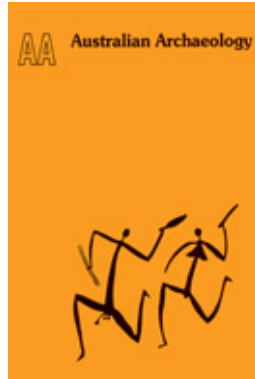


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PRELIMINARY REPORT ON 1977 SURVEYS AND EXCAVATIONS AT TURTLE ROCK, HERVEY RANGE, NORTH QUEENSLAND

John B. Campbell

Location and nature of site

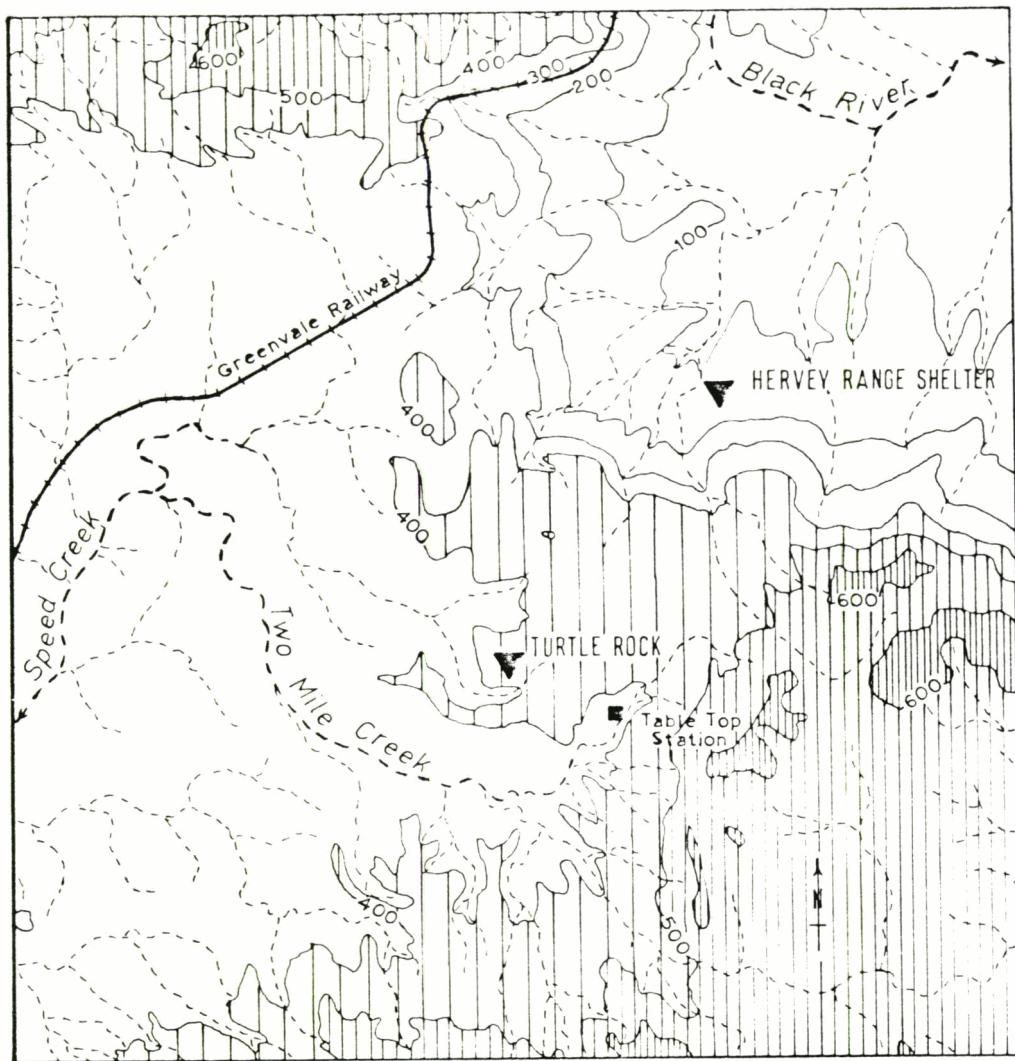
Turtle Rock is 39 km west-south-west of Townsville on Table Top Station (Rollingstone 1:100,000 8159-436569). It is at an altitude of 420 m on the eastern side of a broad plateau valley just behind the steep front line of coastal hills known as the Hervey Range (see Fig.1). It is also 3 km south of Thornton Gap through which the new Greenvale Railway line now passes and through which cattle have been driven for about a century from Dotswood and other upper Burdekin stations.

Turtle Rock itself is a large dome of granite, the top and northern end of which do indeed resemble, respectively, the back and head of a turtle. Beneath its eastern side there is a fairly spacious shelter with a palimpsest of rock paintings and with widespread though apparently shallow floor deposits (see Fig.2). The northern end also has a substantial overhang, but it is more exposed to the rigours of local climatic conditions, its floor of granite bedrock being washed clean of any dry season (winter) accumulation by the heavy rains of each wet (summer) season. There is in addition a crawl-space which connects the eastern entrance and the main area of rock paintings with a 'window' to the northwest.

Ecology, ethnography and archaeology of district

The land use round Turtle Rock is now pastoral with cattle and horses. Vegetation is generally of the dry tropical savannah woodland type. Trees are mostly dry sclerophyll species but there are a few tropical rainforest species in the immediate vicinity, especially amongst the moister rocks and along the wetter creeks. Large pockets of well developed rainforest exist 30 km north-north-west of Turtle Rock and 55 km east-south-east at Mt Halifax and Mt Elliot, respectively. To the northeast the sea is just within 30 km where there are mangroves and many other littoral resources, not to mention the wealth of the Coral Sea itself. Freshwater is available close at hand for most of the year, and Two Mile Creek (see Fig.1) is nearly permanent and in better years never runs dry. Various fish, insects and molluscs are available, and indigenous mammals, birds and reptiles are still fairly abundant. However, indigenous people are no longer in the Turtle Rock/Hervey Range area and generally have not been since about 1915 at the latest.

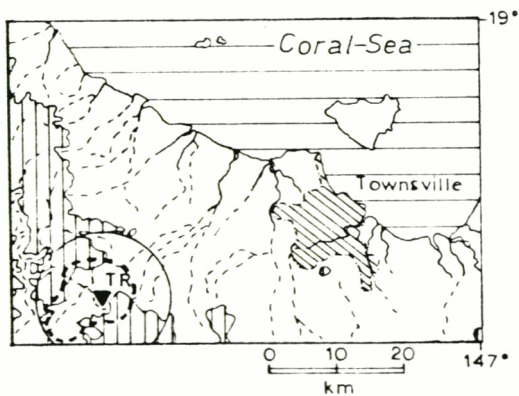
No major ethnographic work was carried out in the district, although some of the researches by Roth (1901-10) in neighbouring districts might be indirectly relevant to any attempted ethnographic reconstruction of the Turtle Rock people. Brayshaw (1974, 1975 and 1977) pieces together



contours in metres



JBC 78



Location of
Turtle Rock
(Nth Qld)

Fig 1

quite a few aspects of local Aboriginal ecology, ethnography and archaeology as part of her study of traditional material culture in the Herbert/Burdekin rivers district in general. Tindale (1974) lists and plots local 'tribal' names and territories as part of his Australia-wide survey. Turtle Rock falls at the intersection of the 'borders' of three of these 'tribes': 'Nawagi', 'Warakamai' and 'Wulgurukaba', and it is not at all inconceivable that some individuals from all three groups might have used the site at various times, whether jointly or separately. In addition to his work on the 'Dyirbal' language further north, Dixon (1972 and 1976) is working on what survives of the 'Wargamay' (i.e. Tindale's 'Warakamai') language near Ingham. I do not know if any elderly Aborigines surviving anywhere who might have been directly connected with the final activities at Turtle Rock.

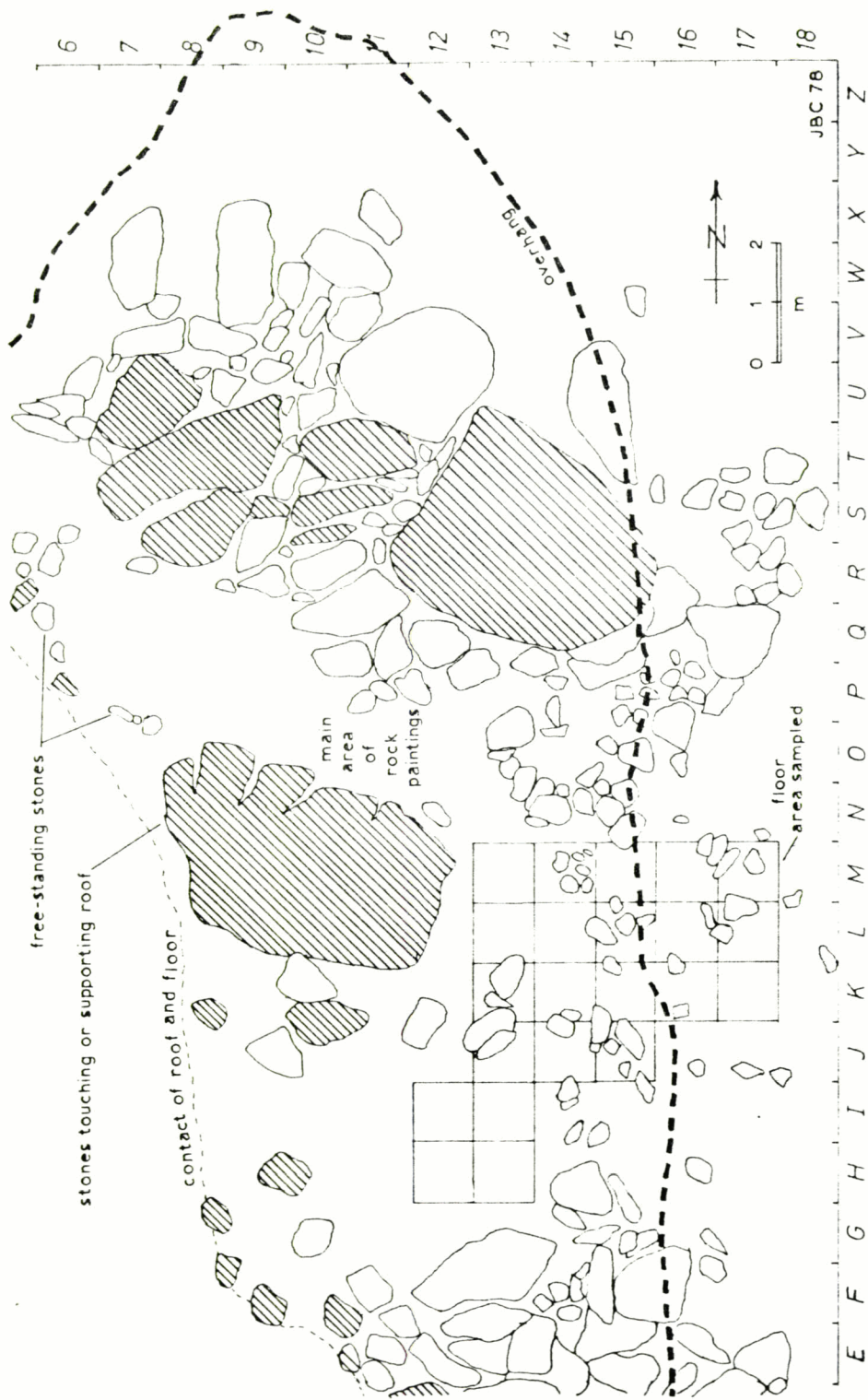
The main archaeological work in the district thus far is that of Brayshaw (1974, 1975 and 1977). Her survey included excavations in 1974 at four rock shelters: Kennedy Shelter near Cardwell, Jourama Shelter near Ingham, Hervey Range Shelter near Townsville and Mt Roundback Shelter near Bowen. All of these sites apparently contain evidence of comparatively recent activities only, none being more than 2000 years old according to her radiocarbon estimates (it would be inappropriate to say more than this as her PhD thesis, Brayshaw 1977, is still unpublished). Hervey Range Shelter is within 3 km of Turtle Rock (see Fig.1). My own archaeological work in the district started in late 1975, and from the beginning it has owed much to Brayshaw's pioneering efforts.

The Quaternary coastal deposits of the Townsville district have recently been studied from a geomorphological point of view (Hopley and Murtha 1975). These include both Late Pleistocene and Holocene sediments, but no artifacts are yet known in any of the Late Pleistocene or Early Holocene contexts. In my opinion at least a few derived artifacts ought to turn up in some of these deposits. A scattering of Late Holocene shell middens with roughly associated stone artifacts is known. It remains to be seen whether caves or rock shelters with long sequences occur, like the Early Man Shelter near Laura (Rosenfeld 1975) well to the north, or Kenniff Cave (Mulvaney and Joyce 1965, Mulvaney 1975) well to the south.

Selection of excavation area

The initial decision to excavate at Turtle Rock was based on three main facts: (1) it was convenient for student fieldwork, being less than an hour by car from James Cook University (Townsville); (2) despite its proximity to a major built-up area, it was not known to many vandals, only minor defacing of the paintings and sporadic thefts of stone artifacts having occurred to date; (3) it had never been thoroughly studied before.

Having decided to excavate and having obtained the necessary permits, four main objectives were set: (1) to train third- and fourth-year students in basic archaeological and palaeoecological field techniques with some follow up in laboratory techniques; (2) to raise and test hypotheses on activities represented by the floor deposits and on correlations with other activities such as



Plan of Turtle Rock 1977 (Nth Old)

Fig 2

painting; (3) to raise and test hypotheses on site location and its local and regional socio-economic and ecological relationships; (4) to broaden basic knowledge on Hervey Range/Townsville prehistory (the prehistory of North Queensland in general is but poorly known and is still only sporadically studied).

The selection of an area within the site to be excavated was determined mainly by: (1) which areas with floor deposits are eroding the most at present; (2) a perceived need to sample a reasonably central area both inside and outside the overhang. The floor area actually sampled is shown on the plan (Fig.2). This area was devoid of vegetation, and the slope under the overhang and outside was suffering sheet erosion, and indeed still is. Cattle and horses intermittently try to shelter here during the wet, and humans arrive periodically to throw stock fodder from the back of a vehicle.

At the start of the fieldwork in July 1977 a grid system of one metre squares was established with false origins to the south for letter codes and to the west for number codes. Squares within the area selected for sampling were then marked with heavy nails at their corners and nylon string lines along their edges. A horizontal plane was also established for recording the vertical position of finds and for mapping 0.1 m contours at and near the site, as well as other features.

Preliminary results of 1977 excavations

Between July and November my students and I recovered more than 2000 stone artefacts, though in that total are included many minute chips and all surface artefacts from the area excavated or sampled (see Fig.2). In that total there are also many objects which have not been recognisably modified but which have been carried into the site; these might best be termed 'manuports' (i.e. 'hand-carried'; Leakey 1971 first suggested this rather useful term). Amongst the modified forms or 'true artefacts' there are many struck flakes and well finished cores, as well as a lesser number of retouched flakes and occasional blades and a few polished or ground fragments of what were presumably axes. Raw materials for the stone artefacts and manuports include quartz, quartzite, chert, rhyolite and granite. Lumps and specks of red ochre also occur, as does a fair amount of wood charcoal. Faunal remains are mostly very fragmentary bits of bone and to a lesser extent shell.

Virtually all finds larger than 1 cm in length or diameter were three dimensionally recorded each to the nearest cm, whether on the surface or buried. Finds smaller than that were generally caught in the sieve and recorded at least according to square and approximate depth. Detailed plans with plotted finds will be included in the full report. For the moment attention is drawn to some of the smaller unshaded stones or boulders shown on the present site plan (Fig.2). A few of these inside and outside the floor area sampled seem to have been arranged in rough rings or circles about 2 m in diameter. This is especially clear in squares L-N 14-17 and N-P 13-15, and there is perhaps a third possibility in squares I-K 13-15 though that one is interrupted in square I13. Whether these 'rings' were originally meant for ceremonial purposes, or as bases for artificial shelters, or

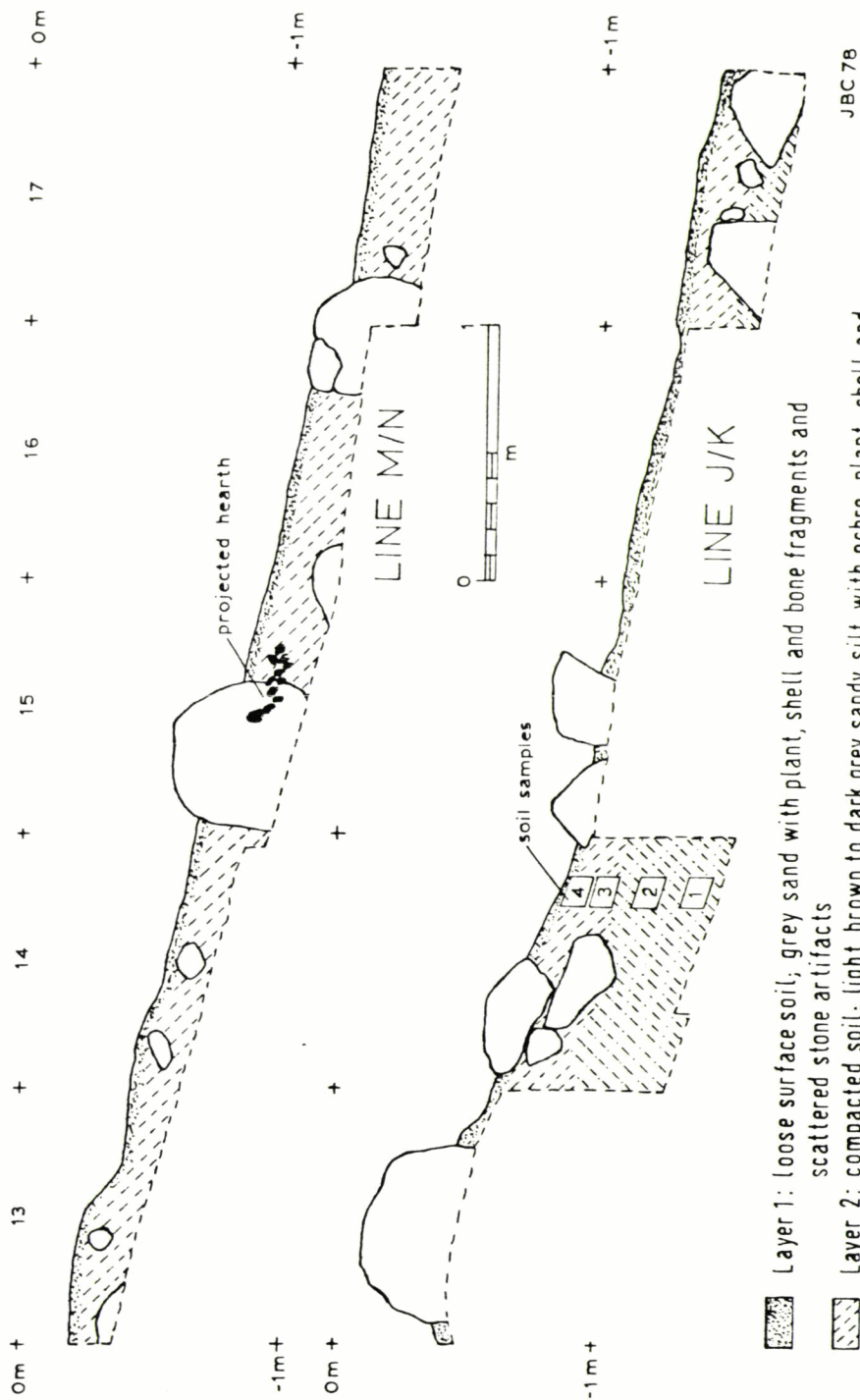
both, is still uncertain. However, concentrations of artefacts, charcoal and ochre seem to occur more within or near these 'rings', rather than further from them, at least in the area sampled.

Sections have been recorded along every east-west metre line and every north-south metre line, but for this report only two selected sections are included here (see Fig.3). These are along lines J/K and M/N running east-west from inside to outside the shelter, and they are considered reasonably representative of what has been encountered thus far. A brief description of the stratigraphy is given as well. As may be seen from the section of square K14 (that with the soil samples) the total accumulation of deposits is fairly shallow. Whether these go deeper outside the shelter and further down the slope remains to be seen.

Layer 1, or the loose surface soil, was carefully removed from all of the floor area sampled (see Fig.2 as well). This deposit varied in thickness from 0 to 5 cm in most squares and up to 22 cm in the centre of square H12, where it became more buff in colour and may have been disturbed by rock wallabies. No European artefacts were found, although a few such as beer bottles were observed elsewhere round the site in the grass (these became particularly evident after a fire burnt through the paddock in September). A total of 443 stone artefacts and manuports were measured in; these include 190 (or 42.8%) of milky quartz, 47 (or 10.6%) of clear quartz and 206 (or 46.5%) of non-quartz materials such as chert. Most of these occurred in squares K-M 13-17 with their numbers thinning out towards squares H-I 12-13.

Layer 2, the underlying compacted soil, has been excavated so far only from squares K14, K17 and M13-17 (see Figs 2 and 3). It varies in thickness from about 15-30 cm, as may be seen in the section drawings. A system of 5 cm thick spits is being used to excavate deposits below Layer 1. These spits are adjusted for the slope of the deposits and are meant as an added control. However, as usual all finds larger than 1 cm are measured in to the nearest cm. Artefacts, manuports, bone and shell fragments, red ochre lumps and specks, and wood charcoal lumps and specks, occur throughout Layer 2, but with more apparent clustering than in Layer 1, especially in or near the stone 'rings' already mentioned. Further, a well defined hearth of burnt stones and charcoal has been found in spits 2-3 of square M15 on the northern side just within one of these 'rings' (see Figs 2 and 3 again). Although all of the finds still need to be more thoroughly analysed, as a preliminary comment for comparison with Layer 1 it might be noted that of 310 stone artefacts and manuports measured in in spit 1 of Layer 2, 65 (or 20.9%) are of milky quartz, 74 (or 23.8%) of clear quartz and 171 (or 55.1%) of non-quartz materials. Quartz is again important but the clear component has apparently increased at the expense of the milky. Quartz in general occurs fairly frequently in every spit of Layer 2.

Layer 3, the basal compacted sand, has been excavated so far only from squares K14 and K17 (see Figs 2 and 3). In square K14 it varies in thickness from about 5 to 50 cm, grading into the granite bedrock which rises in the north-eastern corner of the square to form a ledge. Its surface has been exposed in most of squares M13-17. Artefacts, manuports, bone fragments and wood charcoal lumps and specks



- Layer 1: loose surface soil, grey sand with plant, shell and bone fragments and scattered stone artifacts
- Layer 2: compacted soil, light brown to dark grey sandy silt with ochre, plant, shell and bone fragments and clustered stone artifacts
- Layer 3: very compacted sand; light to medium buff fine to coarse sand grading into decomposing granite bedrock; ranging from scattered plant fragments, bone fragments and stone artifacts at top to archaeologically sterile at base

Selected Sections of Turtle Rock 1977 (Nth Qld)

Fig 3

occur sporadically in the upper spits of Layer 3, whilst the lowermost portion in K14 is archaeologically sterile, though it is of course penetrated by roots. The total number of stone artefacts and manuports is quite small (less than 100), but then even less of Layer 3 has been sampled. Amongst the quartz specimens there seems to be mostly milky quartz. The apparent absence of ochre is curious and may mean that the site had not yet been painted, the main phase of painting perhaps taking place whilst Layer 2 was accumulating.

Most of the faunal remains are very fragmentary and therefore difficult to identify. A mandible with teeth found at the base of spit 1 in Layer 2 clearly belongs to a wallaby and has been tentatively ascribed to *Macropus agilis*, the agile or sandy wallaby. However, most of the faunal remains probably belong to smaller animals, whether marsupial, reptile or bird. Both terrestrial and marine molluscs are represented, but their numbers are not terribly great. The distribution of the faunal remains seems fairly even, but generally less common in Layer 3 and horizontally more common in squares M13-15 of Layer 2.

With the exception of intrusive items such as roots, the plant fragments recognised so far are virtually all bits of wood charcoal, but these have yet to be identified as to wood type. The soil samples await analysis as well. It is hoped to find an appropriate method for extracting reasonable amounts of pollen from these, but they will probably prove to have been horribly mixed by root, worm and grub activity, not to mention recurrent human activity (cf. Hughes and Lampert 1977).

Preliminary site location analyses

In 1977 my students and I surveyed a number of transects radiating out from Turtle Rock for a standard distance of 2 hours' walking time, or about 4 hours return, not counting stops. In flat country 2 hours would normally take one about 10 km, but in the hilly and rocky environs of Turtle Rock it usually takes one only about 5 km, except to the southwest where about 9 km can be achieved. The smaller map on Figure 1 gives both the idealised 10 km (solid line) and actual 2 hour (broken line) site exploitation territories for 'TR' (i.e. Turtle Rock). The site is well situated for exploiting a wide range of upland resources. Further, it may be significant that it is only about 1.5 hours from Hervey Range Shelter which is well situated for exploiting the base of the hills (see larger map on Fig.1). On the transects variations in geomorphology, hydrology, flora and fauna were recorded, but more detailed samplings and analyses are necessary before a reasonably complete picture of the local ecology and palaeo-economy can be drawn. Possibly related archaeological finds were recorded also, including a number of minor painted sites, isolated flakes, a 'canoe-tree' and a milky quartz quarry, all within the 2 hour limit. Rock shelters without paintings or other definite evidence of use were noted as well for future soundings.

The classic model for hunter/gatherer site location and settlement pattern analysis is derived principally from studies of the !Kung San of the Kalahari (Lee 1969, Lee and Devore 1976, Yellen 1977). Some prehistoric models have been built up during studies of hunter/gatherer sites and resources in southwestern Asia and Europe in

particular (Vita-Finzi and Higgs 1970, Jarman 1972, Jochim 1976, Campbell 1977). Whether these models are fully appropriate for Turtle Rock is debatable of course, but they at least provide useful guidelines. Regional Australian models might eventually be derived from the ethnographic/ethno-archaeological work of Thomson (e.g. 1939), Stanner (e.g. 1965), Gould (e.g. 1969 and 1971), Peterson (e.g. 1973 and 1975), Taylor (e.g. 1976) and O'Connell (e.g. 1977) amongst others.

For the moment I am assuming that Turtle Rock was at least at times a 'base-camp' with a definite site exploitation territory rather than simply a 'transit-camp' or 'extraction-site'. I am assuming as well that it was at times a 'ceremonial-site'. Regarding the latter, in addition to the rock paintings and the apparent stone 'ring' arrangements, the frequent occurrence of quartz might lend some weight to this assumption. Quartz is, or was, attributed with a fairly wide range of magical and spiritual properties by a number of different Aboriginal groups round Australia (Eliade 1973, Berndt 1974). For example, according to Eliade (1973:137), 'The essential elements of the southeast initiation scenario seem to be (1) the bright cave, (2) the miraculous feathers, (3) the flight, (4) the quartz crystals, (5) the magic rope.' And here in the northeast amongst the Malanbara of the Tully River for example, a quartz flake was normally used to make the body marks during an initiation ceremony, according to my Malanbara friend Joe Kinjun, who had such marks made on him in that manner about 50 years ago. The fact that Roth (1909:177-78) refers to this artefact as a 'flint-flake' may simply mean that he has employed the rather misleading generic British term for 'stone flake'. Whether not only quartz at Turtle Rock but Turtle Rock as a whole was particularly sacred for a certain period of its use remains to be seen. Certainly some materials represented at the site came from well beyond the 2 hour limit, clear quartz for example perhaps having worked its way through various exchange networks from sources on Hinchinbrook Island 130 km north-north-west (cf. Elkin 1938, Mulvaney 1976).

1978 surveys and excavations

The programme for 1978 includes more detailed site location analyses with amongst other objectives some attempt to determine seasonal variability in the more relevant flora and fauna of the district. Sources of raw materials are to be searched for further, as well as more elaborate exchange networks. The rock paintings at and near the site are to be analysed in greater detail. Excavations are scheduled for May, July, August and November, with further work being done within the squares marked 'floor area sampled' (see Fig.2). Experiments with seed flotation techniques are being planned, though it is suspected that most seed remains would be intrusive, at least in the upper portion of Layer 2. Charcoal samples collected in 1977 and 1978 are to be submitted to two separate laboratories for radio-carbon age estimates, a grant for which has just been awarded by James Cook University. Finds generally are to be more thoroughly analysed, and further attempts are to be made to reconstruct the various functions of the site as a whole, all of which ought to keep my students and me quite busy.

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