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Jars of the jungle: A report on newly discovered and documented megalithic jar sites in Lao People's Democratic Republic

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ABSTRACT

Xieng Khouang and neighboring provinces in Central Laos are home to a vast megalithic landscape featuring large stone jars, discs, and imported boulders located in elevated positions. Sites were first noted in the late nineteenth century, with systematic recording commencing in the 1930s. Despite subsequent survey efforts and more recent excavations, many previously noted sites remain unconfirmed and others undiscovered, limiting our understanding of the geographic extent of the jar sites and the culture that created the jars. Here we present the results of a 2019 survey across Xieng Khouang Province which led to the documentation of 15 previously unreported megalithic sites and one potential habitation site. With the inclusion of the survey data, the Lao PDR Government database of jar sites will grow from 83 to 102, with 94 of the sites now geo-located.

1 Introduction

Megaliths can be found from Europe, Africa, South Asia, North and South America, Oceania and Southeast Asia, with most dated from the Mesolithic, Neolithic, and early Metal ages (Burl 1985, Daniel and Kjaerum 1973, Mohen 1989). They are thought to have been created for varied purposes including ritual activity or mortuary practice and may take many forms including menhirs, dolmen, and cairns, and can be arranged into henges or other configurations (Joussaume and Chippindale 1988, Pearson et al. 2007). The megalithic phenomenon continues to fascinate and confound scholars who grapple with questions around when, how, and more importantly why people throughout history have expended significant labor to create such monuments. The investigation of megaliths has tended to focus on Europe, Africa, and parts of Asia, while megaliths located in Southeast Asia remain relatively under-researched. The megalithic jar sites of the Lao People's Democratic Republic (PDR), found in Xieng Khouang, Luang Prabang, and Xaisomboun provinces, are one of the most significant megalithic landscapes in this region and yet remain one of the world's archaeological enigmas. Insights gained through research at jar sites in Laos and other Southeast Asian sites such as the Cipari megalith site in West Java, Indonesia (Steimer 2018) and the megalithic complex of highland Jambi, Sumatra, Indonesia (Bonatz, Neidel, and Tjoa-Bonatz 2008) contribute to an understanding of the broader megalithic phenomenon.

The megalithic sites of Laos are often referred to as the Plain of Jars sites. Strictly speaking, the Plain of Jars refers only to the broad plain in central Xieng Khouang Province where a limited number of megalithic jar sites are located. The majority jar sites are found outside the plain and are distributed across the mountains, hills, and lower foothills within and around the central plain of the Xiang Khouang Plateau (O'Reilly et al. 2018; DoH 2019; Skopal and Bounxaythip 2019). The sites were first recognized and identified as megaliths over a century ago (Raquez 1902; Parmentier 1954; Dussault 1919; Shewan and O'Reilly 2019) and have since attracted the interest and efforts of archaeologists (Nitta 1996; Sayavongkhamdy, Bellwood, and Bulbeck 2000; O'Reilly and Shewan 2016; O'Reilly et al. 2019; O'Reilly et al. 2019). Sites comprise between one to several hundred stone jars sometimes distributed across multiple groups, with some sites featuring stone discs, apparent lids, and imported boulders (O'Reilly et al. 2018). Individual jars range in size from ca. 1 to 3 m in height and 0.85 to 2 m in diameter (Sayavongkhamdy, Bellwood, and Bulbeck 2000), with some potentially weighing up to 30 metric tons (Baldock and Van Den Bergh 2009). Additionally, the jars across the sites display variable rim types (O'Reilly et al. 2018), but to date there has

been no thorough investigation into whether these changes in morphology are stylistic, socially significant, or temporal.

The precise date of this megalithic culture remains unknown, primarily due to the inherent difficulties associated with directly dating the placement of the stone jars. The most frequently accepted dates place the creation of the jars between c. 500 BC–AD 500 based on the material culture found surrounding the jars, aligning with the Southeast Asian Iron Age (Higham 2002; Lewis et al 2013; Shewan and O’Reilly 2019). Radiocarbon samples obtained from contexts around the jars at Site 1 indicate activity with broad date ranges from as early c. 7500 BC to as recent as the ninth to thirteenth centuries AD, though analyses are ongoing (Van Den Bergh and Luangaphay 2008; Sayavongkhamdy, Bellwood, and Bulbeck 2000; O’Reilly et al. 2019).

Recent research by the Plain of Jars Archaeological Research Project (PJARP) has sought to better understand the jar sites and the culture that created them (Shewan, O’Reilly, and Luangkhoth 2016; O’Reilly and Shewan 2016; O’Reilly et al. 2018; O’Reilly et al. 2019; O’Reilly et al. 2019). As part of this research program, the authors surveyed 23 sites including one potential habitation site in early 2019. Here we describe the geography of the area and detail the archaeological context around previous surveys of the Plain of Jars culture, the unique locations selected for survey, and the materials and methods employed. We then provide an overview of the information obtained and discuss implications.

2 Geographical description

The Xieng Khouang Province comprises a central broad grassland plateau, ca. 600 m high. The plateau is surrounded by heavily wooded highlands up to 2,600 m and a low lying basin (Kham District) in the northeast of the province. Only a small portion of primary forest now exists in the highlands due to long term human activity. The province comprises mainly sedimentary rock with limestone and shale deposits dominating the valleys, and deposits of limestone, conglomerate, shale, and sandstone forming the higher ground. Khun District alone features predominantly granite or granodiorite deposits (Baldock and Van Den Bergh 2009).

3 Archaeological context

The endeavor to identify and record jar sites in Lao PDR began in the late nineteenth century when early French explorers reported six sites (Raquez 1902; Parmentier 1954; Dussault 1919). Later in the 1930s, French archaeologist Colani, with the *École française d'Extrême-Orient*, reported 26 sites (Shewan and O'Reilly 2019; Genovese 2015). Despite these early accomplishments establishing a foundation for future studies, many sites remain unconfirmed and have only begun to be geo-located by more recent surveys. Unconfirmed sites are defined as those which have limited or unavailable data, such as location, jar number, and jar characteristics (e.g., rim style and material) to support meaningful analysis.

In 2002, the Safeguarding the Plain of Jars Project (SPJP), a collaborative effort between the Xieng Khouang Provincial Government (XKPG) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), recorded 58 jar sites, including 10 of the 26 previously reported by Colani (Van Den Bergh and Luangaphay 2008) and three of the six reported by early explorers (Raquez 1902; Parmentier 1954; Dussault 1919; Genovese 2015). The SPJP allocated each of these 58 sites a catalogue number¹, forming the basis of a database that was created for the Lao Department of Heritage (DoH), Ministry of Information, Culture and Tourism, to be used in preparation for World Heritage listing. This DoH jar site database is the most comprehensive available and has been adopted for use by all levels of the Lao PDR Government to manage the archaeological heritage of jar sites (DoH 2019). From 2008, the XKPG catalogued an additional 21 sites.² These, in addition to a further four sites³ identified in 2017 by the PJARP (O'Reilly et al. 2018), brought the DoH database total to 83 (DoH 2019), although eight of the 21 catalogued by the XKPG remain unconfirmed, since no geo-location data was obtained.

In addition to the eight XKPG catalogued sites (DoH 2019), there are a further 62 sites outside of the DoH database which remain unconfirmed. These include three out of the six sites identified by early explorers (Dussault 1919; Raquez 1902; Parmentier 1954), and 16 sites reported by Colani (Shewan and O'Reilly 2019; O'Reilly et al. 2018). Additionally, the SPJP reported that local residents in Xieng Khouang Province provided information on a further 26 sites, although these were not verified for inclusion in the database (Van Den Bergh and Luangaphay 2008). Finally, Genovese (2015) reported an additional 17 sites, but

¹ See sites 1 to 59 in Fig. 11 with a site omitted between 5 and 7.

² See sites 60 to 80 in Fig. 11.

³ See sites 81 to 84 in Fig. 11.

the location of these have not been made available to the Lao PDR Government for confirmation or inclusion in the database (Bounxaythip pers. comm. 2019). The lack of available data on these 70 sites in total made it difficult to determine overlaps between various records, meaning that the same site may have been recorded more than once. In this paper we hope to clarify the number of confirmed jar sites to date and present the recent results of a 2019 survey across Xieng Khouang Province which led to the documentation of 15 previously unreported megalithic sites and one potential habitation site.

4 Location, Materials, and Methods

In 2019, the PJARP, a joint effort between the Australian National University, the University of Melbourne, and the DoH, aimed to confirm the number, location, and characteristics of jars at multiple unconfirmed sites and where possible, to locate and survey new sites. The PJARP survey was conducted in Xieng Khouang Province, Lao PDR, across the five districts of Paek, Phaxay, Phoukoot, Kham, and Khoun.

At each site visited, the survey team recorded Global Navigation Satellite System (GNSS) points using the TDK100 GNSS receiver and obtained photographs of all of the jars, discs, and any discernible surrounding landscape features and archaeological remains such as quarries or workshop areas using a digital camera. The team also manually recorded detailed observations on jar material, jar rim style, jar size, and the position of the site in the landscape. Rim style descriptions were based on those specified by O'Reilly et al. (2018): a flat rim, a recessed inner rim, an outer rim, and a recessed inner rim with an outer rim. To obtain a clearer picture of site features and surrounding landscape, high resolution aerial photography was obtained using a DJI Phantom Unmanned Aerial Vehicle, conditions permitting. All recorded data was collated and analyzed using Microsoft Excel and ArcGIS Pro software. The DoH and PJARP allocated names to the 16 previously unreported sites in accordance with the UNESCO naming convention, whereby site names are based on the closest village, mountain, or area.

5 Results

The PJARP surveyed: 1. five sites already included in the DoH database for which there was incomplete data; 2. two sites reported by Genovese; and 3. 16 previously unreported sites

including one potential habitation site (Fig. 1). The authors also obtained the coordinates for a third site reported by Genovese (2015), Phu Da Phor (Site 87), though were unable to conduct a survey. A brief description is provided below of each of these sites including the number of jars, position in the landscape, observable views, stone types, rim types, and availability of stone near the site (Table 1).

5.1 Non geo-located Department of Heritage Database Sites

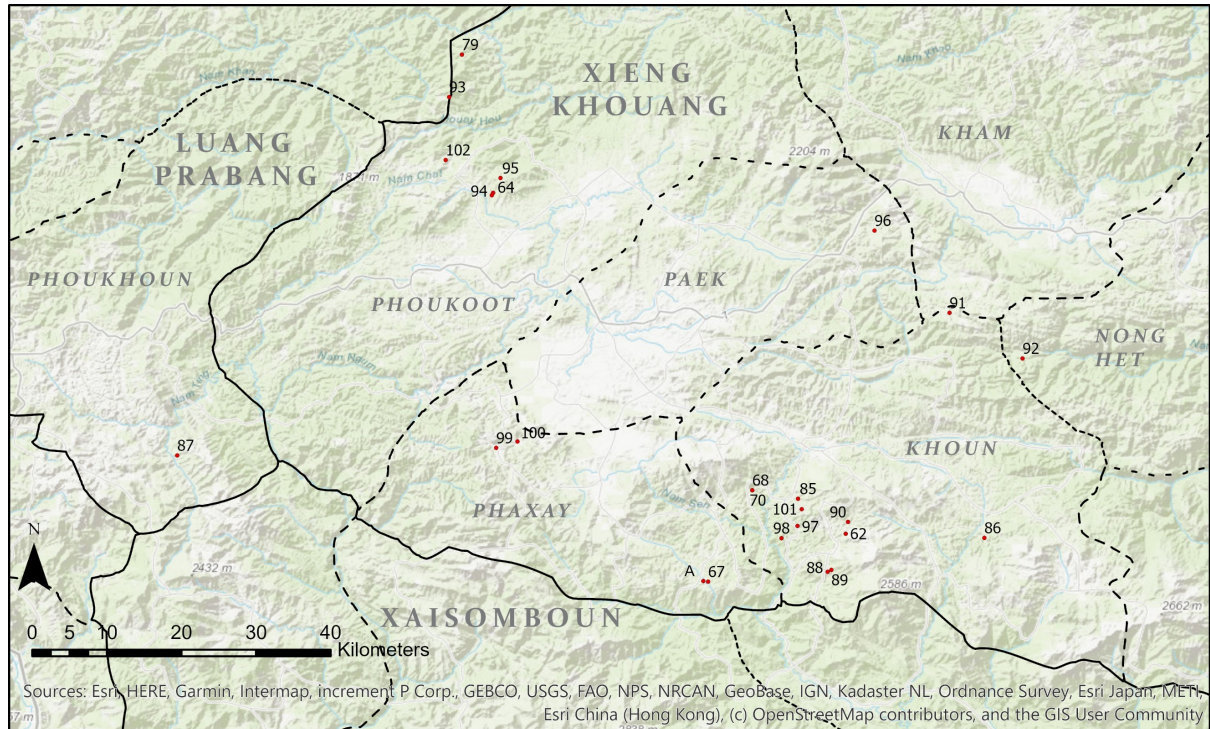


Figure 1. Map of geo-located sites as part of the 2019 PJARP survey. Numbers reflect site names. 62. Ban Nong, 64. Phu Buoc Kuong (Nakham Area), 67. Ban Pha Tai, 70. Na Mon, 79. Phu Hai Chuong (Lang Jong Village), 85. Naho, 86. Ban Khek, 87. Phu Da Phor, 88. Old Village A, 89. Old Village B, 90. Phu Hai Hin, 91. San Choc, 92. Pha Hai, 93. Keo Hai Hin, 94. Phu Seo (Nakham Area), 95. Phou Soung B (Nakham Area), 96. Ban Na Sala, 97. Ban Pha Pheung, 98. Phu Sang, 99. Ban Khong (Phun Area), 100. Ban Phonxay, 101. Keo Koang, 102. Ban Buoc Nam B (Phu Huang Chon), A. Ban Pha Tai Pottery Scatter.

Table 1 Description summary of 2019 sites surveyed. * denotes previously unreported sites. Abbreviations: F-Flat; RI-Recessed Inner; RI+OR-Recessed Inner plus Outer Rim; OR-Outer Rim; S-Sandstone; G-Granite; L-Limestone; UD-Undeterminable

Site No./Name	Village/District	Jar No.	Rim type	Stone Source identified	Buried jars identified	Stone type
62. Ban Nong	Nong/Khoun	31	F, RI	No	Yes	S
64. Phu Buoc Kuong (Nakham Area)	Phou Seo/Phoukoot	11	F, RI+OR	Yes	No	S
67. Ban Pha Tai	Pha Tai/Phaxay	9	F, RI+OR	Yes	Yes	S
70. Na Mon	Phoung/Khoun	16	F, OR	No	Yes	G, S
79. Phu Hai Chuong	Lang Jong/Phoukoot	88	F, RI	Yes	UD	S
85. Naho	Ban Naho/Khoun	24	F, RI, RI+OR	No	Yes	G, S
86. Ban Khek	Khek/Phoukoot	1	F	No	Yes	G
87. Phu Da Phor	Chim/Phaxay	21	-	-	-	-
88. Old Village A*	Pha Pheung/Khoun	5	F, RI	Yes	Yes	G
89. Old Village B*	Pha Pheung/Khoun	31	F, RI	Yes	Yes	G
90. Phu Hai Hin*	Nong /Khoun	27	F, RI	No	No	G
91. San Choc*	Phonhome /Kham	1	UD	Yes	No	L
92. Pha Hai*	Houay Loun/Khoun	5	UD	Yes	No	L
93. Keo Hai Hin*	Phu Sangao, Mien/Phoukoot	9	F	Yes	No	S
94. Phu Seo (Nakham Area)*	Phu Seo/Phoukoot	3	RI	No	No	S
95. Phou Soung B (Nakham Area)*	Phou Seo/Phoukoot	7	F, RI+OR	UD	No	S
96. Ban Na Sala*	Ban Na Sala/Pack	1	RI	No	Yes	S
97. Ban Pha Pheung*	Pha Pheung/Khoun	1	F	No	Yes	G
98. Phu Sang*	Pha Pheung/Khoun	2	F	N	Yes	G
99. Ban Khong (Phun Area)*	Khong/Phaxay	3	UD	Yes	No	L
100. Ban Phonxay*	Phonxay/Phaxay	1	F	No	No	S
101. Keo Koang*	Keo Koang/Khoun	2	-	No	No	-
102. Ban Buoc Nam B (Phu Huang Chon)*	Phou Seo/Phoukoot	4	F, RI, OR	No	No	S
A. Ban Pha Tai Pottery Scatter*	Ban Tai/Phaxay	-	-	-	-	-

5.1.1 Site 62 - Ban Nong: Nong village, Khoun district

The XKPG previously noted 21 jars at Ban Nong (DoH 2019). The authors recorded one group of 31 sandstone jars and two sandstone discs, situated on a gently sloping spur with views over the surrounding landscape (Fig. 2). Two of the jars are buried just below the rim,

while the remainder are standing. The jars have flat and recessed inner rim styles. No stone source was identified in the near vicinity.



Figure 2. Aerial photograph of the stone jars at Ban Nong site (Photo Nicholas Skopal).

5.1.2 Site 64 - Phu Buoc Kuong (Nakham Area): Phou Seo village, Phoukoot district

The XKPG previously noted six jars at Phu Buoc Kuong (DoH 2019). The authors recorded 11 sandstone jars, two discs, and multiple sub-spherical stones across two groups situated along a ridgeline with views over the surrounding landscape. The jars feature flat and recessed inner rim plus outer rim styles, and one jar, shaped on its exterior, has no cavity. Group 1 features seven jars, a disc, and multiple sub-spherical stones measuring 500–700 mm in diameter and a measurable height of between 200–600 mm, with three of the jars standing and four recumbent. Group 2 features four jars and one disc, which forms what appears to be a quarry, with the jars unfinished and surrounded by a number of stone outcrops.

5.1.3 Site 67 - Ban Pha Tai: Pha Tai village, Phaxay district

The XKPG previously noted nine jars at Ban Pha Tai (DoH 2019). The authors confirmed the jar count of nine jars distributed across two groups. Group 1 features seven jars positioned on a low-lying spur a few meters above the surrounding paddy farmland, with jars appearing unfinished. Two sandstone outcrops sit at the base of the group, indicating that it was likely a quarry and production site as well. Group 2, located 165 m northeast of Group 1, on slightly

raised terrain overlooking the surrounding farmland, originally comprised two buried sandstone jars. Local informants reported that the jars were excavated by the landowners in early 2019 as they were constructing a dwelling. The jars have flat and recessed inner rim plus outer rim styles, and the authors observed ceramic sherds around the jars. One of the recently excavated jars in Group 2 bears a carving near the rim (180x230 mm) depicting a reversed anthropomorphic figure with the head pointing towards the base of the jar (Fig. 3).



Figure 3. Carving on jar depicting a reversed anthropomorphic figure at Ban Pha Tai (Photo Nicholas Skopal)

5.1.4 Site 70 - Na Mon: Phoung Village, Khoun district

The XKPG previously noted 11 jars and one disc at Na Mon (DoH 2019). The authors confirmed these and recorded a further 5 jars. Nine of the jars are made from granite and the remaining seven from sandstone. The site is positioned on a flat expanse along a ridgeline with no discernible views due to thick vegetation. The jars have flat and outer rim styles with 14 of the 16 jars buried to the rim. There is no observable stone source in the vicinity.

5.1.5 Site 79 - Phu Hai Chuong: Lang Jong Village, Phoukoot district

The XKPG noted 68 jars at Phu Hai Chuong (DoH 2019) (Fig. 4). The authors confirmed these and recorded a further 20 sandstone jars, one disc, and multiple boulders, distributed over two groups positioned on a flat, forested area at the summit of a mountain, with views over the lower landscape obstructed by vegetation. The jars are in both the standing and recumbent positions, with 31 jars appearing unfinished. The jars feature flat and recessed inner rim styles. Group 1 features six jars, with what appears to be three additional jars buried in the recumbent position, although further investigation is required to confirm this. Group 2, located ca. 25 m to the southeast of Group 1, features 82 jars and one disc surrounded by multiple rock outcrops and boulders.



Figure 4. Group 1 stone jars at Phu Hai Chuong site (Photo Souliya Bounxaythip)

6.1 Sites reported by Genovese

6.1.1 Site 85 - Naho: Ban Naho village, Khoun district

Genovese (2015) reported nine jars at Naho. The authors recorded 24 standing jars, some buried to near the rim, made of predominately granite with some sandstone jars present. The jars have flat, recessed inner and recessed inner rim plus outer rim styles. The jars are distributed across three groups, in a valley which has a stream running through and views of the surrounding paddy fields. Group 1 features 19 jars located ca. 15m north of the stream. Group 2 features 1 jar ca. 25 m south of Group 1, on the opposite side of the stream. Group 3 features four jars ca. 160 m northwest of Group 1. No stone source was identified in the near vicinity.

6.1.2 Site 86 - Ban Khek: Khek village, Khoun district

Genovese (2015) notes the existence of Ban Khek though no further details are provided. The authors recorded a possible partially-buried granite jar with a flat rim style and disc situated on a gentle slope overlooking paddy fields (Fig. 5). No stone source was identified in the near vicinity.



Figure 5. Possible stone jar with lid at Ban Khek. A standard pencil is depicted for scale (Photo Nicholas Skopal).

6.1.3 Site 87 - Phu Da Phor: Chim village, Phoukhoun district (Laung Prabang Province)

The authors geo-located Phu Da Phor but were unable to survey the site (Phetrasy pers. comm. 2019). The site was referred to as San Hin Oume by Colani (Shewan and O'Reilly 2019).

7.1 Previously unreported sites

7.1.1 Site 88 - Old Village A: Pha Pheung Village, Khoun district

The authors recorded one group of five standing granite jars, buried near to the rim, and one granite disc positioned along a flat ridgeline with views of the surrounding landscape. The jars feature flat and recessed inner rim styles. One of the jars has been recently excavated and destroyed and is now scattered in pieces across the site. Large granite deposits in the shape of massive boulders are located ca. 600 m from the site, indicating a potential stone source.

7.1.2 Site 89 - Old Village B: Pha Pheung Village, Khoun district

The authors recorded one group of 31 granite standing jars, 15 of which are buried to the rim, and three discs situated on a ridgeline near the summit of a mountain with views over the surrounding lowlands. The jars feature flat and recessed inner rim styles. Large granite deposits are located ca. 1 km from the site, indicating a potential stone source.

7.1.3 Site 90 - Phu Hai Hin: Nong village, Khoun district

The authors recorded one group of 27 standing granite jars, two granite discs, and a granite slab which are positioned on a spur with steep sides, with views towards the lower valley. The jars feature flat and recessed inner rim styles. No stone source was identified in the near vicinity. This site may be what Colani calls Na Nong, where she recorded 34 granite jars (Shewan and O'Reilly 2019).

7.1.4 Site 91 - San Choc: Phonhome village, Kham district

The authors recorded one standing limestone jar positioned on a slightly raised saddle near the side of the small valley with views over the surrounding landscape. The rim style could not be determined due to the poor preservation of the jar. A limestone outcrop was noted 40 m northwest of the site which bore some possible chisel marks. The local guides informed the survey team that three limestone jars had previously been found here.

7.1.5 Site 92 - Pha Hai: Houay Loun village, Khoun district

The authors recorded one group of five poorly preserved limestone jars positioned on a level area ca. 200 m south from the base of a cliff with views over the surrounding landscape. Jar rim styles could not be determined due to the poor preservation of the jars. A limestone outcrop was found ca. 50 m north from the jars, indicating a potential stone source. Local hunters stated that there were two similar jar sites ca. 1-2 km to the east. However, time restrictions prevented the team from visiting these additional sites. The US Central Intelligence Agency (CIA) established air bases in this area during the Vietnam War from 1955-1974 (Leary 2007). The general coordinates of this site place it near what was known by the CIA as Lima Site 2. Pha Hai may represent what Dussault (1919) and Colani (Shewan and O'Reilly 2019) refer to as San Tiau, though this is speculative and they could have just as likely been referring to one of the two still unconfirmed sites ca. 1-2 km to the west.

7.1.6 Site 93 - Keo Hai Hin: Phu Sangao, Mien Village, Phoukoot district

The authors recorded one group of nine recumbent sandstone jars positioned on a mountainous spur with views of the surrounding landscape. The jars have flat rim styles and display relatively narrow cavities in relation to the total diameter of the jars (Fig. 6). Small outcrops of sandstone are present throughout the jar site.



Figure 6. Stone jar at Keo Hai Hin site (photo Nicholas Skopal)

7.1.7 Site 94 - Phu Seo (Nakham Area): Phu Seo village, Phoukoot district

The authors recorded three sandstone jars across two groups. Group 1 features two jars, one of which is in a fragmented state, in a saddle between a mountain and a small hill with views of the surrounding landscape. Located ca. 50 m to the west is Group 2, which comprises a fragmented jar on the summit of a small hill with views of the surrounding landscape. One of these jars in Group 1 features a recessed inner rim style, while the fragmented state of the remaining two jars prevent identification of the rim style. There is no observable stone source in the vicinity.

7.1.8 Site 95 - Phou Soung B (Nakham Area): Phou Seo village, Phoukoot district

The authors recorded one group of seven sandstone jars, three of which are standing, the remaining four recumbent, and one disc, positioned on a ridgeline with views over the surrounding lowlands. The jars have flat and recessed inner rim plus outer rim styles and have relatively narrow cavities in relation to the total diameter of the jars. Eight semi-spherical stones of sandstone ca. 700 mm in diameter and several boulders can also be observed, though it is difficult to determine if the boulders were brought to the area or are naturally occurring. Some of the jars appear to be unfinished and one of the recumbent jars has only been shaped around the exterior and has no cavity.

7.1.9 Site 68 - Ban Na Sala: Ban Na Sala Village, Paek district

The authors recorded a single sandstone jar near the center of the village of Ban Na Sala. While the jar is now fully exposed in a standing position, it appears to have once been buried, as the jar sits within an area approximately 50 sq. m that has been excavated in the recent past. What appears to be the edge of the former ground surface is apparent ca. 2 m to the north of the jar. The jar features a recessed inner rim. No stone source was identified in the near vicinity.

7.1.10 Site 97 - Ban Pha Pheung: Pha Pheung village, Khoun district

The authors recorded one granite jar with a flat rim style, buried to the rim, situated at the top of a hill on an a relatively flat area, with obstructed views due to vegetation. There is no observable stone source in the vicinity.

7.1.11 Site 98 - Phu Sang: Pha Pheung Village, Khoun district

The authors recorded one group of two granite jars, both buried to the rim, situated on a ridgeline with views of the surrounding landscape (Fig. 7). The jars display a flat rim style. There is no observable stone source in the vicinity. Local informants claimed there was a third buried jar which could not be located. This site is approximately 1.5 km from site 51, home to similar buried granite jars.



Figure 7: Buried stone jar at Phu Sang site (photo Nicholas Skopal)

7.1.12 Site 99 - Ban Khong (Phun Area): Khong village, Phaxay district

The authors recorded one group of three standing limestone jars and a sandstone slab positioned on a gentle spur, raised slightly above the surrounding paddy farmland, from which a clear view was observed. The rim styles are undeterminable due to the poor preservation of the jars. The sandstone slab measures c. 1000 x 700 x 300 mm and is located next to one of the jars. A potential stone source is ca. 110 m to the west of the site.

7.1.13 Site 100 - Ban Phonxay Site: Phonxay village, Phaxay district

The authors recorded one standing sandstone jar with a flat rim style, positioned on a wide ridgeline (Fig. 8). No view was observed from the site due to vegetation. There is no observable stone source in the vicinity.



Figure 8: Stone jar at Ban Phonxay site (photo Nicholas Skopal)

7.1.14 Site 101 - Keo Koang: Keo Koang village, Khoun district

The authors recorded the location of Keo Koang, which according to local residents previously featured two stone jars which were destroyed during the construction of a dirt road. The site had views over the lowlands. There is no observable stone source in the vicinity.

7.1.15 Site 102 - Ban Buoc Nam B (Phu Huang Chon): Phou Seo village, Phoukoot district

The authors recorded four standing sandstone jars spread across two groups. Both groups comprise standing jars that display a narrow cavity in relation to the total diameter of the jars. The jars feature flat, outer rim and recessed inner rim types. Group 1 comprises three jars surrounded by multiple small to medium sized boulders, which are positioned near the end of a ridgeline. Group 2, comprising of one jar, is located at the summit of a hill. Surrounding this single jar, the authors identified multiple sub-spherical stones measuring 500–700 mm in diameter and a measurable height of between 200–600 mm, along with multiple small boulders. Group 2 is ca. 200 m to the northeast from Group 1. Both groups have views of the surrounding landscape (Fig. 9). 75 m southwest of Group 2, the team identified a circular feature, measuring 5 m across, comprising stones measuring approximately 400 x 500 mm. Aside from the small to medium sized boulders surrounding Group 1, there is no discernible stone source in the vicinity.



Figure 9. Group 2 stone jar at Ban Buoc Nam B site (photo Nicholas Skopal)

7.1.16 Site A - Ban Pha Tai pottery scatter: Ban Tai village, Phaxay district

The authors recorded a surface pottery scatter, potentially indicating a habitation site associated with the jar culture, located ca. 600 m to the west of Ban Pha Tai site, positioned on the northern side of a 150 x 100 m enclave between the adjacent paddy rice fields and the surrounding hills (Fig. 10). The pottery scatter is spread across an area 10 x 15 m and despite some disturbance from present day farming, sherds are still visible in situ in the eroding side of the hill. Approximately 50 sherds of varying types were observed on the surface. Initial observations identified the pottery scatter as unglazed earthenware with some sherds displaying curvilinear combed-incised decorations. Further study is required to confirm this.



Figure 10. Northern view of the Ban Pha Tai pottery scatter (Photo Nicholas Skopal)

8 Discussion

With the inclusion of the PJARP survey data, the DoH database will grow from 83 to 102 jar sites, with 94 of the sites now geo-located (Fig. 11). The database will include some 2,263 megalithic jars in various states of preservation and/or completion, spread over an approximate area of 7000 km² across the provinces of Xieng Khouang, Luang Prabang, and Xaisomboun. The survey team's geo-location of the Phu Hai Chuong site presents the most northerly jar site recorded to date and extends the known boundary of jar culture a further 15 km north into mountainous terrain. The identification of this and other largely undisturbed sites ignites hope that there may be additional untouched sites in remote locations, a finding of particular relevance noting that researchers are yet to identify a site that would support investigation of the original jar contents. The majority of the 22 surveyed jar sites are positioned on prominent topographical settings such as spurs, saddles, and ridgelines, all of which appear to have views over the associated lowlands. Though these are often not

necessarily the highest observable position from the associated lowland, for example the spurs may be raised by only one to two meters. Many sites featuring buried jars tend to be positioned along the tops of ridgelines.

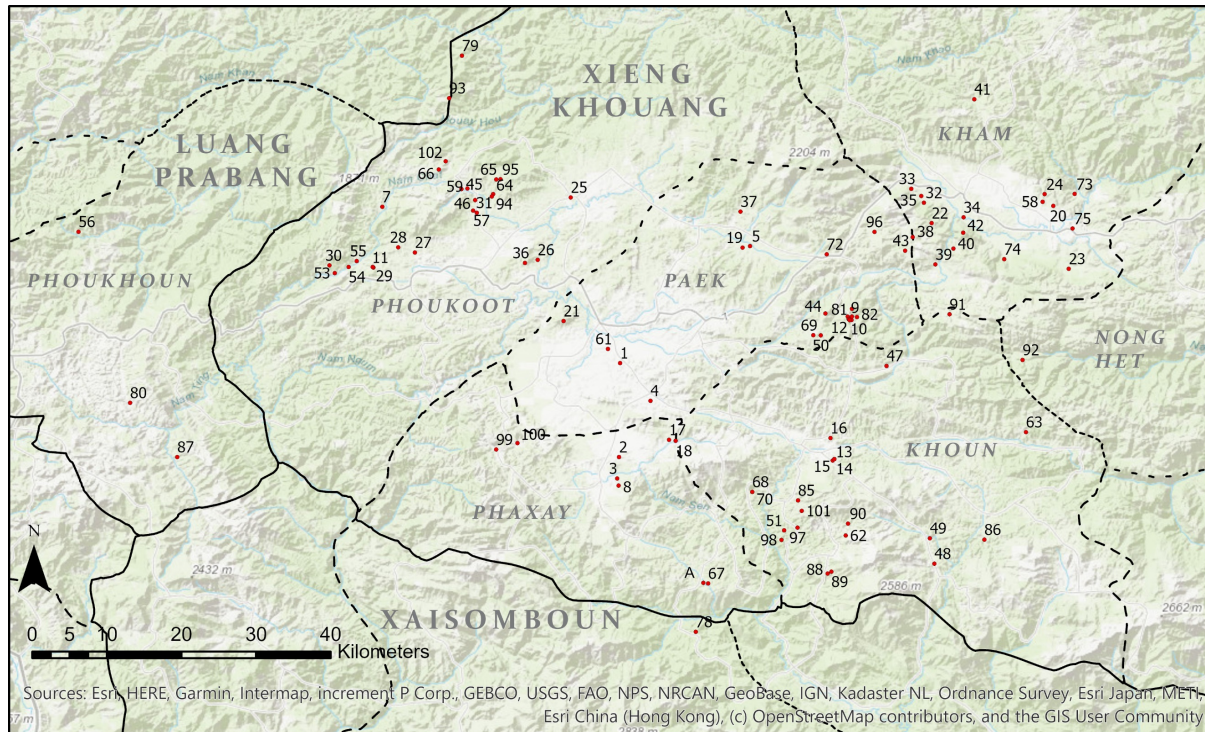


Figure 11. Map of 94 geo-located DoH database sites out of the total 101 DoH database catalogued sites. Numbers reflect site names (The SPJP omitted a site between 5 and 7). 1. Ban Na O, 2. Ban Nakho, 3. Ban Xiengdi, 4. Ban Lathong, Phou Nasi, 5. Ban Phaignam, 6. Unassigned, 7. Ban Xot, 8. Quarry sites of Ban Xiengdi, 9. Ban Phakeo, 10. Ban Phakeo, 11. Ban Phakeo, 12. Ban Phakeo, 13. Ban Thoume, San Phou Naluang, 14. Ban Natad, 15. Huay Far Par, 16. Ban Phai, 17. Ban Boutai, 18. Ban Buatai, Phou Him Mong, 19. Ban Khangvieng, 20. Ban Hai, 21. Phu Keng, 22. Ban Hin, Phou Tham Hua, 23. Ban Nam Hom, 24. Ban Phiangxai, 25. Ban Songhak, 26. Ban Phouvien (Nameng), 27. Ban Sack, 28. Ban Nakuan, 29. Ban Nam Oc Hou, 30. Ban Chomsy, San Phou Ten Yang, 31. Ban Ang, Phu Nabung, 32. Ban Xiengkieu, San Phou Getlin, 33. Ban Hok, San Phou Hok, 34. Ban Xang, Nam Oun, 35. Ban Nathong, San Phou Kokhe, 36. Ban Sai, 37. Ban Sikhoun, 38. Phu Biac, 39. Ban Phonekham, 40. Ban Namthoum, 41. Ban Tha, Phou En Kha, 42. Phu Xang, 43. Phakhom Phu Hai Hin, 44. Phu Namkhun, Sangniac Nongpek, 45. Ban Nasel, San Phou Huathum, 46. Ban Ang, Phu Nasan, 47. Ban Thalin, 48. Ban Nam Nai, 49. Ban Phiang Na Phoi, 50. Ban Huayhok, 51. Ban Sang Luang, 52. Ban Phakeo, 53. San Phu Niathau, 54. Ban Vangkham, 55. Ban Chomsy, Khum Vangkham, 56. Phu Biac, 57. Ban Ang, 58. Ban Phiangxai, 59. Ban Nasel, 60. Ban Than Hong, 61. Ban Ang, 62. Ban Nong, 63. Ban Khap, 64. Phu Buoc Kuong (Nakham Area), 65. Phu Soung, 66. Ban Buoc Nam (Phu Huang Chon), 67. Ban Pha Tai, 68. Ban Na Hung, 69. San Phu Huang Hok, 70. Na Mon (Phung Village), 71. Ban Phakeo, 72. Ban Khang Don, 73. Ban Na Phiang, 74. Phu Huang Sang, 75. Ban Thang A (Phou Kong King Area) Ang, 76. Pha Thang B (Phou Kong King Area), 77. Phu Tin Xang A, 78. Tham Ang, 79. Phu Hai Chuong (Lang Jong Village), 80. Ban Chim, 81. Site 52 Q1, 82. Site 52 Q2, 83. Site 52 Q4, 84. Site 52 Q5, 85. Naho, 86. Ban Khek, 87. Phu Da Phor, 88. Old Village A, 89. Old Village B, 90. Phu Hai Hin, 91. San Choc, 92. Pha Hai, 93. Keo Hai Hin, 94. Phu Seo (Nakham Area), 95. Phou Soung B (Nakham Area), 96. Ban Na Sala, 97. Ban Pha Pheung, 98. Phu Sang, 99. Ban Khong (Phun Area), 100. Ban Phonxay, 101. Keo Koang, 102. Ban Buoc Nam B (Phu Huang Chon), A. Ban Pha Tai Pottery Scatter.

The authors observed a diverse range of jar characteristics across the 22 surveyed jar sites. Sandstone is the most common material used to construct the jars, followed by granite and

limestone, though further research is needed to confirm these observations. A flat rim type is the most common type of rim, though recessed inner, recessed inner rim plus outer, and outer rim styles are also present. There are also some distinct differences evident in the morphology of the jars. Specifically, at sites such as Ban Buoc Nam B (Phu Huang Chon), and Phou Soung B (Nakham Area) in Phoukoot District, jars display narrow cavities in relation to the total diameter of the jars. Van Den Bergh and Luangaphay (2008) referred to similar jars in Phoukoot District. Additionally, multiple sites feature buried jars, most commonly made of granite. Discs were recorded at nine of the sites, and some sites, such as Ban Buoc Nam B. Phu Huang Chon, featured sub-spherical stones associated with the jars, which could be similar to those Colani described at the site she referred to as “Kilometre 469, 200”, though any robust link is yet to be explored (Shewan and O’Reilly 2019: 255). Evidence for decoration on the jars was found at Ban Pha Tai, with a jar depicting a reversed anthropomorphic figure in low relief. This bears similarities to decoration found on a jar and a ceramic vessel at Site 1 (Nitta 1996: 16) and one stone disc each at Site 2, Site 10, and the Na Nong site (Shewan and O’Reilly 2019: 219; Van Den Bergh and Luangaphay 2008). The authors observed a stone source near nine of the surveyed sites, which may indicate associated quarries. The survey team discovered a potential habitation site associated with the jar culture 600 m west of the Ban Pha Tai jar site, which warrants further investigation to confirm this finding. The authors’ initial observations of the ceramic scatters found across the Ban Pha Tai jar site and the potential habitation site identified similarities in ceramic type and style.

9 Conclusion

The expansion of the DoH database is an important advancement in our understanding of the geographic extent of the Lao jar sites. Further research is required to confirm the remaining sites reported but not yet geo-located and determine overlaps between various records. Additionally, informal accounts lead us to believe there are still many sites yet to be rediscovered in the heavily forested upland landscape across the provinces of Xieng Khouang, Luang Prabang, and Xaisomboun. The PJARP will seek to continue to comprehensively survey additional sites to contribute to the important collaborative ongoing body of work to build the DoH database. This will ensure a single, reliable record of all jar sites is available for the Lao PDR government for conservation and management purposes and will support ongoing archaeological research of this unique cultural heritage landscape.

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