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– RESEARCH REPORT –

Archaeological Reconnaissance and the First Radiocarbon Dates from Simbo Island, Western Province, Solomon Islands

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ABSTRACT

Recent archaeological fieldwork on the island of Simbo in the Western Province of the Solomon Islands has identified several new prehistoric sites. Here, we present the results of our research along with the first radiocarbon dates from Simbo. These dates and associated ceramic sherds provide a chronological and stylistic link to other islands with post-Lapita pottery and is an important step for understanding the human occupational history of the island, as well as filling a data gap in the Western Solomons.

Keywords: Simbo, Solomon Islands, pottery; post-Lapita

INTRODUCTION.

The Solomon Islands – comprised of six major and more than 900 smaller islands positioned east of Papua New Guinea in a northeast trending archipelago – has generally been overlooked and understudied compared to other island groups in Near Oceania (Kirch 1997; Sheppard & Walter 2006), due in large part to a relative lack of modern development, political instability, and logistical issues. Despite this, several large projects were undertaken in the latter half of the 20th century, which has filled in some of the temporal and geographic gaps in the archaeological record. Much of the Western Solomons was surveyed as part of the National Site Survey sponsored by the Solomon Islands National Museum (SINM; Miller 1980, 1978). This project, combined with more recent archaeological fieldwork, has helped to elucidate the history of human occupation of the archipelago (Carter *et al*. 2012; Denham *et al*. 2012; Sheppard & Walter 2006), although numerous islands still remain un- or understudied.

The island of Simbo in the New Georgia Group of the Western Province has had little archaeological research. Despite being a major center of historical trade and headhunting activities and its prominence in oral traditions, the prehistory of the island is largely unknown (K. B. Jackson 1978; Lauer *et al*. 2013; Miller 1978, 1980). The National Site Survey included Simbo in its study, with Daniel Miller (1978, 1980) focusing on informant interviews and the classification of archaeological sites based on oral histories. Miller's (1978, 1980) research, however, did not include detailed analysis of subsurface features, artifacts, or ecofacts, nor chronometric dating of any recorded localities.

In this paper, we discuss results of a targeted survey for early human occupation on Simbo where we identified four new archaeological sites (three prehistoric and one historical). We also collected samples for dating and present the first radiocarbon dates for Simbo along with the analysis of surface ceramic artifacts collected from several site localities.

ENVIRONMENTAL SETTING AND CULTURAL BACKGROUND

Simbo is the westernmost island of the New Georgia group and lies 35 km across open-ocean from Gizo, the administrative capital of the Western Province of the Solomon Islands (Figure 1; Lauer *et al*. 2013; Miller 1978). Simbo, known locally as *Mandegugusu*, comprises two islands: the main island and the smaller islet of Nusa Simbo. Simbo is approximately 6.4 kilometers long, less than 1.6 km across at its widest point, and totals roughly 12 km^2 (Lauer *et al*. 2013). The southern half of the island contains two volcanic cones, Matindingi and Patukio. The northern half of the island is dominated by rolling hills and ridges formed by volcanic activity. The terrestrial environment of Simbo is an anthropogenic landscape, featuring semi-

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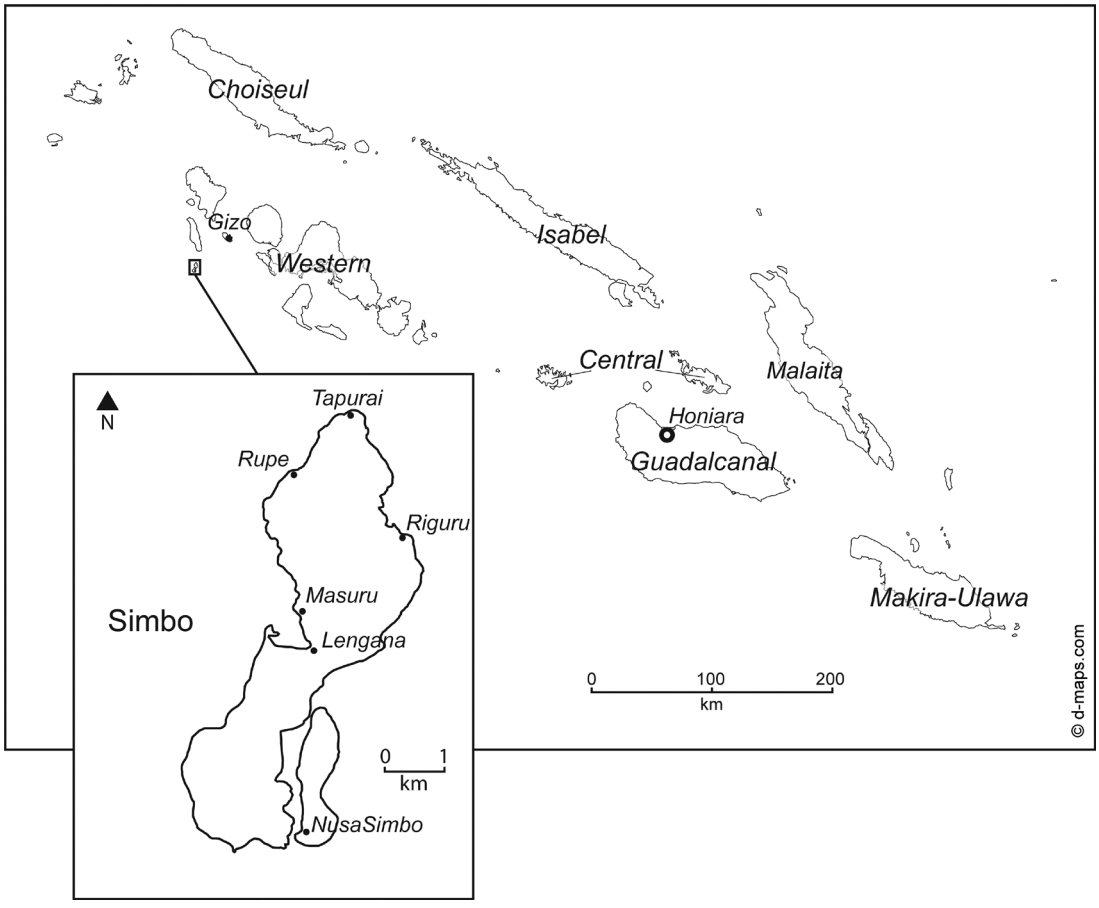

Figure 1. Simbo Island relative to the rest of the Solomon Islands and the Pacific. (Source: d-maps.com 2017)

intensive agriculture, fallowed plots, and agroforest. The island has been heavily influenced by human activity such as the introduction of domesticated plants and animals and millennia of intensive horticultural activities. Simbo's coastline includes coral sand bays, active reefs, and intertidal flats that support highly diverse and productive marine ecosystems. Today, Simbo has five main villages, a number of smaller hamlets, and a population of around 1,800 whose economy relies on fishing and horticulture, supplemented by participation in the Gizo market.

The earliest dates for the Solomon Islands chain come from Kilu Cave on Buka in Bougainville, an autonomous region in Papua New Guinea, and range from 28,470 ± 208 to 20,140 ± 300 calibrated years before present (cal BP). However, there is no evidence for Pleistocene occupation east of Buka, and it is possible that it marks the eastern extent of habitation until the middle Holocene (Sheppard & Walter 2006; Spriggs 1997). The next earliest date from the Solomon Islands comes from Guadalcanal at *ca*. 6400 cal BP, and there is no evidence of settlement on the other Solomon Islands until the Lapita period (*ca*. 3200 to 1000 cal BP; see Roe 1993; Sheppard and Walter 2006; Walter and Sheppard 2006).

Lapita first appears in Near Oceania as early as 3250 cal BP based on dates from the Bismarck Archipelago, and later spread to Remote Oceania between then and 3000 cal BP (Denham *et al*. 2012; see also Kirch 1997; Spriggs 1997). Due to the lack of early Lapita sites in the western and northern Solomon Islands, coupled with genetic and linguistic data, Sheppard and Walter (2006) argued that Lapita migration sidestepped the Western Solomon Islands to settle in the Reef/Santa Cruz Group in the southeast before backwashing into the northern and Western Solomon Islands during the late Lapita period (*ca*. 2600 to 2000 cal BP).

This scenario is supported by the identification of late Lapita ceramics at many sites throughout the New Georgia group and the lack of classic red slipped and dentate stamped Lapita pottery found on many islands to the east (Carter *et al*. 2012; Miller 1978; Sheppard & Walter 2006; Summerhayes & Scales 2005). A later, post-Lapita ceramic tradition characterized by incised and appliqued designs has been identified at various sites throughout New Georgia and the northern and Western Solomon Islands (Sheppard & Walter 2006). Miller (1978) also reported a number of sites in the Western Solomon Islands containing thin plainware pottery that may represent a further simplified

continuation of the post-Lapita ceramic sequence up until recent times (Sheppard & Walter 2006).

The limited archaeological work previously conducted on Simbo and the rest of the Western Solomon Islands, along with oral histories from the island's inhabitants, suggest that most pre-contact villages were located in the interior, but it is unclear how long the islanders practiced this settlement pattern. These defensible locales were positioned in valleys, at the top of ridges, or on bluffs to provide protection from enemy headhunting parties and episodes of warfare (Miller 1978, 1980; Lauer *et al.* 2013).

Because there has been little systematic survey for early sites and no radiometric dating, it is difficult to characterize the colonization history of Simbo. The National Site Survey was successful in identifying roughly 500 archaeological sites throughout the Solomon Islands (Miller 1978), though most were never investigated in any detail. Simbo was selected as a survey locale as part of the project because of Hocart's (1922) detailed ethnographic work on the island, which included the identification of local places and site types. Using the direct historical approach, Miller (1978) applied Hocart's descriptions and oral histories to identify the location, function, and history of the archaeological sites he recorded. Most of Miller's (1978) sites probably date just prior to European contact and include shrines and hamlets containing canoe houses, dance circles, hearths, and house foundations. Miller was focused on the identification of the largest, most dramatic sites on the island, many of which contain stones structures and features, but he also identified several sites containing pottery. The only decorated pottery identified during Miller's (1978) survey included incised and appliqued designs. While information can be gleaned about the recent history of the island from oral history and Miller's (1978, 1980) work, long-term patterns of settlement remain unclear.

METHODS

Our field research was conducted in June 2015 and consisted of targeted archaeological surveys of cave, rockshelters, marine terraces, and pottery-bearing localities. Our approach was similar to Miller's (1978, 1980) survey as we also worked with local informants and relied on interviews with chiefs and other land owners to identify potential archaeological sites. When a new archaeological deposit was identified, it was recorded using standardized site forms. Site localities were mapped with GPS and notable features were recorded, measured, and photographed. When available, shell and pottery fragments were collected from cultural deposits for laboratory analysis with permission from landowners and Solomon Islands National Museum collaborators. Artifacts, with the exception of ceramic sherds, were not collected, but photographed, measured, and left in place. Because we did not conduct excavation, we relied on shell embedded in the upper 5 cm of the the soil matrix as a dating tool. The association of surficial samples and archaeological sites can be suspect due to various natural processes; however, in each case these samples were embedded in the soil or located within a shrine, indicating a clear association between the shell and the archaeological sites.

The age of each shell sample was established via radiocarbon (^{14}C) dating of single marine shells, with dates calibrated to calendar years using CALIB 7.1 and the Marine13 calibration curve (Reimer *et al.* 2013; Stuiver, P. J. Reimer, and R. W. Reimer 2016) with an applied ΔR value of 82 ± 40 (Petchey *et al.* 2004). There is much regional variation in the marine reservoir effect for the southwest Pacific Ocean and it has not been calculated for Simbo, thus there is some uncertainty in these corrections. Sampling of each shell spanned multiple growth bands to avoid seasonal or annual variations in the marine reservoir effect (Culleton *et al.* 2007). Pottery collected from each site was described, measured, and analyzed to identify tempering or other notable characteristics. Shellfish were identified to the lowest possible taxon.

RESULTS

Our archaeological fieldwork identified three new prehistoric sites and one new historical site (Figure 2). The historical site (SI2015-01) consists of the once thriving European trading station. Two prehistoric sites (SI2015-02 and SI2015-03) – one cave and one rockshelter – produced shell midden deposits and artifactual evidence of human occupation and the third site consisted of an ancestral shrine (SI2015-04; Figure 3).

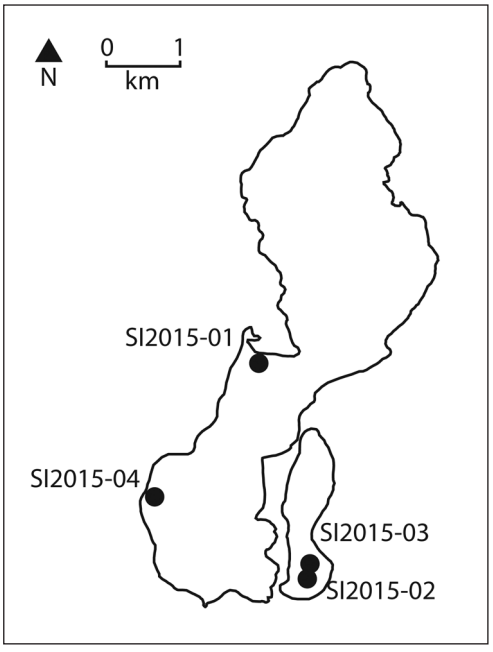

Figure 2. Approximate locations of the four new archaeological sites identified during our reconnaissance work. (Source: d-maps.com 2017)

Figure 3. View of the shrine at SI-2015-04, facing northwest. (Photograph by H. Haas, June 2015).

SI2015-01 consists of the remains of the trading station and basecamp of European traders that occupied the island intermittently beginning in AD 1844 with the establishment of the first European station by Andrew Cheyne up until the early 1900s (Jackson 1978). The site includes the foundation of a storage building, a retaining wall, and an anchor chain. A set of stairs with concrete risers lead to what was the residential area, which includes a water catchment system, three terraces, and scattered artifacts such as glass bottles and clay pipe fragments.

SI2015-02 and SI2015-03 are both located on a hill directly adjacent to the village of Nusa Simbo. SI2015-02 consists of a low density shell midden in a rockshelter. The midden contained shell fragments, including at least one fragment of the reportedly extirpated (though perhaps just extremely rare), *Pasiapo* shell (possibly Trochidae), one fragment of shell money, and one nondescript pottery sherd. Shellfish taxa identified from the site include *Trochus niloticus*, Neritidae, Patellidae, *Venus* sp., and Cypraeidae. Based on the results of ^{14}C dating of shell collected from the site surface, the top of the midden was deposited *ca.* 1560–1820 cal BP (Table 1). A small hand probe was excavated to a depth of about one meter, but produced no discernable subsurface deposits.

SI2015-03 is a large cave site with a main chamber, measuring over 2 m high, 4.6 m long, and 2.3 m wide, and two smaller anterior rooms. The main chamber contained a single pottery sherd, one shell money fragment, and a European ceramic piece. The northern anterior room did not appear to contain any archaeological materials and the

Table 1. *Radiocarbon dates from prehistoric sites recorded on Simbo Island.*

Provenience	Material	Lab No.	δ13C‰	Uncorrected ^{14}C Age	Age Range (cal BP, 2σ)	Age Range (AD, 2σ)
SI2015-02, Surface	marine shell- *Trochus niloticus*	SI2015-02	10.2	2125 ± 27	1560–1820	200–450
SI2015-03, Southern anterior room	marine shell- Neritidae	SI2015-03	1.5	1592 ± 28	1000–1240	770–1010
SI2015-04, Center of shrine	marine shell- tridacnid	SI2015-Ove	7.4	1056 ± 26	560–700	1310–1450

Note: Dates were calibrated with Calib 7.0.1 using the Marine13 calibration curve and a ΔR of 82 ± 40 (Petchey *et al.* 2004; Reimer *et al.* 2013; Stuiver, P. J. Reimer, and R. W. Reimer 2016)

southern anterior room contained a small shell midden and canarium nut processing station. Shellfish taxa collected from the southern anterior room shell midden included Neritidae and tridacnid. Pottery was collected from the surface above the rear entrance of the cave. A total of five pottery fragments were collected, two of which were rim sherds. The rim sherds exhibit a pie-crust impressed decorated lip (Figure 4). Based on the results of ^{14}C dating of a shell fragment collected from the anterior room midden, the cave was occupied by at least *ca.* 1000–1240 cal BP.

SI2015-04 is located adjacent to a shrine atop the active volcano Ove. The shrine is located above the crater, with a commanding view of Simbo's western coastline. Ove's slopes contain habitation sites (Miller's SN-2-10 through -20) whose occupants were likely the proprietors of this shrine. The shrine contains shellfish fragments, a possible power stone, pottery fragments, and human cranial fragments. Shellfish within the shrine consisted of tridacnid only. A total of 43 pottery sherds were collected from the surface directly adjacent to the shrine. One pottery fragment features a fine-line incision created prior to firing and three exhibit signs of applique. Radiocarbon dates from shellfish located within the center of the shrine and associated with its use indicate that it was in use *ca.* 560–700 cal BP. The proximity of the shrine to an active volcano and the possibility that the shell was collected from the surrounding hydrothermal area may have affected the accuracy of these dates.

Pottery fragments from each of the prehistoric sites we identified were of similar make, style, and quality. The pottery appears to have a well-sorted temper of ground shell or coral. The pottery is burnished and was likely open-fired in an oxygen-deprived environment between 450–640°C. All of the pottery appears to be of very high quality suggesting that it was produced by a craftsperson.

DISCUSSION AND CONCLUSIONS

Our targeted archaeological survey identified four new sites, which provide insights into the settlement history of Simbo and the Solomon Islands. While Miller (1978, 1980) identified 59 sites, his surveys focused on relatively recent occupations, shrine sites, headhunting monuments, and recently occupied villages using the direct historical approach and informant interviews. This is essential research for understanding the history of the island, but less useful for decoding the initial human settlement of Simbo and the Western Solomon Islands. Our research was focused on building an initial – albeit coarse – chronology of human occupation, including obtaining the first radiocarbon dates from the island. The oldest radiocarbon date from Simbo (1560–1820 cal BP) along with stylistic similarities to post-Lapita pottery found elsewhere in the Western Solomon Islands (Carter, Roe, and Keopo 2012; Miller 1978, 1980; Spriggs 1997; Wahome 1997), indicate occupation of the island to at least as early as the post-Lapita period. The identification of post-Lapita sites on Simbo is in keeping with the notion that the Western Solomons were not settled until the last stages of the Lapita period. As proposed by Sheppard and Walter (2006), early Lapita peoples may have bypassed the main Solomon Islands to settle the Reef/Santa Cruz Group in Remote Oceania before returning back into the Western Solomon Islands in the late Lapita Period. Reasons for this peculiar settlement history are not well understood, but may be the result of an eruption of the Witori Volcano in West New Britain

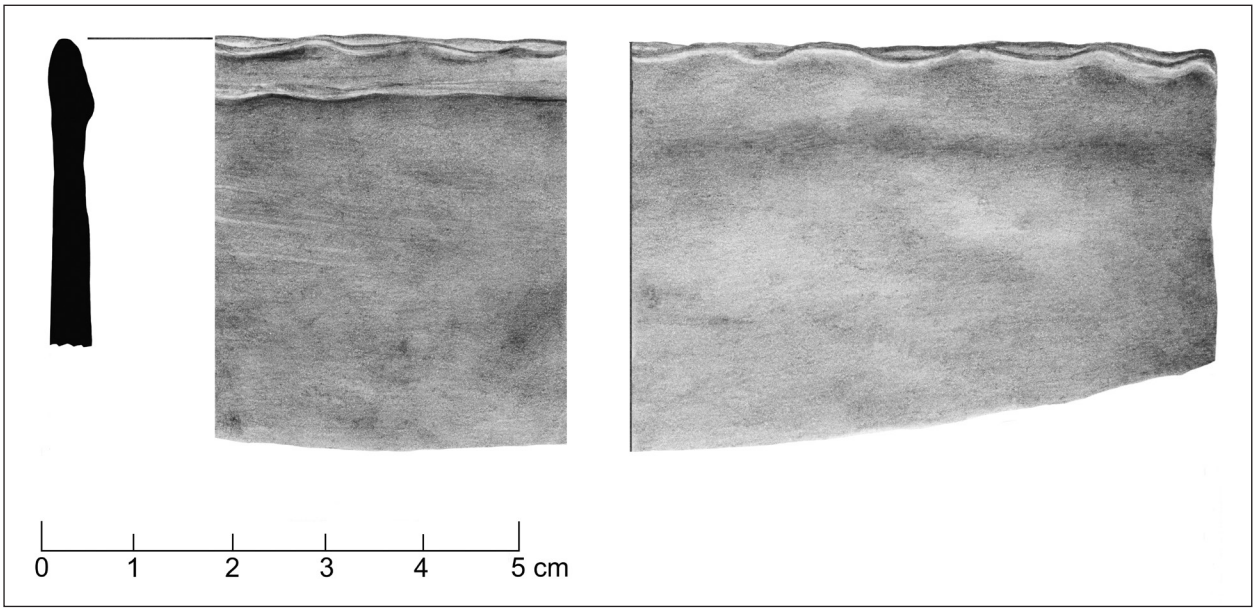

Figure 4. Illustration of pottery found at SI2015-02. (Illustrations by J. Tascheck).

dating to just before early Lapita Expansion into Remote Oceania that displaced and/or influenced the dispersal of populations (Petrie & Torrence 2008). A period of ENSO activity creating favorable sailing conditions for traveling eastward (Irwin 1994, 2008) may also partly explain this phenomenon. As such, systematic and targeted surveys, excavations, and radiocarbon dating of caves, rockshelters, and marine terraces will all be critical for continued testing of this model with the potential for pushing the initial occupation of Simbo and other islands in the Solomons back even further in time.

Similar to the situation reported by Carter *et al.* (2012) related to pottery finds on Santa Ysabel, the language spoken by the people of Simbo contains no word for pottery or any that references pottery manufacture. In fact, when asked if they could recall seeing pottery anywhere on the island, our informants were unable to answer until a fragment was identified. This lack of oral history and language referencing pottery manufacture on Simbo suggests that is has not been manufactured for centuries, if ever on the island, a finding that corroborates reports from most areas in the Solomon Islands where pottery manufacture is absent (Roe 1993). Pottery manufacture, however, is known to have occurred, at least historically, on Bougainville, Choiseul, and the Shortland Islands (Carter *et al.* 2012), and, as Simbo oral history suggests, it is likely that the inhabitants of Simbo were acquiring their pottery from one of these islands through inter-island trade.

Preliminary investigations on Simbo have provided a foundation for conducting more detailed and systematic research at several different site types that span the last 1500 years. Future efforts will be dedicated to improving the island's chronological framework through excavation of stratified deposits to determine whether earlier sites are present, analyzing zooarchaeological and archaeobotanical assemblages to examine subsistence strategies, and sourcing pottery to help trace trade and interaction in the region. This research, in conjunction with local communities, will be an important step in improving our understanding of a major swathe of Near Oceania that historically has been understudied, and testing models on why some anomalous patterns of population movement (i.e., relatively late settlement of the Solomons compared to other parts of Near Oceania) took place.

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