè District.



Fig. 7.15. Luang Namtha. Decorated menhirs relocated to the National Museum, Vientiane. L. Genovese (2008).

The pointed star is also carved on a stone drum from Luang Prabang Province (Fig. 7.18), on display at the National Museum in Vientiane. Its decorations consist of evenly-spaced and neatly-executed rows of dotted circles, similar to the dotted circles on the stone drum from Pak Ou

District (Fig. 7.1 Chapter 7.1). A variant of the popular dotted-circle motif has also been documented on pottery vessels from Ban Non Wat in central Thailand (Fig. 7.19).



Fig. 7.16. Menhir from Luang Namtha.
L. Genovese (2008).



Fig. 7.17. Ban Dornthip, Nalè District.
Photo: Tara Gujadhur.



Fig. 7.18. Stone drum with dotted circles and ten-pointed star. National Museum, Vientiane.
L. Genovese (2008).

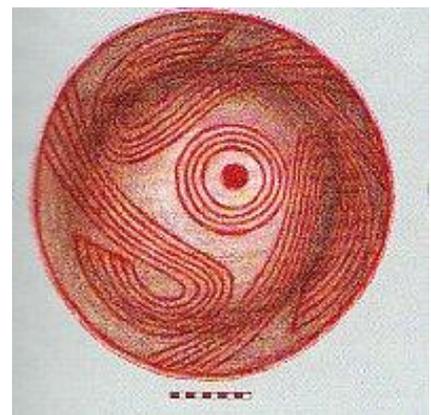


Fig. 7.19. Ban Non Wat. Thailand.
Dotted circle in pottery vessel.
Higham & Thosarat 2012: 101.

7.1.4 Lao Pako

A distance of 400 km separates the Plain of Jars from Lao Pako. The site is on a hill on the bank of the Nam Ngum, a Mekong tributary. Extensive riverine trade was conducted with Siam.

Since 1995, Lao Pako has been the subject of several seasons of excavations by Lao and Swedish teams, who have uncovered a range of artefacts far wider than anything retrieved from the Plain of Jars. The site has been classified as Iron Age with burials in ceramic pots.

Karlström notes that occupation of the site spanned a short period. The first main occupation occurred “in or before the fourth century AD, while the second phase of dense occupation would lie in the fifth century AD”,⁴⁸⁸ but Sayavongkhamdy and Bellwood conclude that the main burial and habitation phase at Lao Pako covered several centuries, “between c. 500 BC and AD 500”,⁴⁸⁹ and possibly as early as 4000 BP for agricultural purposes. Analyses on rice chaff found in pottery and tuyères have revealed an age of at least “two thousand years”.⁴⁹⁰ Evidence of smelting is confirmed by finds of slag and tuyères.

Objects from Lao Pako include pottery, pebble tools, iron knives, spindle whorls (Fig. 7.20), clay seals, glass beads and stamp rollers (Fig. 7.21).



Fig. 7.20. Numerous spindle whorls have been retrieved from Lao Pako.
Källén 2004: 153.



Fig. 7.21. Stamp rollers from Lao Pako, Vientiane Province.
Källén 2004: 155.

Of this list of items, pottery, iron knives, spindle whorls (Fig. 7.22) and glass beads (Fig. 7.23) have also been found at the Plain of Jars but the stamp rollers, which have also been found in Thailand at Ban Chiang (Fig. 7.24) and Ban Na Di, as well as at Samròng Sèn in Cambodia (Fig. 7.25), have not been found at the Plain of Jars or Hua Phan. The grave goods Colani excavated at Hua Phan were comparatively modest.

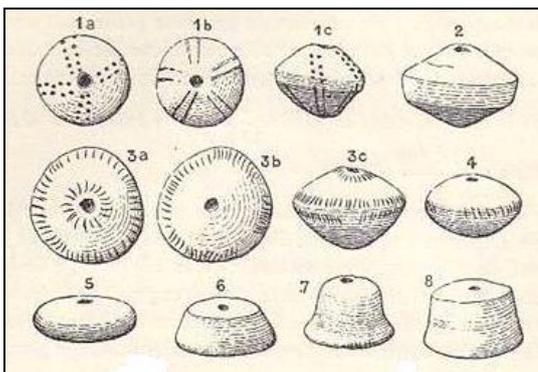


Fig. 7.22. J1. Spindle whorls.
Colani 1935a, v2: 14, fig. 153.

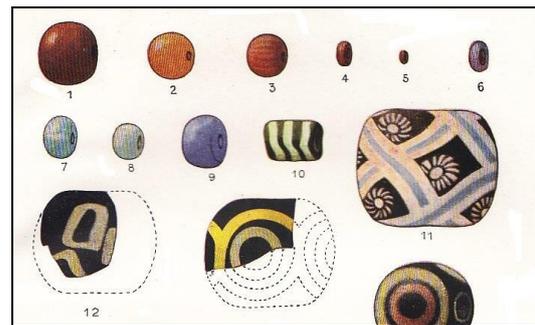


Fig. 7.23. Beads from the Plain of Jars.
Colani 1935a, v2: Aquarelle I.

At Lao Pako, a high quantity of pottery vessels has been found buried and intricately arranged, but the vessels are for the most part empty. Källén and Vinterhav report that two of the 70 complete vessels recovered from the site, contained infant remains, with one of the pots

⁴⁸⁸ Karlström 2000: 87, with radiocarbon dates reported in Table 1, p. 86 of the paper.

⁴⁸⁹ Sayavongkhamdy & Bellwood 2000: 105.

⁴⁹⁰ Sayavongkhamdy & Bellwood 2000: 104. For radiocarbon dates see Table 2, p. 107 of the paper.

containing "the most elaborate set of grave goods",⁴⁹¹ including bronze bangles in sets of two, eight bronze anklets in sets of four, 160 glass beads and some iron implements.



Fig. 7.24. Stamp rollers from Ban Chiang (Thailand).
L. Genovese (2009).

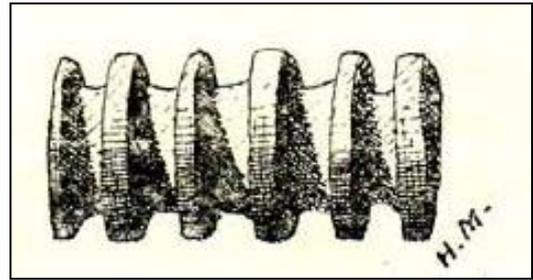


Fig. 7.25. Samròng Sèn, Cambodia. Stamp roller, documented by Henri Mansuy.
Mansuy 1902: 20, fig. 10.

A second infant burial pot contained no bones but its grave goods consisted of a child-size bangle, some bronze bells identical to others found at Ban Chiang, and some coloured beads. According to the authors, any human bones that might have been deposited in the terracotta pot may since have been dissolved by the acidic soil.⁴⁹²

Clay pots with human remains have been found at the Plain of Jars and Hua Phan. Mouth-to-mouth pots have been found at Lao Pako (Fig. 7.26) and J51 (Fig. 7.27) but not in Hua Phan.

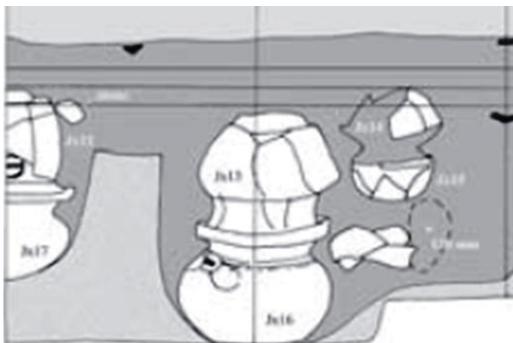


Fig. 7.26. Lao Pako. Mouth-to-mouth pot.
Källén 2004: 84.

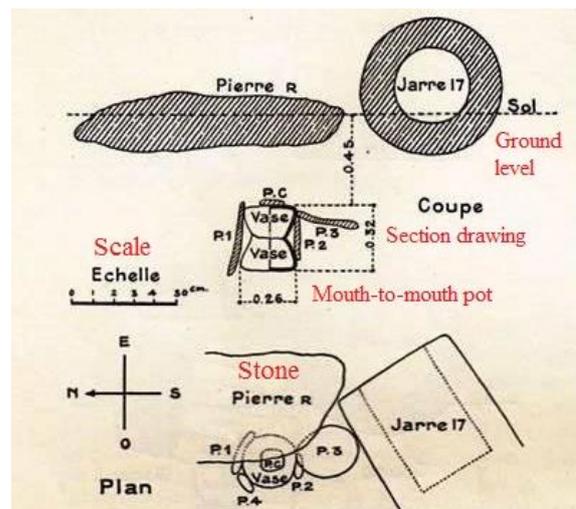


Fig. 7.27. J51. Mouth-to-mouth pot.
Colani 1935a, v2: 74, fig. 183.

⁴⁹¹ Källén & Vinterhav 2003: 173-174.

⁴⁹² Källén & Vinterhav 2003: 174-175.

Lao Pako appears to have supported habitation, as evidenced by the “270 kilograms of potsherds” collected from the occupation levels and pits in the test excavation squares, to which should be added the “45 complete [pottery] jars varying in size and shape”.⁴⁹³

7.1.5 Summary of Lao Sites

Table 18 is a summary of the five archaeological sites discussed for Laos. The study of stone jars and discs in Luang Prabang Province lags behind studies for Xieng Khouang Province and it is therefore more helpful to analyse the two Plain of Jars areas separately.

Table 18 – Comparison of five types of archaeological sites in Lao PDR

	Stone jars		Mixed fields ¹	Discs		Standing stones		Clay pots		Stones		Stone type		Burial
	P	D		P	D	P	D	B	M-M	P	D	S ²	M ³	Pits
Plain of Jars (Xieng Khouang)	✓	✓	✓	✓	✓			✓		✓	✓	✓	✓	✓
Luang Prabang (incl. stone jars)	✓		✓	✓	✓			✓	✓	✓	✓	✓		✓
Hua Phan				✓		✓		✓				✓	✓	✓
Luang Namtha						✓	✓					✓		
Lao Pako								✓	✓					✓

P = plain; D = decorated; B = burial; M-M = mouth-to-mouth; S = single; M = multiple

¹ Fields where stones are scattered among jars

² Site hosts artefacts carved from one stone type only

³ Site hosts artefacts carved from more than one stone type

Source: compiled by L. Genovese from various publications

There are affinities between the two provinces with jars (Xieng Khouang and Luang Prabang) and Luang Namtha and Lao Pako. With its standing stones, Luang Namtha complements both Xieng Khouang and Luang Prabang Provinces, which do not have this type of megalith.

It is immediately apparent that the Plain of Jars is the only site to encompass seven of the eight features selected for analytical comparisons. Even in its under-researched state, Luang Prabang Province shares numerous traits with Xieng Khouang, from stone jars to decorated discs. The mouth-to-mouth pots found at J51, in Luang Prabang Province, have not been encountered in Xieng Khouang, Hua Phan or Luang Namtha, but have been found at Lao Pako.

Sketchy though data for Luang Prabang are, they illustrate that the province enjoyed a diverse mortuary tradition very similar to that prevalent in Xieng Khouang. It is worth stating that several of the jar sites documented by Colani in the 1930s, and awaiting identification to their present-day location, are set in Luang Prabang Province’s Phou Khoun District, home to unusual and distinctive stone artefacts, including animal-decorated stone domes (Fig. 4.22 Chapter 4.7).

In its mortuary tradition, Hua Phan shares some features with both Xieng Khouang and Luang Prabang Provinces, such as the plain discs and the presence of multiple rock types. Hua Phan is radically different from these two provinces because of its standing stones, which are plain and undecorated, unlike the decorated standing stones in Luang Namtha.

⁴⁹³ Karlström 2000: 87.

Map 7.5 shows the position of sites mentioned in the Vietnam, Cambodia and Thailand sections.



7.2 Vietnam

7.2.1 Lang Vac

An important Dong Son cemetery came to light in 1972. Lang Vac, in the Nghia Dan District of Vietnam's Nghe An Province, borders Xieng Khouang and Hua Phan Provinces. The rich graves and the site's location 40 km inland are explained by the presence of a nearby source of tin.⁴⁹⁴ As the crow flies, Lang Vac is located 200 km SW of Hanoi and 230 km east of J1. It lies around 50 km north of the starting point for Route 7, which dissects Nghe An and Xieng Khouang Provinces on its journey to Luang Prabang Province's Phou Khoun District, where it connects with Route 13 to Vientiane.

Nguyen and Trinh, from the Vietnam Institute of Archaeology, note that social strata had already developed at Lang Vac, with the social milieu stratified into aristocrats, peasants and artisans and where "the quantity and sophisticated designs" of the great number of weapons found at the site can be interpreted as the essential "pre-conditions for the birth of an embryonic state among the Dong Son inhabitants".⁴⁹⁵

Lang Vac has been the subject of rigorous archaeological study by international teams. The first three seasons were led by Vietnamese archaeologists in 1972, 1973 and 1980-81, with reports published in the Vietnamese archaeological press (*Khao Co Hoc*). In 1978, a few years after the first two excavation seasons, analyses on soil mixed with charcoal detritus from a pit were carried out by the Berlin-based Central Institute of Archaeology and Ancient History (German

⁴⁹⁴ Higham 2002: 176.

⁴⁹⁵ Nguyen & Trinh 2011: 113.

Democratic Republic at the time), resulting in a reading of 1140 ± 80 BP, a late dating perhaps caused by poor-quality sample and intrusion of “organic matter”.⁴⁹⁶ The same report mentioned results for a second sample from the same cemetery, analysed in Beijing, with a reading of 1990 ± 85 BP, more consistent with recent radiocarbon readings indicating “settlement by 100 BC, and ending in the early first millennium AD”.⁴⁹⁷

Burial in a pottery vessel is not typical of Dong Son sites and this has prompted Bellwood, a leading researcher on the prehistory of the Indo-Malaysian and Pacific region, to suggest influences from coastal Vietnam. For Lang Vac, Bellwood suggests an “influence from Chamic sources” since the Plain of Jars represents an unlikely source for the Sa Huynh “or other Indo-Malaysian jar burial traditions”.⁴⁹⁸ Burial pots in horizontal (Fig. 7.28) and upright (Fig. 7.29) positions have been retrieved from the site.



Fig. 7.28. Lang Vac. Horizontal burial pot. Imamura & Chu 2004: pl. 5a.

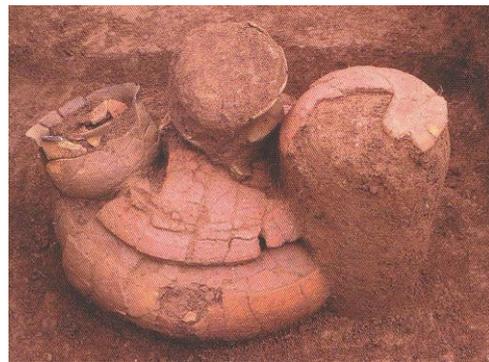


Fig. 7.29. Lang Vac. Upright burial pot. Imamura & Chu 2004: pl. 5b.

A large-scale excavation was undertaken in October-December 1990 by teams from Japan and Vietnam, documented in a 2004 monograph.⁴⁹⁹ Four years later, the Japan-Vietnam teams also cooperated on the first excavation of Xom Dinh, the settlement area located 0.3 km SW of Lang Vac, where two furnaces were discovered. For historical reasons not yet known, communities may have settled at Lang Vac for a brief period, an assumption corroborated by the cultural deposit of only 20-30 cm at Xom Dinh.⁵⁰⁰

At Lang Vac “probably more than a thousand burials”⁵⁰¹ may have existed. Often, the head of the corpse faces W or NW and, rarely, NE or SW. The fact that no skeleton has ever been found at the Plain of Jars prevents an analysis of possible orientation.

Some unusual mortuary practices were in vogue at Lang Vac, such as the seemingly extravagant use of a *thap*, a bronze sarcophagus flattened and placed “on the face of the buried person”.⁵⁰² This custom recalls the large, spiral-decorated bronze object found on a skull at Noen-U-Loke, in Thailand’s Mun valley (Fig. 7.37 Chapter 7.4). In other burials at Lang Vac, the skeleton was covered with pots, “probably for marking the grave”.⁵⁰³

⁴⁹⁶ Kohl & Quitta 1978: 395. The sample was collected in April 1973 from Grave 5, at a depth of 1 m.

⁴⁹⁷ Higham 2002: 176.

⁴⁹⁸ Bellwood 1985: 272.

⁴⁹⁹ Imamura & Chu 2004. The monograph is not on sale and I am grateful to Prof. NGUYEN Giang Hai for presenting me with a copy of this excellent book.

⁵⁰⁰ Imamura & Chu 2004: 2.

⁵⁰¹ Imamura & Chu 2004: 2.

⁵⁰² Imamura & Chu 2004: 145.

⁵⁰³ Imamura & Chu 2004: 118.

Among the rich assemblage of bronze objects from Lang Vac, a bracelet was found with attached bells⁵⁰⁴ similar to another bracelet retrieved from Ban Chiang (Fig. 7.30) and currently on display at the Suan Pakhard Museum in Bangkok. Higham reports that around 50 daggers have been collected from Lang Vac, along with full-size and miniature bronze drums.⁵⁰⁵ The hilts of some of the bronze daggers were decorated with anthropomorphic figures (Fig. 7.31).



Fig. 7.30. Ban Chiang. Spiral-decorated bells. L. Genovese (2009).

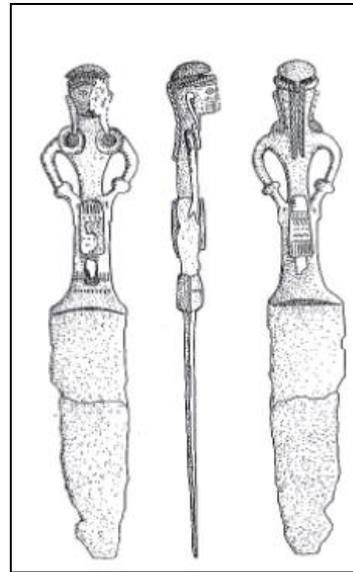


Fig. 7.31. Lang Vac. Dagger. Nguyen & Trinh 2011: 119, fig. 6.5.

In glass, objects include necklaces, earrings and beads. Stone was present in the shape of axes and moulds and pottery pieces with adhering molten bronze fragments were also retrieved. Two Chinese copper coins of different size, found overlapping in one of the burials, have been instrumental in the dating of the site, since they were issued respectively from BCE 180 for the larger coin and from BCE 144-120 for the smaller coin.⁵⁰⁶

The spindle whorls from Lang Vac have been analysed by Judith Cameron of the Australian National University (ANU) but the paper has not been published.⁵⁰⁷ Imamura and Chu illustrate both conical and biconical spindle whorls, all of them with central perforations. Without exception, they were “without design on the surface”⁵⁰⁸ and a diameter in the 25-40 mm range.

From later expeditions to Lang Vac, Yamagata has documented a *ri guang jing*, a Han bronze mirror⁵⁰⁹ similar to others found in Binh Yen, in the Sa Huynh pot burial complex, and dated “from the middle or late 1st century BC”.⁵¹⁰ The Binh Yen bronze mirror, found under a skull, represents a significant find for its ability to demonstrate “the complex relationship between Chinese Han, Dong Son, Sa Huynh and the so-called Dong Nai cultures in that period”,⁵¹¹ where coastal Vietnam was part of the exchange system that connected India with Southeast Asia and China. This is corroborated by the findings of earlier excavations, with Imamura and Chu noting

⁵⁰⁴ Higham 2002: 176.

⁵⁰⁵ Higham 1996: 119.

⁵⁰⁶ Imamura & Chu 2004: 153. Authors were unable to collect good samples for dating.

⁵⁰⁷ Personal communication, June 2014.

⁵⁰⁸ Imamura & Chu 2004: 117.

⁵⁰⁹ Yamagata *et al.* 2001: 101. Also known as “mirror of the sunlight” due to the eight character inscription *jian ri zhi guang, tien xia da ming* (see the sunlight and the whole land is most bright).

⁵¹⁰ Yamagata *et al.* 2001: 105.

⁵¹¹ Yamagata *et al.* 2001: 105. Dong Nai is a former Khmer culture outpost located in southeast Vietnam.

that some of the bronze artefacts found at Lang Vac, such as a certain type of bronze drum, handles of bronze bells shaped like sheep horns and certain daggers and bronze *thap*, are all common to sites dated around the 2nd century BCE in southern China.⁵¹²

7.3 Cambodia

7.3.1 Samròng Sèn

The shell midden of Samròng Sèn is located to the SE of Tonlé Sap Lake, on the right bank of the Stung Chinit River, 45 km south of Kompong Thom in Kompong Chhnang Province. Considered by some researchers as the cradle of Southeast Asian “prehistoric archaeology”,⁵¹³ the site has attracted considerable research efforts since its discovery by Roques in 1876.⁵¹⁴ In the wake of French colonisation of Cambodia, 1876 is marked as the year that defined the study of the Bronze Age of Southeast Asia, following early publications by Cartailhac in 1890.⁵¹⁵

As one of a small number of prehistoric sites in Cambodia, “it was visited by a great many persons interested in archaeology, and collections from it were carried all over the world”.⁵¹⁶ Unfortunately, the site’s reputation is as much due to controversy as to the rich and varied objects allegedly found beneath its soil, as will be detailed.

As well as geology and archaeology, studies have also covered Samròng Sèn’s archaeobotany, early rice cultivation and petrographic studies.⁵¹⁷ Generations of occupiers have left their mark, as testified not only by the stone tools but also by the numerous copper, bronze and iron objects allegedly retrieved from the site. I am using “allegedly” because of the controversy surrounding the objects traded by Ludovic Jammes, a French teacher and amateur archaeologist. Jammes claimed to have excavated an exceptional quantity of artefacts at Samròng Sèn in 1887-88, a collection he displayed in France in 1889 at the Congress of Prehistoric Anthropology and Archaeology. In 1890, Émile Cartailhac (1845-1921), a renowned prehistorian, published a review⁵¹⁸ of this collection, which unwittingly helped in the sale of objects to museums and private collectors.⁵¹⁹ There is no suggestion in this context that Cartailhac was privy to Jammes’ nebulous claims. As early as 1940, Jammes was accused of having fabricated evidence but even earlier, warning shots were fired by Louis Finot, as will be detailed later.

Considerable space was devoted by Jammes to the stratigraphy of this very large site, which he portrayed as three neatly-divided and well-defined layers. The first layer, at the bottom, revealed stone tools and coarse pottery. The middle layer apparently revealed a few bronzes and some stone tools, with slightly more refined pottery, which Jammes visualised as the transition from

⁵¹² Imamura & Chu 2004: 155.

⁵¹³ Higham 2004: 50-51.

⁵¹⁴ Also spelt Somron-Seng, Somrong Seng, Somrong Sen or Som-Ron-Sen. The year of discovery by Roques (or Roque) is variously cited as 1874, 1875 or 1876, the latter being the more prevalent.

⁵¹⁵ Higham *et al.* 2011: 229.

⁵¹⁶ Worman 1949: 318. Items were acquired by the National History Museum (Lyon, France), the National Museum of Natural History (Washington, DC) and other institutions. In 1890, the British Museum acquired a polished rod of pale brown steatite with black veins, with a length of 2.54 cm, a stone often used for polishing precious metals or for shaping sheet gold or bronze.

⁵¹⁷ Ly 2002 & Ly 2010.

⁵¹⁸ Cartailhac 1890.

⁵¹⁹ Cartailhac 1890: 642, N1.

stone to metal.⁵²⁰ In the top layer Jammes claimed to have collected the majority of the 35 bronzes found at the site, mixed with a few stone objects.

Jammes failed to provide an explanation on how the neat, three-layer stratigraphy could have been maintained, despite the historical disturbance caused by the locals extracting shells “from time immemorial”⁵²¹ for the manufacture of lime. Jammes also wrote that he excavated 150 pits,⁵²² some of them to a depth of 10 m,⁵²³ claiming that at a depth of 10 m in the shell layer he found pottery vessels not dissimilar from those manufactured by the village potter.⁵²⁴

Jammes received endorsement in vol. 3 of the Mission Pavie accounts, for shedding light on the ethnicity of the Indochinese peninsula’s original inhabitants: “as demonstrated by Mr. Jammes, direct descendants of the Stone Age ancestors can be found among some contemporary communities in southern Indochina”.⁵²⁵ Another source of endorsement came from the presentation that Jammes delivered on his Indochinese prehistory work in the presence of Paul Doumer, the Governor-general of Indochina.⁵²⁶

In 1901, while employed by the GSI, Mansuy conducted his first survey at Samròng Sèn, with a further visit in 1923, the year after his return to Indochina following a self-imposed period of exile in the wake of a scandal that rocked the institution.⁵²⁷ Mansuy commented on Jammes’ 1887-88 mission and his “short paper of the slightest scientific interest issuing from this journey and published in the *Revue Indo-Chinoise* (no. 8, 1893)”.⁵²⁸

A bronze bell from Samròng Sèn illustrated by Colani in her monograph (Fig. 4.5 Chapter 4.3), was first documented by Mansuy and, by his own admission, it constituted one of the five bronze objects he obtained from the villagers at Samròng Sèn.⁵²⁹ The range of artefacts attributed to the site is varied and of high aesthetic value but there may be some reluctance among scholars to use objects in their writings due to uncertain provenance. Other sites in the region have been similarly affected by doubtful finds, as reported by Higham and Thosarat at Ban Phak Top, in Thailand, where the best pottery vessels “came from looters”.⁵³⁰

The Samròng Sèn bell illustrated in Fig. 4.5 is 34 mm high, compared to the Sa Huynh bells, in the same image, measuring 14 mm. The Cambodian bell recalls the conventional shape, with a well-defined waist decorated horizontally with strands of filigree and some large spiral motifs between the loop and the waist. With a height of 32 mm, the Lao bells in the same image are very close to the 34 mm Samròng Sèn bell and more than twice the height of the Vietnamese version from Sa Huynh. However, approximately half the height of the Lao bells consists of an elaborate loop, which considerably reduces their waist, resulting in a more consistent comparison with the Sa Huynh items. The Lao bells are at times more elaborate, especially those from J26, with an intricate pattern on the loop itself. These bells have a decorative element cascading into a ‘V’

⁵²⁰ Jammes 1891: 42.

⁵²¹ Mansuy 1902: 1.

⁵²² Jammes 1891: 41.

⁵²³ Jammes 1891: 39. The account by Cartailhac claimed that Jammes had excavated some of the pits to a depth of 12 m (Cartailhac 1890: 643).

⁵²⁴ Jammes 1891: 47.

⁵²⁵ Pavie 1904: 20.

⁵²⁶ Finot 1928: 477.

⁵²⁷ Genovese 2011.

⁵²⁸ Mansuy 1902: 2.

⁵²⁹ Mansuy 1923: 10-11, pl. VIII/12.

⁵³⁰ Higham & Thosarat 2012: 99.

shape from the loop to the centre of the spiral-decorated waist. Similar bells have been excavated at Ban Chiang (Fig. 7.30 Chapter 7.2.1) and Lao Pako (Fig. 7.32 and Fig. 7.33).



Fig. 7.32. Lao Pako, decorated bronze bells.
Källén 2004: 163.

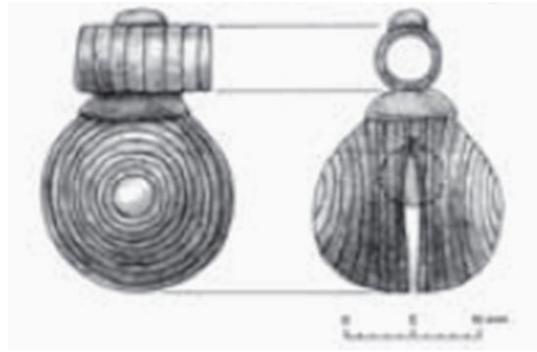


Fig. 7.33. Lao Pako, spiral-decorated bells.
Källén 2004: 163.

Miniature bronze bells have also been found on the leg of a young man's skeleton in Thailand's Khorat Plateau, at Ban Non Wat, a site which has allowed archaeologists to establish "a realistic evaluation of Bronze Age development over a period of about twenty-five generations".⁵³¹

A 19.7 cm high bell was apparently collected from Samròng Sèn by Jammes. The bell (Fig. 7.34) featured in an essay by Cartailhac⁵³² and was detailed in a recent work by Stark (Fig 7.35). It is decorated with four bands at the top, an 'S' motif on the body and a scalloped motif on the base.

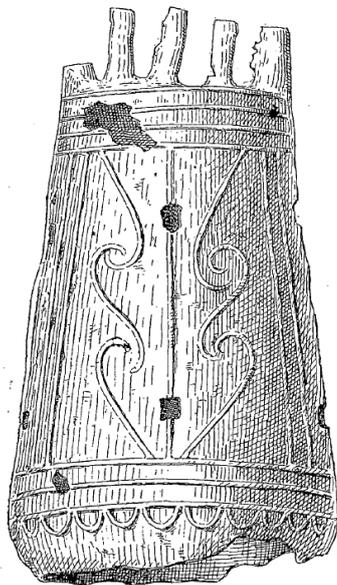


Fig. 7.34. Samròng Sèn, bronze bell, with a height of 19.7 cm.
Cartailhac 1890: 649, fig. 13.



Fig. 7.35. Samròng Sèn, decorated bronze bell.
Stark 2004: 95, fig. 5.7.

In 1928, Louis Finot issued the first warning about Jammes' claims,⁵³³ prompting Colani to distance herself from the disgraced amateur archaeologist, by asking her audience at a lecture in 1939 to avoid Jammes: "Ne retenez pas ce nom, le souvenir d'un manqué de probité scientifique

⁵³¹ Higham & Thosarat 2012: 141.

⁵³² Cartailhac 1890: 649, fig. 13.

⁵³³ Finot 1928.

y étant attaché”.⁵³⁴ This was the year before the most scathing attack on Jammes’ credibility was launched by Worman, who labelled him “one of the most shameless prevaricators ever to indulge in archaeology”.⁵³⁵ Worman’s criticism centred largely on three points: the provenance of the objects which found their way to museums around the world in the latter part of the 19th century, Jammes’ claims of deep stratigraphy and the antiquity of the artefacts themselves, particularly the bronzes. Worman raised the prospect of dubious attribution, stating that since very few of the bronze objects associated with Samròng Sèn have verifiably been excavated there, the envisaged transition from Stone Age to Bronze Age raises questions.⁵³⁶

Additional research and a more thorough analysis of textual sources and museum records have validated some of Worman’s criticism while corroborating a few of Jammes’ claims. Higham, for instance, allows for failings in human nature at a time when the study of prehistory in Indochina was in its infant steps and excavations could be conducted by amateurs: “While Jammes’ finds might have appeared outlandish to Worman in the 1940s, some recent excavations have produced material which is uncannily similar to more than one of Jammes’ claims”.⁵³⁷ Higham adduces similarities in some skeletons found at Khok Phnom Di, in coastal central Thailand, where skeletons are buried on their back, accompanied by fish bones, shellfish remains, pottery and bracelets, which were too small to be removed, indicating that the deceased had worn these bracelets from a very young age. This last detail was also revealed in an elaborate explanation by Jammes, who mentioned the custom among the Chinese and Indochinese to wear bracelets “from a very young age”.⁵³⁸ On the basis of other affinities between Samròng Sèn and Khok Phnom Di, Higham concludes that Jammes may have been economical with the truth, erring perhaps in “presenting a garbled account of what the shell diggers at Samrong Sen had found”.⁵³⁹

Stark has concluded that, due to the poorly-executed excavations conducted in Samròng Sèn late in the 19th century, the site’s age of occupation “is far from resolved”.⁵⁴⁰ It appears that the choicest finds were collected by villagers and the persisting doubts about their provenance continue to cast a shadow over Jammes’ veracity and his archaeological exploits. It is not always the case that objects retrieved in unscientific circumstances are tinged by dubious pedigree, as in the case of the Khin Ba relic chamber, discovered in 1926 by U Khin Ba, a farmer. The mound, dated to 5th-6th century CE, lay deep in the brick stupa of the walled Pyu city of Sriksetra, in Upper Myanmar. The artefacts from the stupa mound are particularly valuable because Khin Ba is “the only undisturbed relic chamber ever found at Śrī Ksetra”⁵⁴¹ and also on account of the exceptional value of objects embedded in the reliquary, which included 20 solid gold plates shaped like palm-leaf manuscripts and “a large number of gold rings”.⁵⁴²

7.4 Thailand

7.4.1 Mae Hong Son Province

Objects retrieved from prehistoric caves in Mae Hong Son Province, NW Thailand, display affinities with objects from the Plain of Jars. Bronze bells and spindle whorls are among the

⁵³⁴ CEFEQ 1939/Q1: 25.

⁵³⁵ Worman 1949: 323.

⁵³⁶ Worman 1949: 325.

⁵³⁷ Higham 1996: 23.

⁵³⁸ Jammes 1891: 45.

⁵³⁹ Higham 1996: 23.

⁵⁴⁰ Stark 2004: 95.

⁵⁴¹ Lwin, Kyaing & Stargardt 2014: 64.

⁵⁴² Moore, Win & Tan 2013: 110.

items that have invited comparison. The bronze bells from the Thai caves have “a rounded dome about 2.5 cm in diameter” and their base is round but flattened (Fig. 7.36) and may have enclosed a striker.⁵⁴³ In common with those found at the Plain of Jars (Fig. 4.5 Chapter 4.3), the bells from Mae Hong Son Province have a small loop at the top.

The diminutive bells from the Plain of Jars, Sa Huynh and Mae Hong Son are suitable as decorative objects, for appending to clothes or artefacts. The larger Samròng Sèn bell (Fig. 4.5 Chapter 4.3) may have fulfilled a different function, perhaps not decorative but for use in rituals or as a luxury item. This can be verified by the “large suspension loop”,⁵⁴⁴ more suitable for appending to a fixture rather than to clothing or to be worn as a personal ornament.

A recent study in ethnography stated that objects, especially beads, sewn onto clothing or worn on necklaces “may signify complex social, economic, ethnic, ideological, religious or emblematic meanings, all of which are only accessible to a participant of the culture in question”.⁵⁴⁵ The study invites a wider interpretation of their meaning, promoting the notion that the objects may also have functioned as charms or as protection against evil spells or spirits. Without this richer reading, objects such as small bronze bells and beads can be relegated to their material components and thus deprived of a “meaning” intended by the wearer.

Spiral motifs are a common feature among the bells from NW Thailand and the Plain of Jars. Objects decorated with spirals have also been found at Noen-U-Loke, in the Upper Mun valley, where a large bronze object shaped like a spiral (Fig. 7.37) was found on a skull.⁵⁴⁶

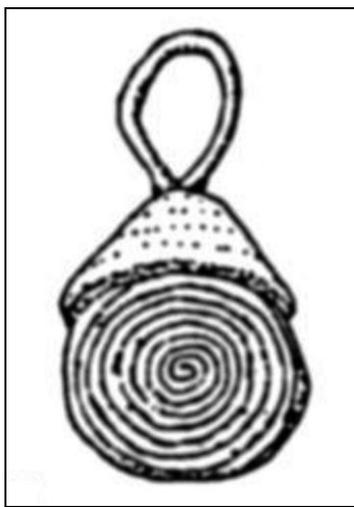


Fig. 7.36. Bronze bell from Huai Pong Saen Pik caves. Kiernan *et al.* 1988: 31, fig. 5a.

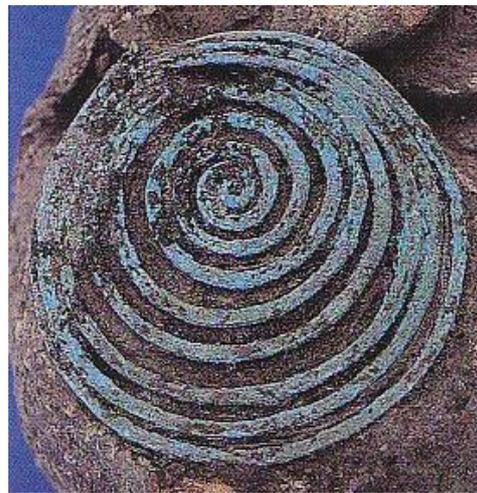


Fig. 7.37. Noen-U-Loke, Thailand. Bronze spiral object found on a skull. Higham & Thosarat 2012: 195.

Other comparable objects have included items not in the prestige category but in the ritual realm, perhaps, like the representation of an animal head. A wooden version (Fig. 7.38) was found in a cave in Mae Hong Son Province’s Huai Pong Saen Pik District, similar to a terracotta version (Fig. 7.39) retrieved by Colani from the limestone cave at J1.

⁵⁴³ Kiernan *et al.* 1988: 30.

⁵⁴⁴ Mansuy 1923: 11.

⁵⁴⁵ Bednarik 2005.

⁵⁴⁶ Higham & Thosarat 2012: 195.

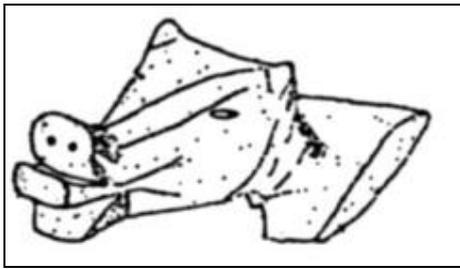


Fig. 7.38. Wooden animal head from Huai Pong Saen Pik caves, Thailand. Kiernan *et al.* 1988: 31, fig. 5d.

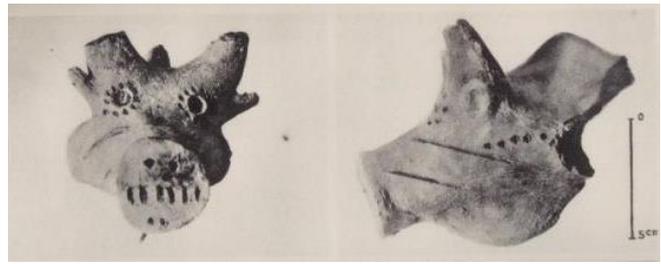


Fig. 7.39. J1, limestone cave. Terracotta animal head, discovered by Colani in 1931. Colani 1935a, v1: pl. LXI.

7.4.2 Ban Lum Khao

Simplicity appears to have been the preferred choice for the spindle whorls at the Plain of Jars, where even the most elaborate items from J1 (Fig. 7.22 Chapter 7.1.4) look modest compared with the sophisticated whorls from Ban Lum Khao, in the Mun River valley. Ban Lum Khao was settled in the late Neolithic period, “dating to the last few centuries of the 2nd millennium BC”.⁵⁴⁷

A rich array of mortuary objects has been recovered from the site, where local casting can be inferred from the recovery of “crucible and mould fragments”.⁵⁴⁸ The spindle whorls (Fig. 7.40) are for the most part of the conical type and richly decorated. Six units are decorated on the upper surface or outer rim, while four others bear small concentric circles or fingernail impressions on the outer rim, “similar to those from early Neolithic sites in the Yangzi river valley and Southeast China”.⁵⁴⁹ One of the whorls is decorated with an anthropomorphic figure (Fig. 7.41).

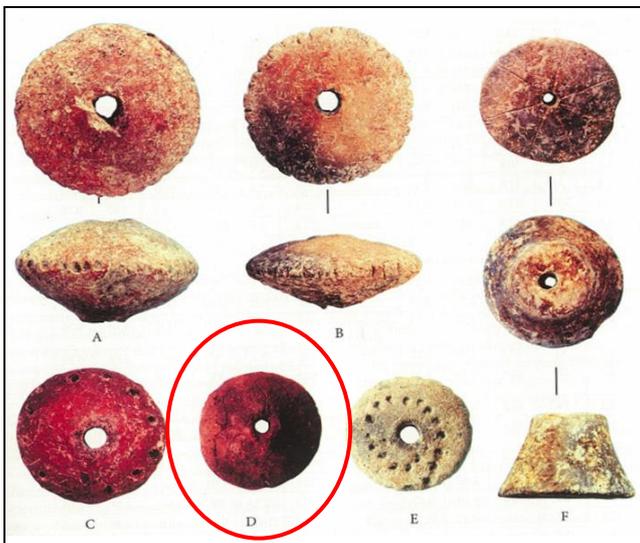


Fig. 7.40. Ban Lum Khao, Thailand. Spindle whorls. Item ‘D’ is decorated with a human figure (Fig 7.41). Cameron 2005, v1: fig. 8.3.



Fig. 7.41. Detail of Item D (Fig. 7.40) decorated with a human figure.

At Ban Lum Khao, whorls as grave goods were not gender- or age-specific, but accompanied people of all age groups, males and females, a practice also documented with ceramic anvils, found with people of both sexes, and stone adzes found with infants, women and children.⁵⁵⁰

⁵⁴⁷ Higham & Thosarat 2012: 126.

⁵⁴⁸ Higham 2002: 142.

⁵⁴⁹ Cameron 2005: 212.

⁵⁵⁰ Higham 2002: 144.

7.5 Myanmar

The stone urns of Myanmar's walled Pyu cities (BCE 200-900 CE), are relatively well researched, thanks largely to Gordon H. Luce (1889-1979), appointed Lecturer in English Literature at Rangoon College in 1912. Luce was one of the first to suggest similarities, in use at least, between the stone jars of north Laos and those of some Pyu cities: "The Pyu kings still clung to megalithic customs: their ashes are found in huge stone urns, engraved with Pyu inscriptions, but otherwise like those of the Plaine des Jarres [*sic*] in Laos".⁵⁵¹

The elaborate funerary customs practiced were cited by the WH Committee as one of the reasons for inscribing the Pyu cities of Sriksetra, Beikthano and Halin onto the WH List in June 2014. The urns, made from local sandstone, are considered a unique feature of Pyu Buddhist sites, with the largest number of urns recorded at Sriksetra, followed by Beikthano and Halin.

The Sriksetra urns (Fig. 7.42) are placed "on elevated areas",⁵⁵² one possible common feature with the megalithic jars of north Laos, but their size, averaging 1 m in height and 2 m in circumference, is smaller than the Laotian jars. The limited height of the Pyu urns would suggest they were created for secondary burials although a whole body could have been fitted inside.⁵⁵³

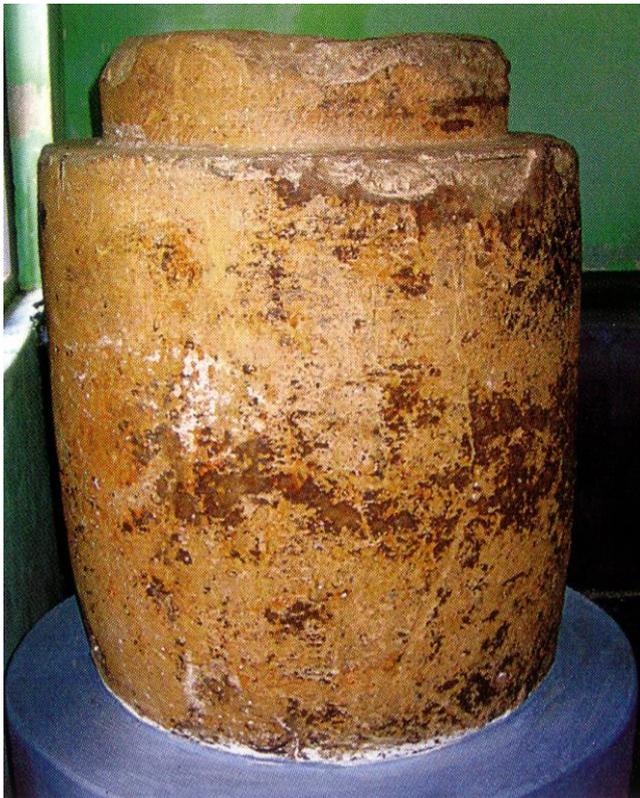


Fig. 7.42. Pyu cities, central Myanmar.
Stone urn from Sriksetra.
Moore 2007: 136.

If the morphology of the Pyu urns bears little resemblance to that of the Laotian megalithic jars, affinities can be found with the clay pots buried near the stone jars in Laos. The clay pots from Laos contained, in addition to skeletal remains, objects in stone, bronze jewellery and bells,

⁵⁵¹ Luce 1961: 11.

⁵⁵² Moore 2007: 136.

⁵⁵³ Personal communication from Elizabeth Moore, 30/09/2014.

pendants, iron implements, beads and spindle whorls,⁵⁵⁴ very similar to objects in the Pyu urns, which contained “ash, bone fragments, silver coins and semi-precious stone and glass beads”.⁵⁵⁵

7.6 South Asia

Map 7.6 shows the position of sites mentioned in the South Asia section.



Map 7.6. Position of megaliths in NE India.
GoogleEarth.

Colani envisioned the Plain of Jars as the middle node in a chain of three rings⁵⁵⁶ (Map 4.5 Chapter 4.8), spreading from the Cachar Hills in India’s Assam state, via the Plain of Jars, to Sa Huynh. In his contribution to the FEPA congress held in Manila in 1953, Von Heine-Geldern encouraged scholars to research the stone jars of north Laos *together with*, rather than *in isolation from*, the clay pots of South Asia and Southeast Asia: “But how to explain their puzzling geographic distribution: Laos, North Cachar, Sumatra, Sumba [Indonesia], Kelabit region of Borneo, Central Celebes [Sulawesi]? There must have been some kind of connection between these various regions. Is it possible that there are links which have not yet been discovered?”⁵⁵⁷

Rao has documented anthropomorphic megaliths associated with burials in the southern Indian states of Andhra Pradesh, Karnataka and Tamil Nadu. The statues “are found either in association with a megalithic monument or are located in a megalithic burial ground”.⁵⁵⁸ They are carved from a single block of stone and the resulting shape is stylised to the extent that it is often impossible to discern whether male or female, although some statues have been sculpted with

⁵⁵⁴ Colani 1935a, v2: 6, fig. 148.

⁵⁵⁵ Moore 2007: 137.

⁵⁵⁶ Colani 1935a, v2: 212, fig. 206.

⁵⁵⁷ Quoted in Heekeren 1956: 194. Von Heine-Geldern was unable to attend the conference but H. R. van Heekeren, from the Archaeological Service of Indonesia, delivered his paper. Van Heekeren had received from Heine-Geldern “a stencilled paper” but no title is provided in Van Heekeren’s Bibliography.

⁵⁵⁸ Rao 2000: 112.

anatomically female features. This custom is prevalent among the Gonds, who inhabit the Indian state of Madhya Pradesh. The Gonds believe that, after death, the soul joins the clan's ancestors, a journey helped by erecting a stone memorial. There is a belief that "the spirit of the dead resides in a stone"⁵⁵⁹ and that menhirs embody the soul of the dead: "after the death of a person, his 'anal' [ghost-soul] will enter a stone [...] Thus the dead are worshipped by erected [*sic*] pillars, stones and menhirs".⁵⁶⁰

It is with the megaliths of Assam and Nagaland that the Laotian jars bear a number of parallels.

7.6.1 Assam and Nagaland

Colani proposed that affinities in grave goods mirrored movements along the caravan trade route between the Plain of Jars and Luang Prabang Province. In December 1937, for instance, she expressed her belief that the megalithic culture had moved from the northwest (Assam) to the southeast (central Vietnam) via the Plain of Jars (Map 4.5 Chapter 4.8), with the Sa Huynh potters deemed the direct descendants of the people of the megalithic jars in Laos.⁵⁶¹ In 1978, Colani's theory received some support in Bellwood's *Man's conquest of the Pacific* but only in relation to stone affinities rather than the envisaged transmission flow. Bellwood conceded that though the stone jars of north Laos are unique in Mainland Southeast Asia, "one is left with the nagging feeling that an unexplained relationship may exist"⁵⁶² with the megaliths of NE India. Bellwood advocates a flow in the opposite direction, however, with Sa Huynh settled by Austronesian (Chamic) speaking people from Malaya or Borneo around BCE 600 or earlier. The megalithic jars of north Laos would therefore be a later development and unlikely to be the source of the Sa Huynh/Indo-Malaysian pot burial tradition.⁵⁶³ This is a refinement of Colani's theory, who envisaged a flow from west (oldest) to east (youngest).

Seidenfaden advocated a theory of long-lost megalithic vestiges to support Colani's theory of the Assam-Xieng Khouang-Sa Huynh corridor, theorising that the route travelled by the salt traders' caravans through the Plain of Jars could in future reveal the vestiges of this ancient traffic: "when the primitive had no stones he raised monuments of wood. The large gap between the two megalithic centres in Mu'ang Phu-Eun [Plain of Jars] and Assam may be explained by the disappearance of such wooden monuments".⁵⁶⁴

Medhi has postulated that the connection between the cultural heritage of Assam and Mainland Southeast Asia may date as far back as the Neolithic: "I strongly believe that present-day Northeast India was in the past much closer to the rest of Mainland Southeast Asia. Archaeology, ethnography, and geography support this idea. Future research will thoroughly test its validity".⁵⁶⁵ The links are based on the shared archaeological and ethnographic material extending from Assam, via Myanmar, to as far east as Vietnam, as envisaged by Colani.

A link between NE India and Southeast Asia has been envisaged by scholars familiar with their communities' cultural heritage, especially megaliths. Some of the earliest publications on the megaliths of Assam are by J. P. Mills and J. H. Hutton (1885-1968). From 1914, Mills was the

⁵⁵⁹ Mehta 1984: 332.

⁵⁶⁰ Mehta 1984: 332-333.

⁵⁶¹ Colani 1937: 12. Lecture at the Louis Finot Museum, Hanoi, 20/12/1937.

⁵⁶² Bellwood 1978: 198.

⁵⁶³ Bellwood 1985: 275-276.

⁵⁶⁴ Seidenfaden 1943: 57.

⁵⁶⁵ Medhi 1990: 42.

District Commissioner in the Naga Hills of India, eventually becoming a lecturer in anthropology at the School of Oriental and African Studies (SOAS) in London. Hutton also served as District Commissioner in the Naga Hills and became professor of anthropology at Cambridge University after leaving the service of the British Raj. Mills and Hutton co-authored several papers but also published individually.

Mills and Hutton belonged to a class of colonial administrators in Asian outposts, eager to document a traditional way of life. In his Foreword to the collection of essays on *The Nagas in the Nineteenth Century*, edited by Verrier Elwin, N. K. Rustomji said:

The days of the scholar-administrator are, alas, over, but it is good to be able to savour, if only for a brief, golden interlude, the taste of a former age, when there was time, and also a sense of pride and an urge, for presenting an official report not as a mere compilation of facts and figures but as an essay of literary endeavour.⁵⁶⁶

One of Hutton's first writings on the topic was *Carved Monoliths at Dimapur and An Angami Naga Ceremony*, published in 1922, to which followed numerous others on burial customs, head hunting and megalithic building among the Nagas of NE India. The focus of Mills and Hutton's articles, whether published individually or jointly, centres on the megaliths of Assam as a localised phenomenon.

Mills began surveying the Assamese megaliths after spotting "two unusual stones [...] pear-shaped monoliths artificially dressed and each containing a cavity hollowed in the bulbous end".⁵⁶⁷ He identified three main groups in Derebora, Kartong and Bolasan, respectively with 42, 50 and 400 megaliths, a total of 492 megaliths.

The Assamese megaliths are hollow, open at the small end, with the base wider than the mouth, which compares favourably with the Plain of Jars urn. A few urns have a narrow aperture but for the most part, they are conical. They are of varying size and, to an extent, they reflect the diversity encountered in the size of the jars in north Laos. The smallest recorded urn in Assam measures 36 cm, against the broadly 100 cm recorded for the smaller stone jars in north Laos. Some of the decorations are intricate, with a human (Fig. 7.43) or animal engraving enclosed between rows of geometric designs (Fig. 7.44).

Like the jars of north Laos, the Assamese urns are carved from one single piece of stone. Radical points of departure exist, however. For instance, the urns at Kobak are decorated with human or animal figures but also with geometric patterns. This represents a significant difference in comparison with the jars of north Laos, which are almost always undecorated. The majority of megalithic funerary jars from the Pyu cities are undecorated, although "pottery from Halin was sometimes decorated with panels containing human figures".⁵⁶⁸

⁵⁶⁶ Elwin 1969: vi. Mills & Hutton's work is mentioned in the book of essays edited by Elwin.

⁵⁶⁷ Mills & Hutton 1929: 285.

⁵⁶⁸ Moore 2007: 138.

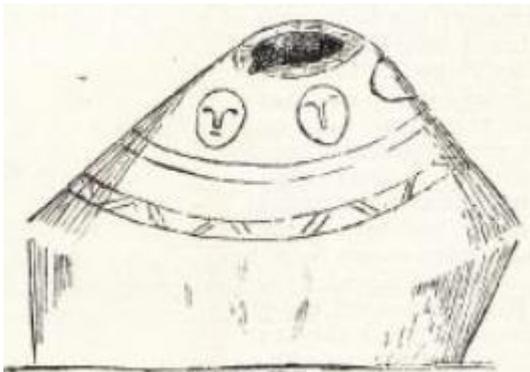


Fig. 7.43. Cachar Hills, Assam, NE India. Human-decorated monolith at Kobak. Mills & Hutton 1929: 288, fig. 5.

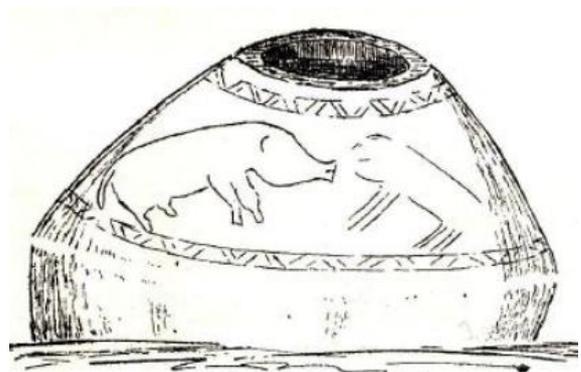


Fig. 7.44. Cachar Hills, Assam, NE India. Animal-decorated monolith at Kobak. Mills & Hutton 1929: 287, fig. 4.

The Assamese urns resemble truncated cones (Fig. 7.45). A megalith (Fig. 7.46) in Kobak measures 210 cm, considerably shorter than the 300 cm sandstone jar recorded in Phoukood District at the Plain of Jars (Fig. 5.43 Chapter 5.2.8).

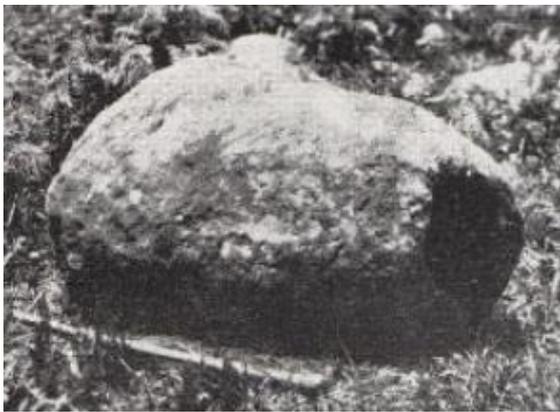


Fig. 7.45. Cachar Hills, Assam, NE India. Monolith resembling a truncated cone. Mills & Hutton 1929: 286, fig. 1.



Fig. 7.46. Kobak. Large monolith. Photo: J.P. Mills. <http://himalaya.socanth.cam.ac.uk/collections/naga/mediaview/naga/millsphot/p48152.jpg.html>

Mills and Hutton conducted their research on the megaliths three years before Colani embarked on her first Plain of Jars mission (May 1931). Moreover, the British officers were close to the megaliths as part of their work, unlike Colani, who was based in Hanoi and for whom fieldwork to Laos was by means of approved projects within tight budgetary constraints.

However, the chronological advantage allowed Colani to employ the British officers' work as part of the Assam-Xieng Khouang-central Vietnam link mentioned earlier. The benefit of research into megaliths, therefore, accrued to Colani, whose 1935 monograph quoted Mills & Hutton's work at length. Colani refrained from excessive reliance on the phallic cult and the "male" and "female" connotations the British writers attributed to megaliths. Colani also alluded to notions of gender, suggesting male elements as the standing stones and the horizontal megaliths as the female equivalent. She was parsimonious in their usage, so that in the context of the 1935 monograph's 700 pages, mentions of phallic cults in megalith building are at least 80 pages apart. For instance, in vol. 1, the 'phallic cult' is mentioned on page 92 (in relation to

Hoop's theory of menhirs as phallic symbols), and on pages 174 and 265.⁵⁶⁹ By contrast, in Mills and Hutton's 1929 *Ancient Monoliths of North Cachar*, 'phallic' is printed on pages 297 and 299-300, 'male' on pages 295 and 299, 'female' on pages 285 and 299 and 'fertility' on pages 294 and 299,⁵⁷⁰ in an article spanning just 16 pages of text.

In her recent book on the megaliths of Manipur, in NE India, Devi has documented at least seven types of stone structures, from flat stones, to menhirs, cairns, stone circles, stone seats and dolmens. However, there is little affinity in the size of these menhirs with those in north Laos, since the Manipur megaliths are significantly taller (Fig. 7.47) than anything recorded in Hua Phan. Devi reports menhirs as tall as 488 cm, with the smallest one measuring just 62 cm, with a common height "between 120 cm and 180 cm".⁵⁷¹



Fig. 7.47. Menhir in Willong, Manipur state, India. Devi 2011: 248, photo 47.

Jamir has documented the Angami Nagas' mortuary custom, including excavations at the burial site of Jotsoma, a village at an altitude of 1400-1500 m in Nagaland, NE India. For the Angamis, death can be natural (old age, disease, etc.) or unnatural (in conflict or during childbirth, victims of suicide, drowning, lightning, etc.), and mortuary customs are arranged accordingly. Victims of natural death are buried inside the village gates but those who die an unnatural death are buried outside, due to a belief that their restless spirit can trouble the living. If the deceased is a hunter, wooden tiger heads are sculpted and erected near the burial house. Among the Angamis, the body of a woman who dies during childbirth is not taken out through the main door but through a breach in the wall.⁵⁷² A similar custom exists among the Njua Hmong:

In the case of the death of an unnamed baby, i.e. before it is 3 days old, the body is taken out of the house by breaking a hole in the wall, not through the door. Likewise when someone dies outside the house as the result of an accident, the corpse must be taken into the house for the mortuary rite through a hole made in the wall, not through the door.⁵⁷³

⁵⁶⁹ Colani 1935a, v1.

⁵⁷⁰ Mills & Hutton 1929.

⁵⁷¹ Devi 2011: 37.

⁵⁷² Jamir 2006: 4554-56.

⁵⁷³ Chindarsi 1976: 91.

The eight burials at Jotsoma, documented by Jamir in two excavation seasons in 2000 and 2001, have been dated to 200 ± 70 BP.⁵⁷⁴ Both primary and secondary burials have been documented, the former in the shape of extended burials in rectangular, earth-cut pits topped with numerous flat stones, and the latter inside pottery vessels. The grave goods consist of iron objects, including a number of spearheads. Other burial objects include carnelian and glass beads, machetes and brass chains. Some of the pit burials had been disturbed.

Jamir postulates that the richness in the burial rites may reflect the social rank or status of the personage. However, he cautions against a strict application of this theory, since he has documented small-size burials containing only “fragmentary skeletal parts”,⁵⁷⁵ where the inherent assumption that they may refer to people of lower rank or social standing can be invalidated by the possibility that they could belong to victims of unnatural death: “The nature of the burial location also indicates that choices of disposal are made by the Angamis on the circumstances rather than the social standing of the deceased”.⁵⁷⁶ There are parallels with the Plain of Jars, where only fragmentary human remains have been found, of limited usefulness for analytical purposes because we lack ethnographic data to complement the archaeological data.

7.7 Island Southeast Asia

Map 7.7 shows the position of sites mentioned in the Island Southeast Asia section.



Map 7.7. Sites in Island Southeast Asia.
GoogleEarth.

A theory postulating that the stone jars of north Laos were carved as containers for the corpse, in my view does little justice to the carefully chosen stone and the great care and efforts invested in creating these megaliths. Such a theory reduces their function to practical objects, as containers

⁵⁷⁴ Jamir 2006: 449.

⁵⁷⁵ Jamir 2006: 455.

⁵⁷⁶ Jamir 2006: 461.

for a person's mortal remains, diminishing the considerable effort and dedication inherent in their creation. Stone is permanent, durable and, for some cultures, the abode of man's spirit, but it can also transmute into harsh retribution when filial duty has failed. Barendregt, for instance, recounts a legend in the song 'Batu batuah' (magic stone) among the Minang of south Sumatra, describing the fate of a young man who was turned to stone for neglecting his mother: "For the Minang, who are pious Moslems, heaven is beneath the soles of one's mother's feet, so that neglect of one's mother is regarded as one of the gravest sins".⁵⁷⁷

In other parts of Southeast Asia, stone has long been associated with man's spiritual qualities. The Toraja of South Sulawesi, for instance, erect menhirs to commemorate the dead. Assuming that the same belief holds true for the Plain of Jars, it would be a dissonance to theorise that a stone jar functioned primarily as a repository for the physical semblance. Among the Toraja, differences in the size of the menhir are attributed to "economic factors".⁵⁷⁸ Thus, the intrinsic qualities of stone are *unaffected* by economic considerations because they are independent of the relatives' financial abilities. In absolute terms, failure to erect a menhir, however small, constitutes a greater offence than erecting a small menhir when funds allow.

A similar custom has been recorded in Luang Namtha Province, where the decorated menhirs at Takheung and Saphim villages are being used "as markers for places where the village spirit resides on the border of the village".⁵⁷⁹ In these instances, then, the spirits embodied in the decorated menhirs are engaged in a tutelary relationship with the villagers, who are thus "encircled" within the area demarcated by the menhirs.

Aside from these considerations, the Plain of Jars also shares features with Island Southeast Asia in iconographic representations.

7.7.1 Sumatra

Since 2003, Dominik Bonatz has led teams of researchers on surveys and excavations in the Jambi Highlands of Sumatra, with megaliths carved from local andesitic tuff, an igneous rock, and can weigh ten tonnes or more.⁵⁸⁰ In one unique instance, a megalith is carved from a block of "very soft pumice".⁵⁸¹ The creation of megaliths in Indonesia was at one time widespread and, according to recent studies, "Where it is still practiced, it is always in the context of ancestral rituals, which promote a person to the status of an ancestor",⁵⁸² a concept also discussed in Chapter 5.8.3.

Settlements discovered close to the megaliths have enabled researchers to date the megaliths to the early part of the 12th century CE, and possibly earlier. OSL tests on two potsherds retrieved from the Jambi sites near the megaliths have revealed dates of around 1200 CE.⁵⁸³

The Jambi megaliths are much more recent and their even and smooth surfaces are in part due to the shorter period of weathering compared to the jars of north Laos. Their recent manufacture may have provided a technological advantage for the carving of figures.

⁵⁷⁷ Barendregt 2002: 416.

⁵⁷⁸ Handini 2008: 274.

⁵⁷⁹ Personal communication of May 2014 from Guido Sprenger.

⁵⁸⁰ Znoj 2001: 302.

⁵⁸¹ Znoj 2001: 304.

⁵⁸² Znoj 2001: 301.

⁵⁸³ Bonatz *et al.* 2006: 500.

The Sumatran units are mostly shaped like cones or cylinders, with most of the conical shapes “carved with human images, portrayed in full relief on at least one end”.⁵⁸⁴ The human figures they bear have been interpreted as threads of continuity between generations. Aside from other considerations, this is an area of major difference with the Laotian stone jars, which are only in exceptional cases decorated with images of humans or animals.

The Plain of Jars and the Jambi Highlands are separated by a distance of 2300 km but numerous parallels can be drawn. For instance, for present-day communities in the Sumatran Highlands, “Local knowledge as to the original purpose of the megaliths has been gradually lost”,⁵⁸⁵ a statement mirroring the loss of direct connection between present dwellers and the jars of Laos. The Sumatran megaliths were erected during periods of prosperity, when the settlements traded gold, ivory and rhino horn with faraway lands in Arabia, India and China,⁵⁸⁶ similarly to the jars of north Laos believed to have been erected when Xieng Khouang was a prosperous province at the centre of a profitable caravan trade.

The 20 megaliths investigated by Bonatz were “oriented towards the most prominent mountain in their immediate vicinity”.⁵⁸⁷ The orientation of the north Laos sites has not been studied in detail but most of the sites hosting stone jars are located on mountain ridges and slopes. On some Jambi megaliths, the underside “is flattened”,⁵⁸⁸ while on others a rectangular section (Fig. 7.48) has been hollowed out, which might have served for ritual purposes.⁵⁸⁹

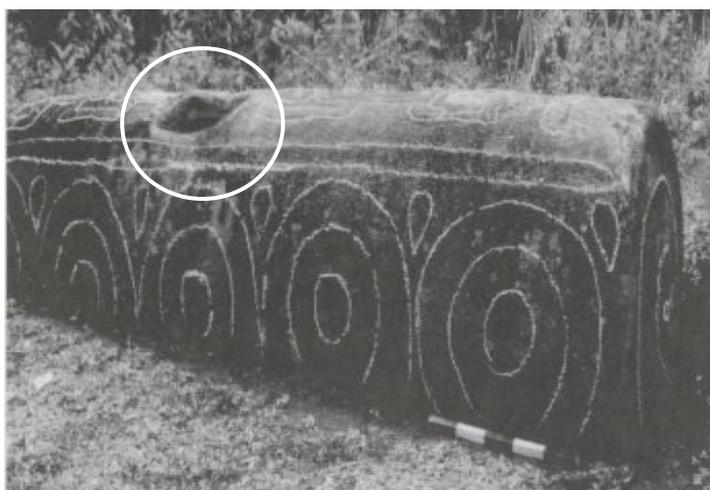


Fig. 7.48. Pratin Tuo, Jambi Highlands, Sumatra. Decorated megalith with square receptacle. Bonatz 2008: 261, fig. 5.

With one documented exception, the Jambi megaliths are always horizontal on the ground. However, unlike the stone jars of north Laos, they have not been hollowed out but the two drum-like ends, neatly finished, are frequently decorated with a human figure. Occasionally, the human figure’s legs are turned sideways (Fig. 7.49), as in this unit with a length of 433 cm (Fig. 7.50). The human figure is in a bent position with arms aloft: “The rigid frontality of the upper part of the body contrasts sharply with the legs, which are turned sideways”.⁵⁹⁰

⁵⁸⁴ Bonatz *et al.* 2006: 508.

⁵⁸⁵ Bonatz 2008: 259.

⁵⁸⁶ Bonatz 2008: 259.

⁵⁸⁷ Bonatz 2008: 259.

⁵⁸⁸ Bonatz *et al.* 2006: 507.

⁵⁸⁹ Personal communication from Mai Lin Tjoa-Bonatz, July 2014.

⁵⁹⁰ Bonatz *et al.* 2006: 508.



Fig. 7.49. Jambi Highlands, Sumatra. Human figure on megalith, with legs pointed sideways. Znoj 2001: pl. 11.



Fig. 7.50. Jambi Highlands, Sumatra. The legs turned sideways are a variation of the 'dancing figure' found on other megaliths in the area. Bonatz *et al.* 2006: 508, fig. 17.

Iconographic expression constitutes a major area of difference between the Jambi megaliths and the stone jars of north Laos. The Sumatran megaliths are decorated with varied anthropomorphic figures not just in the spread-eagled posture, but also figures holding a stick-like object, calling to mind a *dvarapala* (guardian deity) or a dancer's pose. As detailed earlier, the spread-eagled figure has been documented on jars and discs at the Plain of Jars but very infrequently, considering that the Plain of Jars is populated with more than 2000 stone jars and over 200 discs.

In Jambi, clusters of earthenware pots have been found buried in areas associated with the megaliths. Bonatz and his teams have debated whether they were part of a burial complex and, although they do not discount this possibility, they conclude that this theory requires further research. At the Plain of Jars, where clay pots are buried around the archaeological site and often immediately below a stone jar, the presence of teeth and bones in the clay pots has confirmed their function within a mortuary context. At the Jambi Highlands sites, the earthenware pots appear to be contemporary with the megaliths. And this is another potential area in common with the jars of north Laos (Chapter 5.8.4 refers).

The Jambi sites have revealed a rich collection of artefacts, including coloured beads and two-segmented gold glass beads made of "two layers of glass with a partial layer of metal foil in between".⁵⁹¹ Most of the beads were collected from the upper soil level. Carbon dating on a charcoal sample from the ash layer in an excavation area has given readings of 970 ± 140 BP, "indicating that the pots were last used around 1200 AD".⁵⁹²

Bonatz and his teams have also excavated at Kerinci, the largest area in the Jambi Highlands. Although megaliths are no longer a living tradition in Kerinci, they were part of the area's belief system in the not too distant past. In his essay on the area's Islamisation, for instance, Watson quotes a letter dated 1778 CE from the ruler Pangeran Sukarta, calling it "a good example of a document combining political purpose with religious exhortation".⁵⁹³ After some issues dealing with boundary matters and a mandate to institute royal justice, the last part of the letter concerns specific issues related to religious matters, where Pangeran Sukarta states that one of the four things expressly forbidden under *shari'a* law was the practice of paying "homage to spirits and

⁵⁹¹ Bonatz *et al.* 2006: 500.

⁵⁹² Bonatz *et al.* 2006: 500.

⁵⁹³ Watson 1985: 162-163.

devils and stones and trees and suchlike”.⁵⁹⁴ The paper by Bonatz *et al.* suggests that the practice to erect megaliths in Kerinci was alive at least until the middle of the 18th century “and the introduction of Islam was one of the main reasons for ceasing the practice”.⁵⁹⁵

Other factors, however, are clearly at play since in Sabah, in insular Malaysia, megaliths played a significant role in the communities’ life in the recent past, among the now predominantly Muslim population, as recalled by members of the older generation. It was reported in a recent study that an elderly villager in Sabah recalled megaliths erected to commemorate warriors, which were distinguished from other megaliths by the special marks they bore.⁵⁹⁶ The author of this in-depth study noted that upon returning from a successful headhunting season, it was customary to bring the heads to the menhir “and a notch was cut on it for each head captured”.⁵⁹⁷

⁵⁹⁴ Watson 1985: 163.

⁵⁹⁵ Bonatz 2006: 311.

⁵⁹⁶ Mohd Rapi 2013: 11.

⁵⁹⁷ Phelan 1997: 19.

CHAPTER 8

SUMMARY OF FINDINGS AND DISCUSSION

If people ask you if we have ‘solved the riddle’, you can say that we do not claim to have done that, but we have found much that is new & interesting.

- Letter from Katherine Routledge to her mother, Kate Pease, written on 8 June 1915 from Easter Island.

J.A. Van Tilburg. *Among Stone Giants*, 2003: 180.

This thesis has underlined the unique opportunistic use of stone and the intimate relationship of the jars to sources of stone, be they mountain flanks, outcrops or river beds. The topics discussed have illustrated levels of relationship between the Plain of Jars and some of its neighbours in Mainland and Island Southeast Asia. The temporal context and apparent use of the Plain of Jars is discussed as an interchange point. While more information is needed to clarify the function and form of the jars, the thesis establishes a distribution of jar sites and quarries far beyond that investigated by Madeline Colani. The re-assessment of her work shows both the ways her work has constrained further investigation of the regional context of the sites and set interpretational markers which few have questioned, such as stylistic comparisons for a limited number of objects like the bronze statuette (Fig. 8.1) retrieved from an underground pot at Thao Kham. Though Colani acknowledged this object as a unique find, her interpretation employed an anthropometric examination, with the statuette’s measurements compared to the physical features and genetic characteristics of a human being (French male adult), to establish a causal link between the statuette and the intellectual capabilities of the ethnic group that created it.⁵⁹⁸

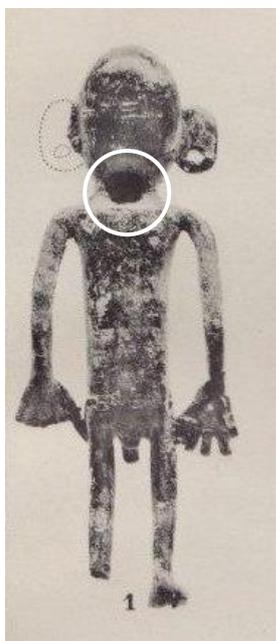


Fig. 8.1. Bronze statuette, 8.8 cm high, from Thao Kham, a field of stones and burial pots in Luang Prabang Province (Map 6.4 Chapter 6.1.2). Circle indicates aperture at the back of the statuette’s neck.
Colani 1935a, v1: pl. LXIII.

The quest for archaeological artefacts as vestiges of an unknown culture was the driving force behind excavations. Rather than being studied for their scientific or artistic merit, objects were analysed for clues on the social and ethnographic context of the Plain of Jars. The focus on the retrieval of material culture, for transportation to museums in Indochina or metropolitan France, influenced other research possibilities at the Plain of Jars, including the analysis of jar form or the search for sources of rock.

⁵⁹⁸ Colani 1935a, v1: 201-204.

The new evidence presented here expands the distribution of Colani from 26 sites (Table 5 Chapter 4.2) to 52 sites (Table 1 Chapter 1.9), to show how the spatial relationship is based on an upland network of exchanges linked to quarries and overland routes. Analysis of the jars themselves indicates a coding through form, particularly in the rim variation, while the irregular association of discs showed no clear correlation to size or rim type.

Renewed interpretation of the artefacts collected by Colani is being hampered by their inaccessibility. As French rule came to an end in Indochina, it appears that some objects collected from the Plain of Jars were transferred from the Louis Finot Museum to Wat Phra Kaew,⁵⁹⁹ a temple-museum in Vientiane. This may explain recent claims that the iconic bronze statuette of Thao Kham (Fig. 8.1 above) may be stored at Wat Phra Kaew.⁶⁰⁰ However, on a visit to the temple to verify this claim,⁶⁰¹ members of staff informed me that no such statuette existed there. It is, therefore, possible that only some of the artefacts were relocated to Vientiane, rather than the considerable haul excavated by Colani. My assumption is corroborated by statements made by curators at the National Museum of Vietnamese History,⁶⁰² Hanoi, when I was informed that Lao artefacts are indeed stored in the museum's basement areas.

The recreational excavations in the first quarter of the 20th century were a substitute for scientific archaeology. Amateurs from disparate backgrounds and modest technical preparation could conduct excavations, frequently discarding the objects which failed to meet their immediate interests, leaving behind damaged and compromised sites which today we would not hesitate to call 'looted' sites. The objects collected through these unscientific excavations enriched museums in Indochina, a practice with direct influence on areas such as the Plain of Jars, which offered modest prospects for museum collections.

Other research efforts, however, were conducted for geological surveys or the study of religious architecture. These reports were instrumental in the compilation of the first inventory of sites at the Plain of Jars. There were efforts to document the unknown, irrespective of its relevance to the study of temples in Xieng Khouang (Parmentier's study in 1912) or related to the rich geology of the province (Dussault's explorations of the eastern reaches in 1912-13). The documentation of jar sites, to varying levels of detail, was undertaken by Parmentier and Dussault and their accounts, together with Raquez's eyewitness account, contributed towards the first systematic record of sites at the Plain of Jars: the 1926 list of monuments for Indochina (Table 4 Chapter 2.4). This list testified to the EFEO's involvement in documenting Laos' cultural heritage, including its enigmatic jars and the remote northeast. If the Madrolle Guides had invited tourists to admire the jars of Xieng Khouang *en route* to Luang Prabang, by travelling through rugged Xieng Khouang, the 1926 inventory of jar sites was an academic effort that removed some of this romanticism. Nine years later, Colani's monograph strengthened the archaeological importance of the jars in the context of Mainland Southeast Asia's culture.

I have demonstrated, with data, that Colani's fieldwork was more extensive than has been acknowledged, covering three types of sites, respectively populated with jars, hybrid sites with jars-stones and sites with stones only. Through her work we can appreciate the extent and range of expression of communities in Xieng Khouang and Luang Prabang Provinces, and their

⁵⁹⁹ Clémentin-Ojha & Manguin 2007: 223.

⁶⁰⁰ See, for example, B.P. Groslier 1966: 31, or Karlström & Fiskesjö 2002:11.

⁶⁰¹ Meeting on 24/11/2008 with Mr. Kamnoy, Wat Phra Kaew Museum, Vientiane.

⁶⁰² Meeting, 18/11/2008, with Dr. Pham Quoc Quan, museum director. At the time of my visit, Mr Dinh Ngoc Trien, curator of the Colani collection, was attending a conservation course in the Philippines.

commitment for long-lasting monuments. However, the increase in the number of known sites – from Colani’s 26 sites to the inventory of at least 80 managed by the Xieng Khouang branch of the DoICT - has not resulted in substantial publications to bring the Plain of Jars closer to mainstream archaeology of Southeast Asia. The Plain of Jars remains shrouded in mystery through lack of research.

Colani’s approach to the study of megalithic expression in north Laos, in its entirety, contrasts with the current predisposition to research jar sites in Xieng Khouang Province at the expense of historically and archaeologically valuable sites in Phou Khoun District. None of the sites in Phou Khoun are open for tourist visits, and although they are located at considerable distances from Phonsavan, several of them are set along Route 7, the thoroughfare between Luang Prabang city and Phonsavan. Efforts to locate the remaining eight sites documented by Colani have yet to be formulated by the Lao authorities. Incentives to open a site in Phou Khoun will need to accommodate the restrictions posed by the limited access in an area commissioned for the Nam Ngum 5 Hydropower Project, where several of the sites are located.

By focusing our research on jar sites, we forgo the opportunity to discover similarities in burial customs. By way of example, mouth-to-mouth pots were discovered by Colani at J51 (Fig. 7.27 Chapter 7.1.4), the only site to date to have revealed this type of burial pot at the Plain of Jars. However, Colani also documented mouth-to-mouth pots at Thao Kham (25 km north of Sanhinoume/J51), illustrated in Fig. 4.27 (Chapter 4.7) and Col de Moc Drehun (approx. 40 km NW of J51), both places shown in Map 4.2 (Chapter 4.7). Thao Kham and Col de Moc Drehun are devoid of megalithic jars and consist of stones and buried clay pots. They are both currently excluded from research efforts, despite their geographical proximity to, and ritual affinity with, J51. Moreover, Colani demonstrated this affinity, by illustrating seven types of artefact common to both J51 and Thao Kham (Fig. 8.2).

Life for the colonial administrator was characterized by “greater ostentatiousness, flamboyance, and display of wealth”⁶⁰³ than among the social elites in metropolitan France. European colonisers saw themselves as temporary dwellers in the host country, typified by the French in Algeria, who identified themselves closely “with the homeland as an inextricable part of being a colonialist”,⁶⁰⁴ because their very existence as colonialists hinged on France remaining the eternal mother country. Colani did not fit the mould of the restive European colonial worker, constantly yearning for the mother country. She made Indochina her home and left Asia only for fieldwork or conferences, or to collect an academic certificate from a French institution. Perhaps on account of her Calvinist upbringing,⁶⁰⁵ she was not ostentatious but her numerous requests for contract extensions at the GSI bear testimony to her commitment to researching Southeast Asia.⁶⁰⁶

Colani spent 32 years in her native France (1866-1898) and made Indochina her home, spending 44 years in the colony (from 1899 until her death in Hanoi in 1943). Her singular commitment to research is evident from her varied achievements in the colonial service, where in addition to geology and archaeology, she also wrote about ethnography and water irrigation.

⁶⁰³ Ringer & Lawless 1989: 89.

⁶⁰⁴ Ringer & Lawless 1989: 89-90.

⁶⁰⁵ Colani’s father was a biblical scholar, from a long line of Protestant pastors known for their commitment to the faith and strong work ethic.

⁶⁰⁶ See, for example, Colani’s letter of 30/03/1926 to Fernand Blondel (1894-1968), Chief of the GSI, asking for a contract extension, or her direct appeal in October 1927 to Alexandre Varenne, Governor-general, pleading for a further two-year contract to complete her outstanding research, when threatened with statutory retirement.

	Pi	Ce	Pe	Br	F	Ch	Sc	A
Ban Ang J.								
Ch. de Lat Sen J.								
Ban Soua J.								
Ban Ban ⁽¹⁾ J.								
Na Nong J. P.								
Song Meng J.								
Sud de Kéo tane J.								
Kéotane P.								
Sanhinoume J.								
11 Jannes J.								
Thao Kham P.								
Col de Moc-Drehun P.								
Km. 469.5 P.								
Km. 469.2 P.								
Ban Xot J. P.								
Ban Na Seo ⁽³⁾ P.								
Ban Si J. P.								

Fig. 8.2. Main sites excavated by Colani in 1931-33 (J. = jars; P. = fields of stones). Red squares highlight affinities in material culture and burial customs between J51 (San Hin Oume, jars) and Thao Kham (stones and buried clay pots). Circled also is the bronze statuette found at Thao Kham. Colani 1935a, v2: 34, fig. 157.

Van Tilburg, author of a critical biography of Katherine Routledge, of Easter Island fame, has noted that though flawed and incomplete, important aspects of her heroine's work will stand the test of time.⁶⁰⁷ Routledge and Colani were born two days apart in August 1866: Routledge to a wealthy Quaker family in England's Yorkshire county and Colani in France's Strasbourg, in the modest household of a middle-aged biblical scholar and his young Spanish wife. These two remarkable female archaeologists shared other traits, including the legacy that their pioneering work and ensuing publications continue to be a work of reference for contemporary researchers.

The suggested carving sequence points to a process that was both logical and rational, with the sequential steps intended to reveal structural flaws sufficiently early for the masons to take remedial action, by reducing the thickness of the walls, for instance. The suggested carving

⁶⁰⁷ Van Tilburg 2003: ix.

sequence also reveals that after the most basic of operations - trimming the external walls and squaring the base - the styling of the lip rim was the next stage in the sequence.

The presence of finished and partially-carved jars at quarries points to considerable planning efforts, with some of the production destined for inventory-building. Evidence of some form of quality-control can be discerned from the flaws observed on abandoned jars at quarries, flaws which are not encountered on jars found at jar sites, their final destination.

After the 34 sandstone jars at Q12 in the Ban Phakeo group, the 23 sandstone jars documented at Q21 (together with Q6), is the highest number of jars at any quarry. And although some jars display flaws which may have been inherent in the rock or may have developed after the quarry was abandoned, nevertheless these high quantities demonstrate that considerable resources were devoted to creating a “stock” of jars. This has also been observed at Q8, with at least eight jars at various stages of carving, and at QS35, with 132 units of mostly fully-carved jars. In this respect, the Plain of Jars is unique for its accumulation of jars at quarries and workshops, particularly when compared to the megaliths of the Jambi Highlands, which for the last 15 years have been the subject of considerable study by teams of international experts. In Sabah, where megaliths have been part of everyday life until recent decades and where they have been employed in a variety of ways, megaliths number a few dozens, rather than hundreds. It is also significant that at Sabah menhirs were created in response to well-defined purposes, as the need arose and to fulfil a specific symbolism. Their use was ‘pre-ordained’ as an oath stone, a boundary stone or a peace stone, erected “as a symbol of reconciliation between the warring villages”⁶⁰⁸ after a feud refused to die down, threatening the peace and stability of the village.

Equally, the Jambi megaliths have been manufactured in limited numbers, in the dozens rather than hundreds, and clear definitions have been handed down for their function as stone creations connecting generations through time.

In recently-documented ethnic groups, such as at South Nias (Fig. 5.18 Chapter 5.1.5), megaliths were transported “on demand”, over long distances, to fulfil a request from a community member to acquire the status of ancestor in his living days. The megalith was thus not “stored” but came to life during the slow-dragging process to acquire ancestor status. The stone and the considerable effort required to move the megalith to its final destination are the agents of transformation. Importantly, as documented by Schnitger among Batak communities in north Sumatra, there is no monetary compensation for the hundreds of villagers who drag the megalith to the plains, because their reward is a daily, communal feast of caribou meat. Monuments in stone can only be gifted. Furthermore, the whole community can witness and participate in the process, as catalysts in this figurative metamorphosis for a villager desirous to become an ancestor in his lifetime.

At the Plain of Jars, however, there is no immediacy in the process, but rather a managed series of stages from selection of the rock to carving. This is also noticeable in the separation between working areas at the quarry and the final destination for the jars. The considerable number of jars that have survived, well in excess of 2,000, even after centuries of exposure to the elements and human factors, points to a significant degree of planning and control.

In the suggested carving sequence, I have maintained that the rim was created either immediately before or at the same time as the hollowing out of the jar’s cavity. The rim may have carried a

⁶⁰⁸ Mohdi Rapi 2013: 9.

higher importance than an ornamental or practical feature. An ornamental feature is non-functional and is executed after crucial features have been executed, the features that define the nature and purpose of the object. The style of the rim was unlikely to be an ornamental feature, witness the fact that it was carved on granite or conglomerate, with unpredictable results. I have argued that the shaping of the rim was an important consideration at the planning stage, not simply because it had to be accommodated within the boulder's structure, but because it may have functioned as a window into the identity of the person or community to whom the jar was dedicated. As parallels for consideration, I have referred to the manipulation of the arm position in Neolithic burials at the West Mouth of the Niah Cave (Fig. 5.19 Chapter 5.2), intended to express sex, identity and other features about the deceased. The rim style, or the arm position in a burial, may have held clues which the communities deemed important *even after* the main event, being the removal of the jar from the quarry or burial of the dead.

It is important to reflect on the requirements for these distinguishing features to follow the jar or the deceased into the future, because if it is conceivable that the masons could have foreseen their jars being admired in open settings centuries into the future, much less certain is the probability that the communities near Niah Cave could have envisaged their deceased becoming the object of rigorous scientific study. It was important for "identity" to follow the deceased into the eternal journey, accompanied by clues on its sex, rank or status. Equally, the jars may have carried their "identity" message in the rim style.

The carving of rim styles was systematic and limited to six variations (Table 7 Chapter 5.2.1). Though stylistic variations may be attributed to individual craftsmen, only six styles appear to have been employed over a period of centuries. There is a consistent method for the deployment of jars carved with a particular rim style, namely the Flat rim being the most pervasive at any given site, even applied to hundreds of jars as at J1, for instance. The second and third most frequent styles are the Recessed Inner rim and the Outer rim. The remaining three styles are exceptionally rare. The repetitive frequency in rim styles points to shared beliefs expressed in uniform patterns. It is a legitimate question to ask why more styles have not developed over the considerable span of time (likely centuries), required for the creation of well over 2000 jars.

Despite flaws in some of the jars, they were transported to their final destination after carving, as is evident in the misshapen nature of some jars, to the extent that the deformed end of a massive boulder appears to have been left untouched (Fig. 5.13 Chapter 5.1.2) in an otherwise evenly-shaped jar. This may be indicative of a belief that the stone was the prized element, rather than a flawless and perfectly-formed jar. This assumed approach bears parallels with the belief among the Toraja of South Sulawesi, where a menhir is judged on its individual merits as a proxy for man's spiritual qualities (Chapter 7.7), because stone's intrinsic qualities are of a higher order than affluence. Erecting a large menhir serves to display affluence, but erecting a small menhir *by itself* fulfils the requirement for a lasting monument in stone. A large menhir is not superfluous to requirements but is only an indicator of economic wealth, above and beyond the basic requirement to erect a menhir, *however small*. Stone was the prized element. By extension, the flaws in numerous jars at the Plain of Jars may have been deemed acceptable because the basic requirement of erecting a megalith had been met.

In this same context, a jar with reduced cavities may have been acceptable because a monument in stone had been created. The fact that its aperture was shallow did not preclude it from being transported to the field. From the list of possible reasons that could account for the shallow cavities, I have opted for technical considerations as the most plausible, due to practical difficulties (Chapter 5.3.4). Although it cannot be excluded that shallow jars were produced in

response to changing funerary customs, it is possible that the masons opted for shallow cavities when faced by a practical inability to carve deep into a narrow boulder. The practical difficulties facing masons in Phukood were also experienced in Phaxay District, where a relatively shallow cavity has been carved on a long and narrow boulder (Fig. 2.3 Chapter 2.1).

If the jars display a degree of uniformity, stone discs are more diverse in shape and decoration. The mushroom-shaped discs of Phou Khoun District, in the NW, have no equal in Xieng Khouang Province, similarly to the dome-shaped units found exclusively in Kham District, in the NE. Granite discs decorated with a large central button have been documented only in Khun District, in the SE, while the pommel-decorated discs documented at QS35, in the NE, bear some resemblance to others found in Ban Phakeo. Whereas there appears to have been a common method for the creation of jars, by contrast, stone discs display a number of shapes, styles and decorative patterns. If the jars are undecorated, with the exception of a very small number of units, decorations on the discs are diverse and frequent, ranging from concentric circles, to geometric patterns but also human and animal figures. Discs are notable for their absence at quarries, the same quarries which host dozens of abandoned jars. The absence of discs at quarries raises the possibility that the place of their production may have been elsewhere rather than at the quarry where the jars were carved.

The two most recent iconographic discoveries discussed in Chapter 5.7 should not be interpreted as confirmation that decorations are lacking but rather as the modest result in the context of the limited research conducted at the Plain of Jars since Colani's fieldwork. This is directly related to the fact that in recent years, efforts have centred on documentation and preservation rather than academic research. Assuming that new iconographic details are discovered, however, it is already apparent that the sparse decorations on the 2000 stone jars in north Laos are exceptionally infrequent when compared to the much smaller number of megaliths on the much younger Jambi Highlands, richly decorated with human and animal figures as well as geometric patterns. The Jambi megaliths were erected within the last three centuries, to strengthen the bond between communities and their ancestors. The sense of community in the Jambi Highlands, fostered by the anthropomorphic figures carved on the megaliths, is not encountered at the Plain of Jars, where varieties in the lip rim and diversity in disc shape and iconography point to localised styles, perhaps as a way of geographically "identifying" the numerous communities that shared this ritually-sacred area.

At the Plain of Jars, data point to a lack of community sense, of the kind encountered in Myanmar's Pyu cities, where local burials bind the deceased with his community and its leaders. Hudson has remarked that "Burial of the population within and around the settlement walls suggests strong local identification, both with the place and with its leaders".⁶⁰⁹

The majority of sites arose in the relative vicinity of quarries, which themselves were not distant from historical or trade routes. The data point to an element of opportunism aimed at exploiting abundant supplies of rock for the creation of megalithic jars. The existence of quarries obviously predated trade routes. The stone from these quarries was appropriated for the creation of jars that could be deposited near historical and trade routes.

The presence of single-jar sites (J19, J31, QS34, QS47 and J48), often located in remote settings and at considerable distance from urban centres, suggests a pervasive coverage that included areas of low traffic. Glover views megaliths as substitutes for permanent settlements, with

⁶⁰⁹ Hudson 2005: 6.

monumental tombs or gathering places symbolically marking “the landscape, denoting ownership, community, and continuity”.⁶¹⁰

Discounting sites such as QS35 (132 jars) and J41 (371 jars), both in remote settings, it is a legitimate question to ask about the consensus that must have been required of the community to move hundreds of these monoliths from quarry to site. Perhaps here lies a crucial factor: the area selected for the final destination of the jars, and therefore the creation of a jar site, did not encroach on settlements because the primary consideration, and motive for the manufacture of the jars, was driven by access to sources of stone. The availability of rock, the raw material of necessity, appears to have instigated the carving of jars and the creation of jar sites. Xieng Khouang Province and Phou Khoun District offered the essential components for jar manufacture: abundant supplies of stone. This point can be verified from Table 15 (Chapter 6.5), detailing distances ranging from 0.5 km (as in the case of J41 in the Ban Phakeo group) to 9 km (as for the jars destined for J1 from Q21). Between these two values, we have the short distance of 1.2 km for hundreds of jars transported from Q8 to J3. The data point to a close connection between not only quarry and final destination for the hundreds of jars, but, very importantly, to a third important element: the availability of abundant supplies of sandstone, the rock from which the 957 jars detailed in Table 15 have been carved.

Sandstone accounts for the overwhelming majority of all jars in the 52 sites under discussion. Table 13 (Chapter 6.3) illustrates that the proportion of sandstone amounted to 87.8% and 99.1% for jars and discs respectively. Particularly for discs, less than 1% were manufactured in a rock other than sandstone. And although five other rock types have been employed for jars, in diminishing proportions from 6.1% for granite to 1.6% for breccia, the corresponding proportions for discs are negligible, being as low as 0.4% for granite and conglomerate and 0.0% for limestone and breccia. However, these findings are consistent for both jars and discs, in that sandstone was the rock of choice used for the overwhelming majority of jars and discs. Where supplies allowed, jars and discs were produced in large quantities from sandstone. However, current data cannot be analysed for clues as to what might have been the limiting factor: why the masons stopped producing jars even though large quarries such as Q8 and Q21 could have accommodated a far higher number of megaliths.

J41 is the only site which holds both the highest number of jars and the highest number of discs, both artefacts carved from sandstone. It is at J41 that the shortest distances from quarry to final destination are involved, often amounting to considerably less than 1 km. But this does not explain why J41 holds 96 (Table 2 Chapter 1.9) of the total 223 discs (Table 1 Chapter 1.9) at the 52 sites (96/223, or 43%). By comparison, there are just 32 more jars at J41 than at J1 (371-339, Table 1), even though the jars travelled for up to 9 km from Q21 to J1. Furthermore, it has been documented that a minimum of six jars have been removed from J1 over the last few decades, closing the gap slightly in the jar quantities for the two sites. Therefore, a distance of 9 km from quarry to field has been no bar for the setting up of at least 339 jars at J1, but the disc quantity of J1 – just 30 units – is not comparable to the 96 units at J41. At J41, one disc was created for every 3.9 jars (371/96) but at J1, one disc was created for every 11.3 jars (30/339).

The extraordinary quantity of jars at the Plain of Jars must have entailed considerable logistics not purely on account of rock cutting, carving and transportation to the field, but the preparation of the ground to accept the finished jars. The desire to erect and move megaliths may have prevailed over other considerations, including environmental issues. For instance, a recent study

⁶¹⁰ Glover 1998: 27.

has discovered that a prehistoric southern coastal roadway, 210 m long, had been dug out on Easter Island in order to move the gigantic statues from quarry to the ritual place called *ahu*: “The road construction was a cut and fill style. It was filled up to a flat surface where the road crosses shallow valley floors. The cut portions are extensive, and were excavated to the rotten bedrock (regolith) [*sic*] level in the form of a shallow V, or broad U shape some 30 cm deep on average, and 5.5 meters wide”.⁶¹¹

The use of sandstone has resulted in two distinct outcomes: the highest and the lowest concentration of jars. The first event is found in Paek (J41/371 jars and J1/339 jars) and Phaxay (J3/247 jars), the only two districts with jar densities greater than 200 units. The second event is found in Phoukood District, where the lowest concentration of sandstone jars is found. The site with the highest density in Phoukood is Phousung (38 sandstone jars), followed by J25 (24 sandstone jars) and J26 (11 sandstone jars). Other quantities in Phoukood range between one and nine jars. The sites in the NW of Xieng Khouang are dispersed and under-populated with jars. Distance may have been a factor in the creation of sites in Phoukood District, witness the fact that no quarries have been identified for the gigantic jars at J25, J26, J27, J37 and QS42.

Future studies may reveal sources of rock in the NW (sandstone) and SE (granite) of Xieng Khouang. Such a discovery would enable the analysis of distances travelled by the boulders, and by the finished jars, to appreciate whether skills of a different order were employed. Their study would allow the analysis of stone use and whether available supplies were exploited to their full potential. Furthermore, we may begin to evaluate the possible reasons that might have dictated a decision to suspend operations at a particular source of stone, when supplies allowed, perhaps because requirements had been met or because the masons’ skills were overcome by inordinate technical challenges.

Some of this information may be difficult to validate because, although quarries such as Q8, Q18 and Q21 are “permanent” and can be visited for research purposes, granite may have been garnered from disparate locations, including river beds.

Although the skeletal remains found in clay pots buried near the jars point to the Plain of Jars as an area for mostly secondary burials, some grave goods found in these secondary burials bear affinities with objects found in primary burials elsewhere in Southeast Asia. The limited skeletal remains at Lao Pako have been interpreted as secondary burials: “local people brought in jars [pots] containing secondary burials and interred them in groups”.⁶¹²

Grave goods at the Plain of Jars and at Samròng Sèn, Ban Non Wat, Ban Lum Khao, Lang Vac and Lao Pako consist of spindle whorls, jewellery, pendants, ear-rings, knives, pots, animal representations and beads. However, other items found at most of these sites (stamp rollers, anvils and miniature tools of the trade), are not present at the Plain of Jars. In north Laos, bronze drums have been found in Luang Namtha but not at the Plain of Jars or in Hua Phan, pointing to a southern route for the bronze drums, from North Vietnam via the south of Laos, then to the west and into NE Thailand, bypassing Xieng Khouang and Hua Phan Provinces.

Tools of the trade have been found in modest quantities at the Plain of Jars, spindle whorls and iron knives, but their association with the profession of the deceased cannot be established because in a few Southeast Asian contexts, these items are judged non-gender and non-age

⁶¹¹ Love 2000: 118.

⁶¹² Sayavongkhamdy & Bellwood 2000: 104.

specific. For example, the spindle whorls and anvils placed in the graves of both males and females at Ban Lum Khao (Chapter 7.4.2). At other places, buried tools of the trade point to a relative closeness between the site and a settlement where the deceased might have conducted his trade, a strong indication that the deceased was part of a community where tools were readily available. At the Plain of Jars, this feature is mostly absent from the grave goods and it may be the case that the tools accompanied the deceased at the point of primary burial. Current data cannot shed light on this particular point.

Much remains to be discovered about the Plain of Jars but research projects are likely to be constrained by challenges, some of which have been mentioned in this thesis. After decades of sustained research by teams of experts, other megalithic sites around the world are revealing a constant stream of new data. By way of example, in August 2014 a BBC News article⁶¹³ noted that Stonehenge may have been a complete circle from inception. It has taken decades of unhindered research to establish this crucial aspect of the Wiltshire megaliths and it is reasonable to expect that features of the Plain of Jars will become known only when the effects of the country's turbulent recent past will recede, including the decontamination of ground from UXO, to allow the unfettered research that has characterised Stonehenge. We have much ground to cover, because research projects at the Plain of Jars have been sporadic since Colani left the field more than 70 years ago.

This thesis has also mentioned aspects of the transformation that some jars are undergoing at the Plain of Jars. It is not entirely accurate to say that jars are no longer part of the 'living tradition' of communities in Laos, because the jars are being used in domestic, industrial or ritual contexts. Instances have been recorded of jars used as storage containers, mostly for water. Votive offerings are frequently left inside a jar (Fig. 8.3 and Fig. 8.4) or on the jar itself (Fig. 8.5). Buddha statuettes have been found inside jars in recent years at J3 (Fig. 6.8 Chapter 6.2.2) but Buddha statuettes of contemporary manufacture were also reported by Colani at J2.⁶¹⁴



Fig. 8.3 J2. Votive candles.
L. Genovese (2012)



Fig. 8.4. J2. Detail relating to Fig. 8.3.
L. Genovese (2012).

⁶¹³ BBC News 30/08/2014.

⁶¹⁴ Colani 1935a, v2: 33.



Fig. 8.5. J1. Offerings, incense and candles on a sandstone jar during the Lao New Year. L. Genovese (2011).

The clay pots buried near the stone jars were the containers for skeletal remains, the organic matter at the end of life's cycle. The present, with Buddhist elements like the statuettes placed inside stone jars at J3 or QS17, reinforces my conclusions that the jars functioned as 'vehicles', or literally 'vessels', to convey and embody mutable meanings connecting man to the World in which he lived.

Rosalia Genovese
October 2014

APPENDIX I - PUBLICATIONS BY MADELEINE COLANI

- 1914 *Recherches sur les premières phases du développement de quelques Combrétacée*, L. Maretheux, Paris
- 1915 Sur un araucarioxylon du Rhétien de Hongay, *BSGI*, III/1
- 1916 Essai sur les flores tertiaires du Tonkin, *BSGI*, VI/1, IDEO
- 1919 Sur quelques végétaux paléozoïques, *BSGI*, VI/1, IDEO
- 1919 Sur un diptérocarpoxyton annamense: nov. sp. du Tertiaire supposé de l'Annam, *BSGI*, VI/3, IDEO
- 1919 Sur quelques araucarioxylon indochinois, *BSGI*, VI/2, IDEO
- 1919 Sur quelques fossiles ouralo-permiens de Hongay, *BSGI*, VI/5, IDEO
- 1920 Étude sur les flores tertiaires de quelques gisements de lignite de l'Indochine, *BSGI*, VIII/1, IDEO
- 1924 Nouvelle contribution à l'étude des fusulinidés de l'Extrême-Orient, *MSGI*, XI/1, IDEO
- 1927 L'âge de la pierre dans la province de Hoà-binh, *MSGI*, XIV/1
- 1928 Deux petits ateliers, Stations de la Province de Son-La, *BSGI*, XVII/1, pp7-21
- 1928 Objets extraits de kjokkenmoddingen très pauvres, *BSGI*, XVII/1, p22
- 1928 Deux petits ateliers, Station de Cho-ganh, *BSGI*, XVII/1, pp23-37
- 1928 Une pierre à cupules, Lam-gan (Province de Hoa-Binh), *BSGI*, XVII/1, pp39-40
- 1928 Stations hoabinhiennes de la région de Phu-Nho-Quan, *BSGI*, XVII/1, pp41-44
- 1929 Quelques paléolithes hoabinhiens typiques de l'abri sous-roche de Lang Kay, *BSGI*, XXVI/6, pp353-384
- 1929 Quelques stations hoabinhiennes, *BEFEO*, XXIX, pp261-272
- 1929 Gravures primitives sur pierre et sur os (stations hoabinhiennes), *BEFEO*, XXIX, pp273-287
- 1929 M. Boule, H. Breuil, E. Licent et P. Teilhard: Le paléolithique de la Chine, *BEFEO*, XXIX, pp392-395
- 1930 Mission dans les provinces de Hòà-binh, Ninh-binh et Hà-nam, *ChrEFEO*, XXIX
- 1930 Brève vue d'ensemble d'après les dernières découvertes, *BEFEO*, XXX, pp299-322
- 1930 Stations préhistorique d'Annam, *BEFEO*, XXX, pp323-403
- 1930 Manifestations intellectuelles (mentalité supposée prélogique), *BEFEO*, XXX, pp404-422
- 1930 S. Shimada: Essay on the ancient mirrors from Suku, *BEFEO*, XXX, pp173-176
- 1931 Procédés de décoration d'un potier de village (Cammon, Laos), *BEFEO*, XXXI, pp499-501
- 1931 Rapport sur les résultats des recherches au Tran Ninh dans la Plaine des Jarres, *ChrEFEO*, XXXI, p626
- 1932 Rapport sur des recherches dans le province de Cammon, *BEFEO*, XXXI, pp330-331
- 1932 Recherches sur le préhistorique indochinois, *L'Anthropologie*, 42, Paris, pp576-578
- 1932 Le sinanthropus pekinensis, *BEFEO*, XXXII/1, pp496-501
- 1932 Dr. A. N. J. Th. à Th. Van der Hoop: Megalithic remains in South-Sumatra, *BEFEO*, XXXII, pp573-576
- 1932 R. Heine-Geldern: Urheimat und früheste Wanderungen der Austronesier, *BEFEO*, XXXII, pp576-580
- 1933 Le protonéolithe, *PCPEO*, 1932 FEPA, pp93-95
- 1933 Différents aspects du Néolithique indochinois, *PCPEO*, 1932 FEPA, pp97-99
- 1933 Divers modes de sépultures néolithiques et proto-historiques en Indochine, *PCPEO*, 1932 FEPA, pp101-102
- 1933 Champs de jarres monolithiques et de pierres funéraires du Tràn-Ninh, *PCPEO*, 1932 FEPA, pp103-128
- 1933 Champs de jarres monolithiques et de pierres funéraires du Tràn-Ninh, *BEFEO*, XXXIII/1, pp355-366
- 1933 Buttes artificielles en valves de lamellibranches, *Académie Sciences Paris*, 196, pp556-558
- 1933 Buttes artificielles en valves de lamellibranches, *BSPF*, 1933/4, Paris, pp257-260
- 1933 Céramique, procédés anciens de décoration, *BEFEO*, XXXIII, pp349-355
- 1933 Briquets en fer, *BEFEO*, XXXIII/1, pp981-985
- 1933 Hache (?) pédifforme, *BEFEO*, XXXIII/1, pp985-988
- 1933 Trousses de toilette hallstattienne et actuelle, *BEFEO*, XXXIII, pp988-992
- 1933 D. Black, T. de Chardin, Young & Pei: Fossil man in China. *ChrEFEO*, XXXIII/2, pp1015-1033
- 1934 Dépôts artificiels en valves de Pélécypodes (Nord-Annam), *AMHN*, 6th series/XI, Paris
- 1934 Cromlechs actuels en Annam (conference paper delivered by V. Goloubew), *BEFEO*, 1934/1
- 1934 Note sur des Mégalithes du Haut-Laos, *BSPF*, XXXI/7-8, pp335-352
- 1934 A propos de trousses de toilette, *BEFEO*, XXXIV, pp567-571
- 1934 Fusaïoles céramiques hallstattiennes et fusaïoles indochinoises, *BEFEO*, XXXIV, pp571-572
- 1934 Note au sujet de trépieds, *BEFEO*, XXXIV/2, pp572-573
- 1934 J. G. Andersson: Children of the Yellow Earth. Studies in Prehistoric China, *BEFEO*, XXXIV, pp664-700
- 1934 N. Palmgren: Kansu mortuary urns of the Pan Shan and Ma Chang groups, *BEFEO*, XXXIV, pp700-703
- 1934 Coïncidences pet-être fortuite, *BEFEO*, XXXIV/2
- 1935 Mégalithes du Haut-Laos (Hua Pan, Tran Ninh), *EFEO*, XXXV, Paris, 2 volumes

- 1935 Fouilles à Sa-huỳnh et Tan-long, *ChrEFEO*, XXXIV
- 1935 Les jarres du Tran Ninh, *CEFEO/2*, Hanoi, pp9-11 (conference, 11/03/1935)
- 1935 La céramique de Sa-huỳnh (Centre Annam), 2nd FEPA, Manila
- 1935 Rustiques figurines des dépôts funéraires de Sa-huỳnh, 2nd FEPA, Manila
- 1935 Haches et bijoux: République de l'Équateur, Insulinde, Eurasie, *BEFEO*, XXXV/1, pp313-362
- 1936 Fouille d'un caveau à Ngoc-bao, province de Vinh-yên, *ChrEFEO*, XXXV/2
- 1936 Reconnaissances au Quáng-bình, au Quáng-trị et dans la région de Phan-rang, *ChrEFEO*, XXXV/2
- 1936 Compte rendu du Congrès des Préhistoriens d'Extrême-Orient aux Philippines, *ChrEFEO*, XXXV/2
- 1936 Les menhirs de Hua Pan, *CEFEO*, 6, pp18-20
- 1936 Notes pré et protohistoriques: province du Quáng-bình, *BAVH*, 23, pp121-140
- 1936 Essai d'ethnographie comparée, *BEFEO*, XXXVI/1, pp197-280
- 1936 Essai d'ethnographie. Comparaisons nouvelles et observations, *BEFEO*, XXXVI, pp479-489
- 1936 L'homme fossile. Chine, Péninsule malaise, Indonésie, Indochine, *BEFEO*, XXXVI/2, pp532-6
- 1937 Note sur les puits et les bassins en pierres brutes du Gio-linh et du Vinh-linh, *BAVH*, 1937, pp433-4
- 1937 Anciennes irrigations et bassins dans le Do-linh (Quáng-trị), *CEFEO*, 10/Q1, pp18-19
- 1937 Bêche en fer actuelle du Haut-Laos, *BSPF*, XXIV, Paris, pp543-6
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