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Stowell Avenue,
HOBART.

Mr. Rhys Jones,
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University of Sydney,
SYDNEY,
New South Wales.

9th February, 1966.

Dear Rhys,

Your smiling face has been missed here this summer. I had hoped that you and a crew would come again for digging in the Derwent Estuary. Perhaps you are still busy with last year's loot.

A copy of your 1964/5 report arrived a couple of months ago. I found it interesting and instructive. Thanks for the mention of my brief efforts.

A year ago you helped me write a short article about my carbon dates. Last September I had some correspondence with R.V.S. Wright who indicated a publication date of November in "Mankind". I wonder what is the status of this matter?

Also in September I had some contacts with Miss Alice Birmingham of the Institute of Applied Science in Victoria. She indicated that they were now in the carbon-date business. I gave her some samples. Nothing more has been heard. Perhaps you can bring me up to date on that situation?

Since seeing you last I've secured some dates from Rafter in New Zealand. They range from one to five millennia, agreeing with my earlier dates.

Let us keep in touch.

Best regards,

Graze Baker

AUSTRALIAN INSTITUTE OF ABORIGINAL STUDIES

Corrigenda to Doc. 65/299

Mr. Rhys Jones - Report on Excavations in Tasmania
1964-65

Please make the following corrections to the document sent to you:-

- (1) The correct title of the Document is -

"Report on the second archaeological field trip to Tasmania 1964-65"

- (2) Page 1, line 8:

Insert '2,000' (two thousand) instead of '200' (two hundred).

- (3) Page 4, line 47:

Insert 'conditions. Data from archaeological sites might here give a chronological' between the two words 'drier' and 'control'

- (4) Page 6, line 56:

Insert 'pyramidal' instead of 'pyramid'

- (5) Page 11, line 6:

Insert 'flakes of little diagnostic value, and there are no changes' between the two words 'retouched' and 'in'.

AUSTRALIAN INSTITUTE OF ABORIGINAL STUDIES

October, 1965

Mr. Rhys Jones : Second Archaeological Report for field
season in Tasmania Summer 1964-65

I left Sydney on the 14th December with two members of the expedition in the land rover, and arriving in Tasmania a few days later, we set up a temporary camp at West Point. The rest of the group arrived by train and air, and a few days were devoted to setting up the camp. We began excavating on the 21st, and had emptied out last year's pit, and defined our working area before Christmas. We first dug a trench across the midden, and then excavated a second one at right angles along the crest of the mound. We eventually excavated something over 200 cubic feet, sieving and sorting through 60 tons of deposit. This yielded a large quantity of animal bones and stone artefacts etc., enough to enable a detailed study to be made. I was also interested in relating the site to the environment, and such is the paucity of information about the area that we had to do our own surveys. (Mr. Thorne and Miss Partridge made studies of the land fauna and shore platform ecology respectively). I was hoping for human remains, and we found several pits containing cremated human material. The assistance of Thorne as physical anthropologist was very great to us in the field. We then filled in our trenches, and turfed the surface, this being absolutely essential in such an exposed site, for wind erosion could destroy it in a few winter gales, once an edge becomes undercut to the basal sand.

We left West Point on the 1st February, and moved to Rocky Cape with a reduced party. I wanted to test both caves at the Cape, and soundings revealed depths of over 10 feet of shell midden at the two sites. Our task was made harder in the South Cave by the very disturbed nature of the site, the result of misplaced enthusiasm rather than hooliganism. We spent 4 weeks at Rocky Cape, finishing the excavations on the 1st March, and we returned to Sydney about a week later, having spent 11 weeks in the field. The excavated finds were sent back by rail, and packed into 100 orange cases, they weighed 2 1/2 tons.

Expedition Members

1. West Point and Rocky Cape - Full time

Miss Anne Bickford (Anthropology III, Sydney University)
Mr. Theocharis Lourandos (Archaeology III, Sydney University)
Mr. Donald Miller (Anthropology III, Sydney University)
Mr. William Rodman (Anthropology III, Sydney University)

2. West Point and Rocky Cape - Part of the time.

Miss J. Partridge (Department of Zoology, Monash University)
Dr. Grote Reber (C.S.I.R.O., Hobart)

3. West Point

Miss Dorothy Bingham (Beverley Hills High School)
Mrs. J. Flood (Department of Anthropology, A.N.U.)
Mr. Stuart Hume (Anthropology IV, Sydney University)
Mr. Alan Thorne (Department of Anatomy, Sydney University)

My appreciation and analysis of the material has only begun, but I think that the best way of presenting a summary is in the form of the two papers following. These are somewhat similar to the work presented at A.N.Z.A.A.S., Hobart, last August.

PREHISTORIC INVESTIGATIONS IN TASMANIA

In 1963, when I was planning a programme of work in Tasmania, I had two main aims in mind.

1. Some archaeologists working on the mainland, had isolated assemblages which are alleged to have Tasmanian connections. Information was badly needed about the antiquity of occupation in Tasmania, and also about the occurrence and nature of typological change. This is essentially the setting up of a sequence, and the prime concern is about change through time.

2. I also wanted to investigate the range of cultural variations within Tasmania, and I had the following points especially in mind.

Firstly in that Tasmania is an island, it is self contained, the geographical limits are defined; and within it are large ecological variations between coast and mountain, between east and west. Secondly, we found in the first trip that we were getting sites with unusually good conservation of bone, and this enables us to answer certain questions about economic adaptation, seasonal occupation etc. Thirdly, the Tasmanians were observed, and some of their activities recorded. This ethnographic evidence, flimsy though it is, can be used to interpret the archaeological material.

To explore these problems, I was looking for a variety of sites. Here the antiquity is less important, what are wanted are a series of sites in different parts of the island; and also in different ecological positions - coastal middens, coastal caves, inland shelters, open living areas, ritual or art sites and so on.

In the reconnaissance trip Summer 63/64, (Jones 1964; 1965(a)) we were lucky to find quickly, an unoccupied cave at Sisters' Creek near Wynyard. This cave is situated about 100 feet up a coastal quartzite cliff, and excavations revealed 5 feet of shell midden, resting on 4 feet of sterile sand. A large stone assemblage was found, together with animal and fish bones. AC14 sample from the basal occupation gave a date of 6,050 \pm 88 B.P. In order to put this site into some sort of archaeological perspective, we made two surveys, one on the east and the other on the west coast. In both cases numerous middens were seen, mostly thin bands of shell stratified in unstable dunes. Small excavations were made at Anson's Bay, Tasman's Peninsula, a rock shelter near Oatlands, and at a large grass stabilised midden near the West Point lighthouse. The latter revealed 7 feet of shell with numerous good implements and seal bones.

For the second season, I wanted to concentrate my resources on a limited objective, and the North West corner of the island seemed to offer the best potential. With a group of 10 people for 6 weeks, I excavated at the West Point midden. We dug two trenches, intersecting each other in the form of a cross, and the total length of 100 feet of trench 5 feet wide, and up to 8 feet deep, yielded about 20,000 animal bones, 15,000 stone flakes and tools, together with cremated human material. We then moved to Rocky Cape, and put soundings into the two caves there. The South Cave had a depth of 11 feet of shell, the North Cave had 10 feet, and in both cases the midden deposit rested on what appeared to be

sterile sand and large angular boulders. The midden contained stone artefacts and animal and fish bone. (See detailed account later).

This work opens up many avenues of enquiry, but here I should like to abstract a few aspects which interest me.

1. Variation in the faunal content of the sites.

One of the most striking features of the results of digging at the four sites of Sisters' Creek, Rocky Cape North and South, and West Point, is the great variation shown in the animal bones which we found. At Sisters' Creek, there was a high percentage of the bones of small land mammals such as bandicoots, possums, rodents, and the rat kangaroo. Also present were wallaby, wombat, some seal and fish. At the two caves at Rocky Cape, about 7 miles away, I think that I have a faunal sequence, with the basal deposits containing very many parrot fish bones - up to 80%; the top layers have no fish but a high percentage of seal, wombat and wallaby.

The caves may be compared with West Point, where there was a very large percentage of seal bones, of several species, including the rare leopard seal. Also present in the deposit were the bones of all the present large land fauna - wallaby, probably Bennett's Wallaby, paddymelon, Tasmanian Devil, Native Cat, and a large variety of birds - including duck, gull, hawk, penguin and mutton bird. Also present were rodents, bandicoot, lizard, echidna, whale bone etc. Out of the approximately 20,000 bones, we only found a few fish bones, and wombat and possum are rare. An interesting aspect, is the extreme rarity of Thylacine - a feature more striking in view of the abundance of the Tasmanian Devil.

The three cave sites are set in high quartzite sea cliffs, and the country behind would have been richly forested, the rain forest coming close to the coast in this area. These contrast sharply with the exposed position of the West Point midden, standing as it does in the teeth of the Westerly gales, on the low rocky shore, with numerous off-shore reefs in front, and backed by coastal sedge land. Davies (1964) and Jackson (1965) suggest that this sedge land may be pyrophytic in origin. Thus the firesticks of the Aborigines performed the same function as the casual firelighting of the present day. The similarity of the prehistoric and present day fauna, tends to support this view, and the present environment may be a good guide to prehistoric conditions.

The faunal variation in these sites is to be explained by a combination of geographical and cultural factors, and any assessment of the stone assemblages must take these into account. With the publication of Robinson's journals (1965), we will have magnificent ethnographic information for this area around West Point, and prehistoric occupation patterns of the land may be inferred with surprising sophistication from distribution studies of the present and recent flora. Jackson thinks that the distribution of rainforest, wet sclerophyll, and scrub moorland, is largely due to intense Aboriginal fire pressure, the Aborigines in part, maintaining a disclimax state, itself the remnant perhaps of slightly drier control to such prehistoric ecological studies.

2. Variations within the site

Archaeologists tend to regard deposits as consisting of discrete layers, the excavation of which is simply the reverse process of

deposition - the peeling of the onion. In many sites, there is no visible stratigraphy, and in excavation, the assumption must be made that the deposit was laid down horizontally, or parallel to the present ground surface, and that the ground is undisturbed. (For a discussion of such a site see White (1965). In shell middens, on the other hand, the deposit is seen to consist of a complex stratigraphy of interleaving lenses of shell, ash and sand. There is enormous variation in the content of these lenses, some consisting entirely of shell, with adjacent ash stiff with flakes.

In the Sisters' Creek midden, we found (Jones 1965 p. 194) great variations in the faunal and artefact content of the deposit in various parts of the cave, and I think that I can explain this in the simple terms of people sitting in the mouth of the cave, chipping and using their tools, and then dumping their shells and animal bones further inside. In the West Point midden, my transverse section across the mound shows enormous variation in lithology. The area in the centre of the midden shows evidence of ash, is dense with small flakes and good finished implements. Sometimes the deposit is black with a fine charcoal, and the shell is crushed. This can be compared to the edge of the midden where there is a high proportion of large shells and sand, small numbers of artefacts, and sometimes huge concentrations of seal bones. The Rocky Cape South cave is another example (see next paper), where if one wanted to, one could show a marked difference between top and bottom of the deposit. This could be backed up by detailed analysis of the distribution of the sizes of the flake assemblages, showing a 'large flake industry' (a favourite term these days!) being replaced by a 'small flake industry'. But is this true? I think not, because there is evidence that in the one case I am dealing with a living and primary chipping area, and in the other a refuse area. To get a valid comparison, I should have to measure equivalent aspects of the assemblages in both cases. In Rocky Cape, I do think that I have some sort of cultural sequence, but it is not at all as marked as appears at first sight, because my small vertical column is not a good sample of the whole site.

This may seem obvious, but it is surely not understood by workers who think that they can solve the prehistory of a large region by simply putting a small square hole into the middle of the floor of a cave. No amount of statistical expertise can correct poor sampling.

These have been largely economic matters, but the work has also given information about other aspects of the prehistoric culture.

In the first trip, we discovered a stone arrangement at St. Helens, (Jones, 1965 (a) p.197; and Jones 1965 (b) pp.78 and 79). Excavations revealed another row of stones stratified in shell midden, about a foot below the first. Whatever function the arrangement had, the traditions associated with its building persisted in this place long enough to be detected by archaeological means. This measure of the stability of a custom might have sociological relevance.

Human remains at West Point

During the reconnaissance expedition to West Point, we found one human molar. It was heavily worn, and severe periodontal disease had caused marked erosion of the roots. Besides giving an

intriguing glance at primitive disease, it offered the hope of more finds, and it has been described by Macintosh and Barker (to be published, Oceania). Last summer, we found half a dozen more individual teeth in the midden, together with three groups of human material of exceptional interest. The site consists of two complexes of midden, separated by sand, and in this sand we found several shallow black depressions filled with charcoal and burnt and smashed fragments of human bones, and with these bones were the phalanges of wallaby and large hawk all together in one black depression. Six feet away from these, and at the same level, was a well defined pit 1 1/2 feet in diameter, and 1 foot deep containing smashed and burned fragments of human bone including parts of cranium, maxilla, and mandible. Although burned, the bone is excellently conserved, so that the broken edges are fresh enough to have allowed A. G. Thorne, to have pieced together large parts of the back and top of the cranium of an adult, probably male. With these bones, we found the bill of a duck and about 30 small, and 2 large shells, each with a circular hole cut or drilled into it. It is reasonable to infer, following ethnographic specimens, (see Plomley 1962) that these shells are the remains of a necklace. A third pit, again 1 1/2 feet wide and 1 foot deep, was found near the base of the lower shell midden complex, about 7 feet below the surface. Here the bones were heavily calcined, but the presence of the pit practically at the base of the deposit, is evidence for the continuity of this particular cremation traditional for a long time, probably for the duration of occupation at the site.

Archaeologically, the evidence is for burning, in some cases not too fiercely so as completely to have calcined the bone. The bones were also broken systematically, and the fact that in some cases the edges are uneroded, suggests that at least for these, the smashing occurred after burning. The fact that some pieces can be fitted together perfectly, suggests that this took place nearby. The burned and broken bones were probably scooped together with ashes and charcoal and put into a small pit. In one case, they were accompanied by the feet of some wallabies and the claws of a large hawk or eagle, and in another case with the bill of a duck and a shell necklace.

From the ethnographic accounts, there seems to be some variety in the burial customs of the Tasmanian Aborigines. In some cases, the body was bound in a flexed position, and either burned, or left in a hollow tree. There is also evidence for the relatives carrying bones and dessicated flesh in little bags around their necks, and the finds of Pulleine (1924), and Crowther (1939) probably belong to this class. For cremation, Calder (1874), records Robinson's observations of the cremation of a man at Bruny Island in 1829. His legs and arms were bent and tied, and the strongly flexed body was placed upright on the funeral pyre. 'After the fire had burnt out, the ashes were scraped together, and covered with grass and dead sticks' Crowther found burned and smashed fragments of human bone in little black depressions in the sand at Sandford (1934) - 'It is difficult to account for the broken down condition of these bones, except by deliberate repeated fractures following partial incineration', The left side of the skeleton was flexed and unburned, and Crowther inferred that the body having been treated as in Calder's account, had fallen over before incineration.

The most fascinating account of all was that of Peron's (1809) on Maria Island, where he discovered a little pit 18 inches wide and 10 inches deep, containing ashes, and fragments of partially burned human bone. This pit was covered with plaited grass, held down by a circle of small stones, and this in turn was covered by a little pyramid

but in a state of decay.

The West Point finds are fully consistent with this evidence, and in turn carry back the traditions to the time of the foundation of the midden. Viewing the decayed condition of his second cremation find, Peron remarked on how quickly all the bark, grass and twigs would disappear; the ashes in the hole would look like an old fireplace, and the bones would remain buried - ' added to which, the thorough burning they had been subjected to necessarily hastened their decomposition and complete annihilation.'

Fortunately, this is not always the case.

EXCAVATIONS AT ROCKY CAPE

The cave sites at Rocky Cape have long been considered to be the key to Tasmanian prehistory. Pullaine (1929) said 'if any light could be thrown on their culture by excavation, the Rocky Cape talus offers the best deposit in all Tasmania. However it is to be feared that excavation would be in vain, as everything points to the conclusion that they were an unchanging people living in an unchanging environment'. Many excavations have been made at the sites; Noetling and Stephens dug in the North Cave before World War 1. In the South Cave Meston cut a trench to a depth of 'over two metres' (Tindale) before 1937, and in 1938 a depth of 'just over 15 feet' (Meston 1956) of midden was found. Gill and Banks dug a small hole reported in 1956, and recently Bryden, Both, Reber and Bennet have trenched there. Tindale (1937), has reported on finds from Meston's 1st trench, and Mulvaney discusses this in his 1961 paper. The site is reported in popular accounts e.g. Kemp (1964), several A.N.Z.A.A.S. trips have been there, and collapsing holes, disturbed deposit, tin cans, beer bottles, and other non Aboriginal artefacts attest to enthusiastic though somewhat less scientific interest.

Yet this activity has yielded little information, and it is confusing. Meston (1956) describes 'a distinct lower layer', yet later on says 'there were no stratification layers'. Tindale distinguishes between patinated and unpatinated implements, but Mulvaney handling Meston's collection in Melbourne says 'without exception, this material is unpatinated to any extent'. Tindale erects a typological sequence of wide implications with a 'Newer' and 'Older' Tasmanian series, yet Meston finds 'no evidence of changed culture, the same types of implements being found throughout'. (1956). Meston found 1 parrot fish bone at the '12-13 feet level', Gill and Banks found dozens at a depth of between 18 inches and 2 feet. Noetling (1912) used his material to deny the Aborigines the use of bone implements; but Meston and Gill and Banks between them describe several bone implements from their excavations. Meston's excavations had been pioneering, and Tindale's inferences were continent wide (1957). The intrinsic value of the site, and also the problems raised by previous workers made an examination essential, though probably this very activity has dimmed the glamour of other sites. Mulvaney concluded his section on Tasmanian Prehistory (1961) with 'systematic excavation at Rocky Cape is as Tindale observed, highly desirable. Until that time, correlations of mainland and insular prehistory are premature'. But this has not stopped such correlations from being made however. I feel that any claim of Tasmanian connections must surely be supported by detailed evidence, and not just stated, e.g. Mulvaney (1964).

During the reconnaissance trip, I wanted to excavate an untouched site, so that I might come to what might be the crucial excavation at Rocky Cape with some experience of cave middens and Tasmanian assemblages behind me. The cave site at Sisters' Creek was ideal (Jones 1965) as it is only 7 miles away from Rocky Cape, in similar bedrock and environment, and the C14 date of $6,050 \pm 88$ for the basal level gives it a comparable antiquity. The main problem at Rocky Cape was whether or not any deposit was left undisturbed, and if there was, where was it? In March 1964, we inspected both caves, and in the Southern one, we could distinguish the long depression of Meston's trench about 15 feet to the north of the entrance; and immediately under the entrance, and a few feet to the south was a roughly circular pit, 8 feet wide and $4\frac{1}{2}$ feet deep. The site looked a shambles, but examination of

the walls of the large pit showed the presence of stratified hearths, and thus a block of material just under the entrance was probably undisturbed. The Northern Cave also had a large pit in it, but in general it was less disturbed.

My aim last summer was to isolate and excavate some undisturbed material. I particularly wanted to test Meston's claim for a 15 foot depth, Tindale's theory of a typological sequence, and also to assess the potential for a major excavation. Our purpose was much aided by Dr. Reber who could show the limits of his own cutting. We first of all cleared away most of the loose shell, and then emptied the big pit down to a depth of 4 feet. We cleaned up the walls with a trowel, and the complex stratigraphy of ash and shell on the north side showed that excavation was feasible. Before digging any further, I wanted a straight wall to work against, so I set out 2 strings at right angles to each other forming a corner on the surface of the ground, beyond the irregular outline of the cleaned up hole. We then excavated this corner carefully, in shallow spits, and flakes, implements and bones were recovered. We repeated the process, taking the disturbed pit down to 8 feet and then to 10 feet, where undisturbed sterile sand was reached. The position of Reber's C14 sample was located at the base. We excavated our embayment down to sand, and a straight wall of 10 feet of undisturbed deposit was revealed. After drawing, we excavated into our wall, in a column 6 feet by 3 feet. The fact that we were digging into a known section, meant that the spits being taken off, could be aligned very closely to the stratigraphy. We now had a section of 12 feet in depth of which the top foot and a half was disturbed. The deposit showed an extremely complex stratigraphy, consisting of interleaving lenses of shell, shell and ash, fine wet charcoal etc. However one can see several complexes of deposit distinguished from each other by slight variations in lithology, and by slightly unconformable deposition. A broad two fold division can be made; the bottom 7 feet consists of thick bands of shell and soil, in marked contrast to the top which is composed of hard ash, broken shell, and a sticky white deposit, which is flecked with fine wet charcoal. This top group is strongly unconformable onto the bottom, and indeed it seems to lie in a wide depression cut into the latter. This is probably what Meston found when he said 'the mound was black from grime and grease throughout all the upper part'. This greasy deposit contained a very large number of flakes up to 70 to 100 flakes per cubic foot, but only 1% to 3% of retouched pieces. The bottom deposit had less material, - 15 flakes per cubic foot, but the percentage of retouched pieces was about 4 times as high. I would suggest that the top deposit is the debris of a living area, with the primary chipping, fire ash, and possibly a high phosphatic content. The bottom deposit represents a different aspect, the rubbish area, or where implements were used and discarded. In this context, it must be noted that if 7 feet of deposit were removed, the cave would look very different, and with it's sloping ceiling, what is cosy now would have been exposed then. Because of these differences, a simple comparison of flake sizes would be meaningless because we are dealing with different aspects of the total assemblages.

When this work was going on, we put a sounding into the other cave, and instantly it was obvious that there were great differences between the two. In the South Cave, the first one dug, the stone artefacts were mostly made of quartzites, 35 bone implements were found, and the faunal material contained a lot of parrot fish bones throughout, with seal, bird and wombat. In some spits, there were up to 80% fish bones, and altogether we excavated several thousand. The shells in the midden were

mostly warreners (*Subnivalia undulata*). In the new cutting at the North Cave, on the other hand, there were many stone tools made of fine cherts and metamorphosed rocks, no fish bones at all, and the faunal material comprised mostly of seal, wombat, wallaby and bird. There were no bone implements, and the midden itself had a large proportion of Mutton fish shells (*Haliotis*) together with warreners and others. These differences had to be explained, and Gill and Banks who noticed the differences in the shells and surface animal bones, said 'as the Northern Cave is nearer the open sea, it is not surprising to find more *Haliotis* and seals in the midden remains'. An examination of the foreshore in front of the caves, however, shows no differences in the shell fish populations, and as the sites are only 7 minutes walk from each other, an ecological explanation would be difficult to believe. The alternative was that the variation was due to changes through time. With Reber's date of 8,000 B.P. for the base of the South Cave, it was most likely that the North Cave deposits were younger, and if this was so, then we should find fish bones, bone tools, and the absence of both fine grained rock and *haliotis* lower down in the deposit at the North Cave. This is exactly what we found, at a depth of between 7 and 9 feet, although it must be stressed that all these changes were not synchronous. The total depth of shell was 10 feet resting on sterile sand on bed rock.

Using this evidence for the relative dating of the two sites, I can set up a hypothetical dating scheme which can be tested by C14. It is that the top 8 feet of Rocky Cape North is later than any deposit in Rocky Cape South. It is possible that in the South Cave we are dealing with a truncated deposit anyway, for Pulleine describes how he had to crawl into the entrance, though now one can walk in without stooping. It is also probably that if the cave filled up, it became abandoned, though the Northern one might have had continued occupation, and there is still headroom of about 30 feet in the latter.

Reber (1965) obtained a date of 8,100 \pm 120 B.P. for the base of the South Cave, and we were able to locate the position of the sample. We found about 1 foot of midden beneath this, and so, if Reber's sample is reliable, then an antiquity of about 8 1/2 millenia might be expected. The midden rests on a deposit of gritty sand and very large sharp edged boulders, packed very tight together. We dug down as much as we could between these, but found nothing. The first human deposit at the site is a marine shell midden. The sea floor deepens quickly off the cape, and according to Jennings' map (1959) a 15 fathom or 100 foot depth occurs within half a mile. Godwin, Suggate and Willis (1958), describe the post glacial sea level rise, and according to their graph, the minus 100 feet level is reached at about 8 or 9 millenia. Thus as soon as the sea shore had arrived at Rocky Cape, the cave was occupied by shell fish eating people; and conversely, it is impossible at Rocky Cape, to have an older marine midden, unless the Aborigines carted tons of shell 15 miles or so.

Throughout the whole excavation, I can find no evidence at all for any patination on the stone artefacts, and thus cannot confirm Tindale's observations. In the South Cave, there are small changes in the raw materials. In the bottom midden complex, 45%-50% of the artefacts are made of white quartzite; 20% of yellow, and 10% of red quartzite; quartz and basalt each have maximae of 20%, the quartz steadily replacing the basalt. In the top ashly complex, the situation is similar, except that we have the appearance of about 3% of new materials mostly cherts. In the North Cave, the bottom 2 feet have rough quartzite and coarse green stone; there is a middle part with materials generally similar to the other

site; and the top 4 feet has up to 30% of the innovated good materials.

Typologically, it is difficult to make definite statements, as the sample is small, and the analysis only begun. In the South Cave, a hint of a sequence can be guessed at - the top complex contains a few well made implements not found in the bottom, though throughout, the majority of the tools are retouched in the distribution of the choppers. It is only when we look at the top of the North Cave that differences become really apparent. Here is a range of small well made tools, and as no analogues to them can be found at the base of either site, we are probably dealing with a cultural sequence. Some of the specific tools that might be abstracted are:

1. Little disc-like cores showing alternate flake scars.
2. Small high domed pieces, with steep retouch, sometimes this retouch forms a series of concavities around the periphery.
3. Small flat circular scrapers, some could be called thumb nail scrapers.
4. Pieces with steep straight lateral retouch.

Tindale divided material from Rocky Cape South, into a patinated, and an unpatinated series, the older unpatinated group coming off unprepared cores, and the newer one off prepared cores, the angle between the flake surface and the platform in the latter case tending to 110° . I find no patination and no systematic distribution of flakes off prepared and unprepared platforms. However Tindale's observations were only 'preliminary indications', and all that he really said about the typology was that there was an innovation of 'specialised implements', so if we exclude pedantic objections, it is possible that we are seeing the same thing. It is only when Tindale claims correlation of his 'Older Series' with the 'Kartan', and the 'Newer Series' with the 'Tartangan', then I beg to differ fundamentally. The Kartan is defined by Tindale as being characterised by pebble tools, including 'Sumatraliths' - pebbles worked all over one face, 'Horsehoof' cores, and 'Kartas' or large discoidal flakes worked around most of their periferies.

Simple utilised pebbles however, are too widely found to be of any correlative value, and neither 'Sumatraliths', 'Kartas' nor 'Horsehoof' cores are found in the excavations. 'Tartangan' is defined by Tindale as being 'a large blade industry' (1957), but no large retouched blades are found at Rocky Cape. If simple retouched flakes be claimed as 'Tartangan', then they are found throughout. In this context, Mulvaney (1961) suggests that this cultural term be abandoned, due to insufficient specific definition. At Rocky Cape I do not find the evidence to support Tindale's specific cultural correlations.

In the South Cave we found 35 bone tools, and their distribution was throughout the deposit. Some of these are fine points and spatulae made from the Fibulae of wallabies. All the points are single ended, having been ground and polished at their ends, some being 115-145 mms long; and the best spatula is 150 mms. long. Some of the tools were found below Reber's C14 sample, and with an antiquity of over 8 millenia, they would be the oldest bone implements in Australia, so far found. They may be compared typologically with the surface finds of Crowther (1925) and Meston (1956) - some of Meston's specimens of course came from Rocky Cape, but their stratigraphic position has been lost. One bone tool, a single ended point on a macropod ulna, was found at the base of

To sum up then. At Rocky Cape, I postulate the following tentative scheme, to be tested by C14 dating and further analysis, and I must stress it's speculative nature.

As soon as the sea shore had reached Rocky Cape in it's Post Glacial rise 8 1/2 thousand years ago, people first occupied the site. They had a well developed sea shore economy, eating shell fish, parrot fish and seal. The stone industry consisted of a range of retouched flakes and simple flaked pebbles, made from the immediately available raw materials. They also made fine bone points and spatulae. Sometime later, fishing dropped out of the economy, bone tools were discontinued and on to the continuing stone traditions, new tools were made, mostly manufactured from good imported rare raw materials. There is no evidence that these changes all occurred at the same time, limited though it is, the data point to gradual replacement, and not cataclysmic change. This sequence is postulated for Rocky Cape only, and it may not be general; but it is intriguing to speculate whether or not the curious rarity or absence of good ethnographic evidence in Tasmania for fishing and the use of bone implements may be explained in terms of discontinuity through time.

The origin of the Tasmanians has long been a vexed one. The mainland route theory was first translated into archaeological terms by Tindale, and now other workers such as Mulvaney (1964) McCarthy, Megaw, Wright and Golson, have found old industries which they claim are somewhat similar to the Tasmanian ones. Although no detailed comparisons have yet been made, it is reasonable that these similarities have cultural value. Accepting therefore the general relationship between Tasmanian and old mainland industries, I don't find the evidence for specific connection of the Rocky Cape sequence to the Kartan and Tartangan assemblages. In archaeological terms therefore, it seems likely that the Tasmanians reached their island home from the continent, being cut off from further cultural influence by the inundation of the Bass Strait some 12,000 to 8,000 years ago.

Birdsell and Tindale have long postulated just this: Birdsell saying that the first occupation of Australia was by a Negrito race, the ancestors of the Tasmanians. In 1949, Birdsell said that if his theory was correct, then the old fossil human skulls found in Australia would be 'Negrito' in character. But Macintosh (1965), in a review of the fossil skulls of Talgai, Kailor, Mossgiel and Cohuna, said 'none exhibits Tasmanian traits' (p.58).

How can we solve this paradox? I can only offer suggestions.

1. We need more rigorous definition of the terms 'Australoid' 'Negrito'.
2. We should look for similarities, and not always for dissimilarities between the physical, linguistic and artefactual attributes of the Tasmanian and Australian Aborigines.
3. As an archaeologist, I should like to ask the physical anthropologist the question - can or cannot the physical differences between the 19th Century Tasmanian and Australian be explained by genetic isolation on a small population for over 8,000 years? More than anything, we need more fossil skulls.

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Rocky Cape Mr. Linus Donally, and all the people in the 'shacks' at the Cape. Their help also saving our camp from a bush fire.

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I should like to thank the Army (Eastern Command) for the loan of tents, and the Department of Geography, University of Sydney, for the loan of surveying equipment.

My greatest thanks again are to my colleagues in the field.

NOTES

Following are some notes on aspects of field work:

1. Photographic Equipment

The equipment was borrowed from the Institute through Mr. Peter Hamilton. The items lent to me makes an admirable field kit, and I found that it was robust, flexible, and easy to use; and the quality obtained was good even in the hands of an inexperienced amateur. I should like to thank Mr. Hamilton for assembling the kit, and I recommend it's use for other archaeological work in the field.

Photographic Kit (Hamilton)

2 Reflex camera bodies, with built-in view finder and light meter (Voigtlander - Bessematic). - one camera for colour, and the other for black and white.

2 interchangeable lenses - one normal lens, and the other a combination telescopic and wide angle lens.

A set of close up lenses for the normal lens.

Electronic flash equipment.

Accessories e.g. U/V filters, hoods, tripods etc.

2. Camping Equipment

Most of the material that we used was bought cheaply, and was expendable, or could be borrowed easily. The weather in Tasmania however, especially in an exposed wet place like West Point, forced us to take good tents. The problem was to get tents robust and big enough for the conditions and the size of the party, and yet small enough to be fitted into and transported by the Long wheel base Land Rover, together with other equipment. I was very fortunate to be able to borrow from the Army (Eastern Command), three 14 foot by 12 foot general duty tents with fly sheets. These gave ample space for living and working in the field, were completely rain and wind proof, could be fitted into the Land Rover (with some adjustment for the poles), and were easy to erect and dismantle. There was one occasion when a bush fire swept through our camp, and we had 5 minutes to get everything down and thrown onto a welcome neighbouring beach.

3. Surveying equipment

I borrowed simple surveying equipment from the Geography Department, University of Sydney. These were a Dumpy Level, Sopwith

staff and Plane Tabling Board. These items are essential to field archaeology, and even such crude items can satisfy most requirements on Australian sites.

I should like to enquire whether or not the Institute might consider getting some good tents and simple surveying equipment for its equipment pool. These items are too expensive for budgets, and yet they are as essential in their own way to the field archaeologists as are his cameras, or as the tape recorder is to the linguist.

Green's Creek Carvings

We visited these carvings one Sunday afternoon, and I was upset to see that part of it had been disfigured. A roughly triangular piece (each side 2 or 3 feet) had recently been removed, and the scar where the piece had been, is easy to see. Comparison with photographs taken only last year (9 months before February 1965) show the carvings complete. We took photographs of the carvings, and if anybody is interested I can send copies to them.

Addendum to report on the first season in Tasmania
archaeological reconnaissance. 1963-64

A report of my field reconnaissance in Tasmania, Summer 1963-64, was sent to the Institute last September (1964). Some of the results of the work have been published since then, and I enclose this list for the record.

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|-------------------|---|
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62, pp. 78-79. |

The single diseased human molar found in the last year's expedition, has been studied by Macintosh and Barker, of the Anatomy School, University of Sydney, and a report on this is in Press.

Report on a short excavation at West Point, August 1965.

We arrived at West Point in a storm late on 22nd August, and left on 30th August, spending 7 days actually digging on the site. My purpose in doing this small excavation was to open up the area immediately to the N.E. of pit M; where last summer we had found a black pit containing smashed human cranium. I wanted to see whether there was the possibility of more scattered fragments to help in the reconstruction of the skull. We dug a total area of 45 square feet down to the relevant level, ranging from 5 feet to 4 feet below the surface. Together with the usual large quantity of seal and macropod bones, we found 2 fragments of burnt human cranium, the edges having been

slightly worn by redeposition or rolling in the midden. These pieces might be fitted with other finds, but it is clear that there is no wide spread scatter of human material on the N.E. side of the pit, as there was on the S.W. It was pleasant to find that the filling and turf put back after last summer's work, had consolidated very well.

Members of the Excavation

Mrs. J. Birmingham
Mrs. B. Hiatt
Miss J. Partridge
Mr. R. French
Mr. R. Jones
Mr. A. Thorne

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