# The relationship of red-slipped and lime-impressed pottery of the Southern Philippines to that of Micronesia and the lapita of Oceania

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I have been interested in the origin of Lapita pottery and its relationship with the people who made it since 1952 when Gifford and I found Lapita pottery at Site 13, New Caledonia. In 1952 we had McKern's 1929 Tonga report, Father Meyer's 1909 Watom report of the dentate-stamped sherds from the site, Leenhardt's 1909, and Avias's 1949 reports on similarly decorated sherds found on the Iles des Pines. Therefore, we felt that Lapita was very promising as an indicator of migrations into the eastern Pacific.

The search for the Austronesian Homeland required looking into the origins of the Proto-Austronesians and their descendants. This led to the Shutler/Marck paper, "On the Dispersal of the Austronesian Horticulturalists", 1975, which I believe was the first time Taiwan was proposed as the Austronesian Homeland with South China as possibly their ultimate homeland. Expanded and more detailed versions of this theme were subsequently published by Bellwood (see Bellwood 1983, 1984, 1987 and 1988; see also Blust 1988). A well-reasoned rebuttal to a South China Austronesian connection was published by Meacham in 1988. An alternative model, published by Allen (1984), suggested that Lapita developed within the Bismarck Archipelago out of cultural developments that may reach back to the terminal Pleistocene.

In 1975, Solheim published his Nusantao Hypothesis. He sees the general area of eastern Indonesia and the southern Philippines islands as the area of Austronesian origin (Solheim 1975:152 see also Solheim 1984-85). However, the finding of Red-slipped and Lime-impressed pottery on Saipan (Red-slipped pottery is also found on several other Marianas islands) possibly dating to 3477 BP (Spoehr 1957), followed by the recovery of Red-slipped and Lime-impressed pottery at Balobok Rockshelter,

Zamboanga, southern Philippines in 1969, possibly dating to 6450 BP (Spoehr 1973), set me to thinking the location of the Lapita/Austronesian homeland as outlined in 1975 (Shutler and Marck 1975). I have long thought that the Lime-impressed pottery of the Marianas was closely related to the Lapita of Melanesia and Polynesia. The Lime-impressed pottery was found in Melanesia and Polynesia is Lapita, and I see it as having developed originally out of the red-slipped pottery of Island Southeast Asia. This is not to say, however, that the additional design elements and pot forms didn't develop in the Bismarck Archipelago.

A sampling of Island Southeast Asian sites with Red-slipped pottery reported in the literature suggests there is a substratum of Red-slipped pottery all the way from Taiwan to Sulawesi. However, the dating and origin of Red-slipped pottery and the exact directions of its spread throughout Island Southeast Asia and the Pacific remains to be determined. Red-slipped pottery is the earliest found in some sites, but it is not confined to just the early stages of occupation throughout Island Southeast Asia or the Pacific. Therefore, we really cannot deal with Lime-filled pottery without also considering Red-slipped pottery.

## Micronesian Red Ware and Lime-impressed pottery

In 1957, Spoehr found eleven Lime-impressed sherds at a depth of 2.4 to 2.8 feet at the Laulau Rockshelter, and one just below the surface at Chalan Piao, both sites on Saipan. He was unable to date the sherds, but said that they were probably tradeware. In discussing them with Spoehr, he said he felt that they were early, possibly associated with the 3477 BP date he had for Chalan Piao. Spoehr defined five other types of pottery from Saipan besides Lime-impressed: Marianas Red (red-slipped), Marianas Plain, Marianas Cord-marked, Marianas Trailed, and Marianas Fine-lined. The last four types seem to be derived out of Marianas Plain and are nowhere found with Marianas Red. Spoehr (1957:124) describes Marianas Red as either dominant in early levels at most sites where it is found or at least important as Marianas Plain, which is characteristically late, post-1450 BP.

Spoehr remarks that, on the basis of Red-slipped and Lime-impressed pottery, there was probably a long history of trade contact between the Philippines and western Micronesia, especially Belau and the Marianas. This proposition would seem to have been borne out when in 1969, digging in the Balobok Rockshelter on Zamboanga, Spoehr found more Red-slipped and Lime-impressed sherds, tentatively dated 6450 BP.

Spoehr (1973:185) states that the Sanga Sanga (Balobok Rockshelter) pottery is closely related to the Tabon pottery complex of the Tabon Cave of Palawan, Philippines. Fox (1970:75-121) agrees that, "all pottery types found at Sanga Sanga (Balobok) have their counterparts in the Tabon pottery complex". Spoehr also found Red-slipped pottery at Balobok Rockshelter (1973:188), "of the 16 sherds, 15 body, one rim: one Red-slipped sherd has a band of impressed circles filled with lime exactly like the one from Saipan" (1973: Fig.17d). Spoehr (1973:191, Table 6) shows one Red-slipped sherd from level 6A, which appears to date from 6450 +\-180 BP, if this date applies to level 6A. Although Spoehr doesn't say that this is the Lime-filled sherd, I assume that it is. Spoehr reiterates (1973:111) that the relationship of Sanga Sanga to Tabon and western Micronesia is important.

In 1992 the Philippine National Museum conducted more excavations at the Balobok Rockshelter (Ronquillo *et al.*:1993). The report begins by quoting Spoehr (1973) as saying that the Red-slipped pottery with impressed designs (I assume they mean the Lime-impressed) dates between 8000-6500 BP. The report doesn't say which cultural layer the Lime-impressed sherds they found come from, nor can this be discerned from the illustrations (Ronquillo *et al.*:1993 Fig:12c or Plate 9). Furthermore, the decoration of the pottery is not clear from the illustrations. It doesn't appear to be the same as that on the Lime-impressed sherd Spoehr found on Saipan in 1957 or the one he found at Balobok Rockshelter in 1969.

The Philippine National Museum report states that the earthenware was found only in Cultural Layers II and III, but it doesn't say which layer the Lime-impressed sherd came from. Ronquillo *et al.* (1993) give carbon-14 dates for Cultural Layer II at Balobok as 7290+\-120 BP, and Cultural Layer III as 8760+\-130 BP. If these dates are correct, then the Lime-impressed sherd dates from at least 7290 BP, even if it is from Layer II rather than Layer III. Further excavation is needed to obtain more pottery and carbon-14 samples that are clearly associated, in order to securely date the pottery.

If it can be firmly established that the Lime-filled pottery at Balobok Rockshelter is actually over 5000 years BP, then there would be more reason to see the southern Philippine area as the homeland of Lapita pottery makers and to believe that Lime-impressed pottery went east to Tonga and north to northern Luzon and Saipan from there.

With our current knowledge of petrography and methods of clay analysis applied to appropriate samples, and with reliable dating, it should be possible to determine if there was a long-range trade network involving Lime-impressed pottery throughout Island Southeast Asia and the Pacific, or if this pottery started out as a trade item, then continued to be made only locally, as Lapita pottery was in the Ha'pai Islands of Tonga after Lime-impressed decorative elements became part of the Lapita tradition.

Returning to Micronesia, Takayama (1981) found Marianas Red on Rota, where it appeared before 2590+\-85 BP. Takayama (1981) notes that Jeff Marck and James

Moses found Marianas Red at Laulau Rockshelter on Saipan, and that they consider it to be the best made Marianas Red on Saipan. Takayama quotes Spoehr (1957:174) as saying that, "Marianas Red is derived from the widespread complex of red wares found in Island Southeast Asia, and that the Marianas Red pottery tradition most likely derived from the southern Philippines".

Additional Marianas Red Ware was recovered by Dean Thomson excavating on Saipan in the 1970's (Thomson 1970). He recovered Marianas Red and a Marianas Red-variant at the Laulau site in the pre-Latte phase deposit, and at the Agiugan Site on Saipan he found three Marianas Red body sherds from the lower level. At the San Antonio Site, also on Saipan, he found Marianas Red sherds throughout the one meter deposit. No carbon-14 dates were reported for any of the sites.

In her excellent paper on pottery traditions in Micronesia, given at the Lapita Conference in Noumea in 1992, Intoh summarises the Marianas pottery situation when she says, "around BC 1600, about the same time that Lapita pottery appeared in the Bismarck islands in Melanesia, a decorated pottery tradition appeared in the Marianas. The tradition was characterised by thin-walls, red colour and the use of calcareous sand temper (Marianas Red Ware)". Again Intoh, reporting on recent work in Saipan (Intoh 1992:73), notes that recent excavations in the Achugao area of Saipan by Butler and Fant in 1989 (Butler pers. comm.), demonstrate that the Lime-impressed decorative tradition was present for the entire early sequence of the sites, between 3600 and 2000 BP. and that the distinction of Spoehr's "Lime-filled, impressed tradeware" from other decorated pottery is questionable, but he doesn't explain why. Intoh then refers to Graves et al. (1990:220), who state that, "within pottery assemblages from the Pre-Latte period, characteristics of temper, surface treatment, surface finish, and rim form show substantial homogeneity, and there is a relatively high inter-site similarity between assemblages on different islands". From this brief survey of Red-slipped pottery reported from Micronesia it would appear that the Red-slipped pottery is the key to tying Saipan to the Philippines.

## A Brief Survey of Red Ware in Island Southeast Asia

At the O-Luan-Pi site on the southern tip of Taiwan, Sung *et al.* (1967) report that a Reddish Ware pottery was found. The pottery is assigned to the earliest phase of the Lungshanoid Culture, which began about 4450 BP. While little is known about the distribution or dating of Red Ware on southern Taiwan, it would seem from the meagre evi-

dence available, that it is not ancestral to the Red Ware which has been found farther south in island Southeast Asia. Meacham (pers. comm. 1993) remarks that the Red Ware from the O-Luan-Pi site in southern Taiwan quite possibly owes its origin to influence from the Philippines.

Moving south, in 1982 Shirakihara, Koomoto and Aoyagi of the University of Kumamoto, Japan, located over 60 archaeological sites on Batan Island, which is between Taiwan and northern Luzon. All of these sites produced some pottery, most of it Red-slipped, consisting of bowls and jars similar to that of the final Kalanay-Plain Complex in Central Luzon. No carbon-14 dates were reported. Many of the sites also contained Sung Dynasty porcelains (1127-1276 AD) (Shirakihara *et al.*:1983).

These archaeologists then surveyed in the Cagayan Valley of northern Luzon. At the Magapit Shell Mound on the east side of the Cagayan River, northern Cagayan, they recovered Red-slipped sherds in Trench B, in the third layer at a depth of 160 cm, dating to 3680+\-100 BP and 3790+\-100 BP. The exciting thing about this site is that it contained Lime-impressed pottery with dot dentation and fine incisions (not illustrated). The authors suggest there may be general relationships between this pottery and other Pacific pottery traditions such as Lapita and Marianas Red. The dot dentation, zig-zag, horizontal, vertical and oblique lines, and the impressed circles also recall Yuan-shan pottery of northern Taiwan (Shirakihara et al.:1983). I also believe that this decoration recalls the Lime-impressed pottery of Saipan and the Balobok Rockshelter. Furthermore, the ring feet with circular cut-outs on pottery from Magapit are similar to those of pottery from both Fengpitou, southern Taiwan (5000-2000 BP), and from the Dimolit site in northern Luzon.

At the Magapit Shell Mound, northern Philippines, not far from Saipan, we have a 4000 year old site with Lime-impressed pottery. It is interesting that this site contains features that appear to come from both Taiwan in the north, and from the southern Philippines. The Magapit Shell Mound appears to be a key site in tracing the origin and distribution of Red-slipped pottery.

In 1978, with a crew from the Philippine National Museum, I surveyed in the Cagayan Valley of northern Luzon and in the northeast section of Luzon, looking for Red-slipped pottery sites old enough to be ancestral to any known Lapita pottery in the Pacific. We excavated two sites, one on Fuga Moro Island at the extreme northeast end of Luzon, and the other called the Andarayan Site, located near the city of Tuguegarao in the central Cagayan Valley. We found a great deal of Red-slipped pottery, but none over 3000 BP (Snow and Shutler 1985). At the Andarayan Site, we found cultivated rice dating to 3000 BP (Snow et al.:1986).

Elsewhere in the Philippines, Bellwood (1987:46) mentions some Red-slipped sherds found at the Batungan Caves, Masbate, which have rows of decoration on their upper surfaces, including rows of stamped circles, incised scrolls, rectilinear designs, and

motifs composed of impressed dots arranged in lines. Some Lime-impressed sherds dating from around 2950 BP to 2700 BP were also found. Their general decorative format closely resembles that of Melanesian Lapita pottery. Bellwood (1987:46), in reference to how far east Red-slipped pottery is found in eastern Indonesia, notes that, "in...Sulawesi and Timor a number of sites have been excavated which contain some Red-slipped pottery, dating from the third millennium BC and later".

### Red Ware and Lime-impressed pottery found in Near Oceania

Dimitri Anson, in his excellent thesis of 1993, Lapita Pottery of the Bismarck Archipelago and its Affinities, deals with the Lapita pottery at the Watom, Ambitle, Talasea, and Eloaue sites, all located in the Bismarck Archipelago. Early in his thesis (1983:31). Anson states that pottery with lime-filled impressions is common in the Watom ceramics (1983:Pl. l, a-d,5), but he doesn't give any provenance. The earliest date for Watom is (ANU-37) 2420 BP (no plus or minus given) (1983:263). Anson remarks on the great differences between Watom ceramics and those from Ambitle, Talasea, and Eloaue (This volume and 1983:51) and he says that the "dichotomy in the decoration and in the shapes of dentate-stamped Lapita pottery between Ambitle, Talasea and Eloaue and those at Watom is due to chronological differences between Eloaue and Watom (1983:262)". Since Talasea had not then been excavated, and no carbon-14 dates for Ambitle are mentioned, how then can these two sites be included in this statement. Therefore, the question of whether Eloaue, Ambitle and Talasea are older or contemporary with Watom doesn't seem to have been settled, but since no Limeimpressed pottery has been found at Ambitle, Talasea or Eloaue, this may suggest that Watom was occupied at a later date than the other sites. Eloaue has dates of 3300+\-180BP (GX 3498) and a questionable one of 3900+\-260 BP (GX 5499). On the basis of the carbon-14 dates for Eloaue, that site is older than Watom. Further on, Anson (1983:265) makes some very interesting observations regarding a possible Southeast Asian origin of Red-slipped pottery. He notes that there is pedestal-based pottery at Eloaue and Ambitle and a possible ring base style ceramic at Ambitle (1983:265;Fig.lll/0\9), "a sigma-shaped motif (1983:Fig.Xiii/ll Pl a) strongly represented at Ambitle, Talasea and Eloaue is reminiscent of cord-mark decoration on Lungshanoid-influenced Southeast Asian pottery" (cf. Bellwood 1970:167).

#### Red-slipped and Lime-impressed pottery in Remote Oceania

Lime-impressed, dentate-decorated pottery has been found over the past several years at four sites in the Ha'apai Group of Tonga during excavations of David Burley's Tonga Project. At the Faleloa site on Foa Island we found two Lime-impressed sherds. They both came from Unit II, Level 5, at a depth of 80-100 cms and a date of about 3000 BP. At Pukotala, on Ha'ano Island, a few Lime-impressed sherds were discovered. This site will be extensively excavated in 1997. By far the greatest quantity of Lime-impressed, dentate-decorated Lapita sherds came from our excavations in 1995 at the Tongoleleka Site on Lifuka Island. It seems at this point that there will be at least several dozen Lime-impressed sherds from that site, and that they come from each of the three cultural layers. So, here at least, they apparently do not constitute any sort of time marker.

#### To Summarise

Until more excavations at the Balobok Rockshelter confirm an association of Red-slipped and Lime-impressed pottery with the date of 6450 BP, we can only postulate that the centre of dispersal of these pottery types was the southern Philippines, which is also a strong candidate fro the homeland of Lapita pottery and the Austronesians. This review demonstrates that there is prehistoric Red-slipped pottery from Taiwan in the north, to Sulawesi in eastern Indonesia and to Western Polynesia. Red-slipped pottery is present, but not reliably dated in southern Taiwan. Dates of 3500 BP for Red-slipped pottery in Saipan, 3790 BP in northern Luzon, and 3000 BP in eastern Indonesia seem acceptable. Lime-impressed pottery possibly dates to 3790 BP on Saipan, 5740 BP in northern Luzon, 6450 BP in Zamboanga, and as early as 3000 BP in Tonga. As it was found in more than one cultural level at several sites, Lime-impressed pottery cannot be used as a time marker. If we accept the 6450 BP date from Balobok Rockshelter, then we can postulate that both Red-slipped and Lime-impressed pottery moved north to Taiwan, and as far east as Tonga from the southern Philippines. More excavation of Red-slipped pottery sites is necessary before we will have a firm picture of the distribution and time-depth of Red-slipped and Lime-impressed pottery throughout Island Southeast Asia and the Pacific. If the very early presence of Red-slipped and Limeimpressed pottery is confirmed for the southern Philippines, then some form of Solheim's ideas on the Nusantau as being the ancestral Austronesians will have to be taken seriously in our search for the ultimate homeland of the Austronesian horticulturalists.

Addendum: As I finished my paper for the Vila Conference, an e-mail to the recipients of list Asaonet by Dr John Edward Terrell, and a press release by the Papua New Guinea Post-courier on Thursday, October 24, dropped a bombshell with regard to the origin of Lapita pottery. I include an excerpt from that news release:

The expedition, led by Dr John Edward Terrell of the Field Museum in Chicago, has recovered evidence of human life indicating that cultural traits carried by the first people to colonise Polynesia over 3000 years ago may have evolved long before that on the Sepik coast of Papua New Guinea, and not in southeast Asia as most experts have always thought.... With funding from the National Science Foundation, the seven archaeologists on the expedition from the U.S.A., Australia and Papua New Guinea have excavated pottery shards, bones, and other traces of ancient life on the top of the Aitape hills suggesting that the prehistoric pottery called Lapita ware used by the earliest inhabitants of Polynesia can be traced back to Aitape, not Asia, specifically to a style of early pottery Terrell calls Sumalo ware.

We eagerly await details.

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