

## ARCHAEOLOGY OF THE GYRANDA REGION, DAWSON RIVER, CENTRAL QUEENSLAND

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### INTRODUCTION

This paper presents the results of survey and excavation in the upper Dawson area of the Central Queensland Sandstone Belt, a sandstone-dominated environment bounded by the townships of Banana in the east, Blackall in the west, Springsure in the north and Injune in the south, and which includes the Central Queensland Highlands (Walsh 1984:1). The work was undertaken as part of the environmental impact study for the Gylanda Weir commissioned by Cameron McNamara for the Queensland Water Resources Commission (Morwood 1985, 1986; Godwin 1985). However, the results of the study, and the potential of the area for future research, have a wider interest.

### THE SETTING

The study area is located in the upper Dawson Basin, a distinct geographic feature of the Central Queensland "Sandstone Belt" (Figure 1). The upper Dawson Basin is roughly circular with Taroom at the centre and is about 15,500km<sup>2</sup> in area. It is bounded by the Great Divide in the south, the Carnarvon, Lynd, Expedition and Bigge Ranges to the west, the Dawson Range to the North and the Auburn Range to the east. The Dawson River flows north through a gap between the Dawson and Auburn Ranges to meet the Fitzroy River west of Rockhampton. Although periodic droughts occur, the Dawson has never been known to dry up during historic times.

The Gylanda Weir near Cracow is located on a section of the Dawson River flanked by wide river terraces, then undulating hills. However, moving upstream (south), the river becomes progressively more deeply incised and narrower, with the Nathan Gorge system extending from 8 to 31km upstream of the weir site. Still further upstream, as far as the existing Glebe Weir, the Dawson passes through gently undulating plains which have been extensively cleared for agriculture.

Three broad land systems have been described along the "Gylanda" section of the Dawson River corresponding to the three sections described above (Speck *et al* 1967) and these are as follows:

A) The Collabah land system from the Gyranda Weir site upstream to the mouth of Nathan Gorge. This comprises a main river channel, terraces, levees and some tributary channels. River vegetation comprises an open forest dominated by eucalypts and the Dawson River Palm, Livistonia sp.

B) The Carborough-Nathan land system characteristic of Nathan Gorge. Here the Dawson is flanked by sandstone cliffs and steep hills rising up to 130m above the river. River terraces are narrow with the riverine vegetation dominated by Melaleuca, Callitris and a low scrub/grass understory. Livistonia/Eucalypt communities occur as discrete bands.

C) The Wooleebee Land system predominates upstream from Nathan Gorge to the Glebe Weir. This comprises fluvial plains up to 8km wide. The characteristic vegetation is a poplar box (Eucalyptus populnea), grass woodland with scattered E. orgadophita and Callitris columellaris. Patches of brigalow scrub (Acacia harpophylla) also occur here.

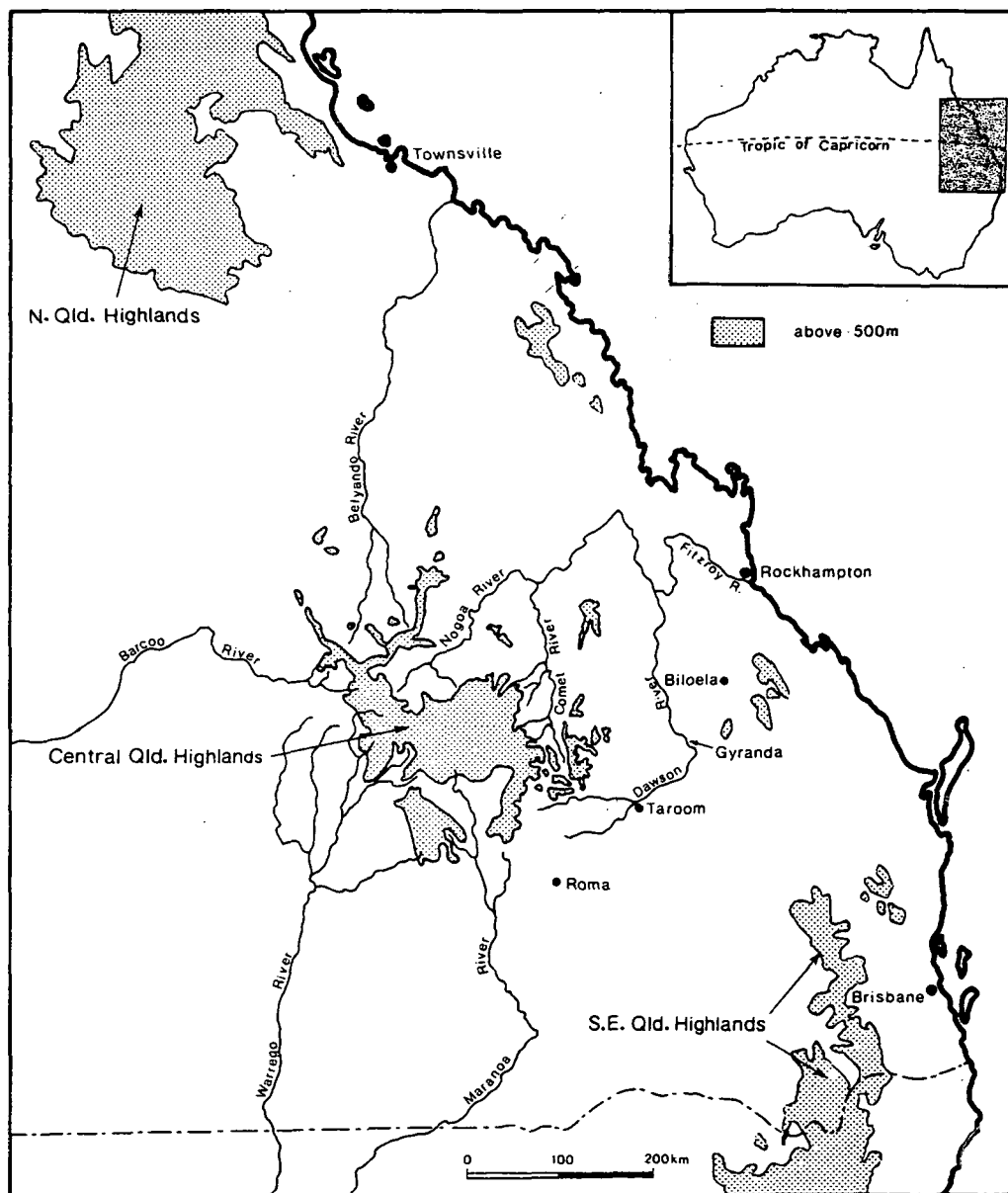


Figure 1. General location of the Gyranda section of the Dawson River.

## THE SURVEY

### Survey Methodology

The survey strategy was quite dependent upon the vagaries of weather and ease of access as heavy rain made some tracks into the study area impossible. However, two priorities were decided upon:

1) The investigation of those areas which are to be directly affected by construction of the Gylanda Weir and associated facilities (e.g. tracks and borrow pits). This involved a systematic survey of the Gylanda Weir site south to the mouth of Nathan Gorge.

2) The examination of a sample of each of the three broad land systems to assess the potential for site preservation and exposure, and the likelihood that sites, if present, would be affected by weir construction. The size of the sample was dictated by time constraints, access and the difficulty in traversing the terrain. For instance, the Collibah land system being relatively level and open, allowed the use of motorbikes, and surveys in these areas proceeded rapidly. In contrast, sections along Nathan Gorge were not only difficult to access, but had to be traversed on foot in very difficult field conditions.

Sections examined during the survey comprised the entire Collibah system from the Gylanda Weir to the mouth of Nathan Gorge (13km), the east side of Nathan Gorge south to Cabbage-tree Creek (13km), and the fluvial plains south of Nathan Gorge (7km).

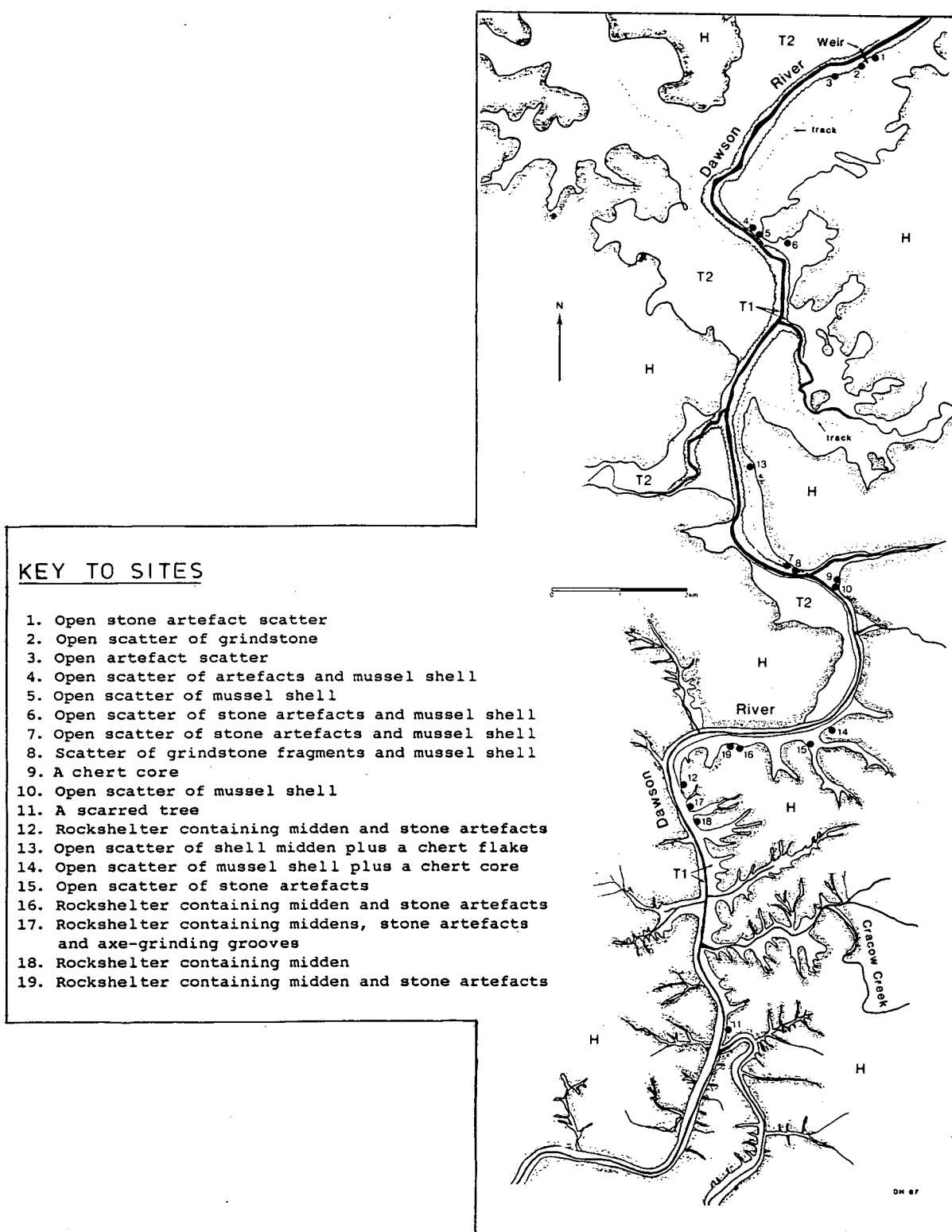
### Survey Results

As Figure 2 shows, nineteen sites were recorded. The majority (14) were surface-scatters of fresh-water mussel shell and stone artefacts located on higher terraces, ridges and knolls within 60m of the Dawson River channel. The density of such sites was approximately equal in the Collibah land system and along Nathan Gorge. No sites were recorded on the open fluvial plains south of Nathan Gorge, but the nature of the country and previous site reports (e.g. Hill 1980:90) make it clear that surface scatters of stone artefacts occur along the higher river terraces where they are most likely to be exposed by ploughing.

Rockshelters are confined to the sandstone scarps of Nathan Gorge, where in some sections they occur at intervals of one shelter every 50m. The majority of shelters contain no surface evidence of occupation and only four were recorded as archaeological sites. However, test-excavation at Site 19 (below) showed that some rockshelters contain cultural material beneath sterile surface deposits. The western side of Nathan Gorge was not surveyed but is also likely to have rockshelters with research potential.

### SURFACE COLLECTIONS AND EXCAVATIONS

Surface collections of material were undertaken on Sites 1, 2 and 3, which were close to the weir site and were likely to be directly affected by weir construction. In each case the procedure adopted was to number and mark all visible artefacts where they lay, to prepare a detailed site plan with each artefact plotted on it, and then to collect the material.



**Figure 2. The distribution of archaeological sites recorded during the Gyrenda survey.**

Excavations were undertaken at three open sites (5, 8, 13) and two rockshelters (17, 19). The aim was to establish the information content and future research potential of a range of sites, and to obtain occupation dates which could be related to the general Central Queensland sequence. Prior to each excavation, site plans were prepared showing site dimensions, position of stone artefacts and midden scatters, grinding grooves and excavation area. Spits averaged 5cm in depth and all excavated deposits were weighed, dry-sieved through a 3mm-mesh sieve, bagged, then later wet-sieved and sorted into shell, bone, charcoal and stone artefacts in the laboratory. After drawing stratigraphic sections and taking sediment samples, a corner of the excavation was marked with a metal datum peg and the hole was backfilled.

#### Surface Collections at Sites 1, 2, 3

Sites 1, 2 and 3 are scatters of stone artefacts in close proximity to one another along the levee of the Dawson River. The edge of the levee, on which the sites lie, is clear of grass here and suffers from gully erosion and deflation, a legacy of cattle trails along the levee margin. As a consequence, archaeological visibility was generally very good close to the river in this locale, whereas elsewhere thick grass obscured the surface. It is likely that the distribution of artefacts over these sites is not a result of differential surface exposure, but reflects cultural and natural processes of discard and dispersal.

Apart from the stone artefacts, there were scattered fragments of freshwater mussel shell (*Velesunio* sp.), but not enough to warrant collection since they may not represent cultural origin; birds collect mussels and crack open their shells on the banks of the watercourse (Martin 1979).

Tables 1, 2 and 3 present some basic data for each site. The presence of hammerstones and cores is a clear indication that knapping was carried out at these sites. Nearly all cores on the sites exhibited a high level of rotation but few could be considered exhausted because of size limitations. Instead flaking seems to have been discontinued because of knapping problems such as step fracturing, incorrect platform angles, and numerous hinge terminations on the free faces. There were a number of cores for which no matchable debitage (flakes or flaked pieces) could be found, as well as a number of flakes which could not be attributed to any cores found on the site. It appears that some material knapped on site was taken elsewhere while some flakes had been brought from other sites or the cores from which they were struck had been removed.

The heat-fractured category includes all pieces of stone found on the site that appeared to have been subjected, either deliberately or accidentally, to prolonged high temperatures, as indicated by hackley fracture, crenated fracture, pot-lidding and heat crazing. It includes both definite artefacts and stone that possessed no indication of flaking. On close examination, only one from Site 3 provided definite evidence of heating prior to flaking to improve flaking quality. The other 14 pieces could have been fractured from exposure to camp fires.

Five raw material types were represented, and the relative abundance of flaked material of each seems to reflect two things: proximity to source and flaking quality. The Dawson River cuts through Quaternary alluvials in

**Table 1: Areal extent, number of artefacts, average artefact density, and maximum artefact density of sites 1, 2 and 3.**

SITE NUMBER	AREA (M <sup>2</sup> )	NUMBER OF ARTEFACTS	DENSITY (NO/M <sup>2</sup> )	MAXIMUM DENSITY
1	1,200 (120 X 10)	29	0.024	2
2	240 (24 X 10)	28 (22)*	0.116 (0.092)	4
3	1,932 (46 X 42)	28	0.014	4

\*lower figure results from conjoining of a number of the grindstone fragments.

**Table 2: Artefact types on sites 1, 2 and 3**

	SITE 1		SITE 2		SITE 3	
	No.	%(a)	No.	%(a)	No.	%(a)
Flakes/flaked pieces	17	58.62	11	39.28 (50.00)	16	57.14
Cores	6	20.68	5	17.85 (22.72)	9	32.14
Ground Pieces	-	-	11(5)	39.28 (22.72)	-	-
Hammerstones	1	3.50	-	-	1	3.57
Heat Fractured	6	30.68	4	10.71 (13.63)	5	17.86
<b>TOTAL *</b>	<b>30</b>		<b>31(25)</b>		<b>31</b>	

\*These figures are larger than those in Table 1 because some artefacts fit into two categories (e.g. some flakes & cores also heat fractured).

(a) Percentages calculated from total artefact numbers in Table 1.

**Table 3: Total number and percentage of different raw materials on sites 1, 2 and 3.**

SITE	RAW MATERIAL									
	andesite		mudstone		chert		silcrete		sandstone	
	No.	%	No.	%	No.	%	No.	%	No.	%
1	-		20	69.0	5	17.2	4	13.8	-	
2	-		11	39.3	3	10.7	3	10.7	11	39.3
3	1	36	15	53.6	4	14.2	8	27.6	-	
<b>TOTAL</b>	<b>1</b>	<b>1.17</b>	<b>46</b>	<b>54.11</b>	<b>12</b>	<b>14.11</b>	<b>15</b>	<b>17.63</b>	<b>11</b>	<b>12.93</b>

this area, but mudstone, the most common type, may be obtained from outcrops less than 3km from the river. The next most common raw material, silcrete, is available from sources no more than 5km from Sites 1, 2 and 3. Chert outcrops no closer than 20km, but is a good material for flaking and has been transported a considerable distance from its source. On the other hand, andesite, a low quality flaking material, is available within 10km, but only one piece was found.

The size of the chert flakes is 30% to 80% smaller on average than for those made of mudstone and silcrete (Figure 3). The greater reduction of chert reflects both the distance it has been transported and its better flaking qualities. A similar trend was noted for the cores, as the average weight of chert cores is less than half that for mudstone and silcrete cores on Site 3.

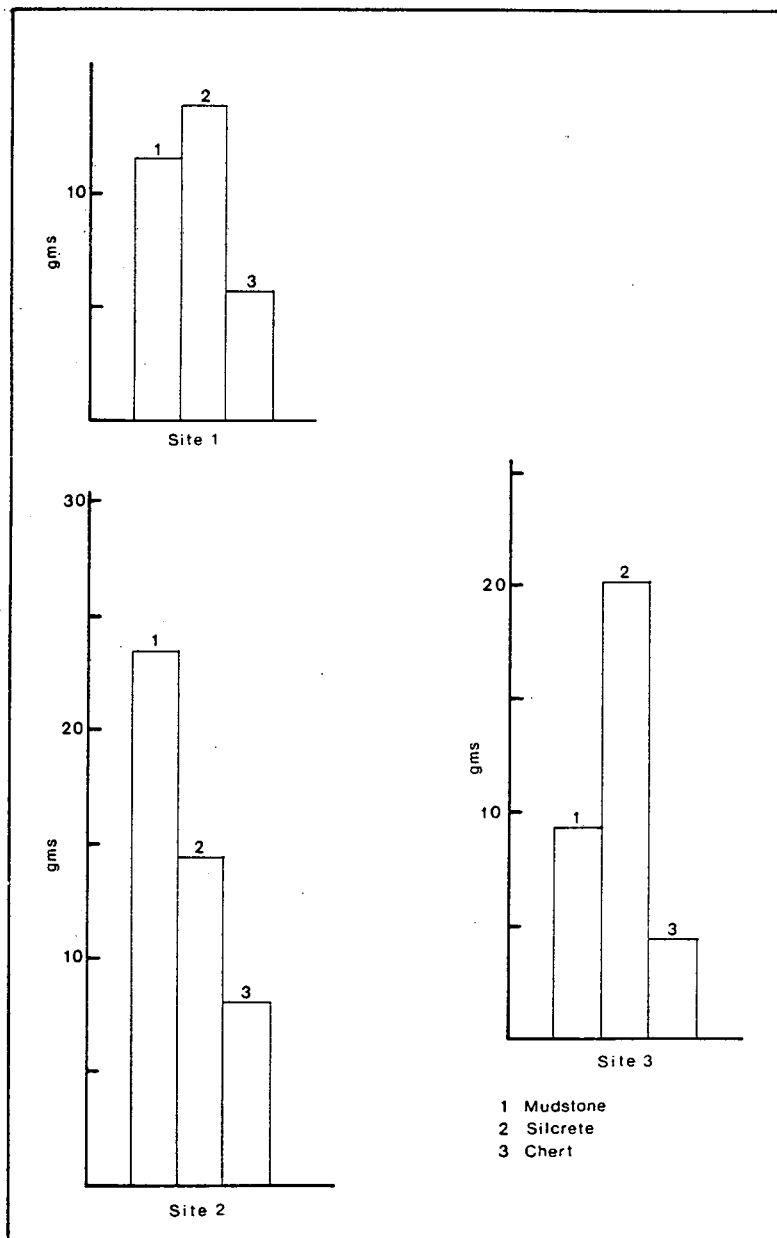


Figure 3. Average flake weights for Sites 1, 2 and 3.

Only 17 of the 79 pieces of flaked stone (21.5%) showed any signs of retouching or use. Of these, only one could be called a formal tool type, this being a small scraper found on Site 2. The other 16 showed only a very limited amount of retouching or use. Pieces of grindstone recovered from Site 2 were almost certainly used for seed processing (Mike Smith, Northern Territory Museum; pers. comm.). Early European settlers and explorers on the Dawson noted that local Aborigines used seeds from "barley grass" (Panicum decompositum) to make a damper-like bread (Reid 1982: 14). The finding of seed grinding equipment is evidence of the presence of women at Site 2 (see Peterson 1968:567). Together with evidence of stone knapping, a predominately male activity, this points to the presence of both sexes on site. Panicum decompositum is ready for harvesting in early summer, needing a period of strong growth in the spring for the seed head to reach maturity (Martin 1979). Thus, the seed grinding activities on Site 2 indicate summer occupation.

The distribution of grindstone fragments on Site 2 also serves as an index of the degree of lateral displacement of all material. When the 11 grindstone fragments were matched on the basis of refitting, similarity of raw material and similarity of thickness of fragments, it was determined that they represent a minimum of four grinding slabs and a muller. In the case of Site 2, scuffing and treadage, rather than water action, are the most probable causes of displacement. This is reflected in the dispersal of five fragments from the same grindstone: the three smaller grindstone fragments (3cm x 3cm, 6cm x 4.5cm, 9cm x 6cm) all lay within a 2m "displacement radius" while the larger pieces (20cm x 12cm, 20cm x 17cm) were a minimum 10m distance and 7m apart. If the flaked stone artefacts have only suffered the "small object" degree of displacement, then most of the flaked stone artefacts probably relate to a single episode of knapping on the site, while the three heat-shattered fragments very likely result from a single hearth.

#### Surface Collection and Excavation at Site 5

This site comprises five small scatters of freshwater mussel shell (typically 3m x 1m), seven stone artefacts and a stone-lined hearth on the upper bank of the Dawson River, approximately 3km upstream from Sites 1, 2 and 3 (Figure 2). The river is only 40m from the site, which is bordered on two sides by dense softwood scrub. An old-wire-and-post fence running across the site suggests that the stone-lined hearth might have been of post-European age, possibly the camp fire of the men who built the fence. To investigate this as well as the nature of shell middens in the region, a 30cm x 30cm excavation was undertaken on the hearth and material was collected from the surface of the shell scatters.

The hearth feature was excavated in a series of spits and the charcoal collected. The deposit consisted of two units (Figure 4): an upper unit comprising Spit 1, which contained large amounts of charcoal (119gm); and a lower unit comprising Spits 2 and 3, with less charcoal (14.78gm and 6.22gm respectively). No stone artefacts, bone or shell were recovered, and excavation ceased when charcoal decreased to an insignificant level. As well as large amounts of charcoal, a number of the stones showing signs of heat fracture (crazing and pot-lidding) were excavated.



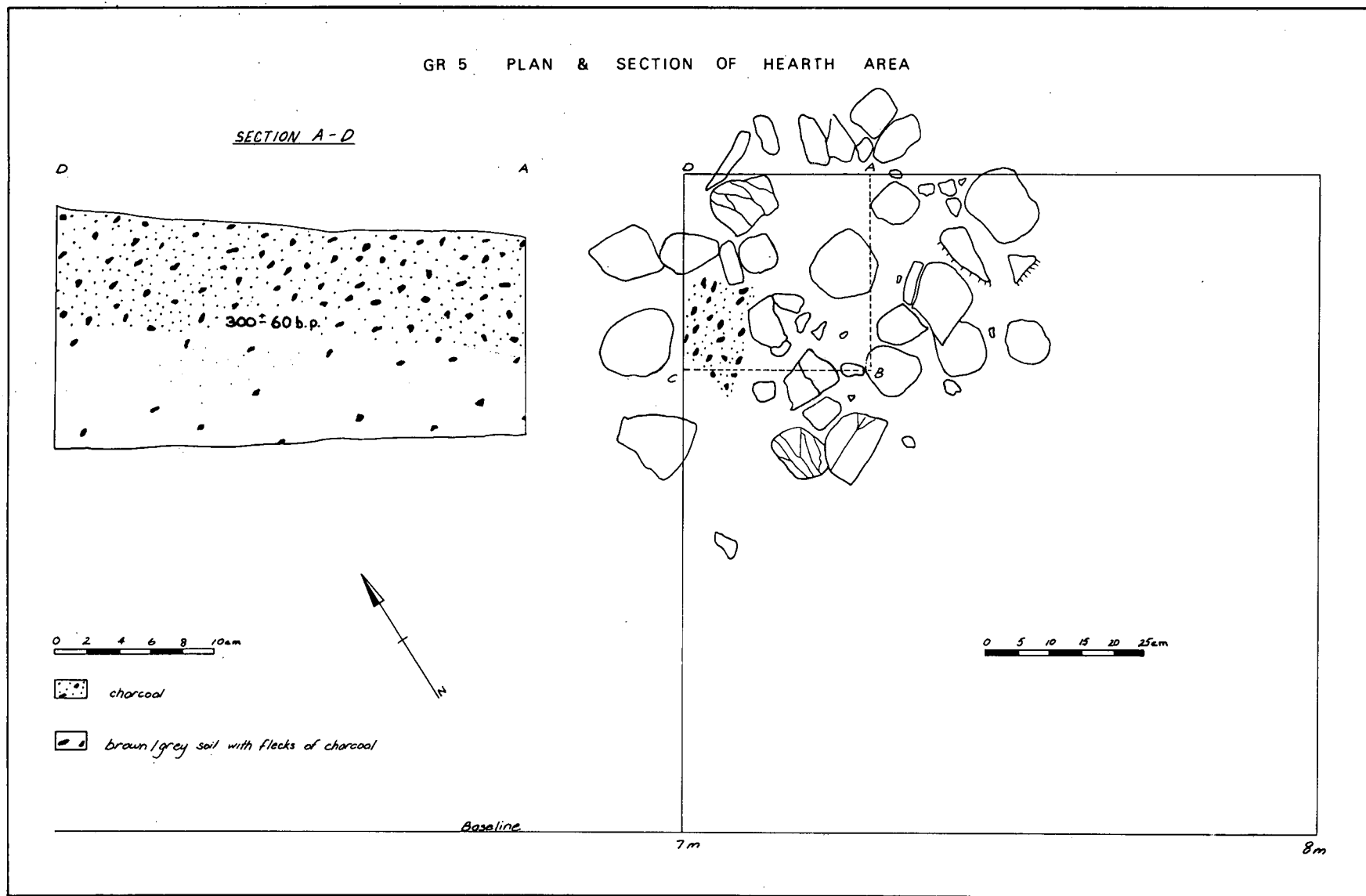


Figure 4. Plan and section of hearth on Site 5.

The charcoal-rich hearth provided abundant material for radiocarbon assay. A sample from Spit 2 was submitted to avoid the possibility of contamination by younger charcoal (bushfires) and yielded a date of  $300 \pm 60$  b.p. (SUA 2362) - a conclusively prehistoric age for the feature.

The midden material consisted of five small scatters, each exhibiting similar amounts of shell, as calculated by weight (Table 4). These closely resembled middens termed "dinner-time camps" by Meehan (1982) from her observations among the Anbara of northeastern Arnhem Land. Shell scatter E was dated to  $610 \pm 50$  b.p. (SUA 2359), indicating that it was not contemporaneous with the hearth despite the fact that the shell scatters lie in a close pattern of association on the same surface. These dates provide clear evidence of multiple visitation to the site over some hundreds of years, resulting in a series of discrete features (N.B. no application of the correction factor for the reservoir effect is necessary for this or other shell dates given in this report - M. Barbetti, N. W. G. Macintosh Centre for Quaternary Dating, Sydney University: pers. comm. ).

The seven stone artefacts collected from this site include three quartz flakes, one possibly flaked quartz pebble, one silcrete flake, one silcrete core and one piece of heat-shattered mudstone. The flakes form too small a sample to be able to say much more of consequence, though their presence suggests that activities other than shell fish consumption occurred at the site.

Table 4. Shell weights from Sites 5, 7 and 8.

SITE/GRID PROVENANCE	WEIGHT (gm)
GR 5/A	176.0
GR 5/B	114.0
GR 5/C	143.5
GR 5/D	45.5
GR 5/E	136.0 (incl. 50gm C14 sample)
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GR 7/A	650.0
GR 7/B	67.0
GR 7/C	37.0
GR 7/D	49.0
GR 7/E	62.0
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GR 8/Test Pit 1/Spit 2	123.0

#### Surface Collection at Site 7

This site consists of a number of fairly dense accumulations of shell (very similar to those on Site 5) against a background of a general, low density scatter of shell fragments and pieces of carbonate. It is situated about 50m from the Dawson River amongst a setting of Callitris and Ironbark. The site lies on the crest of a small hill, over which a vehicle track runs. The site area itself is clear of vegetation but is surrounded by quite thick bush. Salt scalding may be responsible for the low vegetation cover on the site; indeed, this may have been the reason people chose to stop there in the first place.

Five dense shell accumulations were noted on the site and these were collected. With the exception of scatter A, which weighed 650gm, the scatters were of a similar size, averaging 54gm, with a maximum of 67gm and a minimum of 37gm. Similar scatters on Site 5 were interpreted as "dinner-time" camps, and the dates pointing to multiple visits supported this interpretation. Because of the high concentration of carbonate nodules and the possibility of contamination, radiocarbon dating was not attempted.

### Excavation at Site 8

This site lies around the head of an erosion gully at the border of a patch of softwood scrub and more open eucalypt woodland about 200m from the river. The site consists of some surface scatters of shell over an area measuring 20m by 15m. There are also stratified lenses of shell exposed in the sides of the gully at 25cm depth, each only one or two shells thick. It seems likely that the lenses were all part of one large midden as they all lay at the same elevation in the gully bank. The lens on the northern edge of the erosion gully was chosen for excavation as here the shell layer was continuous and well defined.

Two test pits were excavated, both measuring 50cm x 50cm. Test Pit 1 was dug on the edge of the gully, while Test Pit 2 was situated 2m away from this point. Excavation proceeded to a depth well below the visible shell exposure to ensure that there was no further shell deposit which was not apparent in the gully section. In both cases there was only a single lens of shell and two stratigraphic units - an upper layer of friable, soft, brown sand about 18cm thick and a lower layer of concreted, hard, brown/grey sand.

Test Pits 1 and 2 yielded 123gm and <5gm of shell respectively. The latter seems to represent the furthest extent of the midden north of the gully and the shell only extended about a third of the way across the section. The deposit associated with the shell lens was very concreted and could not be sieved on site. Consequently, the material was removed en masse, and wet-sieved in the laboratory, resulting in a near total recovery of shell from this level.

During general excavation no stone artefacts, vertebrate faunal remains or charcoal was recovered, although two grindstone fragments were observed during the initial visit. The absence of other types of fauna and charcoal seems to indicate a specialised site function (i.e. collection and consumption of shellfish).

A sample of shell from Test Pit 1 yielded a date of  $1,050 \pm 50$  b.p. (SUA 2360). This also provides some indication of the age of Sites 1, 2 and 3 which lie on the soft, friable brown deposit constituting the upper unit of Site 8, and overlie a hard, greyish deposit, similar to that dated at Site 8. Thus, Sites 1, 2 and 3 can be no older, and are probably substantially younger than 1000 years. Detailed geomorphologic work is necessary to further examine this suggestion.

### Surface Collection at Site 13

This site is a scatter of freshwater mussel shell with areas of denser accumulations, as seen on Site 7. The midden occurs on a track 100m from the river, surrounded by open eucalypt woodland (Figure 2). A small sample of shell collected from this site yielded a date of  $880 \pm 50$  b.p. (SUA 2361). This site was lying on a deposit similar to that in the upper unit of Site 8. The date also suggests that Sites 1, 2 and 3 are less than 1000 years old.

### Excavation at Site 17

This is a large rockshelter containing midden, axe grinding grooves and stone artefacts. It is 20m long, 12m wide, has a dripline height of about 10m, and occurs at the base of the scarp 50m from the river in a very narrow section of Nathan Gorge. The shelter is fronted by a talus slope with well-grassed, open eucalypt forest. Closer to the river there is Callitris and Melaleuca. The major part of the floor is a bedrock shelf bearing large blocks of sandstone talus, but this is fronted by sandy deposits. Quantities of freshwater mussel shell occur on areas of the shelf, while fragmented shell occurs throughout the sand deposits. In addition, 10 grinding grooves occur on large sandstone slabs within the shelter, while stone artefacts are scattered along the dripline. Although areas of the deposits have been disturbed by animals, the site has considerable archaeological potential.

A 50cm x 50cm pit was excavated at the southern end of the shelter, just forward of the sandstone platform which forms most of the shelter floor (Figure 5). Sandstone bedrock was reached at a depth of 60cm. Freshwater mussel shell, charcoal and bone occurred throughout the deposits, but there was a notable increase in cultural material below 10cm depth. Two main stratigraphic units were identified (Figure 6). Layer 1 was a "lumpy", very dark grey sand (colour: 10YR 3/1; pH: 6.5; depth: 0-10cm). Layer 2 was a powdery, dark-grey sand (colour: 10YR 4/1; pH: 8.5; depth: 10-61cm). Two fine "ashy" lenses were also identified (1a and 2a) which are almost certainly hearths.

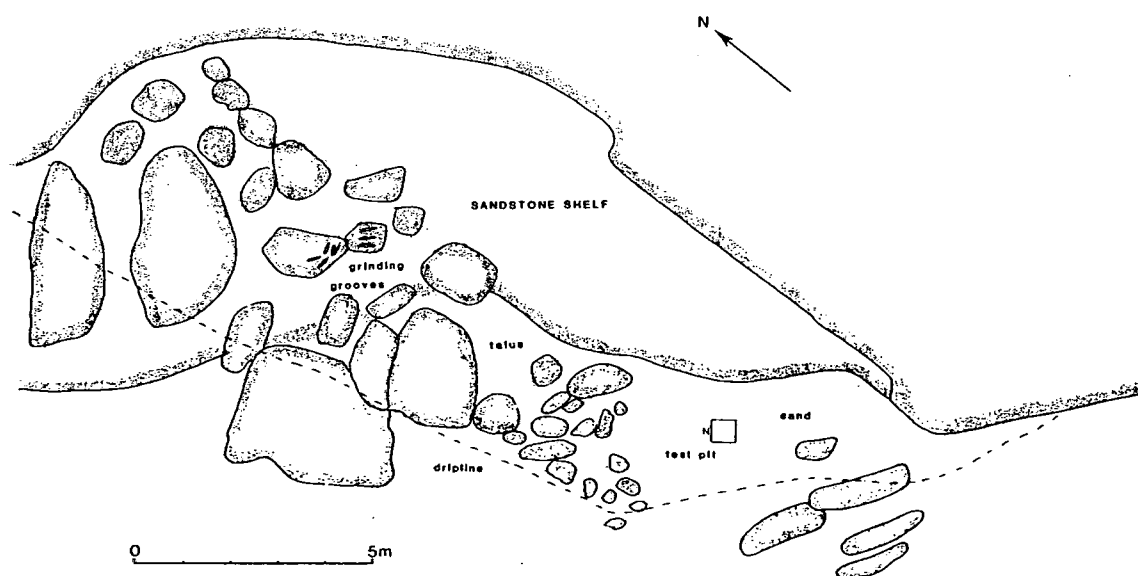


Figure 5. Plan of Site 17.

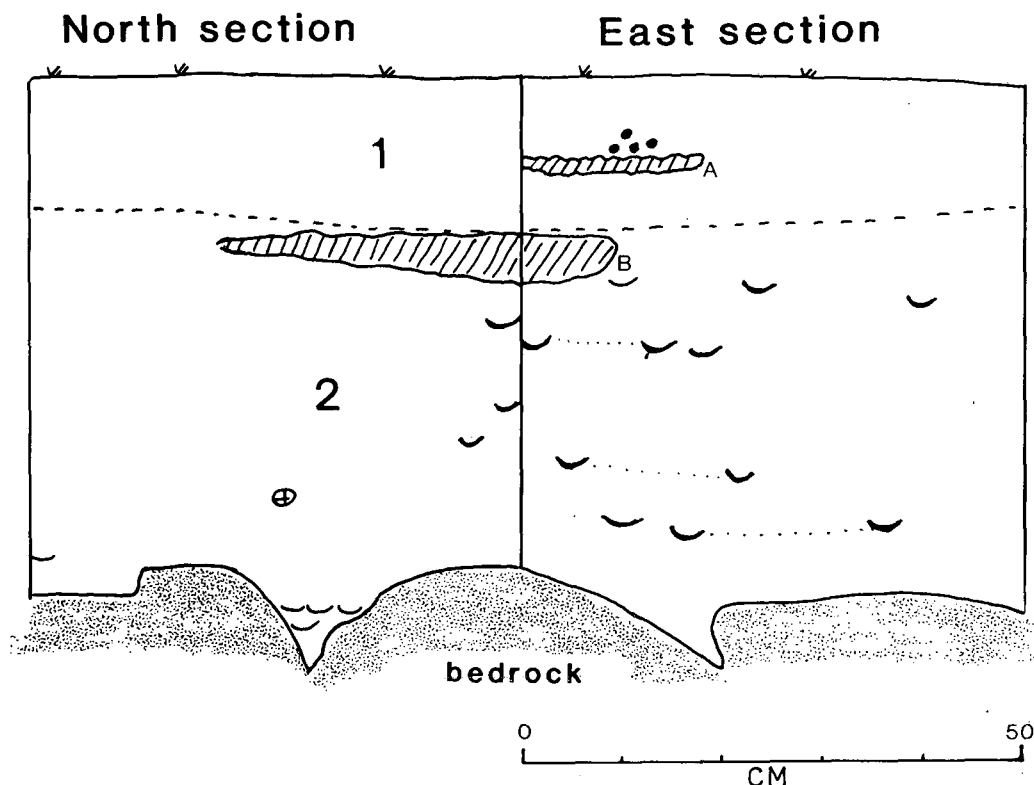


Figure 6. Stratigraphy of Site 17.

The distribution of mussel shell, stone artefacts, bone and charcoal is shown in Figure 7 which clearly indicates that there is little cultural material in the uppermost two spits (Layer 1) which may be post-European depositional units. Below this, shell amounts increased steadily to peak in Spits 12 and 14. The general trend for charcoal is similar but only meagre quantities of charcoal were recovered and it is possible that some of this represents burnt tree roots. A sample of shell was therefore collected from Spit 14 (52cm - 61cm depth) and yielded a date of  $1520 \pm 80$  b.p. (Beta - 16685).

The faunal remains were well preserved and diverse - freshwater mussel shells provided the bulk of these and included many whole, as well as fragmented, specimens. Other aquatic fauna included several types of fish (e.g. *Tandanus tandanus*, the Catfish) and freshwater tortoise (*Chelodina expansa*). Terrestrial fauna included pademelon (*Thyogale sp*), Long-nosed bandicoot (*Perameles nasuta*), fruit bat (*Pteropus sp*), Ringtail possum (*Pseudocheirus peregrinus*), Brushtail possum (*Trichosurus vulpecula*), rodents (e.g. *Pseudomys*) and lizards (e.g. *Agmdae*). This species list indicates that a range of aquatic and terrestrial resource zones were being exploited by the site occupants. There are no strong seasonal indicators.

Only 22 stone artefacts were recovered between Spits 6 and 11 (21cm - 41cm depth). These included 20 small chips, one core fragment, and one flake with use-wear. With the exception of two basalt flakes in Spit 6, all artefacts were made of chert.

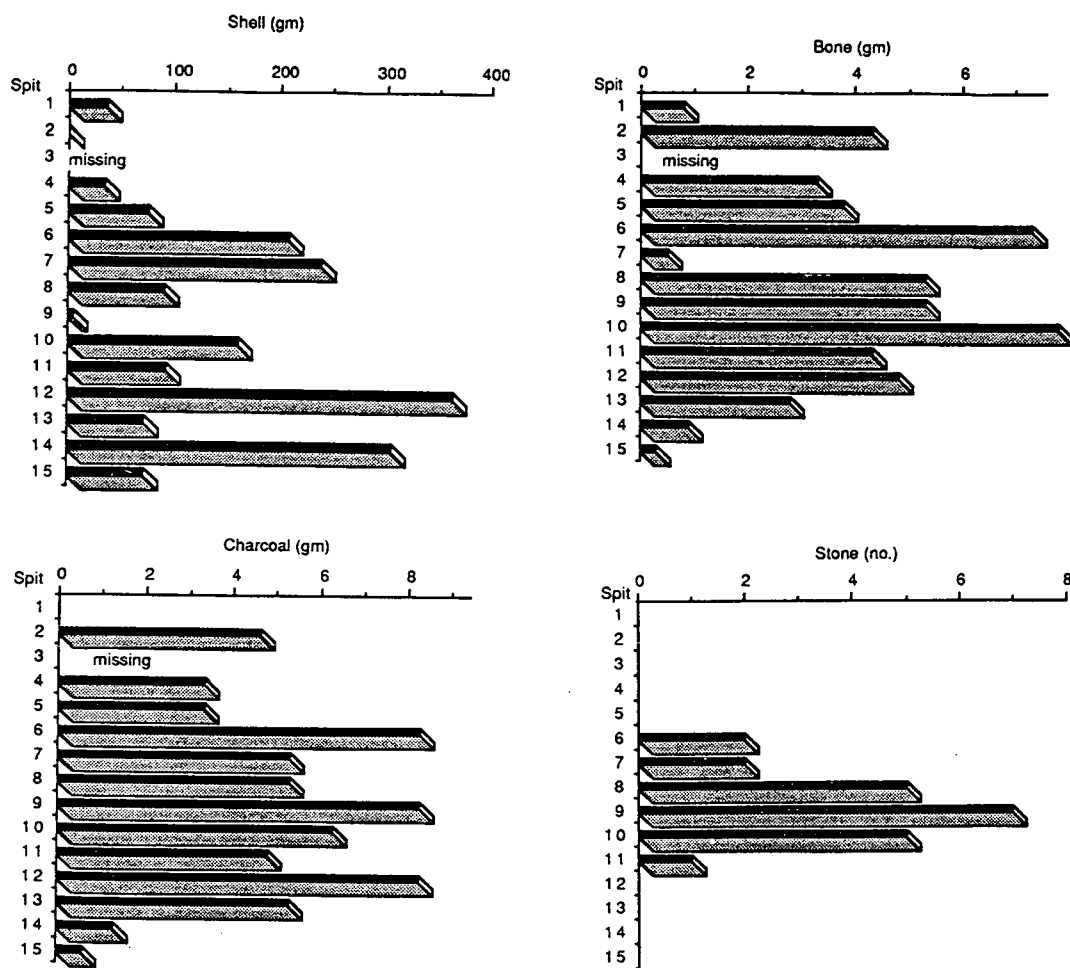
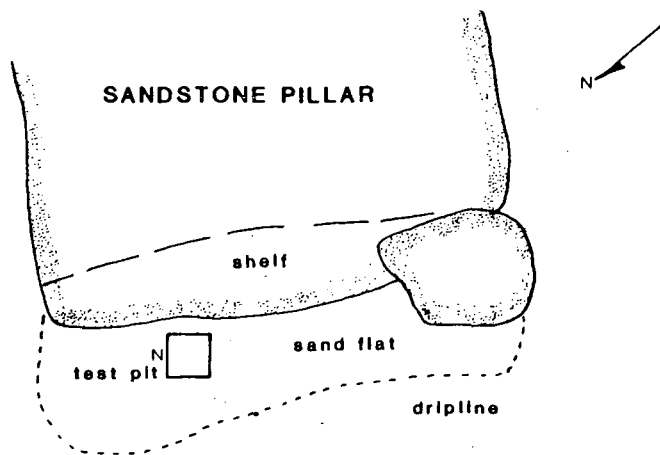


Figure 7. Vertical distribution of shell, stone artefacts, bone and charcoal at Site 17.

#### Excavation at Site 19

This site is one of a series of rockshelters located at the base of a scarp about 100m east of the river. It is 6.5m long, 2m wide, has a drip-line height of 7m, and is formed by the 2m overhang of a distinctive sandstone pillar which projects out from the scarp. A point of interest is that there is no surface evidence, such as midden or stone artefacts, to indicate that the site contains occupation deposits. It offers protection from rain and sun and represents a good depositional situation, but a test-excavation was required to prove that the rockshelter is an archaeological site.

A 50cm x 50cm pit was excavated at the northern end of the shelter where deposits appeared deepest and least disturbed by animals (Figure 8). Eroded sandstone bedrock was reached at a depth of 60cm. The first fragmented mussel shell appeared at a depth of 10cm-15cm. In fact, the main occupational evidence did not occur until 20cm - 25cm, at which depth a dense midden of mussel shell with bone continued until bedrock was reached at 60cm. The uppermost 20cm of deposit may be post-European in age and possibly resulting from increased sedimentation due to changes in land-use. Charcoal and stone artefacts were more restricted in distribution.



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Figure 8. Plan of Site 19.

Four stratigraphic units were distinguished in Site 19 (Figure 9):

Layer 1: a hard, brown, "crust" containing much gravel. Colour 7.5YR 4/2. pH. 6.5. Depth 0-10cm.

Layer 2: a gritty, "yellowish" sand. Colour 10YR 4/3. pH. 8.5. Depth 10-24cm.

Layer 3: a fine, light-grey sand with small pieces of sandstone talus. Colour 7.5 YR 4/2. pH. 8.5. Depth 24-40cm.

Layer 4: a slightly yellower than Layer 3 and contained more sandstone talus. Colour 7.5YR 4/2. pH. 8.5. Depth 40-60cm.

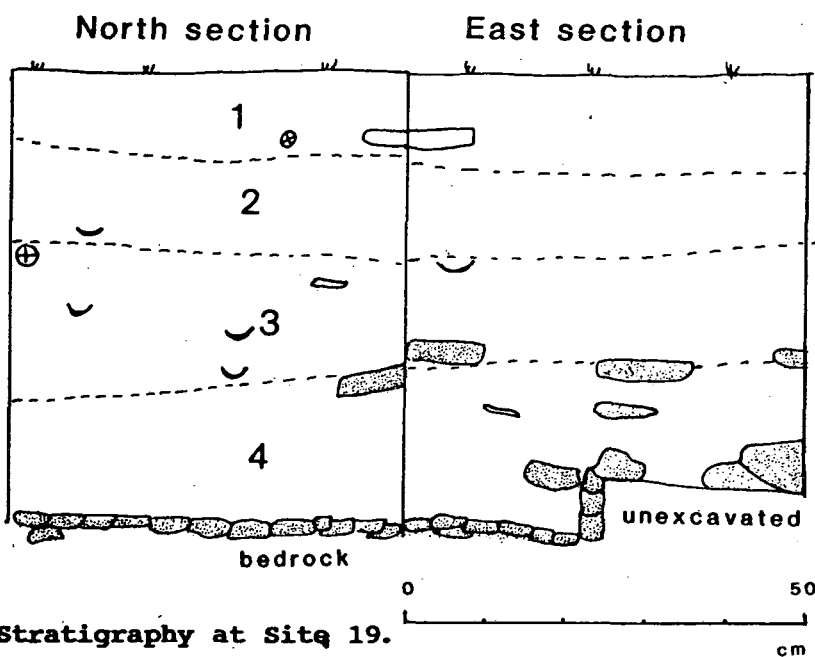


Figure 9. Stratigraphy at Site 19.

The bulk of the faunal remains were of freshwater mussel shell. No other aquatic fauna were identified. There was also a relatively restricted range of terrestrial fauna represented (Brushtail possum, bandicoot, small macropod and rodent). In comparison with the evidence from Site 17 there are some notable absences particularly including fish, fruit bat, ringtail possum, freshwater tortoise and lizards. Whether these differences result from differences in site function, site sampling or factors influencing preservation is uncertain at this stage, although it is relevant that Site 17 is larger and has evidence for a greater range of activities (e.g. grinding).

Only 13 stone artefacts were recovered and these were vertically restricted to between Spits 5 and 10 (Figure 10). Stone raw materials included chert (5), basalt (4), silcrete (3) and mudstone. The majority were small waste flakes or flaked pieces, but a small blade (12mm x 4mm) with adhering resin in Spit 9 was probably a spear barb.

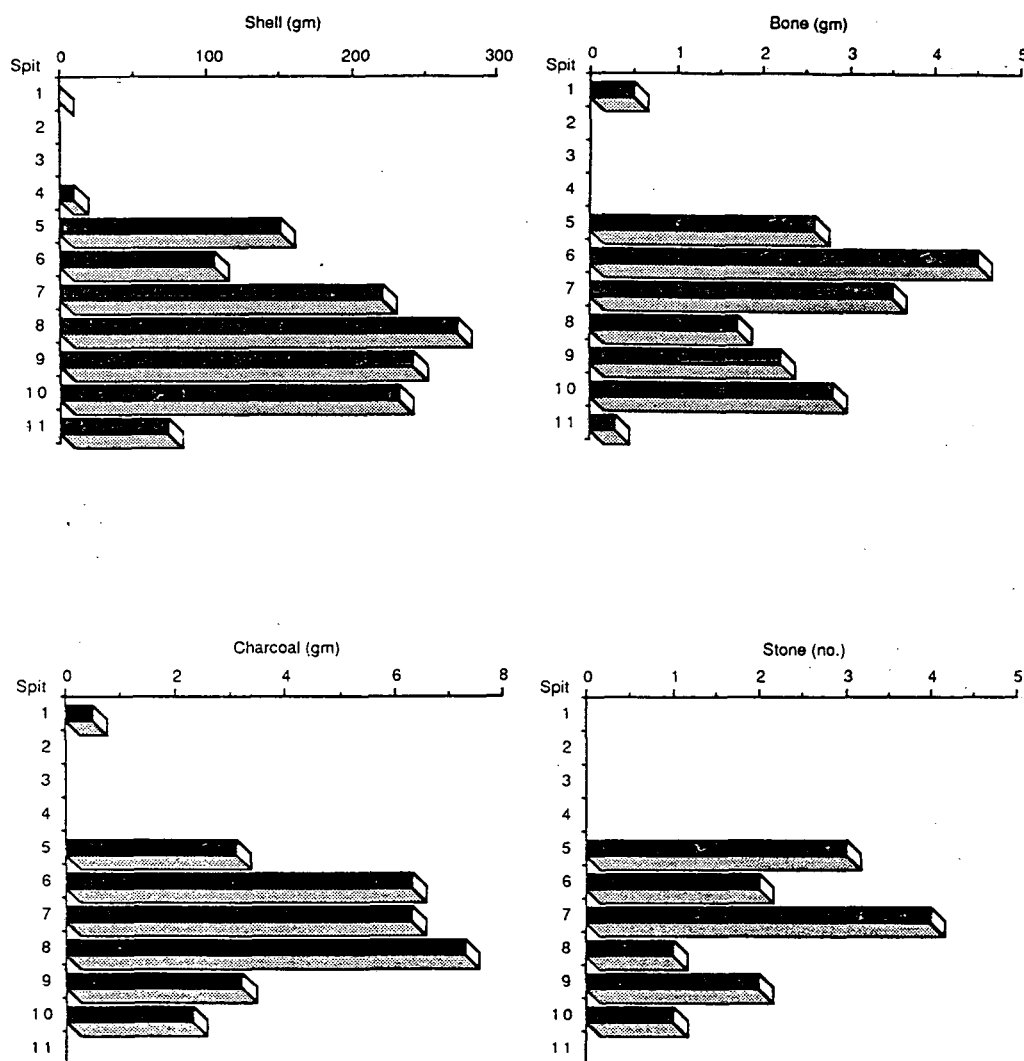


Figure 10. Vertical distribution of shell, stone artefacts, bone and charcoal at Site 19.



## CONCLUSIONS

Prior to this study little archaeological work had been undertaken in the Dawson River basin, although various observers have commented on the range of sites to be found in the area, including middens, rock art sites and burials (e.g. Bunce 1857: 121; Crosby 1968; McKenzie 1977). More recently archaeological surveys have been undertaken in areas of the Dawson where developments such as mining are planned (e.g. Hill 1980). The majority of the sites recorded in such surveys are unobtrusive and often comprise disturbed scatters of stone artefacts which are of limited research value. These studies have also tended to be non-cumulative in the sense that each was a "one-off" event and added very little to the region's prehistory.

Although no excavations have previously been undertaken in the Dawson River Basin, 11 sites have been excavated in the adjacent Central Queensland Highland section of the Sandstone Belt, making it one of the few regions of Australia for which a detailed regional prehistory can be synthesized using several aspects of the archaeological record, including stone artefacts, rock art and plant processing technology (Beaton 1977, 1982; Clegg 1965; Morwood 1979, 1981, 1984; Mulvaney and Joyce 1965). In historic times the Jiman people of the upper Dawson attended the Bunya festivals in the Bunya Mountains to the east and also interacted with Aboriginal groups from the rugged Carnarvon area to the west (Howitt 1904; Telfer n.d.; Tindale 1974). By implication, the general Central Queensland sequence probably applies to the Dawson area, although this remains to be demonstrated.

One of the principal weaknesses in the Central Queensland sequence is that, with one exception, all excavations have been undertaken in large rockshelters with rock art; there has been minimal scientific investigation of stone artefact scatters, middens or undecorated shelters. The Gylanda recording and salvage program was the first attempt to systematically collect, analyse and describe material from such sites. It also indicates the research potential of the upper Dawson Basin.

The survey of the Gylanda section of the upper Dawson River yielded a range of sites documenting Aboriginal use of the area over the last 1500 years of the 19,000-year Central Queensland sequence (cf. Mulvaney and Joyce 1965), but the age range of the sites is more likely to reflect the geomorphologic context rather than prehistoric reality. The radiocarbon dates indicate massive sediment deposition along the Dawson River terraces in the late Holocene, and it is unlikely that sites of greater antiquity will be accessible for investigation.

The Gylanda study represents the first time that middens (or indeed any type of open site) has been archaeologically investigated and dated in the Central Queensland Sandstone Belt. Preliminary analysis suggests that the open midden scatters were of specialised use as "dinner-time" camps for shellfish consumption and discard by relatively small groups of people, with extensive scatters resulting from repeated visits rather than large gatherings.

In contrast, the two rockshelters investigated here (and Site 2) indicate a greater range of activities and exploitation of a variety of terrestrial and aquatic resources more suggestive of base-camps. There are also significant differences between these sites, for example, the presence

and the more restricted faunal assemblage from Site 19 compared with Site 17. These require further investigation, as does the question of seasonality.

Middens, undecorated rock shelters, and sites in riverine zones have not been previously investigated in the Central Highlands and there only are a few points of similarity with the established regional sequence (e.g. the absence of backed blades is characteristic of sites post-dating 2000 b.p.). Nevertheless, the sites occur in a relatively intact environmental context, contain a range of faunal and technological evidence suitable for research on Aboriginal resource use, and preserve patterns of activity and discard within and between sites.

Clearly, the area offers excellent potential for research on Aboriginal land-use by combining detailed mapping of resource zones and site distribution with more extensive excavations, particularly at "base-camp" rockshelters. Such work would both contrast with, and complement, previous work which has tended to focus on mid-Holocene patterns of change in stone tool technology, rock art and economy in old, large and/or aesthetic rockshelters.

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#### REFERENCES CITED

- Beaton, J.M. 1977 Dangerous harvest. Unpublished Ph.D. thesis, Australian National University.
- Beaton, J.M. 1982 Fire and water: aspects of Australian Aboriginal management of Cycads. *Archaeology in Oceania* 17(1):51-8.
- Bunce, D. 1857 *Australasiatic Reminiscences of Twenty-three Years Wanderings in Tasmania and the Australias including travels with Dr. Leichhardt in North Tropical Australia*. Melbourne.
- Clegg, J.K. 1965 A note on the stone industry of Cathedral Cave, Carnarvon Gorge, Queensland. *Mankind* 6:237.
- Crosby, E. 1968 An archaeological site survey near Taroom, southeastern Queensland. *Queensland Museum Memoirs*, 15(2):73-81.
- Godwin, L. 1985 The Gylanda Weir Archaeological Salvage Project: A report on the analysis of Sites 1, 2, 3, 5, 7, and 8. Report to the Queensland Water Resources Commission.
- Hill, I.W. 1980 An archaeological report on the Theodore Coal Project. Report to Theodore Coal Pty. Ltd.
- Howitt, A.W. 1904 *The Native Tribes of South-east Australia*. London: Macmillan.

- McKenzie, E. 1977 **Aboriginal Sites at Isla Gorge. Queensland Naturalist** 21(5/6):104-5.
- Martin, S. 1979 **Mud, Mussels and Toes: The ecology and archaeology of the Narran area.** Unpublished B.Sc. (Hons.) thesis, University of New England.
- Meehan, B. 1982 **Shell Bed to Shell Midden.** Canberra: Australian Institute of Aboriginal Studies.
- Morwood, M.J. 1979 **Art and Stone: Towards a prehistory of central-western Queensland.** Unpublished Ph.D. thesis, Australian National University.
- Morwood, M.J. 1981 **Archaeology and the Central Queensland Highlands: the stone component. Archaeology in Oceania** 16(1):1-52.
- Morwood, M.J. 1984 **The Prehistory of the Central Queensland Highlands.** In F. Wendorf and A. Close (eds), **Advances in World Archaeology** 3:102-24.
- Morwood, M.J. 1985 **Preliminary Archaeological Assessment. Proposed Gylanda Weir, Dawson River, Central Queensland. Report to the Queensland Water Resources Commission.**
- Morwood, M.J. 1986 **An Archaeological Assessment of sites in Nathan Gorge, Gylanda Weir Study Area. Report to the Queensland Water Resources Commission.**
- Mulvaney, D.J. and E.B. Joyce 1965 **Archaeological and geomorphological investigations on Mt. Moffat Station, Queensland, Australia. Proceedings of the Prehistoric Society** 31:147-212.
- Peterson, N. 1968 **The pestle and mortar: an ethnographic analogy for archaeology in Arnhem Land. Mankind** 6(11):567-70.
- Reid, J. 1982 **A Nest of Hornets.** Oxford University Press.
- Speck, N. H., R. L. Wright, F. Sweeney, R. A. Perry, E. A. Fitzpatrick, R. H. Gunn, H. A. Nix and I. B. Wilson 1967 **Lands of the Dawson-Fitzroy Area, Queensland. CSIRO Australian Land Research Series No. 21.**
- Telfer, W. n.d. **Reminiscences.** Unpublished Ms., Mitchell Library (N.P.L. m 237690), Sydney.
- Tindale, N.B. 1974 **Aboriginal Tribes of Australia.** Canberra: Australian National University Press.
- Walsh, G.L. 1984 **Managing the archaeological sites of the sandstone belt. Report to Queensland National Parks and Wildlife Service, Brisbane.**