

ABORIGINAL OCCUPATION OF THE
NEWCASTLE COASTLINE

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Historical The aborigines of the Newcastle coast did not long survive white settlement. Even before such local settlement began, it is likely that smallpox and influenza spreading from the First Fleeters had wreaked havoc. By 1830 the Reverend Threlkeld was complaining at his Belmont mission station that his Herculean task of translating much of the Bible into the Awabakal tongue of the Lake Macquarie natives had been wasted, because so very few Awabakals remained. Severe droughts struck in the 1830's. Only remnants of the Hunter Valley tribes survived that decade, and the tribal way of life was lost forever.

Taking stock of our knowledge of the aboriginal tribes today, we find ourselves with little information about their implements, food, ceremonial centres, and burial customs. It is not known how many thousands of years ago the first aborigines settled in the Hunter Valley, nor by what routes they arrived here, and whether there have been cultural changes among them since that time.

Some of this information can be obtained by a careful study of aboriginal campsites, and the Australian Museum is carrying out field work in the Hunter River estuary and the surrounding areas (references 1 and 2). Considerable work has already been done in the Upper Hunter (references 3 and 4). Much of the field work in the coastal region has been carried out by the present author, and in this article I will attempt to draw the picture of aboriginal life which emerges from these studies.

Basis of Aboriginal Life The aborigines were collectors and hunters of food, and had to keep on the move to avoid exhausting the supply. The campsites we can see today are the places where family groups camped for a few days or a few weeks before moving on to fresh food supplies. Some of the campsites--especially those where shellfish were plentiful--would have been frequently occupied for extended periods. On the other hand, a location at which wild fruit was available might have been visited only for a few days once a year.

The coastal tribes depended heavily on fish and shellfish, supplemented with waterfowl and game. We know from the observations of early white settlers that birds' eggs, honey, wild figs,

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cabbage palms, and bracken fern roots were eaten, and the fruit of the *Macrozamia* was a staple item. This last item is truly remarkable since the toxin is lethal; a special method of preparation and cooking must have been devised.

The natives practised no form of gardening, but could be said to have farmed kangaroos. It was their custom to burn the scrublands each winter, which not only encouraged an early growth of spring grass to attract kangaroos and wallabies, but also cleared the ground for easier stalking of the game. This custom explains why so many of the side valleys in the Hunter drainage system were found to be "open parkland" by the first white settlers. Unfortunately, these winter burnings led to serious misunderstandings once white settlement was established.

Food was not the only factor to be considered in the wanderings of the aborigines. Stone implements have a short working life, so that quarries of suitable stone had to be visited regularly. The considerable importance attached to their ritual life would also have required frequent visits to sacred ground, and the gathering of supplies of ochre and pipeclay.

Newcastle Sites The great majority of native campsites in this area are found on ocean, estuarine, or Lake Macquarie waterfronts, and are often marked by great heaps of discarded shells. Favourite shellfish were the pipi from ocean beaches; turban, winkles, rock oysters, and whelks from tidal reefs; and oysters, whelks, and cockles from tidal flats. The first European settlers burned these shell heaps or "middens" for lime, but shell middens can still be seen at Birubi Point and along the Stockton Peninsula. Prior to the establishment of heavy industry in Newcastle, shell middens extended all the way from Port Waratah to Sandgate along the riverfront (reference 1).

Some of the largest aboriginal campsites were at Birubi Point, Dixon Park, Murdering Gully, Glenrock Lagoon, Redhead, Ham's Beach, Middle Camp, Moonie Beach, and Birdie Beach (see Map). All these sites have both ocean beach and tidal reef types of shellfish, and would have provided good fishing. Some also have other advantages, such as nearby swamps in which waterfowl (especially swans and their eggs) were once numerous. Other camps, such as those on Lake Macquarie and the Hunter estuary, were based on the shellfish, waterfowl, and fish of tidal flats, while the Stockton area gave access to pipis from the beach and mudflat shellfish (particularly oysters) from Fullerton Cove. The extensive swamps around Grahamstown were also attractive to the aborigines.

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Among these sites, those between Nobbies and Glenrock are alongside sources of chert for making stone implements, and a fine quartzite is available near Ham's Beach. A crumbly red ferruginous sandstone which occurs in thick seams at Murdering Gully and Birdie Beach would be a suitable source of ochre, and was indeed transported to other campsites. A similar source of yellow ochre is found at the Merewether Beach.

These coastal campsites are generally at the rear of the beach, in the shade of the scrub. Sometimes the sites extend onto open sand dunes, presumably to catch some sea breeze which would disperse the mosquitos from nearby swamps and lagoons. Camps in the Grahamstown swamps are on high sandhills--though one wonders if that was adequate protection from the "Hexham gray"! At nearly all sites, water could have been got only by digging in the sandy soil alongside swamps or lagoons, and of course the aboriginal preference for such sources of water is well known.

Campsites back from the beach or lake foreshore are uncommon to the south of the Hunter River. Maybe the aborigines liked a comfortable sandhill to sleep on, or perhaps anything left at a camp on a clay hillside was washed away by the next rain.

Axe-grinding grooves are known in five places between Newcastle and Redhead, and also elsewhere (see Map). Grooves occur in the sandstone beds of creeks, always in batches of a dozen or more, which suggests that the tedious job of grinding edges on axes was relieved by making it a sociable get-together.

The ritual centres of the Newcastle aborigines are unknown, apart from early records of corroboree grounds at Wickham and Belmont and on hilltops around Lake Macquarie. There have been reports of ochre drawings in Flaggy Creek rock shelters but there is no sign of them today.

The number of campsites shown in the Map, together with the size of some of the shell middens, may suggest a native population of some thousands. However, one must remember that a nomadic people would use many campsites, and that a square meal of shellfish leaves a sizeable heap of empty shells. In 1828 the Reverend Threlkeld counted only 64 aborigines of all ages in the area between the Lake Macquarie entrance, Newcastle harbour, and Cackle Creek. Even with generous allowance for the effects of European diseases, the original population in the area covered by the map cannot have exceeded a few hundred.

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The Material at Aboriginal Campsites The aborigines dumped their rubbish on the campsites, where it steadily accumulated: heaps of shells, ashes, campfire stones, bones from animals and fish and birds, blunted or broken implements, thousands of waste flakes from the manufacture of stone implements, bits of ochre, and even pretty little pebbles such as the children may have played with. Such an assemblage of rubbish is called a midden.

When there is plenty of shell in a midden, all this material is kept reasonably intact. A careful excavation should reveal all the rubbish in a time sequence--most recent on the top and most ancient on the bottom. However, such an excavation, with many cubic yards of material to be carefully sifted and recorded and identified by a large team of experts, is a very considerable undertaking, and none has yet been carried out in the Newcastle district.

The corrosive action of groundwater may eventually collapse a shell midden. Wind and water then spread out the stone material and remaining shells, which on sandhills will ultimately concentrate again in a depression. Some campsites may never have involved shell middens, but if the scrub is cleared off them, erosion will likewise concentrate the aboriginal material into a fairly small area. This is the present condition of most Newcastle sites.

One may well ask if pieces of stone should not sink from sight in loose sand. Actually they do not, because erosion (especially by wind) keeps removing the sand cover from them. I believe that total collections (repeated to allow for the vagaries of wind and moisture conditions) do give a fair impression of the stone material the aborigines left at a site. In my experience, random collections are close to worthless.

Some of the results of total collections are given in Tables 1 and 2, and will be discussed below. These collections necessarily lump together material of all ages: there is no effective way of telling if a given stone implement is 200 or 2000 years old. Nevertheless, one gets access to the large numbers of artefacts needed for statistical correlations, and eventually comparisons will be possible with artefacts excavated from intact shell midden or rock shelter sites which can be dated. Surface collections also reveal where the shellfish were gathered. The numerous pipis at one Williamstown site required at least a five-mile round trip to get them from the ocean beach.

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Aboriginal Implements One cannot expect nomadic peoples to carry about a large kit of specialized tools. The aborigines preferred multi-purpose tools, such as their edge-ground axes which doubles up as hammers and anvils, or those which could be quickly fashioned when the need arose. The latter type predominate, and are usually a rather rough flake or blade of stone which served to cut or to scrape or to make grooves.

These simple flakes have a sharp edge opposite the working edge, and in the more sophisticated implements this was removed. This secondary trimming is quite easy to do on stout flakes: it requires perhaps a minute's work with a hammerstone against an anvil to make an "elouera scraper" (see Figure 1). Thin blades of stone can be rapidly trimmed by rolling a pebble against the unwanted edge, and it is fairly certain that this "chimbling" technique was used to make the geometrical microliths and Bondi points (Figure 1) which are truly delightful little implements. The pebbles, of various shapes and sizes, which are needed for such working are common on aboriginal sites (see Table 1).

Most of the large stone tools can be recognized as the chisels, scrapers, gravers, rasps, and spokeshaves needed to make the wooden implements (boomerangs, clubs, spearthrowers, shields, food vessels, canoes, paddles, etc) which were so widely used in daily life. Many of these stone tools must have been mounted in a wooden haft to acquire the battered edges seen on some specimens. Aboriginal stone tools defy any sort of neat classification, so I have described all broad flakes as "scrapers" and all blades as "knives" in Table 1.

Stone spearheads are absent from sites in this part of the country. The Sydney colonists reported that spears were made of a Xanthorrhoea stalk pointed with bone or a stingray spine. One imagines that such a flimsy weapon was weighted to give it penetrative power.

The function of the Bondi points and geometric microliths, which are so common on most sites (see Table 1), is still a matter for speculation. Surprisingly, geometrics are quite rare south of the Swansea Channel, making up less than one per cent of some two thousand implements I have collected there.

Unfortunately, the wooden implements which made up most of the equipment used by the aborigines are unlikely to survive. I know of no Newcastle examples.

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Sources of Stone for Implements Only a limited number of rock types is suitable for making stone implements. The rock must readily yield flakes or blades whose cutting edges are sharp and able to withstand wear and shock. The favourite material in our area was chert, though tuffs and fine-grained quartzites were also commonly used. Minor use was made of lavas, indurated sandstones, petrified wood, quartz, and even shale. After the arrival of the white man, the excellent flaking properties of glass were exploited, and some use was also made of flowerpots and willow-patterned crockery. Presumably aborigines held the original scavenging rights at Newcastle garbage dumps!

Good chert was available in the form of small boulders along the foot of the cliffs at Nobbies, Merewether, and Glenrock. One can still see where these boulders were broken up along the Glenrock beach and implements fashioned from the lumps of chert. The chert was used in rather profligate fashion, large pieces of it being left at the campsites. The aborigines must also have fashioned "flaking cores" of chert to take away from these "quarry sites", because thousands of waste flakes from on-the-spot manufacture of implements can be found at campsites on the sand dune terrain of Williamtown and the Stockton peninsula. At these latter sites, however, the chert had acquired real value through the labour of its transport, and generally only unusable flakes and quite small cores were discarded.

Analysis of stone flakes from total collections on campsites reveals much about the sources of rock used and the way in which it was distributed (see Table 2). Thus, at Murdering Gully and at Redhead Dunes, about 90 per cent of the material used was chert. Tuffs and quartzites were acceptable but much less popular. At Swansea Heads, a fine-grained quartzite is the dominant material: it is available on the spot while chert is not. North of the Hunter, there are less dramatic but nevertheless significant changes in the material used. At Birubi Point, the distance to Nobbies chert is reflected in the appreciable use of local lavas, especially for making the massive "Worimi" cleavers (Figure 2). The Morna Point lavas are distributed throughout the area between Stockton and Port Stephens but do not appear at any of the campsites south of the Hunter estuary. At Williamtown there is appreciable substitution of chert by tuffs whose type, and distribution through this sandhill area, suggests a quarry on the Williams River.

Burials We know very little about the mode of burial in this region. There is some evidence that children and teenagers were buried in the sand at the campsites, and the adults somewhere else. Occasional human bones are to be found at many sites, and small cemeteries

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are uncovered from time to time. Inevitably, souvenir hunters flock to these cemeteries with shovels, so that recorded details of age and sex, and methods of burial, are very scanty.

Recognition of Aboriginal Sites How does one recognize aboriginal material? First there is the stone: chert flakes on a sandhill or a clay hillside had to be carried there. Most of the flakes are waste, for flaking stone is a difficult business and produces far more failures than successes. Figure 2 shows a typical man-made flake with its characteristic bulb of percussion. Chert shows a pronounced bulb, but most quartzites do not. Ripples and bulbar scars occur on most flakes but not all.

If one is lucky, some of the quite unmistakable implements will be seen. Flaking cores (Figure 2) are very definite evidence for aboriginal occupation. Shell heaps are not, unless they are accompanied by stone flakes.

It is obvious, from the aboriginal occupation, that there are blanks in our knowledge, which some readers may be able to fill in. Any information sent to the Curator of Anthropology at the Australian Museum, or to myself, will be most welcome. The picture of local aboriginal life is slowly developing, and within a few more years it should be possible to write a much more definitive story than I have been able to do here.

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Aboriginal Occupation of the Newcastle Coastline (cont.)

A number of pieces of information on aboriginal life have been derived from the following sources.

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"The Brisbane Water Story", by Charles Swancott. (Private publication, 1953).

"Sydney Cove 1788", by J. Cobley. (Hodder and Stoughton, London, 1962).

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Table 1: Types of Stone Implements at Newcastle Sites

Swansea Heads Implements

	Chert	Tuffs	Quartzites	Other	Total
Pebbles	0	4	135	0	139
Cleavers	4	1	20	0	25
Utilized slabs	2	0	7	0	9
Scrapers	35	0	80	0	115
Knives	25	2	31	0	58
Bondi points	6	0	10	0	16
Geometrics	0	0	0	0	0
Miscellaneous	4	0	18	1	23
Broken	6	3	17	0	26
TOTALS	82	10	318	1	411
Flaking cores	40	4	46	0	90

Redhead Dunes Implements

	Chert	Tuffs	Quartzites	Other	Total
Pebbles	6	1	34	0	41
Cleavers	5	0	0	0	5
Utilized slabs	5	0	1	0	6
Scrapers	142	6	0	13	161
Knives	103	1	0	1	105
Bondi Points	251	7	0	3	261
Geometrics	269	13	0	4	286
Miscellaneous	10	2	1	3	16
Broken	236	4	1	1	242
TOTALS	1027	34	37	25	1123
Flaking cores	66	13	2	0	81

Aboriginal Occupation of the Newcastle Coastline (cont.)Table 1 (cont.)

Murdering Gully Implements

	Chert	Tuffs	Quartzites	Other	Total
Pebbles	4	8	27	12	51
Cleavers	7	2	0	0	9
Utilized slabs	12	0	0	0	12
Scrapers	141	1	2	3	147
Knives	86	3	0	0	89
Bondi points	24	1	0	0	25
Geometrics	49	5	0	0	54
Miscellaneous	9	0	3	1	13
Broken	20	0	0	1	21
TOTALS	352	20	32	17	421
Flaking cores	62	8	1	0	71

Williamtown Implements

	Chert	Tuffs	Quartzites	Other	Total
Pebbles	1	3	16	0	20
Cleavers	1	3	0	1	5
Utilized slabs	3	1	0	0	4
Scrapers	460	44	15	28	547
Knives	113	25	2	5	145
Bondi points	126	32	1	3	162
Geometrics	171	91	6	1	269
Miscellaneous	28	7	2	4	41
Broken	208	56	11	18	293
TOTALS	1111	262	53	60	1468
Flaking cores	88	29	3	0	120

Birubi Point Implements

	Chert	Tuffs	Quartzites	Other	Total
Pebbles	1	21	141	69	232
Cleavers	0	0	0	10	10
Utilized slabs	4	0	1	7	12
Scrapers	123	9	4	12	148
Knives	82	6	0	0	88
Bondi points	94	13	1	1	109
Geometrics	38	14	0	0	52
Miscellaneous	17	3	1	3	24
Broken	132	11	3	2	148
TOTALS	491	77	151	104	823
Flaking cores	22	7	3	1	33

Aboriginal Occupation of the Newcastle Coastline (cont.)Table 2: Aboriginal Utilization of Rock Types

Site	Implement Material				Total Number of Implements
	Chert %	Tuffs %	Quartzite %	Other %	
Swansea Heads	20	3	77	0	411
Redhead Dunes	92	3	3	2	1123
Murdering Gully	84	5	8	3	421
Williamtown	75	18	3	4	1486
Birubi Point	60	9	18	13	823

Site	Waste Flake Material*				Total Number of Flakes
	Chert %	Tuffs %	Quartzite %	Other %	
Swansea Heads	23	1	75 [‡]	1	2058
Redhead Dunes	92	3	3	2	14702
Murdering Gully	87	2	8	3	13653
Williamtown	68	21	10	1	20633
Birubi Point	63	12	5	20	6166

* Glass implements are counted under "other" and are significant at Redhead and Williamtown. Glass fragments, and flaking cores, are omitted from the waste flake count.

[‡] On this site there were 97 lumps of fire-shattered quartzite which are not included in this count.

Fig. 1

1. An edge-ground axe, made of quartzite, from Middle Camp. Note the heavy battering on the top end and right-hand edge. There is great variety in size, shape, and material of local axes.
2. An "elouera" scraper of typical "orange segment" shape. The trimming on the back would assist the binding of it with gum to a haft. The delicate flaking on its cutting edge may have been done as a method of sharpening. Length, 5.1 cm. Chert.
3. A geometrical microlith, of tuff, from Williamtown. Length, 1.8 cm.
4. Geometrical microlith, of chert, from Burwood. Length, 1.8 cm.
5. A quartzite Bondi point, length 3.8 cm, from Catherine Hill Bay.
6. Bondi point (3.3 cm long), of yellow chert, from One Mile Beach.

All implements are drawn at natural size.

FIGURE 1

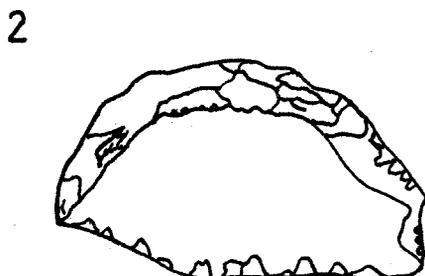
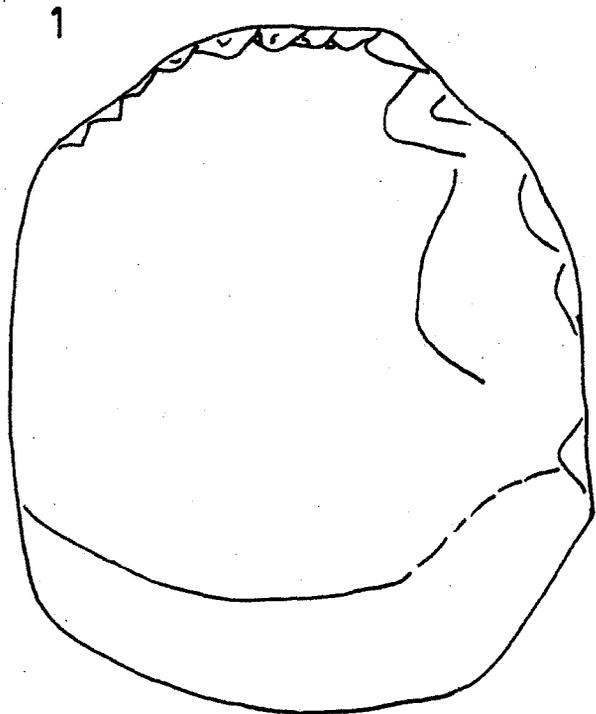
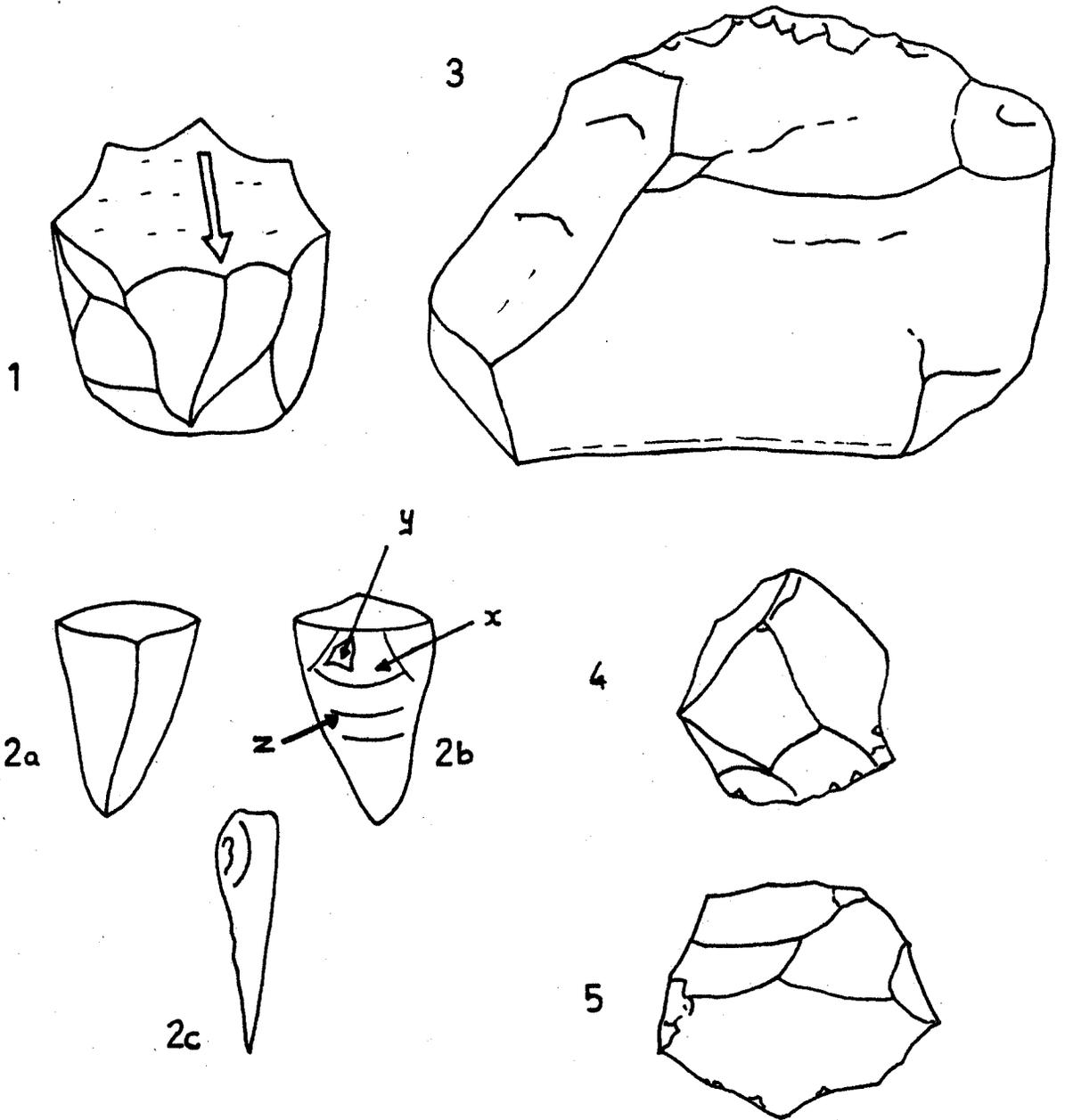
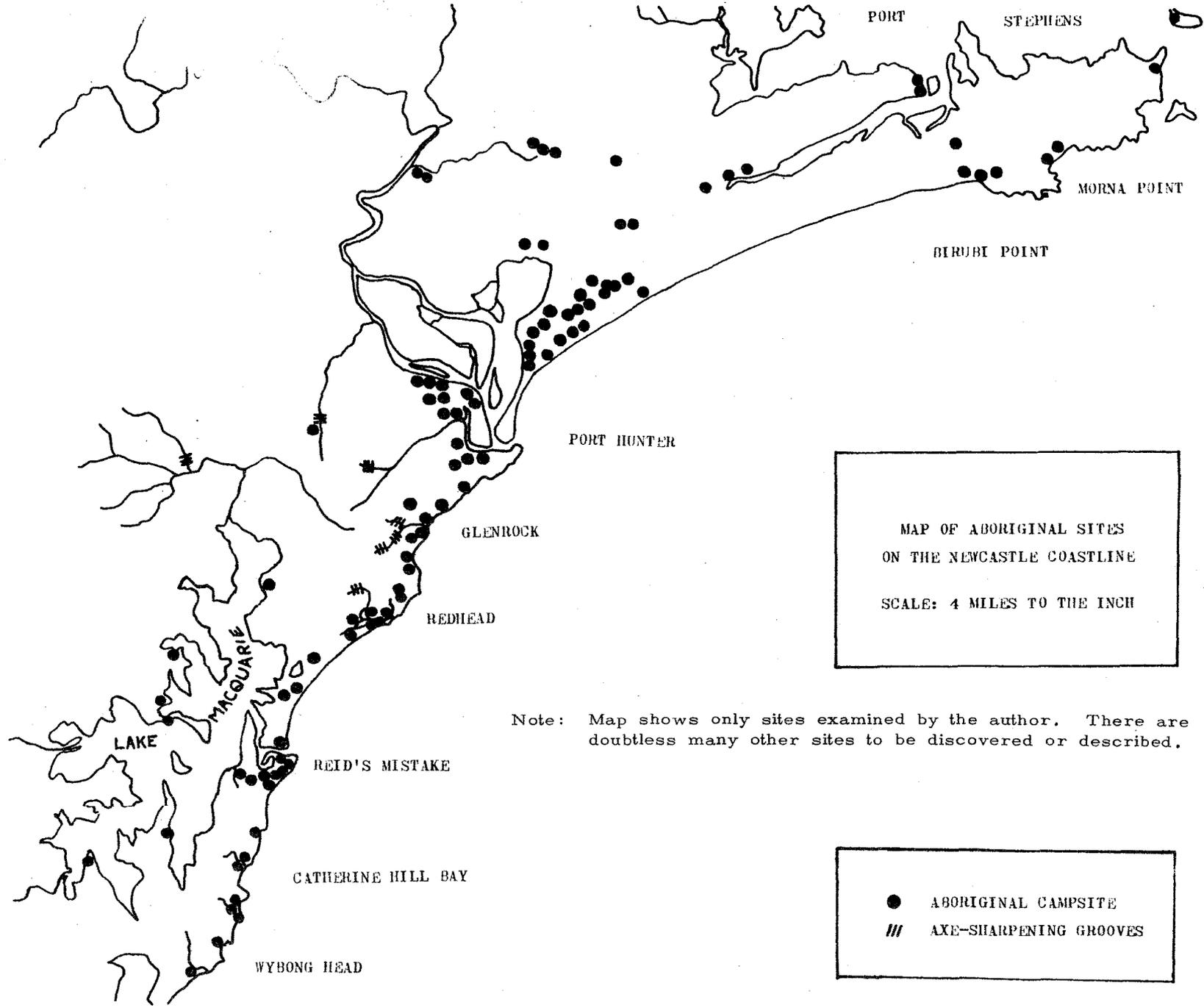


Fig. 2

1. A flaking core in its early stages. The smooth, rounded bottom shows that it began as a waterworn pebble. After breaking the pebble across the middle to provide a flat "striking platform", flakes can be struck off down the sides. A blow at the point indicated will detach a flake (2a).
- 2a. The outer face of the flake. 2b. The inner face of the flake, showing the bulb of percussion (x), the bulbar scar (y), and ripples (z). The side view (2c) shows the bulb more clearly. The flake is often much more rounded at the lower end.
3. A Worimi cleaver, of porphyry, from Birubi Point. The lower edge is considerably polished by use.
- 4 and 5. Untrimmed side-scrapers showing signs of cutting or scraping on the lower edge. Both were struck from the flaking core from the left-hand edge, and show the scars of previous flaking on their outer surfaces. 4 is from Moonie Beach (chert) and 5 is from Birubi Point (quartzite).

FIGURE 2





MAP OF ABORIGINAL SITES
ON THE NEWCASTLE COASTLINE
SCALE: 4 MILES TO THE INCH

Note: Map shows only sites examined by the author. There are doubtless many other sites to be discovered or described.

● ABORIGINAL CAMPSITE
/// AXE-SHARPENING GROOVES