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# EARLY CERAMIC SITES IN SOUTHERN LAU, FIJI

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## Introduction

The Lau Group is a dispersed chain of islands in east Fiji (Figure 1) trending north-south between 21°02'S and 17°00'S on the inactive Lau Ridge remnant volcanic arc, which is part of the convergent margin system comprising the Lau basin and Tonga ridge to the east (Cole et al. 1985). In the south of the Lau Group are several remote islands that are closer to Tongatapu than they are to the largest islands of Viti Levu and Vanua Levu in the Fiji Group. Two of these islands, Vatoa and Doi Island in the Ono-i-Lau Group, were visited briefly in 2006 after field work on Kabara when the government supply boat 'Sandy' made scheduled stops to unload and collect cargo. Lapita pottery and a fortification were recorded on Doi Island in the Ono Group, and on Vatoa Island a site with plain ware ceramics dating to c. 2000 cal. BP was located. The position of the two remote islands lying between the main islands of Fiji and Tongan archipelago suggests they were particularly subject to influence from population contacts and movements from islands to their east and west in prehistory. In the eighteenth and nineteenth century central and southern Lau were the centre of an important canoe building industry based on the hardwood *Instia bijuga* (*vesi*) used to construct large sailing canoes which were the prerogative of Tongan and Fijian chiefs (Young 1982). Archaeological and linguistic studies of the Lau Group suggest a complicated history of population movements earlier during Lapita (2900-2500 BP) and post-Lapita (~2500-1000 BP) times, which can be examined from the study of ceramic sites in southern Lau.



several epidemics and frequent warfare, the population of the Ono Group was 474 (Calvert 1985[1858]:82). The arrival of Christianity and the involvement of Tongans and Europeans in its spread strained the traditional bonds between Christian Ono-i-Lau and the Tui Nayau, paramount of the Lau Group, who was later supplanted by the Tongan leader Enele Ma'afu in the mid-nineteenth century.

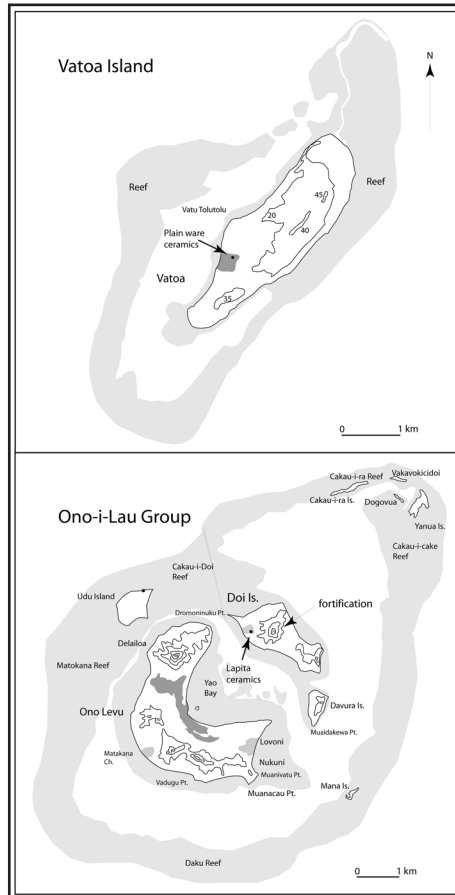


Figure 2. Ceramic sites on Vatoa and Ono-i-Lau.

Vatoa is a small (4.5 km<sup>2</sup>) limestone island (Figure 2) situated 100 km north east of the Ono Group, which was visited in 1774 by James Cook and subsequently by ships travelling from Tonga to collect beche-de-mer, several

of which were wrecked on the southern reef. In the 1840s the population numbered about 50 people (Wilkes 1985[1845]:379). Like several islands in southern Lau, such as Kabara and Fulaga, Vatoa was associated with the production of traditional valuables particularly sennit and scented oil. Ono-i-Lau was famous for the quality of its fine mats used by chiefs known as *tabukaisi*, decorated bark cloth (*masi*) and pearl shells (Calvert 1985[1865]:63). Such valuables were levied by the paramount Tui Nayau/Tui Lau for chiefly exchanges that linked the islands of Lau with other chiefdoms in Fiji (Thompson 1938a; Hooper 1982). Inter-island connections within the Lau Group were also important and involved the redistribution of resources, especially the transfer of food crops from fertile volcanic islands such as Lakeba, Cicia and Moce to limestone islands like Kabara during food shortages (Young 1982; Best 1984:574-575).

Archaeological sites in central Lau on Kabara, Fulaga, Ongea, Wan-gava, Mothe and Namuka were visited by the anthropologist Laura Thompson (1938a, 1940). Thompson made collections of ceramics and adzes, recording mat impressed and late prehistoric incised sherds, as well as stone and shell adzes (1938b, c). Two adzes from Vatoa in southern Lau were reported in the adze paper one of which (C.7288) may be an import as it is similar in form to the Samoan Type X form recorded from ceramic and later sites in Samoa (Green and Davidson 1969). A pioneering study of adze composition using XRF by Best et al. (1992) found that a high proportion of adzes associated with fortifications in central Lau were Samoan imports, suggesting that adzes were also imported into southern Lau in the last 1000 years.

Following Laura Thompson's study Colin Smart (1965) undertook intensive archaeological investigations on Kabara in the 1960s recording 53 sites and excavating in two coastal flats and one rock shelter. No Lapita ceramics were found and the oldest pottery was paddle impressed with cross-hatch, 'wavy' and spot markings similar to decorated ceramics from sites in west Fiji (Frost 1970; Birks 1973). In 1978, Simon Best and others conducted a major programme of site surveying and mapping in central and southern Lau recording 101 sites/site areas and surveying 25 forts. Three sites with Lapita pottery were found on Ono-i-Lau along with post-Lapita pottery, but the location of the sites and the material culture collections were not reported in Best's 1984 thesis, and no radiocarbon dates have been obtained for southern Lau.

### **Ono-i-Lau and Vatoa**

Doi Village occupies a coastal flat on the north east of the island facing Ono Levu and adjacent to a deep water lagoon channel. Houses are aligned east-west in front of the beach behind which is a church – the largest building on the island – and village green. The coastal flat extends 200 m to the south

west where the sand plain is bordered by a low raised terrace behind which are garden plots and the village school. The terrace marks a former shoreline indicating that the coastal flat was probably an embayment in prehistory, which has since been infilled from the Holocene high-stand sea-level fall which was underway by ~3 ka (Dickinson 2003) and progradation. In other parts of the Lau Group, Nunn (1996) identified a raised erosional shoreline 1.75 m above current mean sea level dating to ~3.5 ka. Ceramics and marine shell fish remains were observed in spoil from a post hole dug into the lower slope of the terrace beside a cooking house ~180 m from the present beach berm (GPS 20° 38' 12.42''S, 178° 43' 16.87''W, Google Earth 20° 38' 10.90''S, 178° 43' 17.56''W). A wider distribution of fragmented ceramics and shell fish was observed in slope-washed material eroding from the terrace. Among the shell fish remains were bivalves (*Anadara* and *Gafrarium*), and the ceramics included rim and body sherds, including a rim marked on the interior with dentate stamping and on the exterior lip with 'diamond' shaped side-tool impression (Figure 3). The temper of the decorated rim consisted of abundant blocky carbonate particles suggesting use of coarse calcareous beach sand quite different to the volcanic placer sand found in many Tongan ceramics (Dickinson 2006). Similar decorated rim sherds have been found on Ugaga Island off the south coast of Viti Levu and on Lakeba (Best 1984:Fig. 3.39; Clark 2000).

The central part of Doi Island is a raised volcanic outcrop and is the highest part of the island at 79 m above sea level with commanding views to the north where canoes travelling to the Ono Group from other parts of Fiji could be sighted. The outcrop is a known fortification and has entrance ways, stone piles and surface scatters of ceramics and marine shell fish (GPS 20° 38' 14.45''S, 178° 42' 57.96''W, Google Earth 20° 38' 12.30''S, 178° 42' 55.92''W). A date on a surface collected *Conus* sp. shell gave a result of  $463 \pm 33$  BP. Calibrated with a  $\Delta R$  of  $43 \pm 12$  years the result has an age (2 sigma) from the nineteenth century to the present (Wk-19815,  $\Delta^{13}C=3.4 \pm 0.2$ ). The shell may have been deposited during warfare between Christian and non-Christian groups in the nineteenth century (Calvert 1985[1865]:70-71).

On Vatoa, the single village is located on a coastal flat on the north west side of the island backed by an old shoreline terrace. To the north west of the sand plain, construction of a septic tank on the terrace ~180 m inland from the current beach berm uncovered red slipped ceramics and marine shell fish remains. A piece of worked *Conus* shell used to make a ring ornament (Figure 3) from this deposit was radiocarbon dated and returned an age of  $2421 \pm 37$  BP. The result has a calibrated span (2 sigma) of 1900-2120 cal. BP (Wk-19814,  $\Delta^{13}C=2.8 \pm 0.2$ ). Two plain rim sherds from the site are shown in Figure 3. Megascopic observation of five sherds identified several with a high propor-

tion of calcareous particles, and one with numerous lateritic grains consistent with local production. A well-fired body sherd marked with parallel paddle impressions collected near the current beach berm contained placer sand grains indicating transfer of temper or pottery from a volcanic island in the post-Lapita period, as has been identified in central Lau (Dickinson 2006:117).

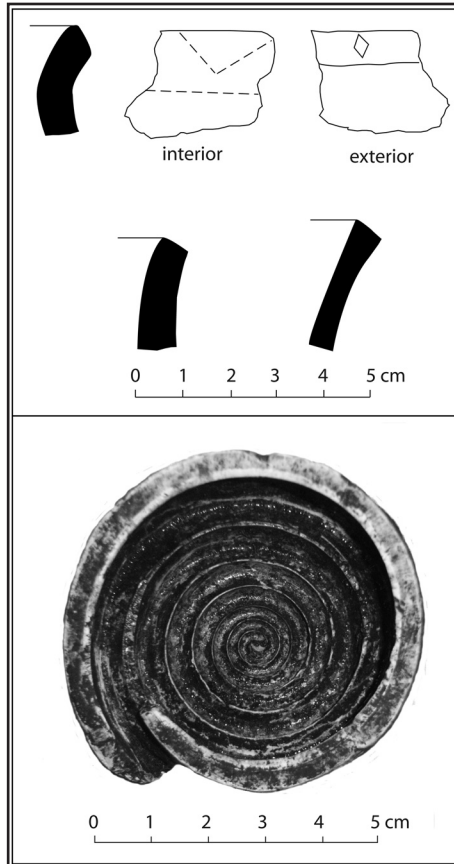


Figure 3. Top. Dentate-stamped rim from Doi Island and rim sherds from Vatoa. Bottom. Worked *Conus* sp. shell from Vatoa dated to ~2000 cal. BP.

## Conclusion

The presence of Lapita and post-Lapita ceramics on palaeoshorelines located some 180 m from the current beach berm in southern Lau suggests that

early populations favoured shallow embayments on the leeward side of islands. Such environments would have provided canoe shelter and were likely prime environments for concentrations of bivalves such as *Anadara* and *Gafrarium*. According to Nunn (1996) there has been little tectonic uplift in the Lau Group in the last 3000 years, suggesting that early occupation was concentrated on sheltered shorelines and later followed prograding sand plains following a sea level fall of ~1.5 m. Two easily found ceramic sites on palaeoshorelines suggests the presence of similar sites associated with infilled embayments, which can be identified in conventional aerial photography/Google Earth prior to archaeological survey.

The Lapita groups who occupied southern Lau were probably highly mobile as obsidian from Lapita sites in Lakeba were sourced to northern Tonga (Best 1984:434), and the same material has been recorded from a Lapita deposit on Tongatapu, while a quartz-bearing sherd from the Mulifanua site in Samoa most likely derives from Vanua Levu in Fiji (Dickinson 2006:118). An analysis of Lapita dentate-stamped designs from Lakeba grouped them with motifs from Tonga and Samoa rather than with designs from west Fiji (Best 1984:740). The stylistic split between Lakeba and Viti Levu parallels the linguistic division between west Fiji and east Fiji, which is argued to have occurred prior to the build up of populations in inland Viti Levu (Geraghty 1983:387). Best (1984:654) notes, however, the contradictory data from Lakeba where Lapita levels contained more material from west Fiji than from Tonga-Samoa. In post-Lapita times there is similar uncertainty about the direction and effects of interaction with Burley (2005) hypothesising that prehistoric contact introduced Navatu phase decoration to Lakeba in the Lau Group at ~200 AD in tandem with the arrival of Vanuatu obsidian, and the new decorative style later spread from the Lau Group to Viti Levu at ~400 AD. The possibility that Navatu phase ceramics are stylistically intrusive to Fiji now appears unlikely as reanalysis of the Lakeba obsidian shows that it does not derive from Vanuatu as previously thought (Reepmeyer and Clark 2009). Best (1984:565) raises and rejects the possibility that central Lau was aceramic in the first millennium AD, but he does not rule out an aceramic phase for southern Lau.

Issues of mobility, interaction and the direction of prehistoric contact are central to island culture history, and the investigation of ceramic sites in southern Lau will be significant for understanding the early prehistory of Fiji. Foremost among these research issues is the pattern of Lapita colonisation in the archipelago, and whether some parts of the Lau Group were colonised from Tonga rather than from west Fiji, which might indicate small numbers of colonists in west Fiji or back migration from northern Tonga-Samoa to southern Tonga-east Fiji (Clark and Bedford 2008). Second, is the question of post-Lapita



ceramic change and whether southern Lau was aceramic, like Tonga, or if it continued to produce pottery in styles and forms like those manufactured in other parts of Fiji.

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