

Ethnoarchaeological Research on the North Coast of Papua New Guinea: A Preliminary Report on Pottery and Stone Arrangement

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Abstract

This paper is a report of an ethnoarchaeological survey conducted in August 2024 along the north coast of Milne Bay Province, Papua New Guinea. Since 2005, we have conducted continuous ethnoarchaeological surveys in the East Cape area to explore pottery types and social systems to compare with prehistoric archaeology, including the Jomon studies. This research serves as a preliminary investigation and aims to reassess the local pottery tradition examined in previous surveys, but on a broader scale. For this purpose, we selected Taupota, a ward with ethnographic records from the late 19th to early 20th century and oral records of historical interregional migration. In addition to conducting interviews about pottery production, we also examined and documented the remaining stone arrangements to compare them with the ethnographic records.

This report offers an overview of the survey and outlines potential directions for future research by comparing the current situations with existing ethnographic data.

The study of pottery revealed that multiple pottery traditions with distinct production techniques may have coexisted within the same linguistic region. Such ethnoarchaeological observation is particularly suggestive for understanding changes in prehistoric pottery types and their interrelationships.

We also reaffirmed oral histories of migration recorded in earlier studies from an ethnohistorical perspective. At the same time, it revealed that the form and function of stone arrangements—material indicators of migration—have diverged between Taupota and East Cape. Stone structures are found throughout the Massim region. Excavations of some of these sites have provided intriguing possibilities related to cannibalism and chiefdom societies in this area. Further research of stone structures in Taupota is necessary to understand the sociopolitical developments in the Massim prehistory.

Summary

This paper is a report of an ethnoarchaeological survey conducted in August 2024 along the north coast of Milne Bay Province, Papua New Guinea. Since 2005, we have conducted continuous ethnoarchaeological surveys in the East Cape area to explore pottery types and social systems for comparison with prehistoric archaeology including Jomon studies. However, due to the deteriorating security situation in Milne Bay Province, our fieldwork was suspended in 2018. During this period, we compiled our research findings into a book.

Fortunately, we were able to resume the survey following improvements in the security situation last spring. This research serves as a preliminary investigation aimed at reassessing the local pottery traditions examined in previous surveys, but on a broader scale. For this purpose, we selected Taupota, a ward with ethnographic records from the late 19th to early 20th century and oral records of historical interregional migration. In addition to conducting interviews on pottery production, we also examined and documented the remaining stone arrangements to compare them with the ethnographic record.

This report provides an overview of the survey and outlines possible directions for future research by comparing the current observations with existing ethnographic data.

Introduction

We have conducted ethnoarchaeological surveys in Papua New Guinea under the direction of Ryuzaburo Takahashi (Professor Emeritus, Waseda University) since 2005. Although the research was suspended in 2018 due to an incident involving the escape of a Rascal (local robber gang), we had published our accumulated results in the volume *Papua New Guinea Ethnography and Jomon Society* (Takahashi ed. 2023).

In the spring of 2024, security in the area improved following the elimination of the remaining members of the gang and the lifting of the curfew, allowing peace and stability to return. Consequently, we decided to resume our field research. Our long-term research has focused on the Massim region, a cultural region that includes the southeastern tip of mainland Papua New Guinea and surrounding offshore islands. This region was defined by A. C. Haddon based on the similarities of material cultures (e. g. the design of wood carvings or shell ornaments) (Haddon 1894) (Fig. 1). Especially we had conducted our research in the East Cape area, located at the eastern tip of New Guinea mainland. This area is administratively divided into two wards: Kehelara (Hehego) and Topa. We have also carried out research on Wali Island, approximately 70 km southeast of East Cape.

The aim of the present research is to reexamine previously collected pottery data from East Cape on a broader regional scale. Our previous findings suggest that offerings during funerary rituals may have played a significant role in the distribution and transformation of local pottery traditions, and that the regional importance of pottery production may have influenced its spread. It is therefore important to clarify the extent and historical depth of these phenomena.

Based on this background, we focused on Taupota for further research: a western ward in the Maramatana Rural LLG (legal-level government) in Milne Bay Province. Ethnographic records indicate that Taupota belongs to the same language family as East Cape and shares a similar pottery tradition. P. May and M. Tuckson note that “it is possible that pots similar to those of East Cape are made at least at Taupota” (May & Tuckson 1982: 81). We also recorded a tale of historical migration from Taupota to East Cape in old days (Takahashi ed. 2023: 70). These date suggest that Taupota is an important case study for examining the boundaries of pottery typologies and for exploring the wider social systems of migration and clan-based land use.

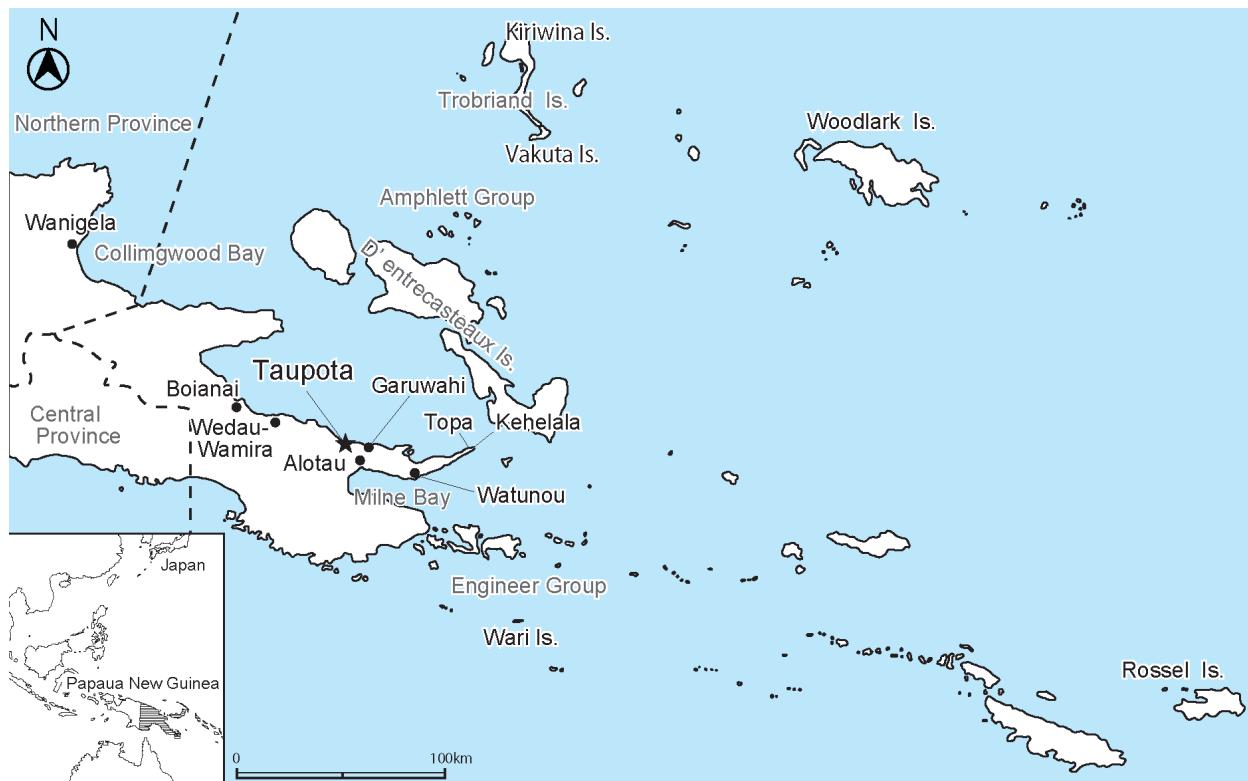


Fig. 1 Massim region

Tab. 1 The details of the itinerary

date		schedule	accommodation
3-Aug	Sat	Narita → Manila	(on a plane)
4-Aug	Sun	Manila → Port Moresby → Alotau	Alotau
5-Aug	Mon	Milne Bay Provincial Office: application for the research permission Alotau → East Cape	Dawatai
6-Aug	Tue	General survey @Topa and Kehelala	Dawatai
7-Aug	Wed	East Cape → Alotau → Taupota	Taupota
8-Aug	Thu	Identifying stone monuments, research about pottery, interviews and mapping with GPS @Taupota	Taupota
9-Aug	Fri		Taupota
10-Aug	Sat		Taupota
11-Aug	Sun		Taupota
12-Aug	Mon		Taupota
13-Aug	Tue	Taupota → Alotau	Alotau
14-Aug	Wed	Alotau → Port Moresby	Port Moresby
15-Aug	Thu	Papau New Guinea National Museum & Art Gallery Papua New Guinea National Research Institute	Port Moresby
16-Aug	Fri	Port Moresby → Manila (connection flight was delayed due to the typhoon)	Manila
17-Aug	Sat	Manila → Narita	

In addition, C. G. Seligmann documented the presence of stone circles in Taupota used as “the squatting and debating places of the men” (Seligmann 1910: 464). For this reason, we also aimed to assess the current situation of these stone circles and to conduct interviews regarding pottery and kinship organization, in comparison with earlier ethnographic records. The research itinerary is presented in [Tab. 1](#).

1. Taupota Overview

Taupota is located approximately 50 km west of East Cape ([Fig. 1](#)). The village is situated on the northern coast of the peninsula, with the mountain hills of the Owen Stanley Range extending inland behind it. It takes about three hours drive to reach Taupota from Alotau, the provincial capital. At first we drive east along the highway, then turn northwest at a junction near Watunou, and continues westward along the northern coast of the peninsula. Along the way, we pass through the wards of Awaiama and Wagohuhu ([Fig. 2](#)). Among the surrounding wards, Taupota and Awaiama are considered the oldest, where Anglican church had established in both in 1893.

Taupota language can be categorized in Are-Taupota chain, a part of Proto North Mainland/ D’Entrecasteaux group of Proto Papuan Tip (PPT) of Austronesian language family (Ross 1988: 190-191). *Tawala* language spoken at East Cape is also included in the same chain.

2. Settlement and Society

Taupota ward consists of more than 50 villages and is considered one of the oldest districts in the Maramatana LLG. According to the 2011 census, Taupota had 198 households and a total population of 977 (National Statistical Office of Papua New Guinea 2014). It is located in the southwestern part of Milne Bay Province. Most villages are formed at the foot of the hills or on the surrounding plains. According to the oral history collected in 2024, ancestral groups originally settled in the mountain areas and used the lowlands as hunting grounds. However, at some point enemies invaded from the Milne Bay side, then many people moved to the lowlands. As a result, remnants of old settlements and stone arrangements can still be found in the mountain areas. In some areas, old style pottery has been discovered during land clearing for gardening.

The social organization of Taupota is based on the matrilineal clan system, as in East Cape. There are four



Fig. 2 Map of Taupota (S=1/10,000) (The base map is imported from GPS Tracks)

major clans (called as *dam* in *Taupota* language), which further subdivided into groups (called as *guguni*, also based on matrilineal descent). Each clan has animal (e. g. bird) and/ or plant totems. Similar clan names and bird totems to those found in East Cape were also identified in *Taupota*.

3. Pottery in *Taupota* (Fig. 3)

Although there is only one potter in *Taupota*, she no longer makes pottery and pottery production disappeared several decades ago. Nevertheless, people still use and keep traditional potteries, and we found clay pots in several villages. These pots were purchased at local markets, received from relatives, or inherited from ancestors. Among the pots obtained through markets or as gifts, there are examples originated from *Wari* Island (Fig. 3-1), *Amphlett* Islands (Fig. 3-2), and *Wanigela* in Northern Province (Fig. 3-3). Geographically, *Taupota* is situated at the boundary between two distinct pottery traditions.



Fig. 3 Pottery collected at *Taupota*

Regarding pottery inherited from ancestors (referred to by local informants as “Taupota original”), we identified *pidola* (Fig. 3-4~6), which exhibits coiling traces as same as in East Cape; *habaya* (Fig. 3-7, 8), used for ceremonial cooking; and *nau-mahemaheri* (Fig. 3-10, 11), a long-bodied vessel which were not found in East Cape.

Fig. 3-10 is an oval shaped vessel, approximately 30 cm in diameter and 35 cm in height. It has a well rounded bottom and displays clear scraping traces on the interior surface and the base. Diagonal incised lines are engraved around the rim. The dividing wavy lines are applied on the rim and lower body using a comb incising tool. Within this divided panels S-shaped motifs and diagonal hatching patterns are drawn.

Fig. 3-11 is a helmet-shaped vessel, approximately 40 cm in diameter and 35 cm in height. Although it also has a rounded bottom, there is a distinct change in the contour angle along the lower half of the body. This suggests that the vessel may have been shaped on a plate after the base was formed. There are also same scraping traces on the interior surface and the base. The rim is decorated with small protrusions, and the lower body is divided by a horizontal line made with a comb incising tool. Three sets of vertical lines made with a thin stick tool separate the design panels, which contain semicircle motifs, horizontal lines, and vertical serrated patterns in three layers.

Nau-mahemaheri is similar in their use of comb incising tool for design, but its highly refined rounded bottoms suggests that they may have been made using different techniques from those of in East Cape, possibly beating to complete. *Pidola* in Taupota has a small flat base, implying that it was likely formed on a plate, similar to those in the East Cape tradition. Informants told us that both *nau-mahemaheri* and *pidola* are traditional pottery of Taupota. However, the coexistence of vessels made using different techniques within the same area indicates regional diversity in pottery traditions. Further research is needed to determine whether these vessel types were produced contemporaneously.

4. Stone arrangements

4-1. The Ethnographical and Archaeological Background

In *The Melanesians of British New Guinea*, C. G. Seligmann described about stone arrangement as follows (Seligmann 1910: 463).

“~, the majority of the hamlets have in or near them a collection of large stones, or a heaped mass of smaller stones used as the squatting and yarning place of the men.”

He also noted that stone circles, locally called *gahana*, served dual purposes: one types was used for cannibal feasts (cannibal *gahana*), another functioned as venues for male gatherings and discussions (non-cannibal *gahana*) (Seligmann 1910: 464).

Regarding Taupota, a illustration of a non-cannibal *gahana* appears in his volume (Fig. 4-1). At the center of the *gahana*, “a shallow pottery vessel full of water was formerly kept” and used “as a mirror by the men who frequented the *gahana* (Seligmann 1910: 465). According to Seligmann, *gahana* were typically constructed and owned by clans, and only male clan members were permitted to enter.

Following Seligmann’s work, many stone monuments have been recorded throughout the Massim region. Along the north coast of mainland New Guinea, Egloff documented stone groups in four areas: Boianai, Wedau and Wamira, Garuwahi and Taupota (Fig. 4-2) (Egloff 1970). On the northern side of Kula ring (e.g. Trobriand Islands and Woodlark Island), megalithic ruins have also been reported (Austen 1939; Forth 1965; Ollier et al. 1970; Damon 1979; Bickler 1998, 2006; Shaw 2019, 2021). L. Austen identified two groups of megalithic structures on Kiriwina in the Trobriand Islands (Fig. 4-3, 4) and suggested that they were originally “places of privileged burial” (Austen 1939: 43). C. D. Ollier recorded megalithic structures at Wagaru on Vakuta Island (Fig. 4-5) (Ollier et al. 1970). Although local legends associated the megaliths with sub-clans, the discovery of human bones beneath them led to the conclusion that “the megaliths were originally funeral monuments, as were those elsewhere in the Trobriands” (Ollier et al. 1970: 25). S. Bickler excavated megalithic structures in Woodlark Island (Fig. 4-6) (Bickler 1998, 2006) and concluded that the monuments date to around 1200BP-600BP, and the more complex monuments were primary burial sites (Bickler 2006: 47). He further suggested that “the stone monuments may be evidence of an early chieftainship in the Massim” (Bickler 2006: 48). More recently, B. Shaw excavated stone circles on Rossel Island that are associated with oral histories of cannibalism (Fig. 4-7) (Shaw et al. 2021). Radiocarbon dating indicated that



Fig. 4 Stone arrangements in the Massim region

the one of stone circles (Keyvu) was built within the past 290 years (Shaw et al. 2021: 51). Shaw also reported that stone arrangements were used as ground ovens to cook cannibal victims (Fig. 4-8) (Shaw et al. 2021).

4-2. Stone Arrangements in Taupota (Fig. 5-6)

In the local language, assigned stones are called *gahana* (Note 1). These stone arrangements function as meeting places for chief, called *guyau* (Note 2). The ownership of the *gahana* is inherited matrilineally—specifically through male relatives of the maternal line.

During this survey, we identified many *gahana* in the villages. In addition to stone circles with several standing and/ or seating stones (type A) similar to those illustrated in Seligmann's work, we also found simple mass of smaller stones (type B) which are regarded as cannibal *gahana*. Local informants told us that cannibalism was practiced until about seven to eight generations ago.

Below, we describe the *gahana* which we were able to document basic information or conduct interviews. Scanner is used to record the stone arrangements.

Takakam (Fig. 5-1 · 2)

Two stone arrangements were recorded in Takakam village.

Fig. 5-1 depicts an oval-shaped structure measuring approximately 5.4 by 4.4 meters. It is located on a gentle slope descending from south to north. It is composed of gravel stones ranging from 20 to 40 cm in size. On the lower side of the slope, two to three tiers of stone were stacked. On the higher side, five flat stones about 30 cm across were placed within the circle, each accompanied by standing stones about 40 cm tall behind it—likely functioning as seating places.

Fig. 5-2 is located approximately 20 meters west from Fig. 5-1. Flat stones covers ground and a single standing stone protruding about 25 cm above the ground surface. Informants said, this is the cannibal *gahana*, where members of the four clans gathered to divide human flesh. The intended sacrificial victims were said to have come from across Milne Bay.

Hehewa (Fig. 5-3)

There is a stone arrangement within a cemetery in Hehewa village. This depicts an oval-shaped structure, measuring approximately 5.9 by 4.3 meters. The eastern side lacks stones, forming an entrance. There is a raised platform in the circle, beneath which a chief's grave has been constructed. The grave itself is enclosed by a smaller oval-shaped stone arrangement, measuring approximately 2.7 by 1.3 meters, located on the eastern side of the main circle.

A standing stone approximately 1 meter tall is positioned about 5 meters east of the main arrangement as a landmark.

Itu (Fig. 5-4)

A stone arrangement in Itu village is roughly circular shape, with a diameter of approximately 4 meters. Stones are stacked to a width of about 40–50 cm to form a ring. There is a gap in the southwestern side may represent an entrance. No standing or seating stones were identified.

Kaibou (Fig. 6-1 · 2)

There are two adjoining stone arrangements In Kaibou. One, named *Poipoi* (Fig. 6-1), measures approximately 7.3 by 6.2 meters and has a large central stone. Another, named *Romuhaga* (Fig. 6-2), is of comparable size. Both *gahana* have been abandoned and are overgrown due to a lack of maintenance. No standing or seating stones were identified. However, some stones in *Romuhaga* covered the ground, so there is a possibility that *Romuhaga* once functioned as a cannibal *gahana*.

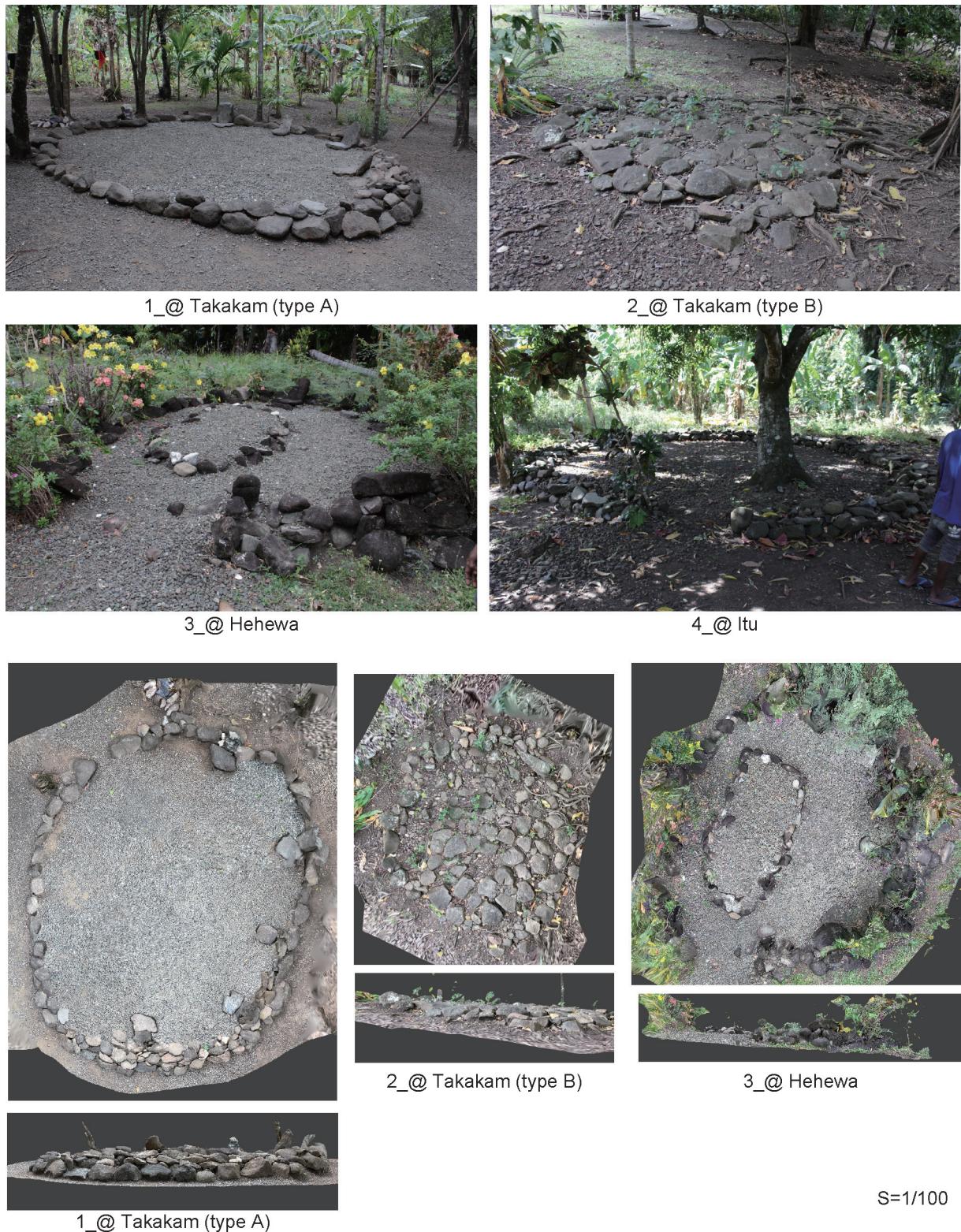


Fig. 5 *gahana* at Taupota (1)

Radava (Fig. 6-3)

A stone arrangement called *Baniayara* was recorded in Radava village. It is, a circular shaped, measuring approximately 6 meters in diameter. It was reconstructed in later years as a memorial structure. According to local oral history, there was a much larger cannibal *gahana* near the coast in old days, but that was destroyed by a large wave about seven to eight generations ago. Informants described a flat stone plate that had been placed at the center of the *gahana*, reportedly used to hold water and reflect the human figure—although it differs in terms of pottery

Fig. 6 *gahana* at Taupota (2)

and stone plate, it's a very similar story written by Seligmann.

Ganigobe (Fig. 6-4)

A stone arrangement called *Hinau Yatuba* was recorded in Ganigobe. It is, an oval shaped, measuring approximately 7.4 by 6.8 meters. It is no longer maintained, with only two flat stones and a few standing stones remaining

along the perimeter. A standing stone approximately 50 cm tall stands 1.5 meters inside the northern center of the circle. In front of it, three flat stones have been arranged, possibly forming ceremonial seating area.

5. Comparison with East Cape

5-1. Pottery

At Taupota, we identified three types of traditional pottery: *pidola*, *habaya* and *nau-mahemaheri*. Among these, *pidola* and *habaya* are also known in East Cape. Especially *pidola* is regarded as a typologically older form (Takahashi ed. 2023). In East Cape, *pidola* is reportedly used in traditional burial practices. In this custom, the deceased is buried in a squatting position, with only the head exposed above ground, and then covered with a pottery. Later, the skeleton is removed and placed in a cave known as the “Skull Cave” for a secondary burial. Informants in Taupota told us that pottery-covered burials were practiced at Taupota as well, although they didn’t mention secondary burials in caves. This difference may relate to the region’s relatively flatter terrain, where natural caves are less common due to limited erosion.

Pidola at Taupota is supposed to have been made with the same technique as in East Cape—shaping the vessel on a plate—because of its small flat base. In contrast, *nau-mahemaheri* has an elegantly rounded bottom. It is supposed to have been made using a different technique. This is identified locally as ‘Taupota original’ show intensive scraping traces on the surfaces. In East Cape, such scraping traces are especially found on older vessels. The pottery documented in this survey shares characteristics with early-period vessels in East Cape, suggesting that similar pottery-making techniques were used across the East Cape–Taupota area as far back as seven to eight generations ago. Considering the history of migration (discussed below), it is possible that *nau-mahemaheri* was not transmitted to East Cape during movements. Further investigation of its distribution in nearby wards may provide new insights into the social dynamics that shaped pottery production and distribution.

5-2. The History of Migration

Our previous research has documented oral histories describing migration from Taupota to East Cape (Takahashi ed. 2023). One such account from Betutu village in Topa ward states that its founder, Borowasawasa, left Taupota with her four brothers and eventually settled in Betutu (Takahashi ed. 2023: 70–71). Another legend recounts that Betutuli, a renowned warrior originating from Taupota, invaded the Topa area (Takahashi ed. 2023: 162).

In this survey, we also heard testimony confirming that a group from Taupota migrated to Betutu. This group reportedly belonged to the Yawalata *guguni* of the Garuboi *dam*. In contrast, Betutu in East Cape today belongs to Hulana clan, indicating that clan affiliation has changed. Such transformations may be attributed to adoption, which is known to influence clan affiliation in East Cape. We need to conduct further research including follow-up interviews in Betutu village.

Betutu is also noteworthy for the presence of a stone arrangement associated with the period when cannibalism was practiced. In East Cape, stone arrangements are generally rare; instead, standing stones (*gaima*)—often originating from Normanby Island—are typically erected in villages as markers of migration. In this context, the existence of a stone arrangement in Betutu may reflect a material link to Taupota, although it currently functions as a cemetery. This suggests that the original meaning of the stone feature may have changed over time (Takahashi ed. 2023: 159–160).

It is said that there are also stone arrangements in Garuwahi, located east to Taupota, and in Awaiama to the southeast. In future, we should conduct research including systematic documentation of stone arrangements in the wards between Taupota and East Cape to better understand regional patterns of movement and cultural continuity.

Overview

Although this was a preliminary survey at Taupota, it offered a valuable opportunity to reassess the findings of our earlier studies. The pottery analysis suggests that multiple pottery traditions with distinct production techniques may have coexisted within a single linguistic region. Such ethnoarchaeological observation is particularly relevant

for understanding changes in prehistoric pottery and interation patterns.

From the ethnohistorical perspective, we could reconfirm oral histories of migration recorded in previous research. At the same time, the study revealed differences in the form and function of stone arrangements—material indicators of migration—between Taupota and East Cape. Stone structures are widely distributed across the Maasim region including the D'Entrecasteaux group. Particularly in the north coast of mainland New Guinea, stone structures and petroglyphs have been recorded four locations: the villages of Boianai, Meitepana and Radava (collectively known as Boianai); Wedau and Wmira; Garuwahi; and Taupota (Egloff 1970: 147). Although their dating remained uncertain for many years, recent excavations on Rossel Island have provided new insights, with discussions focusing on their possible association with cannibalistic practices (Shaw & Coxe 2021). Further research of stone structures in Taupota is essential for understanding sociopolitical developments in the Massim prehistory.

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Notes

Note 1: The words *gahana* (stone arrangement) and *gaima* (stone in general) are used in both East Cape and Taupota. However, while *gaima* specifically refers to standing stones in East Cape, we couldn't confirm that meaning in Taupota.

Note 2: Although *gahana* are said to be collectively owned by all clans, the clan leader in Taupota is referred to as *dam badana*. This suggests that “chief” is the head of the matrilineal subgroup, but further clarification is required.

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