

THE EXCAVATION OF THREE ARCHAEOLOGICAL SITES ON MORETON ISLAND: FIRST RIDGE AND THE LITTLE SANDHILLS

RICHARD ROBINS
Australian Environmental Sciences
Griffith University

The three sites reported herein were excavated in 1980 as part of more detailed examination of sites found during an archaeological survey of Moreton Island in 1979 (Robins 1983, also this volume). Two of them are at First Ridge on the northeastern side and the other is located in the Little Sandhills in the southwestern coast (Figure 1). They were excavated for three reasons. First, as they were originally identified as small piles of shell, a site type not previously recorded in coastal southeast Queensland, I wished to obtain information about their form and content. Second, I wanted to demonstrate that small scale excavation should, in certain circumstances, be incorporated into site surveys undertaken to identify and describe the basic characteristics of the archaeological record. Third, I wanted to illustrate the fact that sites which are often rated low in archaeological significance due to their small size, lack of stratigraphy, disturbed condition, etc., may often be of considerable value.

THE FIRST RIDGE SITES (19A - 19B)

These sites were located in a mining exploration track in open Tristania conferta forest at the base the northern side of a high transgressive dune system named "First Ridge" in the north-eastern section of the Island. Some 50m to the northeast, the vegetation and topography changes to heath or closed shrubland on undulating terrain which slopes gently towards Blue Lagoon 500m to the northeast. A steep gully, which runs into Blue Lagoon, commences some 100m to the east. Approximately 70m to the northwest the vegetation changes to open forests and woodlands. The sites are 1.75km inland from the east coast.

The aim of the excavation of Site 19a (originally recorded as Site 19 in the survey) was to ascertain if that which had been recorded as a small compact pile of shell, was in fact such or was part of a larger archaeological feature (e.g. the tip of a large subsurface shell mound). Tachymeter transects, combined with bulk samples taken at 1m intervals with a rat-wall shovel (length 40cm, width 10cm, breadth 10cm), were also made to complement the aims of the excavation and to obtain data about site location. During the course of this work a second site comprising a small compact pile of shell was discovered. Hence the sites were designated Sites 19a and 19b (Figure 2).

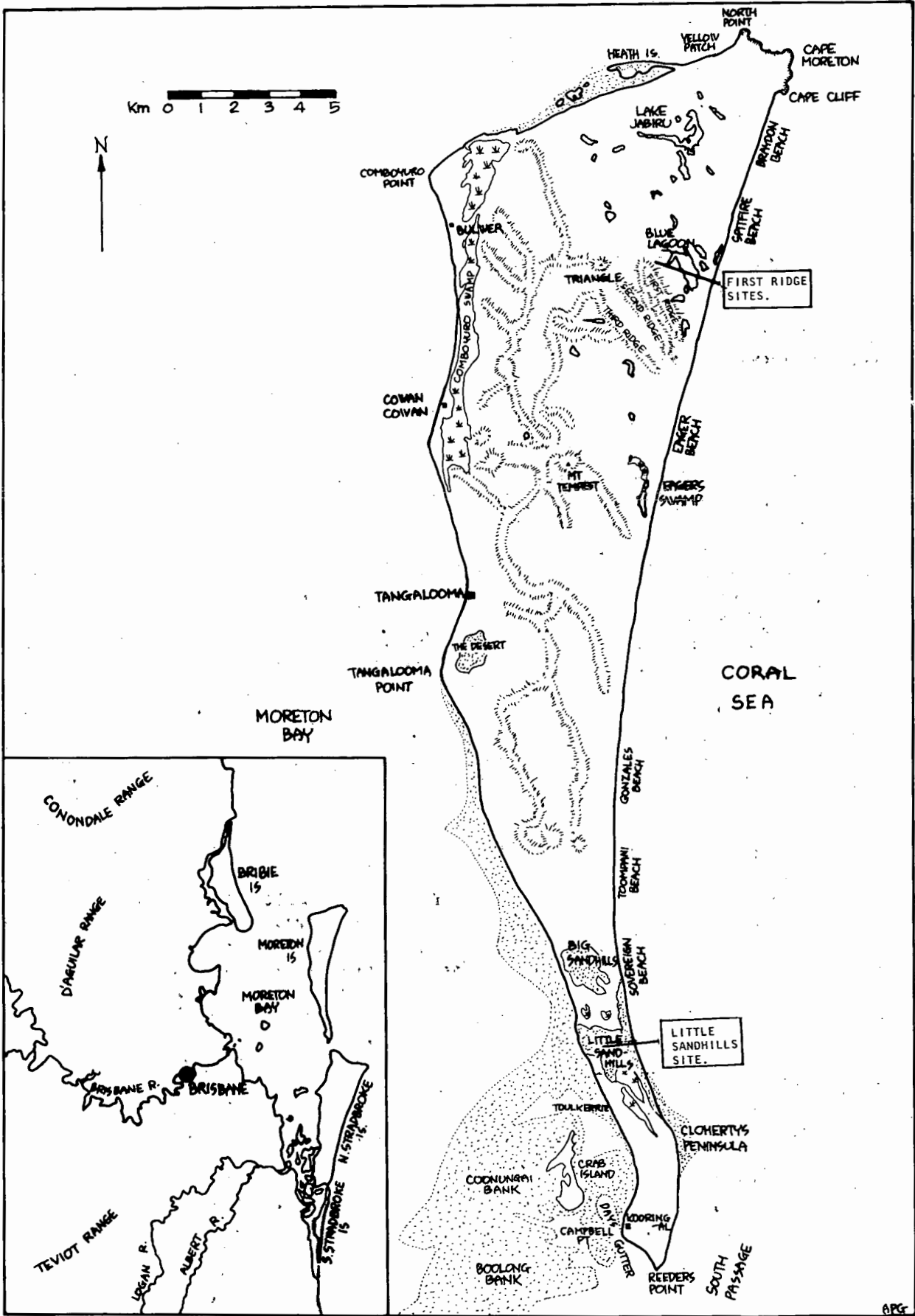


Figure 1. Moreton Island map giving location of sites mentioned in text.

The shovel samples indicated that Site 19a was a small pile of shell. The only other shell in the vicinity occurred in the southern and western transect lines where some surface shell and a thin layer of subsurface shell were recorded. The shell on the west line appears to have derived from Site 19a (see Figure 4), but the shell on the south line is probably derived from a separate but undefined archaeological feature (Figure 3).

A small 1m² grid, subdivided into four units was laid out over 19a. Three units were excavated. Section A was excavated as a 1m x 0.5m rectangle and Section B as a 0.5m x 0.5m square. Excavation proceeded in 5cm spits to a depth of 15cm. Deposits were sieved through 3mm and 6mm mesh. The majority of shell, all Donax deltoides came from the top 6cm of the deposit and only occasionally fragments of shell without particular orientation were thinly and evenly spread through the deposit. There was no evidence of compaction or extensive disturbance of the site despite its position in the middle of a vehicle track. Stained sand, charcoal, grass roots, matted organic matter and insect remains made up the remainder of the deposit.

A sample of approximately one third of the deposit was wet-sieved but only a few additional shell fragments were recovered. Total numbers and weights of shell recovered are presented in Table I.

Table 1. Number and weight of Donax deltoides shell from Site 19a excavation.

		Number	Weight (grams)
<u>Section A</u>	Whole shell	2	9
	Hinged fragments	33	26
	Fragments		14
<u>Section B</u>	Whole Shell	3	12
	Hinged fragments	27	17
	Fragments		<u>108</u>
TOTAL			186

This site may be interpreted as a small irregular pile of shell with a maximum area of 4m². Excavated data suggest that the entire site contains about 250g of shell, a figure within the shell weight range obtained from other Moreton Island sites (19b, 31-37, 58/1-3, 59/1-10 - see Robins 1983)).

At site 19b shovel samples were taken on east-west transect at 1m intervals along the track for a distance of 5m from a central datum point. On the south line, fragments of shell (Donax deltoides) were located at the 3m mark at a depth of 7cm (Figure 4). On the north line, fragments of shell (Donax Deltoides) were recorded on the 2m mark at a depth of 7cm (Figure 4).

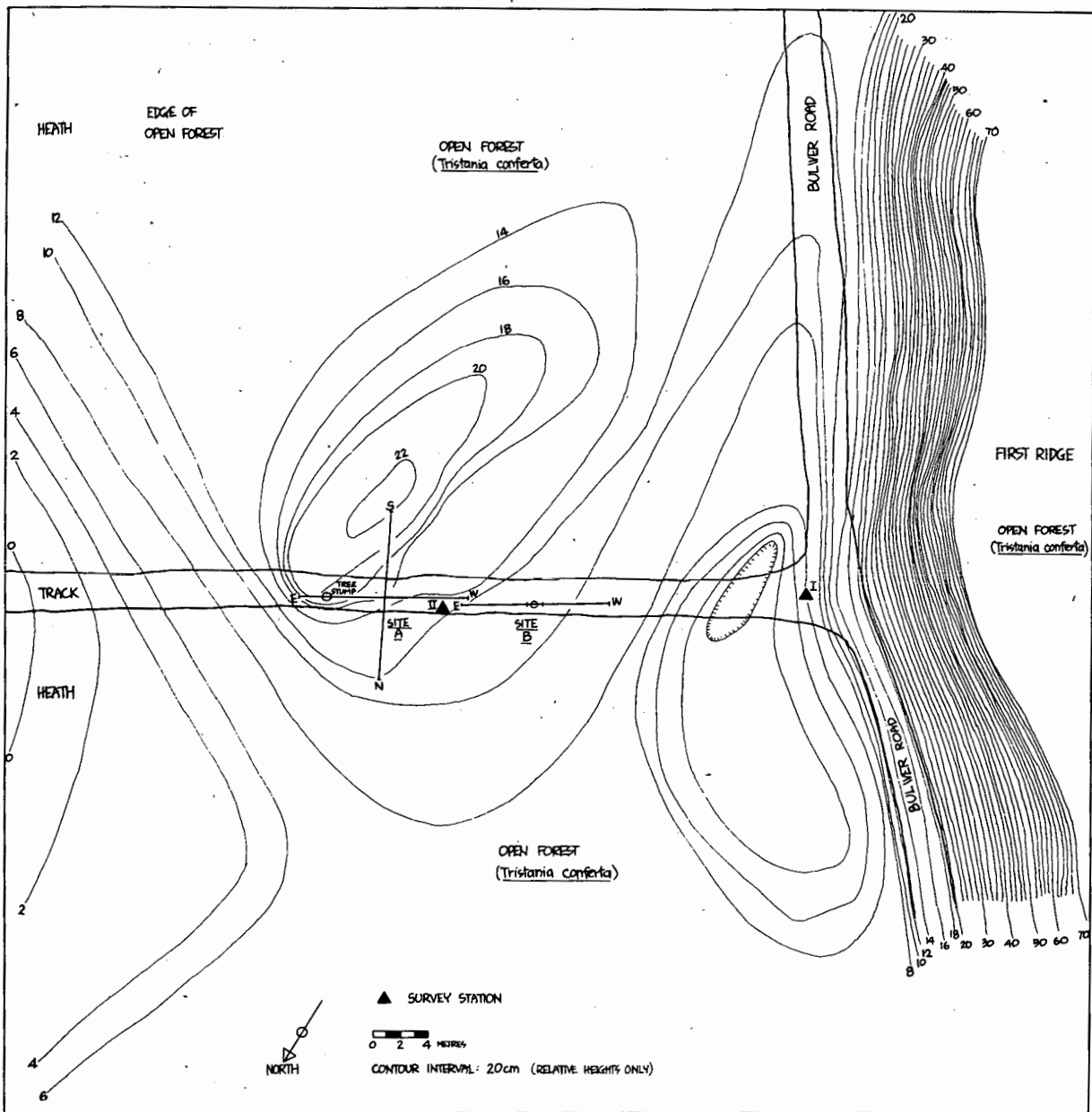


Figure 2. Plan of First Ridge sites 19a and 19b showing shovel sample transects.

A 1m x 1m grid was laid out and subdivided into quadrants labelled A-D. Quadrant D was excavated in 10cm spits (to minimise damage to shell to a depth of 20cm). The deposit was sieved through 6mm and 3mm mesh. It consisted of a compact but uneven deposit of *Donax deltoides* extending from the surface to a depth of 12cm (Figure 5). It showed no evidence of fragmentation or disturbance as a result of the track construction and use. The site may be interpreted as an area of not more than 4m² of compact shell with a maximum depth of 12cm. Extrapolation from shell in square D gives an estimated weight of 9,400g for the entire site. Shell submitted for radiocarbon dating gave an environmentally corrected age of 1150 \pm 70 BP (Beta 1946). This is the second

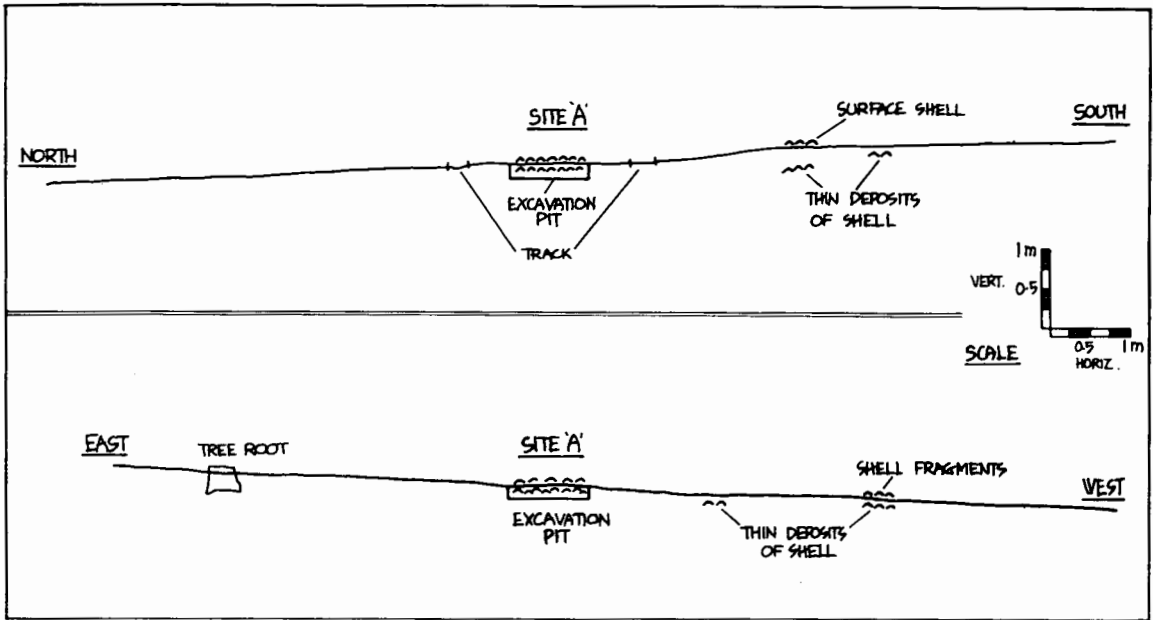


Figure 3. Site 19a shovel sample transects.

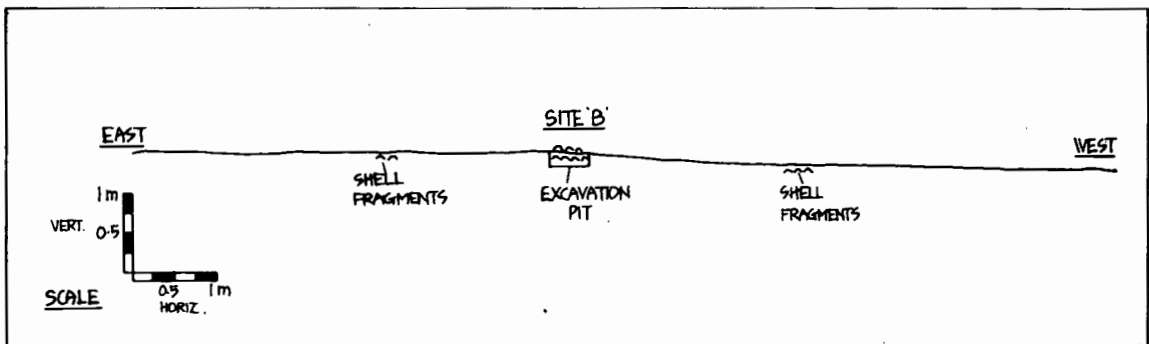


Figure 4. Site 19b shovel sample transect.

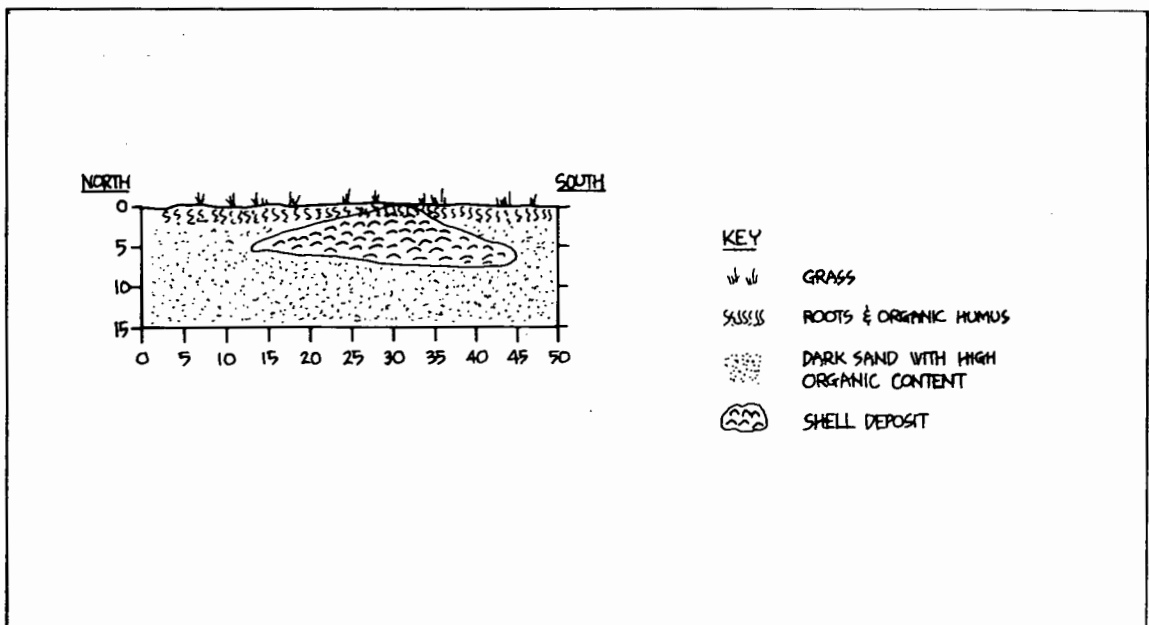


Figure 5. Site 19b excavation profile of East face, Section D.

oldest date yet obtained for a site on Moreton Island. Apart from shell, the deposit contained stained sand, charcoal, grass roots, matted organic matter and one whiting otolith. In fact, shell was more compacted and less fragmented than that in site 19a. Numbers and weights of shell recovered are given in Table 2 below.

Table 2. Number and weight of Donax deltooides shell from Site 19b

		Number	Weight (grams)
<u>Section D</u>	Whole shell	63	390
	Hinged fragments	338	445
	Fragments		<u>1527</u>
	TOTAL		2362

The weight of shell from this site was significantly greater than that from any other of the small shell piles collected during the Moreton Island survey. In fact, Site 19b contained five times more shell than the next largest pile and more than 200 times the amount found in the smallest pile. Although morphologically similar to other sites in terms of depth, area and components, this site is anomalous in terms of total amount and density of shell. Although further work on similar sites throughout the island is needed before this anomaly may be explained, two possible explanations are offered below for future resolution.

1. The sample of shell piles on which this comparison is made is not a representative one or one which may be biased towards smaller samples.
2. This site represents the remains of an event or activity different from that producing the smaller ones.

The site was revisited in 1981. A large area (ca.2,500m²) had been dug up by pigs and traces of shell were visible throughout the area. Ironically, the very fact that Sites 19a and 19b were in the middle of a track may have contributed to their preservation. Thus, excavation of sites on the basis of their surface characteristics or situation alone, may prove inaccurate and misleading.

THE LITTLE SANDHILLS SITE (No. 59)

Site 59 is located in a north-south running depression in giant active sand dunes within the Little Sandhills 1.1km from the east coast and 650m from the west coast. The immediate locality was bare of vegetation at the time of survey. Some 30m to the south, grasses and small Melaleuca trees grew in a seepage area. The site comprised 10 small piles of shell, some eroded and scattered, associated with stone artefacts scattered over an area of approximately 90m². Recent rains had caused a rise in the water table and most of the site was saturated.

Site 59 contained the clearest examples of small shell piles recorded during the initial survey. It was also the only site in the southern sector associated with a large amount of stone material. Systematic collection and excavation of this site was undertaken to provide data about the composition of small shell piles and to assist in determining the distribution of stone material throughout the island.

The site was gridded into one metre squares. A density plot of the shell was made (Figure 6) and the site was excavated by square to a depth of 5cm. All excavated material was sieved through 6mm and 3mm mesh. The shell piles were excavated individually and in toto because of their friable condition and the mixed orientation of the shell. Shell, other faunal material and stone material not directly associated with the piles, were collected by square and bagged separately.

The site exhibited two distinct stratigraphic units. The top 2-4cm consisted of white siliceous sand. Beneath this, and sharply delineated from it, was a darker layer, samples of which were collected. This was tested for high mineral or organic content using a 20% solution of hydrochloric acid. Within two weeks the sand had been bleached white, indicating that the original sample had a high organic content. Rat-wall shovel samples of this layer showed that it became lighter with depth, returning to white sand at about 40cm. This profile is typical of podsol horizons in vegetated areas of the island and is similar to those found in samples taken in forested areas of Quadrats 213 and 215 (see Robins 1983). Samples of wood from a dead tree near the site were identified as Eucalyptus intermedia (M. Cause, Queensland Forestry Department, pers. comm.) indicating that the area may have once been open woodland or forest.

Some of the shell piles proved upon excavation to be only a thin veneer of shell in the white sand. Others (F4, F8 and F9) extended up to 10cm into the dark sand. F9 was under and partly overlapped by F7. Shell in the piles had come from both the east and west coasts. Fish bone was recovered from some of the piles and other fragments of burnt bone (possibly dugong) were found throughout the site. Some of the shell had been burnt. The faunal remains for each pile are presented in Figure 6 and the size and densities indicated in Figure 7. A description of the stone material is presented elsewhere (Robins 1983). Shell from F4 was dated to $102.1 \pm 7\%$ modern (Beta 1945).

Concerning interpretation, this site needs to be treated with a degree of caution. For example, a large shell scatter observed at the southern end of the site in 1979 had been covered with shifting sand by 1980. Despite the fact that all the stone material observed on the site was collected after sieving, artefacts within the collected area were observed in 1981. A stone axe was found on the site six months after this collection by J. Hall (University of Queensland, pers. comm.). The site has been subject to continual change and there is currently no way of establishing the contemporaneity of the stone material and the shell piles.

Nevertheless, some basic statements can be made about the site. It consists of a number of small discrete piles of shell. The shell from the site indicates that both the east and west coasts were exploited and that fish and dugong were cooked and probably eaten at the site.

From the superimposition of some piles it is probable that this site does not represent a single event in time, but at least two separate events. The sandstone fragments, a stone axe and a large number of stone flakes also indicate that the site may have been associated with maintenance, manufacturing and food processing activities.

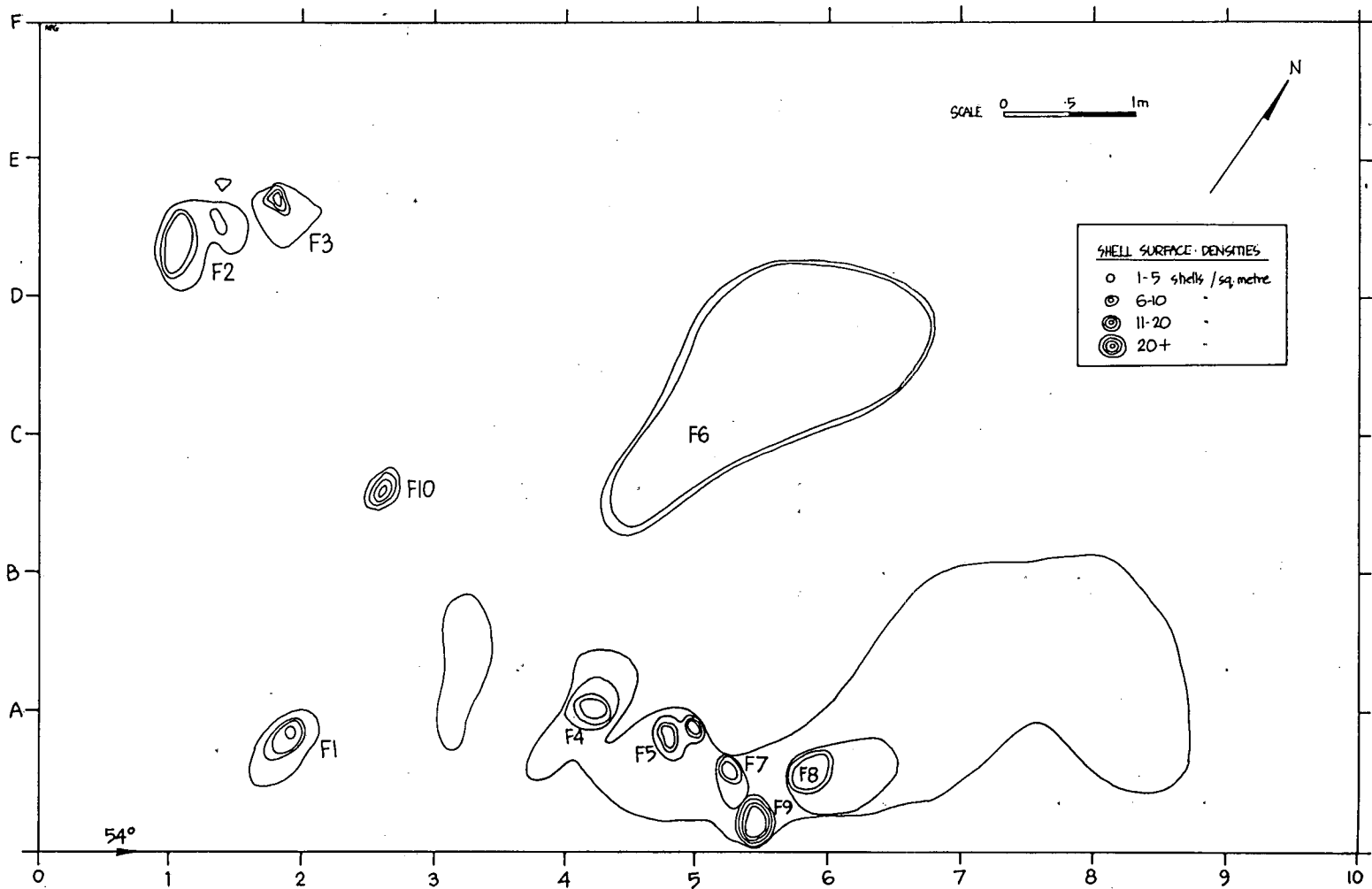


Figure 6. Site 59 - shell density plot.

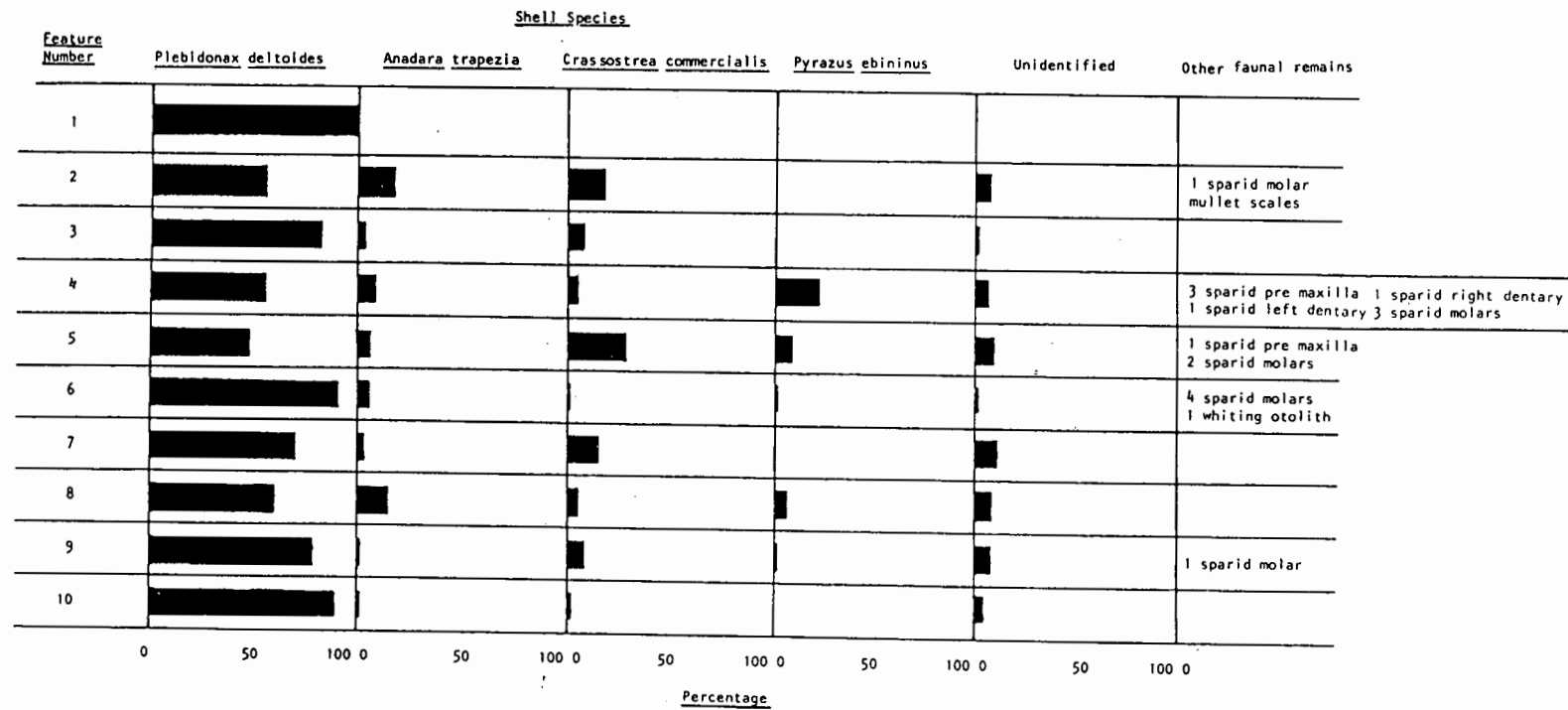


Figure 7. Site 59 - Faunal remains from shell piles.

The site is not old and when it was formed the area was probably open woodland or forest.

DISCUSSION

In terms of their size, morphology and components, these sites were not unique on Moreton Island; similar sites were found throughout the northern and southern sections of the island. For example, 93% (n=42) of the sites recorded in the northern section of the island were less than 10m² in area. These sites have been interpreted as the remains of small temporary campsites. Similar small discrete piles of shell known to have been left over from meals at temporary camps by Aborigines have been observed in northern coastal Australia. Meehan (1982) recorded small piles of shells left at temporary Gidgingali campsites in northern Arnhem Land which she termed "dinner camps". Anderson (Dept. of Anthropology and Sociology, University of Queensland, pers. comm.) also observed small shell piles that were left at temporary campsites by Kuku Yalangi speakers at Bloomfield River, Cape York.

By using small scale excavation and structured collection procedures it is possible to test some of the assumptions that were made about the identification of archaeological features during a survey that relied on surface examination only. In so doing it can be shown that surface examination alone is not a sufficient basis upon which to adequately describe archaeological sites particularly in mobile and shifting environments. It can also be shown that the size of a site or its condition are not a necessary of sufficient basis on which to make an assessment of archaeological significance.

ACKNOWLEDGEMENTS

I wish to thank Lyle Johnson and Ian Walters for their assistance in the field, Ian Walters for faunal identifications and Peter Meuhling for sorting the shell. Thanks also to Dr.J. Hall for his advice and assistance throughout the project's duration. Peta Tinniswood typed the original manuscript. This research was carried out under the auspices of the Queensland Museum Board of Trustees as part of an M.A. degree at the University of Queensland.

REFERENCES

- Meehan, B. 1982 Shell Bed to Shell Midden Australian Institute of Aboriginal Studies. Canberra.
- Robins, R. P. 1983 This Widow Land: An Evaluation of Public Archaeology in Queensland using Moreton Island as a Case Study. Unpublished M.A. Thesis, University of Queensland.