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Pitcairn before the Mutineers: Revisiting the Isolation of a Polynesian Island

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Introduction¹

The myth of Pitcairn, building on the destiny of the *Bounty* mutineers, focuses on the recent history of this island as the epitome of marginality and isolation. Human occupation of the island, however, occurred long before the *Bounty* settlement, and Pitcairn provides a fascinating example of Polynesian sustainability that is little known to the general public. Located at the eastern fringe of Central Eastern Polynesia, the Pitcairn group includes the volcanic island of Pitcairn (4.5 square kilometres), the elevated limestone island of Henderson (37.2 square kilometres) and the two small atolls of Oeno and Ducie (Figure 2.1). Situated approximately 400 kilometres east of the Gambier Islands and 1,700 kilometres west of Rapa Nui/Easter Island, this island group is one of the world's most geographically isolated.

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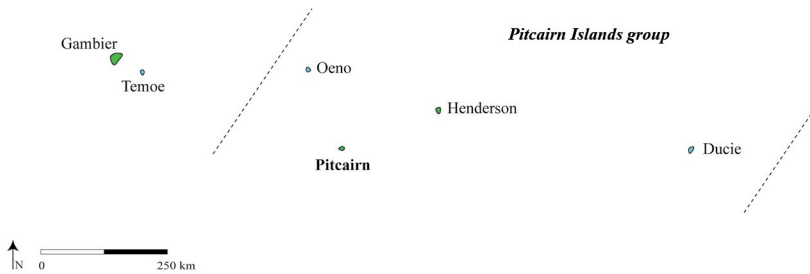


Figure 2.1. Location of Pitcairn Islands in relation to the Gambier Islands.

Source: Guillaume Molle & Aymeric Hermann.

While Pitcairn was uninhabited when the *Bounty* mutineers landed on 23 January 1790, subsequent exploration of the island by the mutineers, and later by scholars, provides strong evidence of previous Polynesian occupation. For this reason, Pitcairn is often referred to as one of the ‘Mysterious Islands’ of the Pacific; this expression, conceived by Peter Bellwood,² defines a group of approximately 25 atolls and high volcanic islands that were devoid of human habitation at the time of European discovery. The so-called ‘Mysterious Islands’ also include Nihoa and Necker in the Hawaiian archipelago, several islands amongst the Line and Phoenix groups, as well as Norfolk, Kermadec and Raoul in south-east Polynesia.³ Different environmental and cultural hypotheses have been proposed to explain why these islands were abandoned before Westerners arrived.

This chapter reviews and synthesises various kinds of archaeological information that document the ancient occupation of Pitcairn and its position within Central Eastern Polynesia (see Teriierooiterai, Chapter 1). In pre-European times, before the *Bounty* mutineers chose the island as a refuge on which to hide from the British Navy, the Pitcairn community was involved in a complex set of inter-island relations. The Pitcairn case, therefore, illustrates two ways in which to perceive insularity, which are

2 Peter Bellwood, *The Polynesians: Prehistory of an Island People*, rev edn, London, Thames & Hudson, 1987, pp 109–10.

3 See Geoffrey Irwin, *The Prehistoric Exploration and Colonization of the Pacific* (Cambridge, Cambridge University Press, 1992); Patrick V Kirch, ‘Polynesia’s Mystery Islands’ (*Archaeology*, vol 3, no 41, 1988, pp 26–31); Patrick V Kirch, *On the Road of the Winds. An Archaeological History of the Pacific Islands before European Contact* (Berkeley & Los Angeles, University of California Press, 2000); Paul Wallin & Helene Martinsson-Wallin, ‘When Migration Failed. On Christmas Island and Other “Mystery Islands” in the Pacific’, in Paul Wallin (ed), *Migrations and Exchange in a Historical Perspective* (Kon-Tiki Museum, No Barriers Seminar Papers, no 3, 2000, pp 10–13); Atholl Anderson, ‘No Meat on that Beautiful Shore: The Prehistoric Abandonment of Subtropical Polynesian Islands’ (*International Journal of Osteoarchaeology*, vol 11, 2001, pp 14–23).

discussed from a long-term historical perspective. By doing so, we are attempting to breach the common Western narrative on Pitcairn Island. While building on Greg Denning's approach,⁴ this case further advocates that the agency of ancient Polynesians be reconsidered at the core of this historical trajectory.

Polynesians on Pitcairn: A long-term archaeological perspective

Traditional knowledge of the island

Few oral traditions are available for Pitcairn. While people now use the name 'Petania' – an abbreviation of 'Peretania', the Polynesian transliteration of 'Britannia' – the island was known by other names before the arrival of Europeans. Peter Buck⁵ recalls the name of Heragi in the Mangarevan version of the legend of Hina and Tinirau. Teuira Henry⁶ uses the name Hiti-au-rereva ('the edge of passing clouds') to refer to Pitcairn, but its use is restricted to this single source.

Ethnographic research conducted by Père Jacques-Désiré Laval in the Gambier Islands provides details of Mangarevan oral traditions relating to Pitcairn. Prior to the arrival of Europeans, inhabitants of the Gambier Islands found themselves in a near-constant state of warfare, with defeated chiefs often forced into exile. Taratahi, one of these chiefs, was sent to an island called Mata-ki-te-ragi (possibly 'beginnings of the skies'), which could be Pitcairn.⁷ While it is not clear whether Taratahi fled with his men or if the land had already been settled by another group, it is reported that the island's Meriri people eventually rose up against him, leading to the destruction of the breadfruit trees. One of Taratahi's grandsons, Te Agiagi, who still lived on Mangareva, had a vision of this disaster and decided to travel to Mata-ki-te-ragi with his father and two of his brothers. Heading south, they encountered three small, uninhabited atolls before reaching their destination, a high volcanic island on which it was extremely difficult

4 Greg Denning, *Islands and Beaches: Discourse on a Silent Land, Marquesas 1774–1880*, Melbourne University Press, 1980.

5 Peter H Buck (Te Rangī Hiroa), *Vikings of the Pacific*, New York, FA Stokes Co, 1938, p 224.

6 Teuira Henry, *Tabiti aux Temps Anciens*, Paris, Musée de l'Homme, Publication de la Société des Océanistes, no 1, 2000, p 75.

7 Honoré Laval, *Mangareva, l'Histoire ancienne d'un peuple polynésien*, Pape'ete, Haere Pō, 2013 (1938), p 10.

to make a landing. Te Agiagi went ashore alone and found Taratahi dead in a creek. He replanted breadfruit and banana trees all over the island, which he then divided into two parts, one for each of his brothers. Rua-kai-tagata went to Puniga and Rua-toga went to Marokura. Several years later, the resources of the island attracted Ragahenua, another chief living on Mangareva. Ragahenua sailed with 500 warriors on his canoes to Kai-ragi (an abbreviation of Mata-ki-te-ragi) and built a fortified place on the highest peak. After defeating Puniga and Marokura, Ragahenua took possession of the island. Four fugitives fled back to Mangareva during the conflict and reached the archipelago after a short trip for which they took no provisions. One of them went to the chief of the Taku district in Mangareva and told him about the war on Mata-ki-te-rangi. This event is said to have taken place prior to the late 14th century, and there appears to be no further mention of the island in Mangarevan oral traditions.

There has been continuous debate about whether Mata-ki-te-rangi is Rapa Nui or Pitcairn. Laval raised this question at a time when Mangarevans argued that Mata-ki-te-rangi was Rapa Nui. When the traditions were transcribed for Laval by the Mangarevans themselves, however, the text specified '*Pe a kaiga ko Petania noti reka*', which can be translated as 'this land looked like Pitcairn'.⁸ Other scholars agree that these traditions do refer to Pitcairn on the basis of the following evidence:⁹ first, Pitcairn is the closest high island to the Gambier Islands. It can be reached faster from Mangareva, which is also consistent with the narrative of the last fugitives who did not carry any provisions on their short canoe trip. Moreover, it is known that landing on Pitcairn is extremely difficult, while Rapa Nui possesses some large beach areas. Finally, breadfruit trees are prevented from growing on Rapa Nui by severe climatic conditions. These aspects of the oral traditions provide compelling evidence that the island of Mata-ki-te-rangi was indeed Pitcairn, a place that Mangarevans knew of and to which they travelled. This story does not contradict the well-known traditional account of Rapa Nui being settled by King Hotu-Matua from Mangareva.¹⁰ Archaeological work in the region currently supports the idea that all of these easternmost Polynesian islands were discovered and settled during a single pulse of colonisation that occurred around a thousand years ago.

8 Laval, 2013, no 18.

9 Buck, 1938; Henri Lavachery, 'Contribution à l'étude de l'archéologie de l'île de Pitcairn', *Bulletin de la Société des Américanistes de Belgique*, vol 19, 1936, pp 3–42.

10 Alfred Métraux, 'Ethnology of Easter Island', *Bernice P Bishop Museum Bulletin*, no 160, 1940, p 33.

The settlement of Pitcairn

Most of the archaeological work on Pitcairn has consisted of survey and artefact collection, and has been focused on the more recent past. In the absence of archaeological excavation, access to information about the timing and nature of the early settlement of Pitcairn is not yet available.¹¹ Archaeological data from the Gambier Islands, Henderson Island and Rapa Nui, however, may help in generating an estimate for the date of settlement of Pitcairn.

Lying at the south-eastern margin of French Polynesia, the Gambier Islands occupy a key position at the confluence of the Tuamotu and Austral chains that is the most likely point of departure to Rapa Nui.¹² While a lack of data¹³ caused the Gambier Islands to be neglected in early settlement models, investigations conducted since the early 2000s have provided insight into the chronology of human occupation there. Several sites have now been excavated and dated, such as Onemea on Taravai, Nenega-iti on Agakaitai,¹⁴ and a few locations on Kamaka. Results show an intensive occupation of these localities from around AD 1200 until the arrival of Westerners in the late 18th century. The initial Polynesian settlement is demonstrated by a series of significant anthropogenic impacts on the island environment, including the hunting of seabird

11 Yosihiko Sinoto has identified only two radiocarbon dates for Pitcairn ('An Analysis of Polynesian Migrations based on Archaeological Assessments', *Journal de la Société des Océanistes*, vol 76, 1983, p 61). The dated samples were recovered by Sinoto from an adze workshop, however, which was probably in use by the 14th century. While this means that a group definitely occupied the island at this time, the period of initial colonisation has not yet been confirmed.

12 Roger C Green, 'Linguistic Subgrouping within Polynesia: The Implications for Prehistoric Settlement', *Journal of the Polynesian Society*, vol 75, 1966, pp 6–38; Roger C Green, 'Rapanui Origins Prior to European Contact: The View from Eastern Polynesia', in Patricia Vargas Casanova (ed), *Easter Island and East Polynesian Prehistory*, Santiago, Universidad de Chile, 1998, pp 87–110; Patrick V Kirch & Éric Conte, 'Mangareva and Eastern Polynesian Prehistory', in Éric Conte & Patrick V Kirch (eds), *Archaeological Investigations in the Mangareva Islands (Gambier Archipelago)*, French Polynesia, Archaeological Research Facility, no 62, Berkeley, University of California, 2004, pp 1–15.

13 Yosihiko Sinoto, 'A Tentative Prehistoric Cultural Sequence in the Northern Marquesas Islands, French Polynesia', *Journal of the Polynesian Society*, vol 75, no 3, 1966, pp 286–303; Yosihiko Sinoto, 'An Archaeologically Based Assessment of the Marquesas as a Dispersal Center in East Polynesia', in Roger C Green & Marion Kelly (eds), *Studies in Oceanic Culture History*, Pacific Anthropological Records, vol 11, 1970, pp 105–32; Patrick V Kirch, 'Rethinking East Polynesian Prehistory', *Journal of Polynesian Society*, vol 95, no 1, 1986, pp 9–40.

14 Conte & Kirch, 2004; Patrick V Kirch, Éric Conte, Warren Sharp & Cordelia Nickelsen, 'The Onemea Site (Taravai Island, Mangareva) and the Human Colonization of Southeastern Polynesia', *Archaeology in Oceania*, 45, 2010, pp 66–79; Patrick Kirch, Guillaume Molle, Cordelia Nickelsen, Peter Mills, Emilie Dotte-Sarout, Jillian Swift, Allison Wolfe & Mark Horrocks, 'Human Ecodynamics in the Mangareva Islands: A Stratified Sequence from Nenega-iti Rock Shelter (Site AGA-3, Agakaitai Island)', *Archaeology in Oceania*, vol 50, no 1, 2015, pp 23–42.

and the introduction of *Allopeas* snails and Pacific rats (*Rattus exulans*). Two early radiocarbon dates indicate that this human occupation may have occurred around AD 950.¹⁵

The pre-European contact history of marginal Henderson Island has also been well documented, first in a preliminary study by Yosihiko Sinoto,¹⁶ then through extensive work conducted by Marshall Weisler.¹⁷ The island's constrained environment and its depleted terrestrial and marine resources exemplify human adaptation pushed to its limit. The centre of the uplifted limestone island is formed by karstic depressions and is not suitable for human habitation. As a consequence, many north-eastern coastal caves and rock shelters were occupied for domestic purposes, as shown by the presence of artefacts, firepits and bone remains. Along with these habitation sites, gardening areas were established nearby in rare pockets of arable soil.¹⁸ Burials were also discovered in close proximity to habitation sites. Surveys and excavations demonstrate a long-term human occupation of the island rather than short-term visits. In total, 31 radiocarbon dates are available to reconstruct the cultural sequence for Henderson.¹⁹ Weisler first argued that the colonisation of the island could have taken place as early as the 8th century AD, taking into account the maximum range of the oldest sample.²⁰ Although not impossible, this assertion is at variance with the results obtained for Mangareva that suggest a later occupation. On the other hand, many coastal rock shelters certainly provide evidence of occupation by the 12th century, leading Weisler to propose, more convincingly, that Henderson might have been settled around AD 1050.²¹ This assumption is in keeping with the most recent results for the Gambier Islands.²²

15 Kirch et al, 2010, p 72.

16 Sinoto, 1983, p 59.

17 Marshall Weisler, 'Henderson Island Prehistory. Colonization and Extinction on a Remote Polynesian Island', in TG Benton & T Spence (eds), *The Pitcairn Islands: Biogeography, Ecology and Prehistory, Biological Journal of the Linnean Society*, vol 56, nos 1–2, 1995, pp 377–404.

18 Mark Horrocks & Marshall I Weisler, 'Analysis of Plant Microfossils in Archaeological Deposits from Two Remote Archipelagos: The Marshall Islands, Eastern Micronesia, and the Pitcairn Group, Southeast Polynesia', *Pacific Science*, vol 60, no 2, 2006, pp 261–80.

19 Weisler, 1995, tbl 2, p 389.

20 Marshall Weisler, 'The Settlement of Marginal Polynesia: New Evidence from Henderson Island', *Journal of Field Archaeology*, vol 21, 1994, pp 83–102.

21 Roger C Green & Marshall Weisler, 'The Mangarevan Sequence and Dating of the Geographic Expansion into Southeast Polynesia', *Asian Perspectives*, vols 41–42, 2002, pp 213–41.

22 Kirch et al, 2010; Kirch et al, 2015.

Rapa Nui, the easternmost Polynesian island, has a long history of archaeological research and has been integrated into various models of colonisation. More recent studies propose initial settlement from around AD 1200.²³ As mentioned earlier, Polynesian migration traditions attribute the settlement of Rapa Nui to the legendary King Hotu-Matua, high chief of Maraë-erenga, who landed on Anakena beach after sending scouts to discover the island.²⁴ Following the chiefly genealogies, cultural anthropologist Alfred Métraux suggests that this episode took place around the 12th century.²⁵ While Métraux previously proposed that Hotu-Matua originated from the Marquesas, it now seems more likely that Hotu-Matua departed from Mangareva following a land dispute.

Outside the south-eastern region, archaeologists now have at their disposal new data sets from other central Polynesian archipelagos that further illuminate our understanding of the colonisation of east Polynesia. Human presence is attested on both Mo'orea in the Society Islands and on Mangaia in the Cook Islands by the 11th century AD,²⁶ and Ua Huka in the Marquesas by the 10th century AD.²⁷ With this in mind, it appears that a wide-ranging and rapid movement of migration occurred by the end of the 1st millennium AD, departing from Samoa. The discovery of the Gambier Islands, probably around AD 1000, could have led rapidly to further voyages eastwards. From this perspective, we might hypothesise that Polynesian navigators located the Pitcairn group around the same period, during exploration voyages to Rapa Nui. Based on the dates available for the region, it is possible that Pitcairn was first settled between AD 1000 and 1200.

23 Terry L Hunt & Carl P Lipo, 'Evidence for a Shorter Chronology on Rapa Nui (Easter Island)', *Journal of Island and Coastal Archaeology*, vol 3, no 1, 2008, pp 140–48; Janet M Wilmshurst, Terry L Hunt, Carl P Lipo & Atholl J Anderson, 'High-Precision Radiocarbon Dating Shows Recent and Rapid Initial Human Colonization of East Polynesia', *Proceedings of the National Academy of Sciences*, vol 108, 2011, pp 1815–20.

24 Thomas S Barthel, *The Eighth Land: The Polynesian Discovery and Settlement of Easter Island*, Honolulu, University Press of Hawai'i, 1978.

25 Métraux, 1940, p 33.

26 Jennifer G Kahn, 'Coastal Occupation at the GS-1 Site, Cook's Bay, Mo'orea, Society Islands', *Journal of Pacific Archaeology*, vol 3, no 2, 2012, pp 52–61; Patrick V Kirch (ed), *Tangataua Rockshelter (Mangaia, Cook Islands): The Evolution of an Eastern Polynesian Socio-Ecosystem*, Los Angeles, Cotsen Institute of Archaeology Press, Monumental Archaeologica series, 2017.

27 Éric Conte & Guillaume Molle, 'Reinvestigating a Key-Site for Polynesian Prehistory: New Results from Hane Dune Site, Ua Huka, Marquesas', *Archaeology in Oceania*, vol 49, 2014, pp 121–36.

Temporal issues aside, the finer details of the settlement process are difficult to resolve. Biological affinities have been demonstrated between the Rapa Nui and Henderson populations,²⁸ which imply either ancestor–descendant relationships (from the Gambier Islands to Henderson then Rapa Nui) or sister populations descending independently from the same founding group, presumably Mangareva. These two possible patterns must be evoked in the case of Pitcairn due to its position midway between Mangareva and Henderson. While it is impossible to solve this problem without further work, a simultaneous discovery and settlement of Pitcairn and Henderson remains the most convincing hypothesis because it supports the idea of a quick development of inter-island interactions, as outlined below. As for remote Rapa Nui, the population of which probably originated from the Gambier Islands via the Pitcairn group, linguists have demonstrated that it became rapidly isolated from other Central Eastern Polynesian islands.²⁹

‘Marked in stone’: Remains of an active community

As previously discussed, archaeological work has been limited on Pitcairn in comparison with other islands in the region. This is due largely to the island’s geographical isolation and relative difficulty to reach by ship. The first anthropologists working on Pitcairn stopped only for brief visits on their return from Rapa Nui. In 1915, Katherine Routledge, who conducted pioneer work on Rapa Nui, stayed on Pitcairn for five days before returning to Tahiti.³⁰ Archaeologist Henri Lavachery and anthropologist Alfred Métraux, on the Franco-Belgian expedition to Rapa Nui, spent just two days on Pitcairn in 1935.³¹ The short accounts available from these visits mention petroglyphs and destroyed *marae*, the locations of which had already been reported by earlier visitors.³² During the

28 Sara L Collins & Marshall I Weisler, ‘Human Dental and Skeletal Remains from Henderson Island, Southeast Polynesia’, *People and Culture in Oceania*, vol 16, 2000, pp 67–85; Vincent H Stefan, Sara L Collins & Marshall I Weisler, ‘Henderson Island Crania and their Implication for Southeast Polynesia Prehistory’, *Journal of the Polynesian Society*, vol 111, no 4, 2002, pp 371–83.

29 Green, 1998; Steven R Fischer, ‘Mangarevan Doublets: Preliminary Evidence for Proto-Southeastern Polynesian’, *Oceanic Linguistics*, vol 40, no 1, 2001, pp 112–24; Mary Walworth, ‘Eastern Polynesian: The Linguistic Evidence Revisited’, *Oceanic Linguistics*, vol 53, no 2, 2014, pp 256–72.

30 Katherine Pease Routledge, *The Mystery of Easter Island: The Story of an Expedition*, London, Hazell, Watson and Viney, 1919, pp 305–15.

31 Lavachery, 1936.

32 Frederick W Beechey, *Narrative of a Voyage to the Pacific and Beering’s Strait*, London, Colburn & Bentley, 1831; Jacques-Antoine Moerenhout, *Voyage aux îles du Grand Océan*, Paris, Arthus Bertrand, 1837; Walter Brodie, *Pitcairn Island and the Islanders in 1850*, London, Whittaker & Co, 1851.

Norwegian expedition of 1956, Thor Heyerdahl directed excavations in two cave sites, together with a general survey of the island.³³ As part of the Polynesian archaeological research program led by the Bernice P Bishop Museum of Honolulu, an expedition composed of a number of specialists was led by Peter Gathercole (University of Otago, New Zealand) from January to March 1965. This was the first and only intensive archaeological project ever undertaken on Pitcairn. Unfortunately, only a preliminary report is available despite the large amount of data collected over a three-month field season.³⁴ Nonetheless, the report includes a map of recorded archaeological sites. Little archaeological work has been conducted on Pitcairn since, with the exception of Yosihiko Sinoto's excavation of a pit area in 1971,³⁵ and Marshall Weisler's samples of different quarry sources for geochemical analysis.³⁶ More recently, Nicholas Erskine focused on the historical archaeology of the *Bounty* mutineers' settlement.³⁷ While certainly of interest, this study does not provide any further information about pre-European settlement.

Despite the relative scarcity of information, a detailed review of available sources helps to trace the pre-European history of Pitcairn prior to its abandonment and 'rediscovery' by the *Bounty* mutineers (Figure 2.2). Two questions arise regarding past occupation of this marginal island: did the early inhabitants use the natural resources of the island sustainably, and was occupation temporary or permanent? One must consider these questions with respect to the desertion of the island prior to the arrival of the *Bounty* settlers.

33 Thor Heyerdahl & Arne Skjølsvold, 'Notes on the Archaeology of Pitcairn Island', in Thor Heyerdahl & Edwin N Ferdon (eds), *Reports of the Norwegian Archaeological Expedition to Easter Island and the East Pacific*, vol 2, *Miscellaneous Papers*, Stockholm, Monographs of the School of American Research and the Kon-Tiki Museum, no 24, part 2, 1965a, pp 3–7.

34 Peter Gathercole, *Preliminary Report on Archaeological Fieldwork on Pitcairn Island*, Jan–Mar, University of Otago, Department of Anthropology, 1964.

35 Sinoto, 1966; Sinoto, 1983.

36 Kenneth D Collerson & Marshall I Weisler, 'Stone Adze Compositions and the Extent of Ancient Polynesian Voyaging and Trade', *Science*, vol 317, 2007, pp 1907–11; Marshall I Weisler, 'Prehistoric Long-Distance Interaction at the Margins of Oceania', in Marshall I Weisler (ed), *Prehistoric Long-Distance Interaction in Oceania: An Interdisciplinary Approach*, New Zealand Archaeological Association Monograph 21, 1997a, pp 149–72; Marshall I Weisler & Jon D Woodhead, 'Basalt Pb Isotope Analysis and the Prehistoric Settlement of Polynesia', *Proceedings of the National Academy of Sciences*, vol 92, 1995, pp 1881–85.

37 Nicholas Erskine, 'The Pitcairn Project: A Preliminary Report of the First Integrated Archaeological Investigation of the Mutineer Settlement of Pitcairn Island', *Bulletin of the Australian Institute for Maritime Archaeology*, vol 23, 1999b, pp 3–9; Nicholas Erskine, 'The Historical Archaeology of Settlement at Pitcairn Island, 1790–1856', PhD thesis, James Cook University, 2004.

THE *BOUNTY* FROM THE BEACH

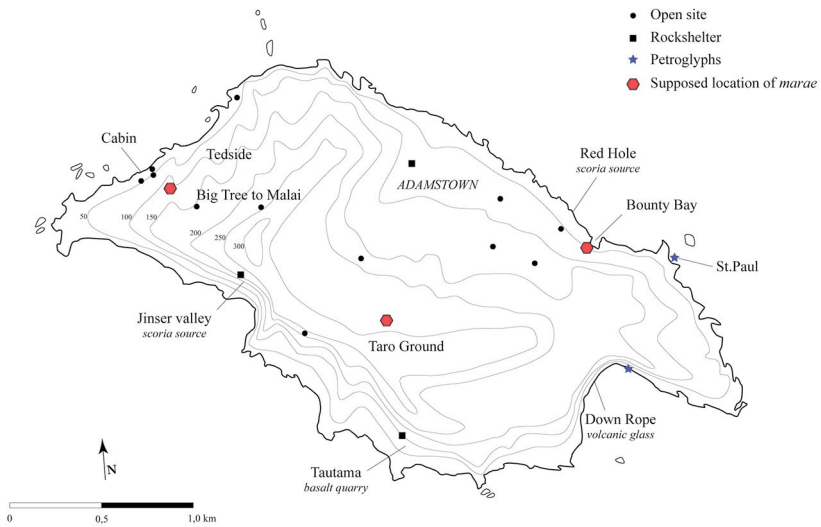


Figure 2.2. Location of archaeological sites on Pitcairn.

Source: After Weisler (1995).

Exploitation of stone resources

Peter Gathercole's report noted that 'the whole of Pitcairn island is a "site", in the sense that over much of its surface can be found flakes of basalt, and to a lesser degree pitchstones, fragments of worked tuff, hewn stones and carted beach boulders'.³⁸ All visitors highlight the importance of stone implements, both in the archaeological landscape and in museum collections. Along with Eiao in the northern Marquesas, Pitcairn offers one of the finest sources of good-quality basalt in Central Eastern Polynesia. For this reason, these two islands constituted major sources in the past, allowing ancient Polynesians to produce various types of valued stone implements. On Pitcairn, these tools include mostly adzes but also side-hafted axes, picks, drills, chisels, gouges, stone balls and projectile points.³⁹

38 Gathercole, 1964, p 19.

39 Kenneth P Emory, 'Stone Implements of Pitcairn Island', *Journal of the Polynesian Society*, vol 37, 1928, pp 125–35; Heyerdahl & Skjölsvold, 1965a; Heyerdahl & Skjölsvold, 'Artifacts Collected on Certain Islands in Eastern Polynesia', in Heyerdahl & Ferdon, 1965b, pp 155–68; Gonzalo Figueroa & Eduardo Sanchez, 'Adzes from Certain Islands in Eastern Polynesia', in Heyerdahl & Ferdon, 1965, pp 169–254.

In the early years of Polynesian archaeology, distinctive morphologies and styles of adze blades were used as cultural markers to identify connections between islands and to further hypothesise migration routes.⁴⁰ Pitcairn's archaeological assemblages show great typological variability. Nearly all of the types of East Polynesian adzes and axes identified by Roger Duff⁴¹ are present on the island. Both types 1 and 2 (Figures 2.3a & 2.3b) are widespread in all archipelagos and correspond to a formative period in Eastern Polynesian societies. In contrast, types 3E and 4A show morphological specificities that are unique to Pitcairn, such as the great flare towards the cutting edge in type 3E (Figure 2.3c), the thinness of type 4A (Figure 2.3d) and a tendency towards symmetrical bevels. Most adzes in those two categories are of exceptional size (between 30 and 50 centimetres in length) and, therefore, may have been prestige goods used in ceremonial contexts.

One can argue that these various types of adze blades were likely to have been produced by local specialists excelling in stone knapping. Indeed, the use of percussion to shape these fine tools, rather than 'easier' techniques such as pecking or hammering⁴² would seem to argue in favour of advanced knowledge in the manufacture of stone tools. In Pitcairn assemblages, the work of specialists is even more likely where stone hammer percussion was used for fine shaping. Tremendous skill was involved in all stages of the production process, from the roughing out to finishing phases of the blade production process.

A series of sites has been explored and partly tested by archaeologists. The most prominent of these, located at Tautama on the south-east shore, encompasses an area of approximately 1 hectare stretching between the base of a cliff and the sea. Polynesian-introduced banyan trees in the vicinity indicate the presence of cultural remains. The entire surface is covered with flaked debris of hard, dark-grey, fine-grained basalt that was collected downslope and quarried at Tautama.⁴³ The high density of flakes and roughouts in this area probably corresponds to a first stage

40 Kenneth P Emory, 'East Polynesian Relationships as Revealed through Adzes', in I Yawata & Y Sinoto (eds), *Prehistoric Culture in Oceania, A Symposium*, Bishop Museum Press, 1968, pp 151–70.

41 Roger S Duff, *The Moa-Hunter Period of Maori Culture*, 3rd edn, Wellington, Government Printer, 1977.

42 Emory, 1928, p 127; Figueroa & Sanchez, 1965, p 178; John FG Stokes, 'Stone Implements', in Robert T Aitken (ed), *Ethnology of Tubuai*, Honolulu, BP Bishop Museum Bulletin, vol 70, 1930, pp 139–40.

43 Gathercole, 1964, p 40.

of manufacture, while the completion process took place elsewhere. A small rock shelter located 20 metres away from the quarry contains the remains of human occupation, including several charcoal layers, shells and bones. Gathercole collected samples but no radiocarbon date has ever been published. One might suppose, however, that the site was occupied by small groups of adze makers working at Tautama.

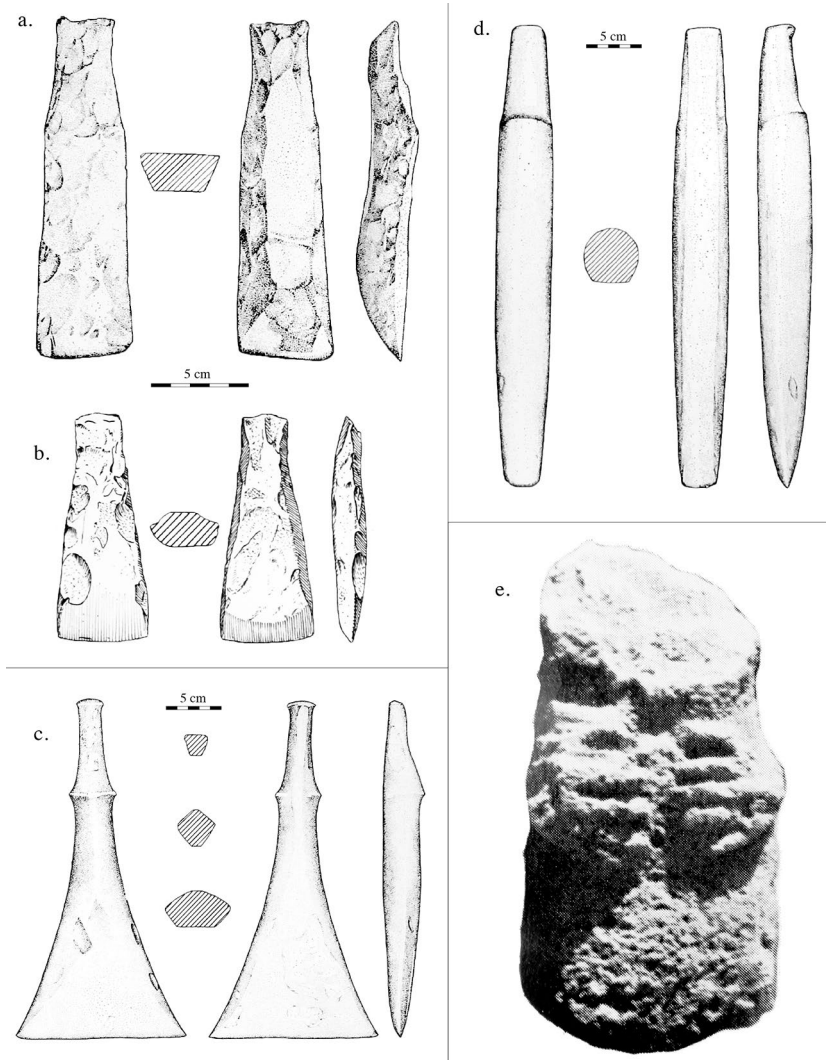


Figure 2.3. Typical stone adze blades and a tiki from Pitcairn.

Source: a–d: After Figueroa & Sanchez (1965); e: After Heyerdahl & Skjölsvold (1965a).

Aside from the Tautama source, which provides among the best quality basalt in south-eastern central Polynesia, Pitcairn offers other geological resources. Red volcanic tuff is found in at least two locations: Red Hole on the north-east shore near Bounty Bay, and in the Jinser valley on the south-west edge of the island (Figure 2.2). The latter was investigated by Thor Heyerdahl and Gathercole.⁴⁴ This cave is difficult to access as it is located in a cliff and situated 50 metres above the sea. It contains a zone of red scoria underlain by vesicular basalt and other basalt dykes. Volcanic tuff was used on many islands for stone carving: on Rapa Nui, the *pukao* hats of the *moai* were made of tuff from Puna Pau; while, in the Marquesas, white, yellow and red tuff called *ke'etu* was carved with *tiki* and displayed on *me'ae* temple sites. On Pitcairn, the red tuff from Jinser valley could have been employed for the same purpose, as discussed further below. It is also possible, however, that tuff was used as an abrader to polish and hone basalt, as noted by the geologist Robert M Carter from the Gathercole expedition.⁴⁵ This idea is consistent with the discovery of such fragments found in association with basalt flakes and finished tools in many locations across the island.

Also of note is the presence of a volcanic glass source on Pitcairn situated near Down Rope in the south-west of the island. The source consists of ignimbrite with patches of welded grey and black glass.⁴⁶ This material is often referred to as obsidian, to which it is petrographically close. It is rarely found in Polynesia, except on Rapa Nui where it was widely used to manufacture projectile points called *mata'a*.⁴⁷ Such artefacts have been recovered from excavations on Henderson Island, where they must have been imported from Pitcairn.

Living, surviving or adapting?

During the 19th and the 20th centuries, a large number of stone tools from Pitcairn were purchased by different museums (see Young, Chapter 7). Given the potential to generate an income from these objects, post-*Bounty* Pitcairners began to systematically collect objects, without regard for their

44 Heyerdahl & Skjölsvold, 1965a, p 6; Gathercole, 1964, p 50.

45 Gathercole, 1964, p 54.

46 Weisler, 1995, p 394.

47 William Mulloy, 'The Ceremonial Center of Vinapu', in Heyerdahl & Ferdon, 1965, pp 93–180; Michel Charleux, 'L'outillage lithique de l'île de Pâques. Considérations générales. Contribution à l'étude technologique et typologique de l'outillage pédonculé en obsidienne: les *mata'a*', Masters thesis, Université Paris I Panthéon-Sorbonne, 1986.

archaeological context.⁴⁸ This caused a detrimental loss of information, hindering attempts to reconstruct the processes of raw material acquisition, tool manufacture and use. Archaeological data recovered from excavations on quarry sites, however, are insufficient to ascertain the nature of the Polynesian occupation in these areas. This question requires consideration of other categories of archaeological evidence.

Several excavations took place at different locations near Tedside, a place on the western side of Pitcairn where a stone platform was discovered.⁴⁹ The platform was constructed using vesicular basalt and beach boulders, the latter delineating a semicircular area where basalt points were manufactured, and may have been part of larger pavements that served as domestic sites. Another platform of 15 x 3 metres was discovered at a higher point on the slope. A few structures were also found further down the valley, at a location called Cabin. These appear to have been hearths, although their antiquity has not yet been determined. It is indeed interesting to note the presence of various remains in this area situated around 60 metres from a small sand beach. This embayment is one of two safe landing spots on Pitcairn (along with Bounty Bay) and 'may have been a convenient place to bring fine-grained basalt adze preforms from the Tautama quarry for finishing and grinding'.⁵⁰ In agreement with Peter Gathercole, Marshall Weisler interpreted the area as a place favoured for canoe manufacturing, as it provides a good launching spot. This argument was also supported by Henry Maude⁵¹ who considered Pitcairn's timber resources to be the finest in the region. It is possible, therefore, that Pitcairn was visited because of its suitability for canoe construction.⁵²

In addition to its wood resources, Pitcairn provided a fertile environment for growing various food crops and plants introduced by Polynesians over the course of their occupation. Teehuteatuaonoa – also known as Jenny, one of the Tahitian women amongst the *Bounty* settlers – reported the discovery of several species during the first days after their arrival on the island, including *taro* (*Caladium esculentum*), *auti* (*Cordyline fruticosa*) and, ironically enough, breadfruit (*Artocarpus altilis*). Paper mulberry (*Broussonetia papyrifera*) was also on the island, which proved useful in

48 Gathercole, 1964, p 6.

49 Gathercole, 1964, p 61.

50 Weisler, 1995, p 384.

51 Henry E Maude, 'The History of Pitcairn Island', in ASC Ross & AW Moverley (eds), *The Pitcairnese Language*, London, André Deutch, 1964, p 46.

52 Gathercole, 1964, p 81.

the first years of the post-*Bounty* settlement, as it allowed the Tahitian women to maintain their cultural tradition of *tapa* production⁵³ and provide clothing to the settlers.

Also relevant to the subject of resource availability is that the *Bounty* Pitcairners discovered a burial site on a *marae* (see below) in which the individual lay on his back with his head resting on a mother-of-pearl shell. Mother-of-pearl is scarce in Pitcairn's archaeological records. Thor Heyerdahl reports finding a pearl-shell scraper and two partially worked pieces of pearl shell.⁵⁴ At a place known as Bills Ground III, Gathercole's team uncovered the only pearl-shell fishhook ever discovered on the island.⁵⁵ The scarcity of pearl-shell artefacts may be explained by a bias in archaeological sampling due to insufficient survey of coastal areas where they are usually found. Moreover, Pitcairn's acidic soil conditions do not favour the preservation of this material.⁵⁶ Importantly, however, *Pinctada margaritifera* pearl shell does not grow in Pitcairn's waters and was more likely imported from the Gambier lagoons, where it is abundant (Figure 2.4).

That being said, and supposing that Pitcairn was once inhabited by a large population, they did not import pearl shells in numbers large enough to manufacture fishhooks, a major item in the Polynesian tool kit. People must have turned to other local resources to overcome this constraint, developing stone fishhook manufacturing instead. Indeed, as we mentioned earlier, several stone hooks are found in museum collections.⁵⁷ Although stone hooks are more common on Rapa Nui (and in New Zealand), the Pitcairn specimens evince a different system in tying the line to the head. Geochemical analysis has not been run on these fishhooks in order to ascertain a basalt source, but we hypothesise that their makers chose the Tautama fine-grained stone to manufacture them. This highlights two points of interest that are explored further below: the importation of pearl shell, and Polynesian adaptation to local resources.

53 Erskine, 2004, p 175.

54 Heyerdahl & Skjölsvold, 1965b.

55 Gathercole, 1964, p 76.

56 Weisler, 1997, p 157.

57 Bengt Anell, *Contribution to the History of Fishing in the Southern Seas*, Uppsala, Studia Ethnographica Upsaliensia, vol 9, 1955, p 105; Henry Skinner, 'A Classification of the Fishhooks of Murihiku, with Notes on Allied Forms from Other Parts of Polynesia', *Journal of the Polynesian Society*, vol 51, 1942, pp 208–21, 256–86; Roger C Green, 'Pitcairn Island Fishhooks in Stone', *Journal of the Polynesian Society*, vol 68, no 1, 1959, pp 21–23.

Religious practices

One of the most challenging aspects of Pitcairn's pre-European history lies in the assumed existence of *marae*, the traditional Polynesian temple sites. Several early visitors, including Frederick Beechey and Henri Lavachery, report having seen *marae* remains in different places. Descriptions differ between accounts and, in the absence of detailed maps, it is now impossible to locate these sites with precision. Moreover, shortly after their arrival, the *Bounty* mutineers destroyed the *marae* for religious reasons, and some of their descendants later participated in their final destruction.⁵⁸ It is likely that the stone material employed in *marae* construction, such as hewn tuff slabs and boulders, was removed by later Pitcairners for building cisterns, house thresholds and steps.⁵⁹

The main site, identified as site no 1 by Lavachery, was located at the eastern edge of Adamstown, on a cliff overlooking Bounty Bay. It is not clear, however, if it was lying at the Edge, as claimed by Lavachery, or further east of the bay at Ships Landing Point, which would fit Beechey's account.⁶⁰ Beechey was told that the *Bounty* mutineers had found four stone statues, about 1.8 metres in height, standing on a platform. At that time, only one statue had been preserved but it was later thrown down the cliff when the site was destroyed by later Pitcairners, perhaps in the early 20th century. In 1919, Katherine Routledge made observations in the area designated by Beechey as the location of this *marae*. She noted a 3.6-metre-high human-made embankment at the edge of the cliff. While its seaward face was vertical, the landward face formed an inclined plane extending over 12 metres in length. Routledge assumes that both sides were paved with marine boulders, and eventually compares the general arrangement of the site with the semi-pyramid *abu* she had previously documented on Rapa Nui.⁶¹ In 1935, Lavachery did not find any remains of the sanctuary but gave a rough reconstruction based on Routledge's comments.⁶² Unfortunately, Routledge's personal notes have never been published so we must rely on her brief description. The architectural similarities between the Pitcairn site and the Rapa Nui *abu* are interesting, as they could provide evidence for the potential transfer of forms from

58 See Knight's report in Gathercole, 1964, p 28.

59 Gathercole, 1964, p 52.

60 Beechey, 1831, vol 1, p 112.

61 Routledge, 1919, p 313.

62 Lavachery, 1936, fig 2.

one island to the other. Both Routledge and Lavachery, however, though excellent archaeologists, may have been influenced by their experience on Rapa Nui, and thus inclined to make potentially overhasty regional comparisons.

Of the four statues formerly standing on site no 1, only one fragment remained during Lavachery's visit in 1935. It had been picked up from the base of the cliff at Bounty Bay and was now used as the supporting pillar of a house. The owner refused to allow Lavachery to transport it to Belgium, so the archaeologist took a photograph and described it in detail.⁶³ The statue was eventually sold in 1936 to the Dunedin Museum of Otago, where it is currently displayed (Figure 2.3e). The headless statue carved from red tuff is 76 centimetres high, 33 centimetres wide and 30 centimetres thick. Its large hands almost meet in front of the abdomen, which is a traditional posture in Polynesian statuary.

Lavachery located site no 2 inland, within the Taro Ground area, but there were no architectural features present at the time of his visit, and local informants reported that there were no stone statues on this site. Lavachery also noted the existence of a third site, which he did not visit, on the western part of the island in the Tedside area. His informants stated that a statue had stood on this *marae*, built on a cliff above Pitcairn's other primary landing area, but unfortunately the *marae* was now destroyed. There are contradictions between the information provided by different authors, and it is unclear if the *marae* was situated at Cabin or Big Tree to Malai, two localities that might have been visited by Beechey and Routledge.⁶⁴ Jacques-Antoine Moerenhout stated that he and his guides walked for a long time through several cultivated fields and across a valley to finally reach a high peak where the trail was rough and hazardous. Unlike Lavachery and Peter Gathercole, we propose that the site described by Moerenhout could be the one located at Tedside. Moerenhout's itinerary, and his description of a *marae* 'of considerable extent, ornamented at each corner with a statue of about 2.5 to 3 metres/8 to 10 feet in height, raised on platforms of stone masonry still very well joined together'⁶⁵ might apply to site no 3, and not site no 1, which is located close to Bounty Bay and is of easier access. It is therefore highly likely that the only stone image Moerenhout saw there was the same one that Lavachery was told about.

63 Lavachery, 1936, p 13.

64 Gathercole, 1964, p 37.

65 Moerenhout, 1837, p 53.

Furthermore, the existence of an ancient temple in this area would make sense in light of other remains discovered during Gathercole's expedition (see above).

The existence of at least three *marae* sites on Pitcairn points to a long-term occupation of the island rather than short-term visits. Indeed, the amount of effort put into the construction of *marae* and the carving of statues indicates a permanent settlement, which is also confirmed by associated burial sites discovered by later Pitcairners during their process of *marae* destruction. The ancient practice of burying individuals on *marae* (supposedly persons of higher rank) is attested elsewhere in Polynesia, especially in the Tuamotu archipelago⁶⁶ and on Temoe atoll in the Gambier Islands.⁶⁷ In this context, connecting the ancestors to the land is significant and further reveals the existence of a complex organisation in Pitcairn's ancient society.

In addition to religious sites, petroglyphs have been recorded at two locations. The most famous are situated at the base of Down Rope cliff at the rear of the beach. The panel of tuff on which they were incised measures 11 x 3.8 metres. First published partly by Walter Brodie,⁶⁸ then Léon Seurat,⁶⁹ they were studied in more detail by Lavachery.⁷⁰ The Down Rope site includes 22 figures representing human bodies, animals – supposedly chickens and maybe a dog and a pig – some features interpreted as tools, a canoe, and geometric figures. The other location, a cave facing St Paul's rock, east of Bounty Bay, shows eight figures including one human representation. Analysis of rock art is a delicate matter in Polynesia as figures can only be interpreted in relation to their general archaeological

66 Éric Conte & Kenneth Dennison, *Tē Tahata. Etude d'un marae de Tepoto (Nord)*, *Archipel des Tuamotu, Polynésie française*, Puna'auia, Les Cahiers du CIRAP, vol 1, 2009; Guillaume Molle, *Ancêtres-Dieux et Temples de corail: Approche ethnoarchéologique du complexe marae dans l'archipel des Tuamotu*, Tahiti, Collection Cahiers du CIRAP, vol 3, 2015; Guillaume Molle, 'Exploring Religious Practices on Polynesian Atolls: A Comprehensive Architectural Approach towards the *Marae* Complex in the Tuamotu Islands', *Journal of the Polynesian Society*, vol 125, no 3, 2016, pp 263–88.

67 Pascal Murail & Éric Conte, 'Les sépultures de l'atoll de Temoe (archipel des Gambier)', *Les Dossiers d'Archéologie Polynésienne*, no 4, 2005, pp 164–72; Guillaume Molle & Pascal Murail, *Recherches archéologiques et anthropologiques sur l'atoll de Temoe, archipel des Gambier. Rapport de la campagne 2010*, Punaauia, Université de la Polynésie française-CIRAP, 2012; Guillaume Molle, Pascal Murail & Aymeric Hermann, *Recherches archéologiques et anthropologiques sur l'atoll de Temoe, archipel des Gambier. Rapport de la campagne 2013*, Punaauia, Université de la Polynésie française-CIRAP, 2014.

68 Brodie, 1851, p 14.

69 Léon G Seurat, 'Sur les anciens habitants de l'île Pitcairn', *L'Anthropologie*, vol 15, 1904, pp 369–72.

70 Lavachery, 1936.

context.⁷¹ In Pitcairn, the two sites are independent of one another and neither archaeological structures nor any other remains have been found in either vicinity. It is therefore very difficult to interpret the significance of the figures. They might have been engraved for some ritual purpose for which we have no details.

Pitcairn in its regional context: Nuancing the isolation

Tracing ancient inter-island mobility and exchange in south-east Polynesia

Prior to the development of computer simulations and experimental voyaging,⁷² which established that Polynesian seafarers had the skills and abilities to navigate long distances, some researchers suggested that the colonisation of Pacific Islands was accidental or resulted from drift voyages, and that societies consequently evolved in total isolation on remote lands.⁷³ Recent studies, however, offer new evidence for previously unsuspected patterns of exchange between Polynesian islands during pre-European times and put into question the idea of isolation (see Teriierooiterai, Chapter 1). Geochemical analyses of volcanic rocks used for tool manufacture allow archaeologists to source the provenance of artefacts. These analyses have largely developed over the past two decades and the sourcing of Polynesian adzes has become a major focus of archaeological research.⁷⁴ Provenance studies have shown, in contrast to the idea of isolation, that Polynesian communities remained in contact for several centuries after their initial colonisation of islands, by exchanging

71 For Marquesan cases, see Sidsel Millerstrom, *Gravures rupestres et archéologie de l'habitat de Hatihau à Nuku Hiva (Iles Marquises, Polynésie française)* (Puna'auia, Collection les Cahiers du Patrimoine – Archéologie, 2003).

72 Irwin, 1992; David Lewis, *We, the Navigators: the Ancient Art of Landfinding in the Pacific*, 2nd edn, Honolulu, University of Hawai'i Press, 1994; Ben Finney (ed), *Pacific Navigation and Voyaging*, Wellington, Polynesian Society Memoir, vol 39, 1976.

73 Andrew Sharp, *Ancient Voyagers in Polynesia*, Auckland, Paul Longman, 1963.

74 Collerson & Weisler, 2007; Weisler, 1997; Marshall I Weisler, 'Hard Evidence for Prehistoric Interaction in Polynesia', *Current Anthropology*, vol 39, 1998a, pp 531–32; Marshall I Weisler & Patrick V Kirch, 'Interisland and Interarchipelago Transport of Stone Tools in Prehistoric Polynesia', *Proceedings of the National Academy of Sciences*, vol 93, 1996, pp 1381–85; Weisler & Woodhead, 1995.

basalt artefacts as well as various other types of goods.⁷⁵ Inter-island communication indeed played an important role in political alliances that were sealed through inter-community marriage and the exchange of prestige items. Inter-archipelago transfers of commodities took place within interaction spheres of different scales in Central Eastern Polynesia.

Marshall Weisler⁷⁶ has been at the forefront of geochemical studies by conducting intensive research in the Gambier and Pitcairn island groups. Drawing on analyses of both raw material and finished artefacts, Weisler identified reciprocal exchanges of utilitarian items within the south-east region of Central Eastern Polynesia (Figure 2.4). Pitcairn provided fine-grained basalt and volcanic glass to Henderson and Mangareva for tool-making purposes. In return, abundant black-lipped pearl shell (*Pinctada margaritifera*), vesicular basalt used as oven stones, maybe *porites* coral files and abraders, and a variety of economically useful plants⁷⁷ originated from the Gambier Islands, while green sea turtles (*Chelonia mydas*) and red feathers of lory (*Vini stepheni*) or fruitdove (*Ptilinopus insularis*) were imported from Henderson.⁷⁸ These rare red feathers were used by Polynesian chiefs as prestige items reflecting a divine nature, and were therefore intensively exchanged through specific networks that generally included high islands and atolls (like Society–Tuamotu or southern Cook–Austral–Society). The transfer of feathers and turtles, however, has never been ascertained archaeologically within the Pitcairn group.

75 Barry V Rolett, 'Voyaging and Interaction in Ancient East Polynesia', *Asian Perspectives*, vol 41, no 2, 2002, pp 182–94; Marshall I Weisler, 'Centrality and the Collapse of Long-Distance Voyaging in East Polynesia', in Michael D Glascock (ed), *Geochemical Evidence for Long-Distance Exchange*, Westport, Bergin & Garvey, 2002, pp 257–73; Mark Eddowes, 'Etude archéologique de l'île de Rimatara (Archipel des Australes)', *Dossiers d'Archéologie Polynésienne*, Puna'auia, Ministère de la Culture de Polynésie française, 2004; Collerson & Weisler, 2007; Aymeric Hermann, 'Production et échange des lames d'herminette en pierre en Polynésie centrale', in F Valentin & G Molle (eds), *La pratique de l'espace en Océanie: Découverte, appropriation et émergence des systèmes sociaux traditionnels*, Paris, Séances de la Société Préhistorique Française, no 7, 2016, pp 205–21.

76 Weisler, 1997; Weisler, 1998a; Marshall I Weisler, 'Issues in the Colonization and Settlement of Polynesian Islands', in Patricia Vargas Casanova (ed), *Easter Island and East Polynesian Prehistory*, Universidad de Chile, 1998b, pp 76–86; Weisler, 2002.

77 There is no doubt that the cultigens brought to Pitcairn originated from the Gambier Islands. Plant remains identified in archaeological contexts on Henderson could, however, have been introduced from both Pitcairn and Mangareva. Whether they were introduced during the initial settlement of the island or over the course of four centuries of inter-island interaction in the region remains unknown. The same issue occurs for introduced fauna, including pigs (*Sus scrofa*), chickens (*Gallus gallus*) and rats (*Rattus exulans*). See Horrocks & Weisler (2006).

78 Weisler, 1997.

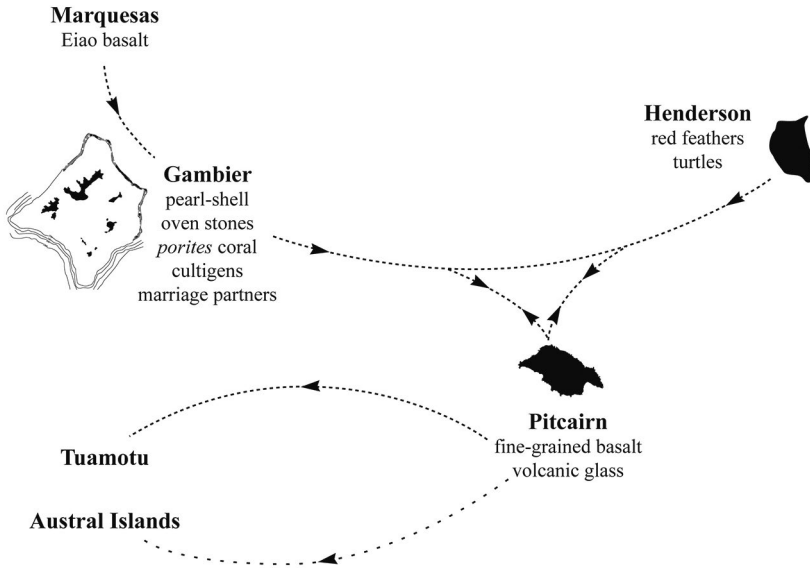


Figure 2.4. Patterns of interaction involving Pitcairn and the Gambier islands.

Source: After Weisler (1995, 1997, 1998a); Collerson & Weisler (2007); Hermann (2013).

In addition to these items, marriage partners were also exchanged. Maintaining connections between islands, particularly those inhabited by small isolated communities, both favoured their development and helped populations face harsh ecological conditions. The case of Henderson provides a striking example of the role of inter-island exchange and voyaging in sustaining small communities in an extremely impoverished environment.⁷⁹

Given its central position within the south-east region, Pitcairn might have played the role of an intermediary in the exchange of items. It may be seen as a hub in a ‘down-the-line’ network pattern extending from the Gambier Islands in the west to Henderson in the east. Other recent data show that stone resources from Pitcairn were also distributed outside the south-east sphere of interaction identified by Weisler: an adze collected on the atoll of Katiu in the Tuamotu archipelago has been sourced to Pitcairn’s Tautama basalt quarry,⁸⁰ and primary analysis of two volcanic glass flakes discovered in the Atiahara site on Tubua’i Island (Austral archipelago) show

⁷⁹ Weisler, 1997, p 170.

⁸⁰ Collerson & Weisler, 2007.

a geochemical signature matching the Down Rope outcrop in Pitcairn.⁸¹ Indeed, recent investigations provide information to reconstruct an extensive sphere of interaction including all archipelagos from the Cook Islands to Pitcairn and the Marquesas, through the Societies, the Australs and the Tuamotu archipelago (Figure 2.4) during the first centuries of Polynesian presence in the region.⁸²

The abandonment of Pitcairn: Why, when and how?

An examination of archaeological data shows evidence of long-term human occupation on Pitcairn Island. Given that the island was deserted when the *Bounty* mutineers landed in 1790, however, Peter Bellwood was led to classify Pitcairn as one of the ‘Mysterious Islands’ of the Pacific, reinforcing the idea of its isolation. Several researchers have tackled this question and proposed different hypotheses to explain the abandonment of Pitcairn.

The desertion of the island was first presented as a consequence of decline in inter-island voyaging and exchanges in Central Eastern Polynesia by the 15th century, a phenomenon also referred to as the ‘contraction’ of interaction spheres.⁸³ Exchanges did not stop suddenly, nor completely, but rather decreased in intensity and became confined to geographically limited networks within archipelagos, as described in oral traditions. Patterns observed in the Cook and the Marquesas islands demonstrate a similar sequence of an interruption in long-distance exchange and a consequent adaptation to local resources.⁸⁴ Within the Mangareva–Pitcairn sphere, such a sequence is revealed through archaeological records, especially on Henderson where artefacts produced after the 15th century were no longer made of imported material (such as basalt from Pitcairn or pearl shell from the Gambier Islands) but of local material

81 Aymeric Hermann, ‘Les industries lithiques pré-européennes de Polynésie centrale: savoir-faire et dynamiques techno-économiques’, PhD thesis, University of French Polynesia, 2013, p 184.

82 Collerson & Weisler, 2007; Hermann, 2013; Andrew McAlister, Peter J Sheppard & Melinda S Allen, ‘The Identification of a Marquesan Adze in the Cook Islands’, *Journal of the Polynesian Society*, vol 122, no 3, 2014, pp 257–74; Barry Rolett, Eric W West, John M Sinton & Radu Lovita, ‘Ancient East Polynesian Voyaging Spheres: New Evidence from the Vitaria Adze Quarry (Rurutu, Austral Islands)’, *Journal of Archaeological Science*, vol 53, 2015, pp 459–71.

83 Rolett, 2002; Weisler, 2002.

84 Richard Walter, ‘The Southern Cook Islands in Eastern Polynesian Prehistory’, PhD thesis, University of Auckland, 1990; Barry Rolett, ‘Hanamiai: Prehistoric Colonization and Cultural Change in the Marquesas Islands (East Polynesia)’, *Publications in Anthropology*, no 81, 1998.

instead, including *tridacna* shell adzes and *isognomon* shell fishhooks.⁸⁵ Archaeological records on Pitcairn are still insufficient to demonstrate such a pattern, although it is clear that neither basalt from the Tautama quarry nor volcanic glass from Down Rope has ever been recovered from other Polynesian islands after AD 1450, which indicates an interruption in exports.

The Henderson population maintained their autonomy after the ‘collapse’ of inter-island voyaging, and eventually left permanently by AD 1600.⁸⁶ There is no chronological data available to date the actual abandonment of Pitcairn. As its environmental conditions are more favourable than those of Henderson, however, it is highly probable that a sustainable occupation was maintained there for at least as long as on Henderson. Moreover, the construction of *marae* on Pitcairn might date from a relatively recent period, probably post-16th century, based on what we know about the regional development of ceremonial architecture. Although further investigation is needed, we can assume that the island was abandoned during the 17th century or maybe at the beginning of the 18th century. Given this, the contraction of interaction spheres cannot be the only cause for deserting the islands. The exact reasons for contraction have not been entirely established, but it is likely that a combination of different ecological and sociopolitical factors led to the abandonment of Pitcairn and Henderson.

Environmental fragility due to anthropogenic pressure has been proposed by several authors as a reason for abandonment. Jared Diamond⁸⁷ and Atholl Anderson⁸⁸ have described these islands as highly vulnerable to faunal depletion through over-exploitation. They have also argued that local populations were unable to overcome these environmental constraints through the development of agriculture. This could explain the situation on Henderson where the over-predation of nesting birds led to avian extinction and extirpation.⁸⁹ On the other hand, prehistoric faunal

85 Weisler, 1995.

86 Weisler, 1995.

87 Jared Diamond, ‘Why Did the Polynesians Abandon their Mystery Islands?’, *Nature*, vol 317, 1985, p 764.

88 Anderson, 2001; Atholl Anderson, ‘Faunal Collapse, Landscape Change and Settlement History in Remote Oceania’, *World Archaeology*, vol 33, no 3, 2002, pp 375–90.

89 Susan E Schubel & David W Steadman, ‘More Bird Bones from Archaeological sites on Henderson Island, Pitcairn Group, South Pacific’, *Atoll Research Bulletin*, vol 325, 1985, pp 1–13; Graham M Wragg & Marshall I Weisler, ‘Extinctions and New Records of Birds from Henderson Island, Pitcairn Group, South Pacific Ocean’, *Notornis*, vol 41, 2004, pp 61–70.

extinction has not yet been recorded on Pitcairn. Unlike Henderson, the high island of Pitcairn and its maritime environment provided its inhabitants with other food resources, through fishing and the cultivation of various prehistorically introduced crops (see above). Pitcairn did, however, face episodes of ecological degradation as it was partly deforested and eroded when the *Bounty* mutineers arrived.⁹⁰ It is therefore likely that the island's ability to regenerate was significantly reduced. Water resources are relatively limited on the island and, therefore, extended periods of drought could have destabilised the local hydrographic system and impacted on the inhabitants.⁹¹ In the absence of further investigation, it is difficult to evaluate the role of environmental change on the abandonment of Pitcairn.

Mangareva turns out to be pivotal within the organisation of the south-east interaction sphere, as exchanges were likely controlled by the chiefdoms of the Gambier Islands. Given that Mangareva was a gateway to remote archipelagos such as the Marquesas and the Society islands, the Pitcairn group was likely to be highly dependent on Mangareva for long-term survival. This dependency became even more critical after the interruption of long-distance voyaging and connections with the Marquesas. As a result, the role of the Gambier Islands as a node in the region was reinforced after the 15th century, and sociopolitical development in Mangareva would have impacted neighbouring islands. According to Irving Goldman, prior to European contact, the people of Mangareva participated in a 'stratified society' that was riddled with rivalries and almost constant warfare.⁹² From this perspective, Marshall Weisler hypothesises that, by the 16th century, Mangareva reached an untenable sociopolitical situation, 'withdrawing from servicing the Pitcairn group', which eventually led to the abandonment of the islands.⁹³

While explaining the abandonment of the 'Mysterious Islands' remains challenging given our limited understanding of local settlement histories, this brief review of existing hypotheses shows that the desertion of Pitcairn did not happen suddenly but consisted of a final, and somehow inevitable, response to both internal and external factors. Pitcairn's Polynesian

90 Weisler, 1995.

91 Gathercole, 1964.

92 Irving Goldman, 'Status Rivalry and Cultural Evolution in Polynesia', *American Anthropologist*, vol 57, no 4, 1955, pp 680–97.

93 Weisler, 2002, p 268.

community remained on the island in a state of relative autonomy after the collapse of the south-east interaction sphere and adapted to local environmental conditions.

Conclusion

The early prehistoric occupation of Pitcairn was probably motivated by the exploitation of valued local resources, and succeeded due to a network of interaction with neighbouring islands and archipelagos that continued for at least five centuries after initial colonisation. Evidence for inter-island voyaging in the south-east region shows that the Polynesian community on Pitcairn was not isolated but maintained constant relations with allied groups that were easily reachable by short canoe trips. Even after the interruption of long-distance exchanges by the 15th century, archaeological data tends to support the idea that a sociopolitical group lived on Pitcairn for longer.

By 1790, however, the island was deserted. Pitcairn was the perfect answer to the *Bounty* mutineers' search for a remote place outside the travel routes of Western ships that might allow them to escape British pursuit.⁹⁴ Moreover, it had been wrongly charted, both by Philip Carteret, the first Westerner to sight the island, and by John Hawkesworth who transcribed the British navigators' *Voyages* (see Young, Chapter 7). Nicholas Erskine's investigation of the historical archaeology of the island also demonstrates that the *Bounty* colonists' initial settlement in the Adamstown area was directed by a 'fundamental concern for concealment'.⁹⁵ The destruction of the vessel further removed all chances of leaving the island.⁹⁶ The isolation they sought on a remote island was reinforced by their decision to burn the ship, leaving these new islanders with no means of communication with the outside world.

By taking a long-term historical view of Pitcairn Island we are confronted by two intriguingly distinctive perceptions of insular 'isolation': Polynesian and European. In both cases, geographic isolation determined social evolution on the island. The different contexts of settlement and distinct

94 Henry E Maude, 'Tahitian Interlude. The Migration of Pitcairn Islanders to the Motherland in 1831', *Journal of Polynesian Society*, vol 68, no 2, 1959, pp 115–40.

95 Erskine, 2004, p 148.

96 Erskine, 2004, p 2.

cultural backgrounds have, however, led these groups to comprehend isolation in different ways. For Polynesians, the ocean was mostly seen as a facilitator of communication with other lands and groups. This idea remains strong today among Pacific Islanders, as demonstrated by the work of historian Paul D'Arcy.⁹⁷ In contrast, Europeans⁹⁸ on Pitcairn voluntarily subjected themselves to isolation in a bounded territory whose maritime perimeter served as a protective barrier to communication with the outside world.

The *Bounty* mutineers' extreme isolation lasted for 18 years until the *Topaz*, an American sealing vessel, arrived and heralded the beginning of a new period in the modern history of Pitcairn. Even though the post-1790 settlement survived, difficulties were numerous and adaptation to the unfamiliar environment was challenging for the Europeans, who mostly relied on materials salvaged from the *Bounty* to maintain a semblance of Western life.⁹⁹ From the 1820s, the mutineers' descendants began to open up to the world in response to more frequent visits to the island by whalers and commercial vessels (see Naugrette, Chapter 5). As a direct consequence, opportunities for trade developed and Pitcairners obtained a large range of utilitarian items in exchange for water and food as well as other *Bounty* relics (see Young, Chapter 7). This system of trade soon became regulated, and eventually led the British Government to grant the island the status of a British protectorate (see Young, Chapter 7). It is noteworthy that the increasing trade severely impacted the environment of the island through the exploitation of timber resources, production of agricultural surpluses, and associated land clearance and catastrophic erosion.¹⁰⁰ In 1853, an episode of drought brought the trading to an end and revealed the vulnerability of the island. Three years later, an official decision was made to relocate the community to Norfolk Island, resulting once again in the abandonment of Pitcairn.

97 Paul D'Arcy, *The People of the Sea: Environment, Identity, and History in Oceania*, Honolulu, University of Hawai'i Press, 2006.

98 We refer to the *Bounty* settlement here as European, reflecting the fact that the Polynesian members of the group were never allowed to take part in any decision-making concerning the development of the colony. In the first years of the settlement, the Polynesian men were almost reduced to slaves by Englishmen.

99 Erskine, 2004, p 207.

100 Erskine, 2004, p 212.

Following the discovery of the *Bounty* survivors and descendants, an entire literature emerged that included popular fiction and historical novels (see Jolly & Petch, Chapter 6; and Naugrette, Chapter 5). This genre of Crusoe-like island adventure narratives, whose characters face extreme environmental conditions, has highlighted and reinforced the isolated nature of the island in Western minds. Conversely, the long-term occupation of Pitcairn exemplifies the efflorescence of sustainable communities in the most marginal islands of Polynesia prior to European arrival. Similarly, the reconstruction of inter-island exchange networks reveals how Greg Dening's 'little people', who first settled this remote island, remained connected with other groups through regional spheres of interaction for several centuries. As Scott Fitzpatrick and Atholl Anderson¹⁰¹ remind us, there is a real challenge in endeavouring to assess how various degrees of interaction and isolation may have shaped island societies at various points in their historical trajectories. In Polynesia, as in most Pacific Islands, shores were reached and beaches were crossed many times, long before European explorers, missionaries or even mutineers entered the scene.

101 Scott M Fitzpatrick & Atholl Anderson, 'Islands of Isolation: Archaeology and the Power of Aquatic Perimeters', *Journal of Island and Coastal Archaeology*, vol 3, no 1, 2008, pp 4–16.

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