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An Archaeological Sequence for Codfish Island (Whenua Hou), Southland, New Zealand

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Abstract

Recent archaeological investigations on Codfish Island, Southland, New Zealand are described. The form and contents of the archaeological deposits along with a series of radiocarbon dates provide the basis for outlining the sequence of human settlement on the island. Initial settlement between the thirteenth and fifteenth centuries AD is proposed; there are no strong indications of later prehistoric settlement. The island was reoccupied during the first decade of the nineteenth century by sealing gangs, and from about 1825 to 1850 there was a substantial settlement of former sealers, Maori women and their descendants. Some implications for understanding the colonisation history of New Zealand are considered.

Keywords: CODFISH ISLAND, SOUTHERN NEW ZEALAND, RADIOCARBON DATES, PREHISTORIC OCCUPATION, NINETEENTH CENTURY SETTLEMENT.

INTRODUCTION

Codfish Island is situated just west of Stewart Island near the southern end of New Zealand (Fig. 1). Although named Pegasus Island by Eber Bunker in 1808 (Smith 2002: 15, 46), it was referred to as both Codfish Island and Whenua Hou by 1824 (Middleton 2007: 6). The dual English and Maori nomenclature reflects the island's significant role in the nineteenth century history of southern New Zealand. Sealing gangs were landed there in 1808 and 1809, and one of New Zealand's first mixed-race communities was founded there about 1825–1826 by former sealers and their Maori partners (Anderson 1991; Smith 2002: 46; Middleton 2007). The island is now managed, primarily as a protected habitat for endangered birds, by descendants of this community in conjunction with the Department of Conservation.

A programme of research by the Department of Conservation (Southland Conservancy) has been underway for some years in the southern coasts and islands of New Zealand, with the aim of finding, recording and assessing historical and archaeological sites in order to assist conservation management. Projects on the Snares, Auckland Islands and Stewart Island (Rakiura) have investigated prehistoric and historical Maori occupation (Anderson and

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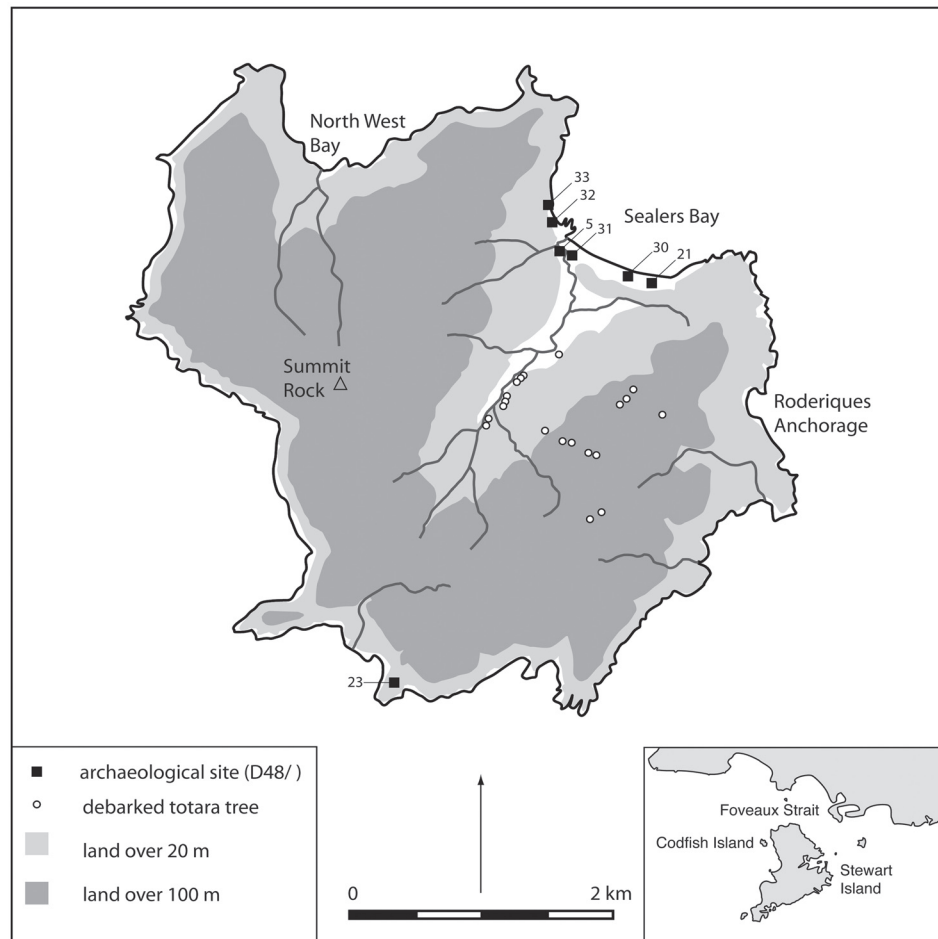


Figure 1: Codfish Island, showing the locations of archaeological sites and debarked tōtara trees.

O'Regan 1999a, 1999b, 2000; Anderson 2003, 2005), sealing and whaling sites (Prickett 2002; Smith 2002), and sites of European castaways and settlers (Anderson 2007; Smith and Gillies 1997, 1998).

A project on Codfish Island, organised by Rachael Egerton (Department of Conservation), included preparation of a history of the past two centuries of human settlement on the island (Middleton 2007) and an archaeological investigation, 12–24 January 2007, by a team of 12 under the direction of Ian Smith and Atholl Anderson. Our archaeological fieldwork recovered a wide range of prehistoric midden and material culture, now in the process of analysis. Here we present the evidence from fieldwork and radiocarbon dating from which it is possible to construct a settlement sequence.

There had been no systematic assessment of archaeological evidence on the island until our fieldwork, and only three sites had been recorded: one (D48/5) based on references in the historical literature; the second (D48/21) inspected only perfunctorily by archaeologists, and the third (D48/23) a chance find of human skeletal remains adjacent to a track on the southern side of the island. Our archaeological investigations focused upon Sealers Bay,

location of the first two previously recorded sites, but we also inspected other potential site locations. Our objectives were: (a) to determine the location and extent of archaeological deposits at Sealers Bay; (b) to confirm which parts of these deposits were remains of the nineteenth century Sealers Bay settlement; (c) to establish whether there were remains of any earlier occupation there; and (d) to determine as far as possible the age and purpose of any earlier settlement.

METHODS AND SITES

Exposed and eroding surfaces were inspected for archaeological evidence, and in places a metal detector was used to assist in locating areas of human activity during the historic period. In selected locations, subsurface deposits were sampled using 75 mm diameter sand augers, and/or restricted test pitting by spade and/or trowel. A log of these observations is presented in Smith and Anderson (2007: Appendix 1). Locational data were recorded with differential GPS (Trimble GeoXT) and analysed using ArcGIS 9.2 with the assistance of Moira Jackson (University of Otago). Excavations were undertaken in seven locations using standard archaeological procedures. In conjunction with our work, Mike Hilton and Teresa Konlechner of the Geography Department, University of Otago, completed a detailed topographic map of the Sealers Bay dunes, plotting in most of our archaeological data points.

As far as we can establish, Sealers Bay is the only place where people have ever lived on Codfish Island, although no doubt they visited every part of it in the course of fishing, fowling and other activities. Coring and spade pits at North West Bay and Roderiques Anchorage, the only other landing places, uncovered no signs of former occupation, nor were any found by inspection and test-pits at potential rock shelters near Observation Rock and Summit Rock. Some 22 de-barked tōtara trees (*Podocarpus* sp.) in a zone about 0.75 to 1.5 km inland were the only evidence recorded beyond the confines of the bay (Fig. 1).

At Sealers Bay we identified four sites (Fig. 2). Most of our attention was focused on SB1, which we were able to confirm as the location of the nineteenth century village already recorded as D48/5. The other previously recorded site (SB2, D48/21) was relocated, but appears to be mostly eroded away. SB3 (D48/30) is an area of exposed archaeological deposits midway along the beach, which we sampled with small test excavations. SB4 (D48/31) consists of scattered observation points near the modern hut and helicopter pad. In Penguin Bay, at the western end of Sealers Bay, we recorded two sites. PB1 (D48/32) is an area of metal debris, at least partly from shipwrecks, at the back of the beach while PB2 (D48/33), on the cliff-top above the western end, is the remains of what appears to have been a still.

SEALERS BAY 1 (D48/5)

The sheltered western end of Sealers Bay has generally been presumed to be the location of the nineteenth century village. Fragments of glass, ceramics and stone tools eroding from a deep layer of charcoal-stained soil at the junction of Sealers and Hydro Creeks provided the first archaeological signals of its presence. A series of auger transects across the flat ground between these creeks showed that large parts of the flat were waterlogged and disclosed no archaeological deposits. However, two zones of archaeological deposits on bands of drier ground were identified (Fig. 3). One of these lay along the foot of the hill

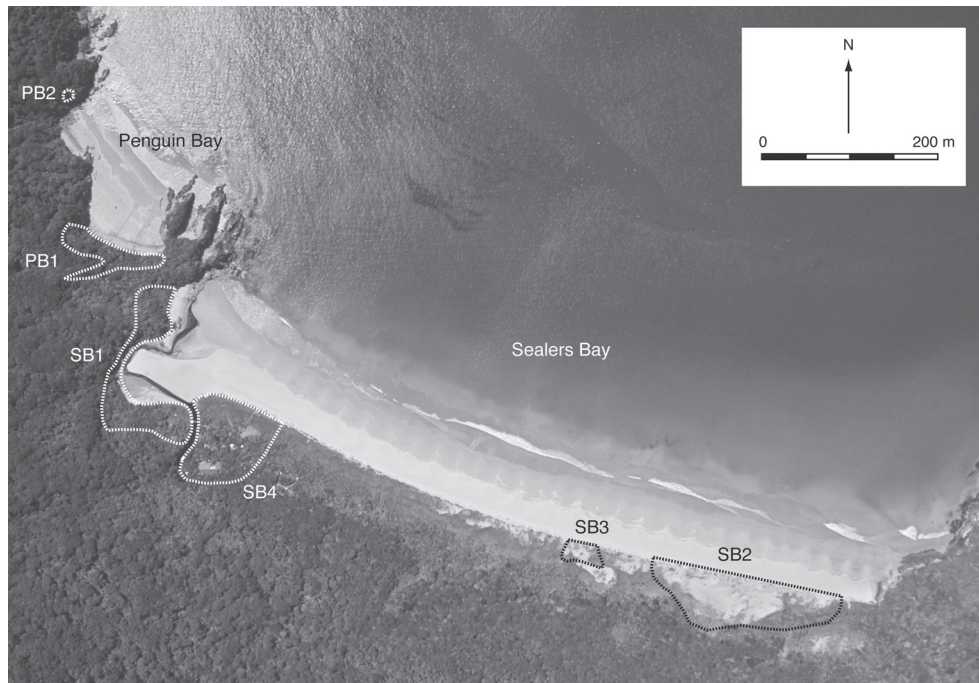


Figure 2: Sealers Bay and Penguin Bay, showing the locations of archaeological sites.

at the western edge of the flat. We sampled part of this with our largest excavation, SB1: Area 1. The second zone occupied a band of sandy soil beside Sealers Creek and was sampled in SB1: Area 4.

Additional archaeological remains, SB1: Area 2, were located on low sloping ground above the shore at the north-western edge of the bay. Augering showed that the site did not extend on to the saddle or headland north of it. However traces of occupation were located on the top of the hill immediately west of SB1: Area 2. Between Areas 1 and 2, part of the site has been lost to erosion, as shown by remnants of ovens exposed in the creek bed beside Area 1, and *in situ* deposits eroding from the bank in SB1: Area 3.

SB1: Area 1

Area 1 was located on a flat natural terrace about 3 m above mean high water immediately south of eroding deposits at the confluence of Hydro and Sealers creeks. Midden and charcoal-stained sediments in auger cores defined the extent of this deposit, and a rectangular arrangement of stones protruding from the ground suggested the presence of a fireplace. Undergrowth was cleared from this area and an 8 x 1 m trench was opened initially. This was later extended to a total of 16 m² (Fig. 4). Three layers were identified and excavation was by natural layers and, within Layer 2, 10 cm spits.

Layer 1 was a brown humus intermixed with grey-brown sand, generally 8–10 cm deep. It contained a few scattered bird bones, along with metal and glass artefacts and several wooden planks that were lying across the sides and back of a chimney base.

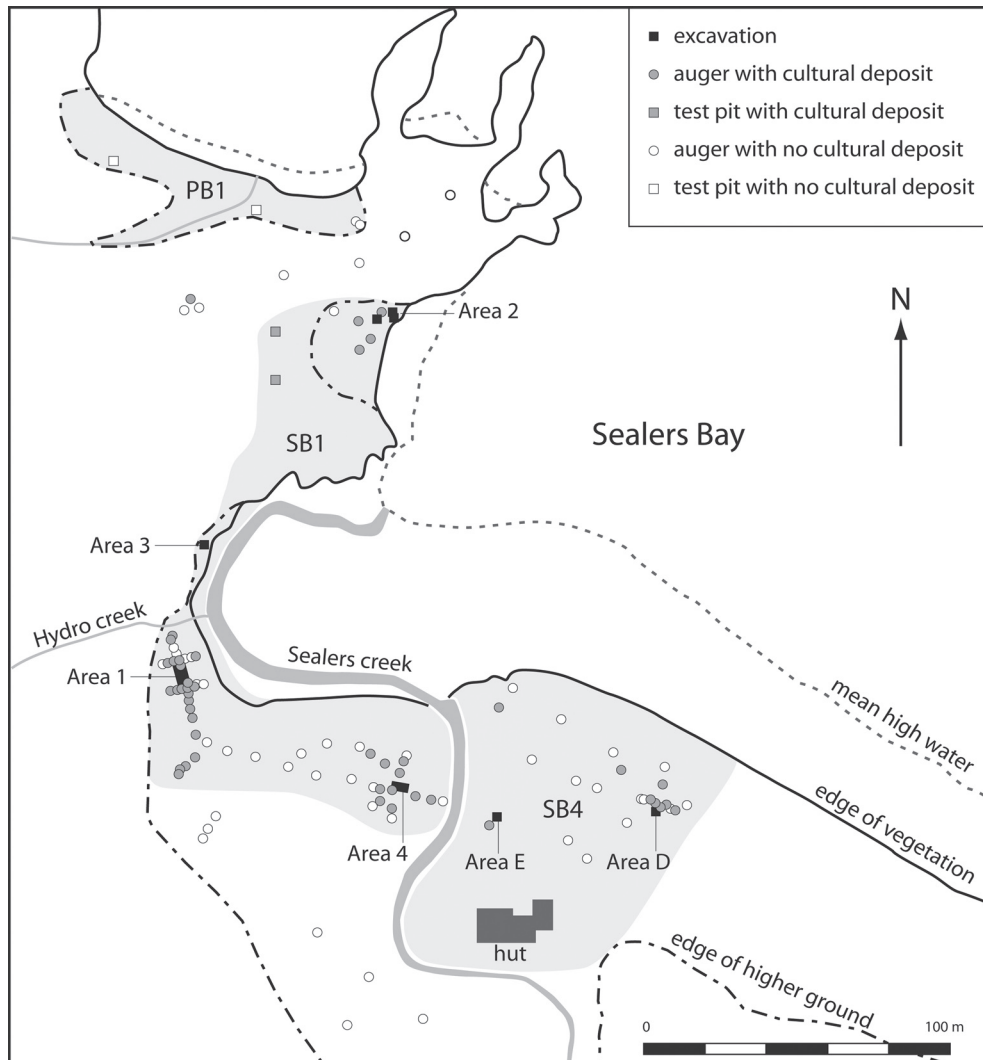


Figure 3: The western end of Sealers Bay, showing the locations of archaeological investigations at Sealers Bay 1 (D48/5), Sealers Bay 4 (D48/31), and Penguin Bay 1 (D48/32).

Layer 2 was a grey sand, lighter in colour at the northern end (rows 1–4) while at the south (rows 5–8) it was darker and charcoal stained. It ranged in depth from about 20 cm to just over 40 cm. Removal of spit 1 from within the chimney base revealed a clearly defined central area of ash with a cobblestone hearth immediately in front, and wide side spaces of ashy-sand, perhaps forming an inglenook. At the base of spit 1 south of the fireplace was a series of wooden planks, which were lying more or less horizontally and oriented north-south. They appear to have been about 25 mm (1 inch) thick, and although now very soft and rotten, had clearly formed a house floor in front of the fireplace. Upright slabs formed a discontinuous wall at the southern end, and in the north-west corner part of the wall slab

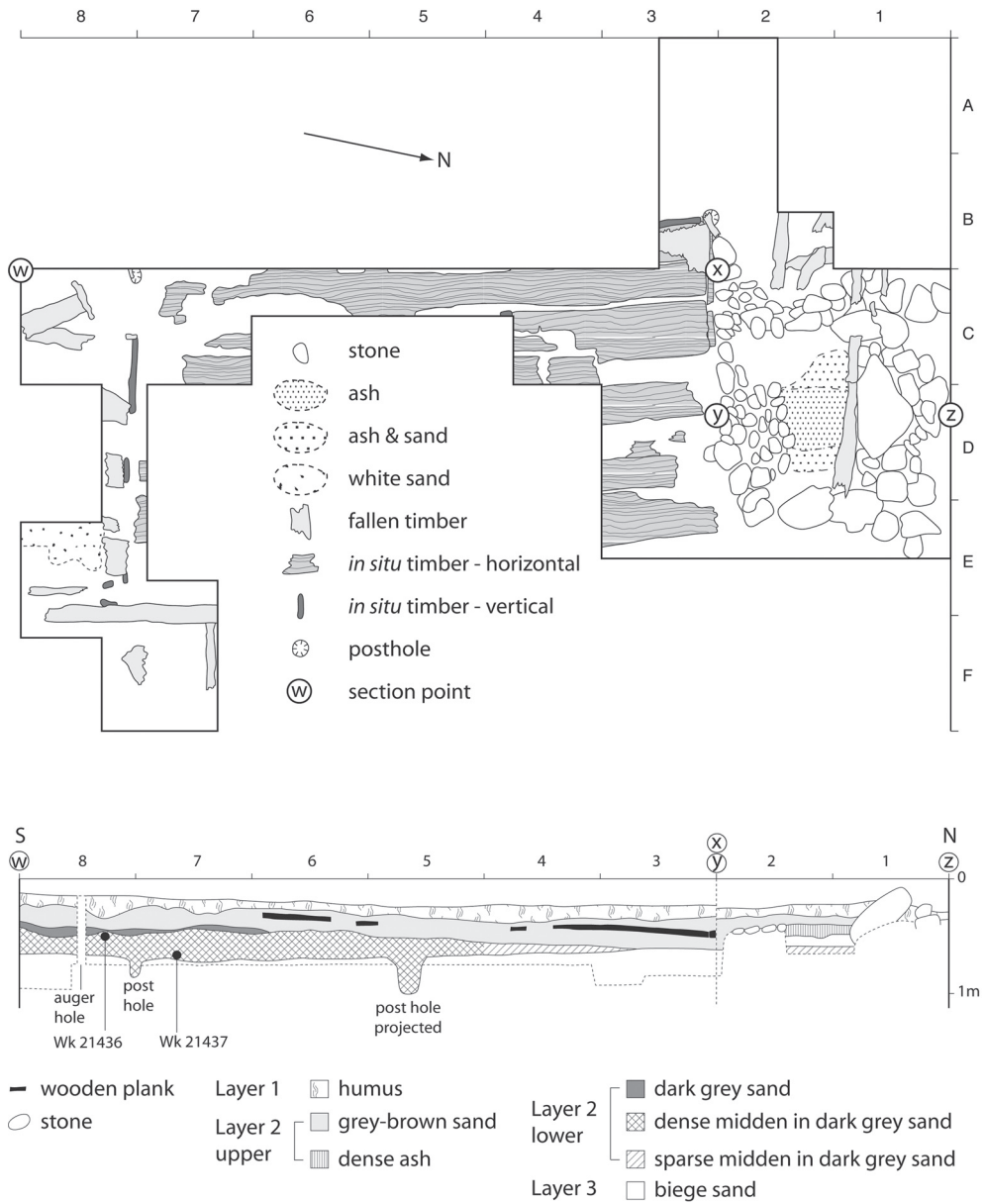


Figure 4: Sealers Bay 1, Area 1: plan of features in Layer 2, Spits 1 and 2; and north-south profile.

had been bent over the floor planks, presumably by soil spilling from the hill slope to the west (Smith and Anderson 2007: Figure 8). Postholes were apparent at both north-west and south-west corners. A single long piece of much heavier timber (about 12 x 5 cm) running through squares E–F/7–8 was presumably a roof beam. Below the floor in squares C–D/3 was a patchy lens of clay, perhaps packing during construction, but for the most part the floor lay directly on grey sand. Ceramic, glass and metal artefacts were found in spits 1 and 2, especially at the northern end (rows 1–3) and the south-east corner (D–F/8).

The lower spits (3–5) of Layer 2 were almost entirely devoid of European items and dominated instead by midden, which was extremely dense in squares C/6–8. This was almost entirely of bone, including fish and marine mammals but with birds extraordinarily well represented. Artefacts included three large blades, two of silcrete, one of porcellanite, and fragments from argillite adzes. The density of this deposit limited the extent to which it could be sampled. A single posthole filled with this midden protruded into the underlying surface in square C6, although from where it was cut could not be established. Its fill contained both stone artefacts and a single piece of glazed earthenware. Layer 3 was a clean beige sand.

The upper component of this area (L1 + L2, spit 1) can be interpreted as a dwelling house from the early nineteenth century village, while the lower component (L2, spits 3–5) derives from what appears to be an Archaic period Maori settlement. There is some evidence of intermixing in L2, spit 2. Probable chimney stones and augering suggest that another house of a similar kind and size lies about 35 m to the south of Area 1. Time and sampling constraints did not permit its investigation.

SBI: Area 2

Area 2 was located just above the shore at the north-western edge of Sealers Bay where a track leaves the beach to cross a low saddle to Penguin Bay (Fig. 5). A total of 5 m² was opened, although only part of this was excavated to natural. In square A1, Layer 1 consisted of grey-brown sandy soil with charcoal and a rich assortment of artefacts including several pieces of shell-edged blue pottery, about eight iron nails, pieces of clay pipe bowls and stems, bottle and window glass, some argillite and quartz flakes, along with fish, bird and dog or seal bone. Layer 2 (excavated only in the NE quadrant of the square) consisted of yellow clay and gravel, below which Layer 3 comprised a pale brown sand with charcoal lenses. From Layer 2 down there was abundant bone midden, mostly of fish. Shell was scarce and generally very degraded and soft. There was virtually no historical material in Layer 3, which probably represents a prehistoric site. Square A2, immediately south, was excavated only to the top of Layer 2 (Fig. 5d). Amongst abundant fish bone were pieces of clay pipes, bottle glass, window glass, iron and copper nails, and one piece of blue and white pottery. There were also quartz and argillite flakes and cores and the base half of a bone barracouta lure point.

Excavation of H2 revealed an upper deposit similar to that in square A1 with abundant bone midden and charcoal, while Layer 2 contained black sand, charcoal and densely packed stones clearly forming an oven (Fig. 5b, c). Historical material was relatively abundant in Layers 1 and 2: a pipe bowl, broken and then used as a ceramic core for flakes, bottle glass, iron nails and two bone buttons. There were also quartz cores and flakes, and argillite flakes and a core. Layer 3 again comprised pale brown sand with charcoal, bone midden and stone artefacts, and only a few fragmentary historic period items. Square J4 contained no cultural material.

These excavations, at the foot of a slump (Smith and Anderson 2007: Figure 11), probably include historic material that had been eroded down over an earlier prehistoric site. Traces of occupation were evident on the top of the spur above the slump, in the form of charcoal-stained soil and hoop iron. Careful inspection of two 1844 illustrations by Selwyn (Middleton 2007: Figure 16 and 17) indicates that they were drawn from the top of this hill, and that they show two dwellings located about the head of the slump. An impenetrable patch of flax bushes prevented detailed survey there.

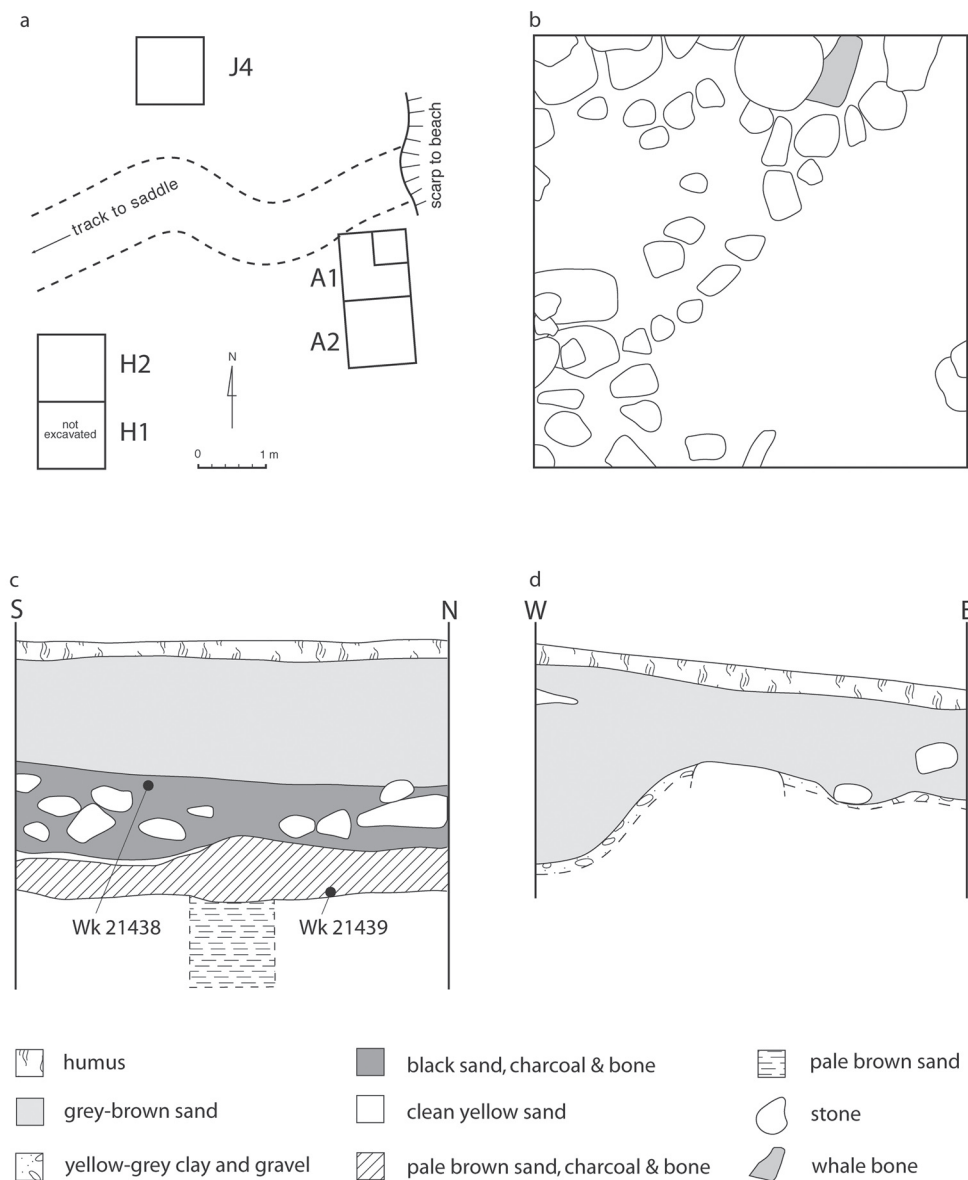


Figure 5: Sealers Bay 1, Area 2. a: plan of excavations; b: H2, plan of Layer 2 surface; c: H2, profile of west baulk; d: A2, profile of south baulk.

SB1: Area 3

Between Areas 1 and 2, occupation material is exposed in several places in the left bank of Sealers Creek. At one of these, part of a basalt adze was recovered and a test pit (0.5 x 0.5 m) was cut into the exposed face. Other than some pieces of charcoal beneath the adze find spot there was no other cultural material. About 1 m to the south an oven was eroding from the bank. The exposed face here was cleaned and then charcoal collected from around and beneath the ovenstones. These observations indicate that at least the prehistoric component of the site identified in Area 1 formerly extended north of Hydro Creek. It probably also extended further east, as indicated by the bases of two ovens in the bed of Sealers Creek immediately east of Area 1 (Smith and Anderson 2007: Figure 12).

SB1: Area 4

Occupation deposits covering an area of about 20 x 25 m were defined by augering on the low flat forming the eastern part of SB1. A 3 x 1 m trench was opened here and four layers were identified (Fig. 6).

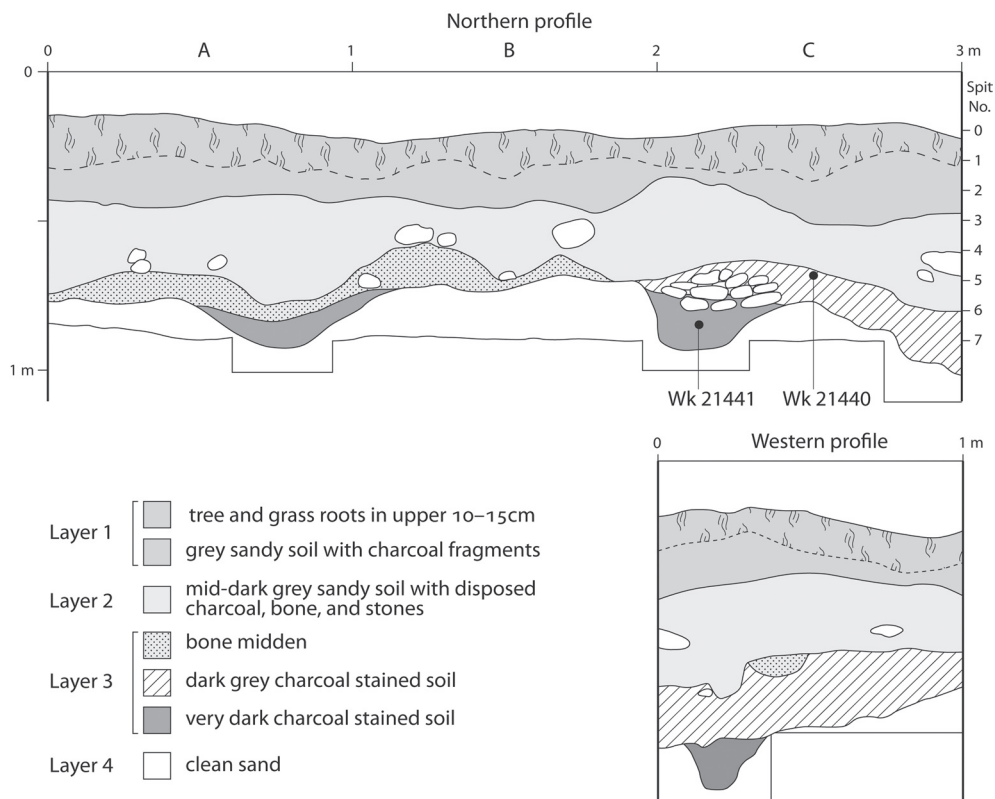


Figure 6: Sealers Bay 1, Area 4: profiles of excavated trench.

Layer 1 was a grey sandy soil, quite deep and homogeneous, and possibly gardenized. Spits 1 and 2 were entirely within this band while spit 3 was transitional with Layer 2. Few

artefacts or bones were found above spit 3. Layer 2 was a darker grey soil interspersed with charcoal and bone, clearly oven rakeout, while Layer 3 was a very dense layer of bone midden adjacent to and partly overlying oven pits. Layer 4 was clean yellow sand.

Historic period items were scarce and found mostly in Layer 1. Below Layer 1, the site produced a broken one-piece bait hook of bone, the blade section of a rectangular green argillite adze — subsequently used as a core — and numerous stone flakes of argillite, quartz, and chert. There was also a large argillite preform flake with cortex and a piece of a large silcrete blade. This appears to be primarily the oven and midden area of a small prehistoric settlement. The artefactual range and types (rectangular adze, large one-piece hook, silcrete blade) and the diversity of material, suggest an Archaic site.

SEALERS BAY 2 (D48/21)

Archaeological remains at the eastern end of Sealers Bay (Fig. 2) were first recorded following a Lands and Survey Department visit in 1981 (NZAA Site Record Form). These comprised an eroding layer of charcoal, burnt bone and oven stones exposed in a blow-out about 110 m from the end of the beach. About 200 m to the north was a second long blow-out with a lot more bones but no other cultural evidence. Currently, at 110 m from the end of the beach there are signs of an old blow-out, partially filled by a parabolic dune advancing eastward along the dune ridge. This will have been active for some time (Mike Hilton pers. comm.) making it unlikely that either of the hollows observed in 1981 is still visible.

Furthermore, it is clear that the front of the dune has retreated significantly. In 1981 the eroding midden layer was 20 m inland from the front of the dune. By 1992 it was only 10 m back, and the following year all that remained was a thin lens of midden slumping from the front of the fore dune. In 2003 a further 15 m were lost from the fore dune in a single storm (Mike Hilton pers. comm.). It seems likely, then, that most of the deposits previously recorded have been eroded and either reburied or weathered away. The erosion zone encompassing these observations forms the bulk of the site area indicated in Figure 2.

Reported contents include a fluted clay pipe bowl, hobnail boot and hoop iron along with fish, bird and marine mammal bone, mussel shells and charcoal, indicating occupation from the historic period and possibly earlier. Human bones were noted in 1992, although they are not otherwise reported on the Site Record Form. However further evidence of burials has recently been collected (Middleton 2007: 68–69) and this vicinity is recognised as an *urupā*. We made no intrusive investigations here.

SEALERS BAY 3 (D48/30)

About midway along the dune crest, close to the old Lands and Survey 500 m peg, we located a small blow-out with old soil horizons eroding from both its eastern and western sides, and a thin scatter of midden and stone on the loose sand below (Fig. 2). The western face was cleaned, exposing a section about 2 m high and 8 m long with a 10-cm-deep band of bone midden about 1.5 m below the crest (Smith and Anderson 2007: Figure 15). A 1.5 x 1 m test trench was excavated from the top of the cultural deposit in four 10 cm spits. These contained fish, bird and mammal bones and a few shells. No historic period items were located. The eastern face was sampled stratigraphically for land snails by Rachael Egerton.

SEALERS BAY 4 (D48/31)

Archaeological deposits were also found in the vicinity of the modern hut, helipad and service areas (Fig. 3). Earthworks, such as the digging of rubbish pits, have from time to time uncovered items including three adzes (Middleton 2007: 68), a copper kettle, clay pipes and ceramic fragments. Although it is now difficult to establish the precise locations of these discoveries, find localities include the dune swale between the hut and generator shed, and along the track from the hut to the bridge across Sealers Creek (Smith and Anderson 2007: Figure 16). None appear to have been inland of the modern hut, and our test pits along the Valley Track further inland found no evidence of occupation (Smith and Anderson 2007: Appendix 1). Seaward of the hut, auger surveys located three areas of buried deposits, two of which (Area D, Area E) were tested further.

SB4: Areas D and E

A series of cores on an intact portion of the dune crest near the helicopter pad disclosed a band of occupation material about 7 x 22 m in area. A 1.5 x 1 m test pit (Area D) disclosed a thin cultural layer at about 70 cm, rich in charcoal and ovenstones but with relatively sparse bone midden. Some dog coprolites were also recovered. Artefacts were also scarce, but included two fragmentary bone points from composite fish hooks, which may indicate a late prehistoric age. There were no historic period items. A spade test pit, 0.8 x 0.6 m, at Area E disclosed a 10-cm-thick layer of abundant charcoal, ovenstones and sparse shell and bone midden at a depth of 0.5 m, sloping down to 0.9 m.

PENGUIN BAY 1 (D48/32)

Penguin Bay was examined during the course of determining the boundaries of the Sealers Bay 1 site. As noted above, the latter did not extend on to or beyond the low saddle between the two bays, and two spade test pits showed only natural soil profiles. However metal detecting on the gently sloping ground behind the beach located a number of large pieces of railway iron and several smaller metal items. Middleton (2007: 70) records that Euan Kennedy noted an historic site in this vicinity from which short sections of railway iron were recovered for use in diving. We also observed two fragments from a trypot amongst the large boulders at the back of the beach (Smith and Anderson 2007: Figure 17), and several pieces of iron, wood and fibreglass that clearly derived from shipwrecks. Although the limited nature of our investigations make it difficult to be sure, it is possible that this site is nothing more than an accumulation of flotsam and jetsam.

PENGUIN BAY 2 (D48/33)

On the cliff top above the western end of Penguin Bay, adjacent to the Mephistopheles Track, we relocated a heap of bricks first observed by Robert Wilson (1959) in 1934. Middleton (2007: 69) notes that these have been identified as the remains of a rum still, likely to derive from rum running pre-1933.

RADIOCARBON AGES

Eight samples of charcoal, each consisting of identified material of short lifespan (Appendix 1), were analysed at the Waikato Radiocarbon Laboratory (Table 1). Calibrated age ranges are shown in Figure 7.

Determinations Wk 21436 and 21437 are from the top and bottom of the midden in Layer 2 beneath the house in SB1: Area 1. The ages are statistically indistinguishable, suggesting a relatively short period of midden formation. Overlap between the two results indicates that this occurred between the late thirteenth and early fifteenth centuries AD, but probably during the fourteenth century. It is clear that this ended well before reuse of this part of the site during the nineteenth century.

Archaeological observations at SB1: Area 2 suggested slumping of nineteenth century occupation debris from the hill slope above the excavations, but also noted historic period materials within an *in situ* earth oven in square H2. Wk 21438 supports our inference that this feature derives from the historic period, and suggests continued use of traditional cooking practices into the nineteenth century. Wk 21439 confirms the prehistoric status of the underlying Layer 3 deposits in this area.

Wk 21440 and Wk 21441 date Layer 3 of SB1: Area 4 to the fifteenth century AD. Similarly, Wk 21442 and Wk 21443 indicate that both of the deposits sampled in SB4 also date to the fifteenth century.

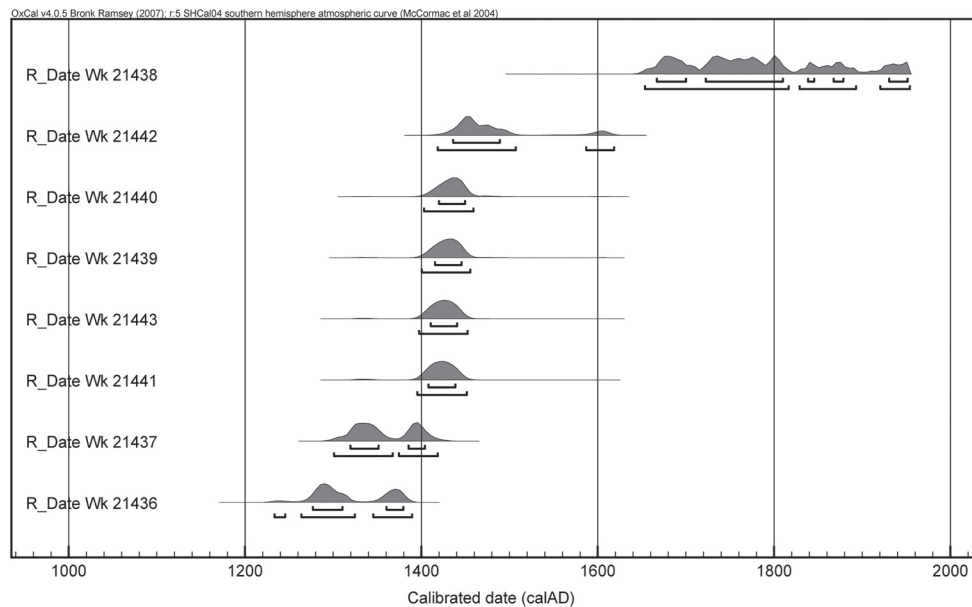


Figure 7: Calibrated age ranges of radiocarbon dates from Codfish Island.

TABLE 1
Radiocarbon dates from Codfish Island

Lab No.	Provenience	CRA	$\delta^{13}\text{C}\text{‰}$	Cal AD (95.4%)
Wk 21436	SB1: Area 1 C8	740 \pm 35	-26.0 \pm 0.2	1233–1245 (.018)
	L2 Spit3			1264–1324 (.601)
				1345–1389 (.335)
Wk 21437	SB1:Area 1 C7	631 \pm 35	-24.6 \pm 0.2	1300–1367 (.588)
	L2 Spit 4			1374–1418 (.366)
Wk 21438	SB1:Area 2 H2	197 \pm 35	-28.8 \pm 0.2	1653–1816 (.681)
	L2 (Spit 4)			1828–1892 (.172)
				1920–1954 (.101)
Wk 21439	SB1:Area 2 H2	529 \pm 35	-24.1 \pm 0.2	1400–1455 (.954)
Wk 21440	L3 (Spit 6)	517 \pm 34	-25.9 \pm 0.21	402–1458 (.954)
	SB1:Area 4 C			
Wk 21441	L3 (Spit 6)	548 \pm 35	-25.0 \pm 0.2	1395–1451 (.954)
	SB1:Area 4 C			
Wk 21442	L3 (Spit 7)	464 \pm 36	-24.8 \pm 0.2	1418–1506 (.852)
	SB4: TPD			
Wk 21443	L2	542 \pm 35	-24.8 \pm 0.2	1586–1618 (.102)
	SB4: TPE			
	L2			1397–1452 (.954)

Note: All samples are charcoal; identifications are listed in Appendix 1.
Calibrated using OxCal v4.0.5 (Bronk-Ramsey 2001).
Southern Hemisphere Atmospheric data from McCormac *et al.* 2004.

DISCUSSION AND CONCLUSIONS

Codfish Island is small and Sealers Bay its most obvious and only reliable point of access. As we have not located any archaeological sites at any distance away from Sealers Bay and given also that this area was the focus of early historical settlement, it is quite likely that we have recovered evidence of the full sweep of human occupation on the island. If that is so, then the radiocarbon chronology suggests that there were two phases of occupation. Although analysis of the artefacts and fauna from these is not yet complete, we utilise preliminary observations regarding these in the following description of the settlement sequence.

The first phase began with settlement on a dry low terrace beside a creek in the western extremity of Sealers Bay, where the best shelter from frequent strong winds out of the west and south is found. Occupation began in the thirteenth century AD, about as early as colonisation of New Zealand generally (Higham and Jones 2004; Wilmshurst *et al.* 2008), and the material has a typical colonisation signature: a huge abundance of bird bones, especially from flightless taxa, coupled with distinctive early artefacts including large struck blades and Archaic styles of adzes. By the fourteenth century, occupation had spread throughout the western end of Sealers Bay. The material culture remained Archaic although large blades appear to have become scarce, while the early focus on birds declined into a more typical coastal pattern of abundant fish, marine mammals and shellfish with relatively few bird bones. This phase of occupation, which was probably discontinuous in any case,

was over by the late fifteenth century AD, except possibly for some sixteenth century occupation in SB4, where there are fish hook pieces of types more common in later prehistory and scattered midden indicative of small, brief campsites.

The second phase of occupation was early historical and the archaeological evidence clearly matches expectations generated by historical accounts of small European-style cottages and material culture associated with maritime pursuits before the onset of shore-based whaling (Smith 2008). Historic period occupation was also concentrated at the western end of the beach. SB1: Area 1 provides outstanding evidence of the form of housing during the nineteenth century settlement phase (about 1825–1850). Our survey observations strongly suggest another house site about 35 m further south. We propose, also, that the huts sketched by Selwyn in 1844 stood at the top of the slump face above SB1: Area 2, making it likely that the upper horizon in our excavations there derives from those dwellings. Historic items were also present in the upper spits of SB1: Area 4, but in very small numbers and we suggest that this area may have been a garden, rather than a housing area. It is certainly the area in which mint introduced in the early nineteenth century is most common today (Smith and Anderson 2007: Figure 15).

The historic period deposits in SB1: Area 1 also showed that while European artefact types such as ceramic plates, tobacco pipes and glass bottles were present, they were not common compared to later historic period sites. Maori artefact types were present in similarly low numbers, and included a small bowenite pendant (Fig. 8) recovered from just below the floorboards of the Area 1 house.

Altogether, the archaeological record from Codfish Island is remarkably full and diverse. We had not expected any evidence of Archaic occupation, yet it actually dominates the current assemblages and site areas. That Codfish Island was occupied and exploited intensively during the colonisation era of New Zealand is not in itself surprising — after all colonisation also reached into the subantarctic and elsewhere in the remote islands of South Polynesia (Anderson 2006). Yet implicit in its additional confirmation that colonisation in about the early fourteenth century reached even small and remote islands in South Polynesia,

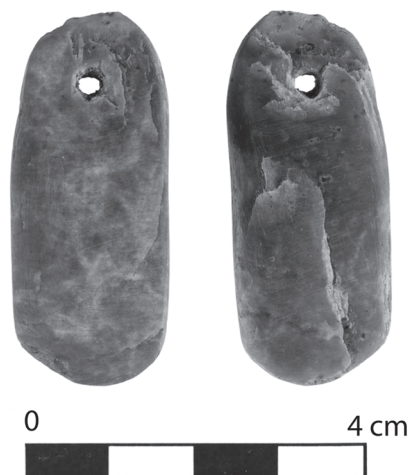


Figure 8: Front and back views of a small tangiwai (bowenite) pendant from Sealers Bay 1, Area 1.

is an issue which is becoming increasingly prominent. If evidence of colonisation is so widespread during the earliest horizon for which we have plausible data, then how is this to be interpreted? Does it mean that colonising mobility was extraordinarily high? Could it suggest that the initial colonising population was large? Did colonisation begin earlier than it appears from current archaeological and environmental data? We cannot address those issues here, but Codfish Island adds another case suggesting that the age and behaviour of human arrival in our region are matters that still need archaeological attention.

ACKNOWLEDGEMENTS

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APPENDIX 1

CHARCOAL IDENTIFICATIONS FOR RADIOCARBON SAMPLES

Sample No. Taxon (number of pieces)

- Wk 21436 *Hebe salicifolia* (6), *Pseudopanax colensoi* (5), *Leptospermum scoparium* (4), *Pseudopanax edgerleyi* (3), *Myrsine australis* (2), *Coprosma* sp. (1), *Griselinia littoralis* (1), *Pseudopanax crassifolius* (1)
- Wk 21437 *Myrsine australis* (5), *Griselinia littoralis* (3), *Leptospermum scoparium* (3), *Hebe salicifolia* (1), *Coprosma* sp. (1), *Aristotelia serrata* (1), *Fuchsia excorticata* (1)
- Wk 21438 Fern ? sp. (4), *Pteridium esculentum* (2), *Fuchsia excorticata* (1), *Pseudopanax edgerleyi* (1), *Ascarina lucida* (1)
- Wk 21439 *Aristotelia serrata* (9), *Hebe salicifolia* (8), *Leptospermum scoparium* (7), *Pseudopanax edgerleyi* (2), *Ascarina lucida* (1), *Dracophyllum longifolium* (1)
- Wk 21440 *Hebe salicifolia* (3), *Leptospermum scoparium* (3), *Coprosma* sp. (2), *Aristotelia serrata* (1), *Fuchsia excorticata* (1), *Myrsine australis* (1)
- Wk 21441 *Hebe salicifolia* (5), *Leptospermum scoparium* (3), *Coprosma* sp. (2), *Pseudopanax crassifolius* (2), *Fuchsia excorticata* (1)
- Wk 21442 *Hebe salicifolia* (7), *Pseudopanax colensoi* (7), *Leptospermum scoparium* (6), *Fuchsia excorticata* (3), *Griselinia littoralis* (3), *Myrsine australis* (2)
- Wk 21443 *Leptospermum scoparium* (4), *Hebe salicifolia* (2), *Pseudopanax colensoi* (7), *Melicytus ramiflorus* 1), *Myrsine australis* (1)

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