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Kunturu, an Aboriginal Sacred Site on Lake Moore, Western Australia

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INTRODUCTION

In February, 1966, we learned of the existence of a large rock alignment on the western shore of Lake Moore, approximately 230 miles northeast of Perth, Western Australia. We visited the site twice, once in February and again in March, and subsequently visited some local homesteads and the Native Reserve at Mt. Magnet to interview aborigines from the Lake Moore region about the nature of this site. From both the appearance of the site and the information gained through these interviews, it became clear that around the time of European contact this rock alignment was one of the most important aboriginal sacred sites in this part of Western Australia.

HISTORICAL NOTES

The first recorded sighting of Lake Moore occurred on August 25, 1846, when A. C. and F. T. Gregory (1884, p. 5) encountered “. . . an immense salt marsh or dry lake, extending to the north-east and south-west to the horizon, but narrowing to about three miles at the point we came to it.” These explorers tried to cross the lake from the east side but became bogged and had to go around to the north. The aborigines they encountered were frightened by their appearance and ran

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off. They did not report sighting any rock alignments. These explorations were followed by those of Austin in 1854, of John Forrest (1875) in 1869, and of E. Giles (1889) in 1875, all of whom reached the lake but failed to report that they saw any rock alignments. This failure is not very surprising considering the large size of the lake and the practical difficulties these men faced during their travels. It was not possible for them to settle in any one place long enough to explore it thoroughly. Nevertheless, our aboriginal informants, all elderly men, insisted that the site had still been visited by natives until the generation of their fathers.

ECOLOGY AND GEOGRAPHY

Lake Moore is one of a group of large salt lakes lying in the thornscrub (or mulga) belt of Western Australia. This belt is a semi-arid zone of low vegetation, with an annual rainfall ranging from 10 to 20 inches. The actual amount of rainfall may vary considerably from year to year, and more than 40 inches had been reported in the vicinity of Lake Moore during 1965. Evaporation is high throughout the area; except for a few months following heavy winter rains, the lakes rarely hold any water. The country immediately surrounding Lake Moore on the west is made up mainly of jagged, dark gray hornblende schist interspersed with occasional small patches of reddish clay soil. The steep slopes and sharp rocks of this western shore make the site hard to approach, even with a four-wheel-drive vehicle. For all practical purposes, the site can be reached only by driving along the edge of the lake itself when the lake bed is dry and hard. The absence of a beach or strandline of any kind makes even this means of approach tricky. The country surrounding the lake is generally flat, except for the dissected hills along the immediate lakeshore and the solitary range containing Mt. Singleton (2290 feet high) about 20 miles to the northwest.

The dominant vegetation of this region is mulga (*Acacia aneura*), although other, similar forms of acacia scrub occur as well. The rocky shore slopes support almost no grasses, but occasional desert kurrajong (*Brachychiton* sp.) trees occur. The local fauna includes the red kangaroo (*Macropus rufus*), euro (*Macropus robustus*), and emu (*Dromaius novaehollandiae*), as well as smaller birds such as yellow-banded parrots (*Barnardius zonarius*), western magpies (*Gymnorhina dorsalis*), and galahs (*Kakatoe roseicapilla*). European-introduced fauna include sheep, some stray goats, and, of course, rabbits.

On the shore of the lake at this site, where the rocky slope meets the salt crust of the lake bed, there is a fresh-water spring with three outlets. Each outlet is partially covered by a flat slab of rock. Local station

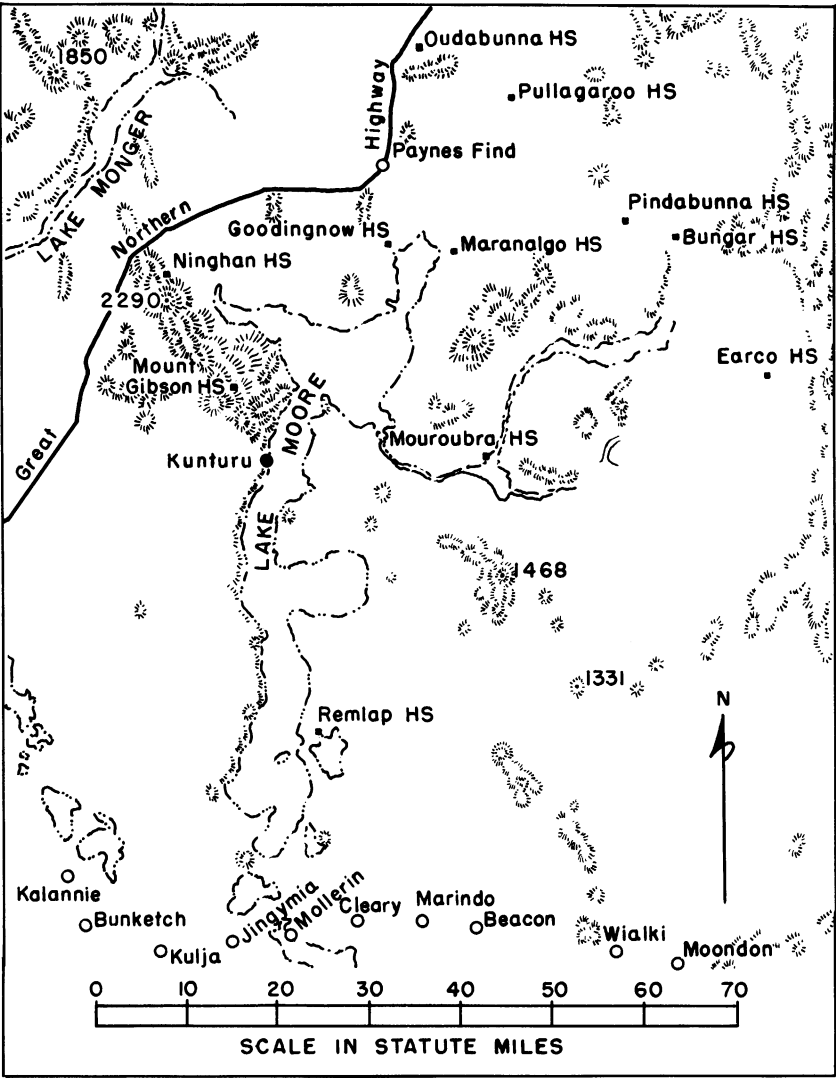


FIG. 1. Map of Lake Moore region. Redrawn from Perth Section, Australian Geographical Series Map, National Mapping Office, Canberra, Australian Capital Territory, 1952.

owners told us that this spring is virtually permanent and goes dry only during unusually severe droughts. There are no other sources of fresh water in the immediate vicinity.



FIG. 2. View of serpentine alignment, facing northeast.

THE SERPENTINE ROCK ALIGNMENT

The most impressive feature of the site is a perfectly preserved serpentine rock alignment more than 250 feet long situated on the salt crust of the lake bed (figs. 2 and 3). This alignment contains 437 upright rock slabs as well as 91 which have fallen over in place. The slabs are small, varying from 6 to 25 inches in length; a few range up to 1 foot in width or thickness, or both. So that they would stand upright,



FIG. 3. View of serpentine alignment, facing northwest.

they were shoved 4 to 8 inches directly into the soft lake bed. None of the rocks used in this alignment or in others at the site show any signs of trimming or dressing. All the rocks are local in origin; that is, they are all slabs of hornblende schist identical with the rock occurring naturally on the nearby shore.

Rock alignments are a widespread feature of traditional aboriginal culture throughout the desert regions of Australia. All those we have studied have sacred significance. They are generally regarded as the actual bodies of totemic "dreamtime" heroes who have transformed themselves into lithic form. During the course of interviews with three aborigines from the Lake Moore area, it became apparent that the serpentine alignment fits into this general pattern.

The aborigines of this region¹ have experienced regular contact with Europeans since about 1840. The few traditionally oriented aborigines who remain in this area are greatly acculturated. Most of their knowledge about the site is secondhand, in the form of fragments of traditional myth cycles narrated by their elder relatives. Our informants' accounts of this site were collected independently and proved to be remarkably consistent. Their knowledge about the site was fragmentary (as is usual when one works from peoples' memories in this way), but it offers more details than could be gained by our simply looking at the site.

The informants generally agreed on the name of the site, pronouncing it variously as "Kunturu" or "Kunturin." One of these aborigines translated "Kunturin" as meaning "something bunched up-place." This name probably refers to the curled pattern formed by the serpentine alignment. They all agreed that this was an important ceremonial site which was visited by local aborigines and by people from farther east, who reached the site by crossing the lake along a pad or hard trail on the lake bed. This trail, clearly visible now, leads directly to the site. The informants all pointed out that the totemic Water-Snake ("Pimara") crawled across the lake at this place, leaving the pad behind as his track. He turned into stone where the large alignment is and resides inside the fresh-water spring nearby. It is worth noting that the mythological figure of the Water-Snake (also known as the Rainbow Snake) who resides inside important springs or rock holes is widespread in abo-

¹ The aborigines from this area lack any clear-cut tribal name. Early sources give the term "yungar" (also "yunkera," "yongar," and "youngar") both for the people themselves and as the word for kangaroo. Our informants said they called themselves "yungara." Among Pitjantjatjara-speakers in the desert areas farther to the east, the term "yungara" means "themselves" or "by themselves."

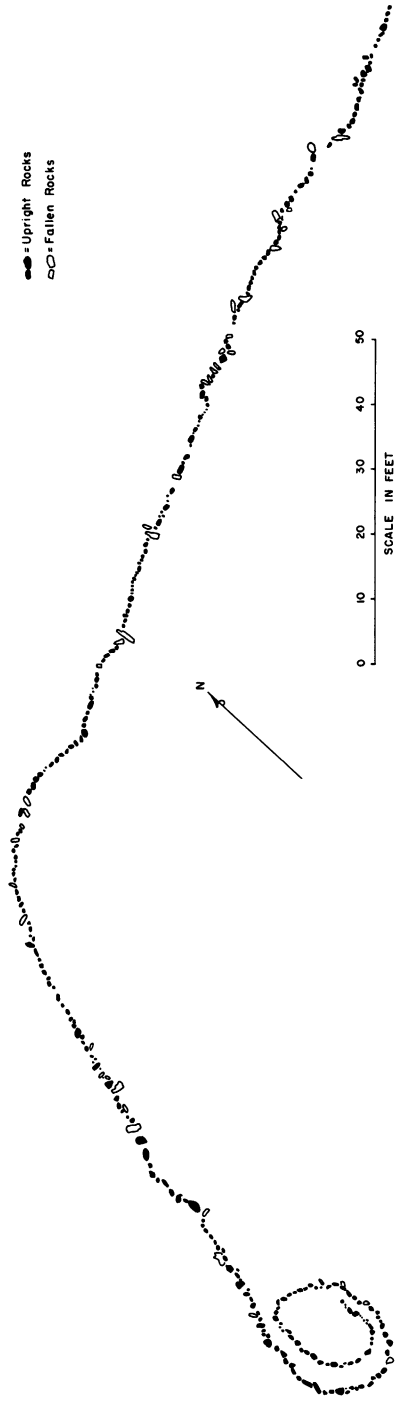


FIG. 4. Sketch of serpentine alignment, drawn to scale.

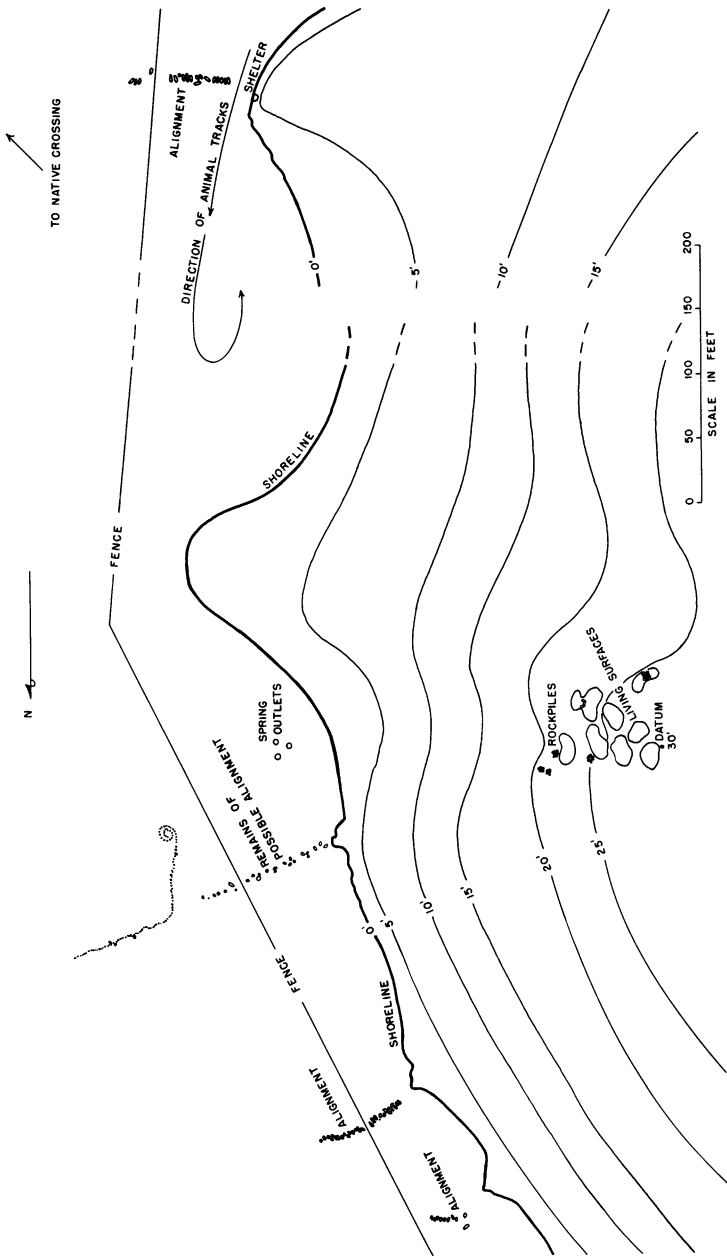


FIG. 5. Contour map of the site.

iginal culture throughout the deserts of Western Australia, as well as in the Kimberleys and Arnhem Land (Berndt and Berndt, 1964, pp. 209-210). Thus the available evidence indicates that the spectacular serpentine rock alignment at this site is probably to be interpreted as a representation of the totemic Water-Snake.

SUBSIDIARY ROCK ALIGNMENTS AND THE ROCK-SLAB SHELTER

In addition to the serpentine alignment, traces of four smaller rock alignments extend out onto the lake bed from the shore (fig. 5). These are not well preserved. The largest contains 65 rock slabs, of which only five are still upright, and the next largest one has 27 slabs, all collapsed. The one closest to the spring is in the worst condition, probably because it had been trampled by livestock approaching for water. The aboriginal informants offered no explanation, mythological or otherwise, for these alignments.

Six hundred and eighty-five feet south of the spring there is a small crevice in the low rocky shoreline cliff which has been neatly roofed over with rock slabs (fig. 6). It lies directly opposite the southernmost of the four smaller rock alignments. The local station people were completely unaware of the existence of this feature and stated firmly that it had nothing to do with the station activities. From its position opposite one of the rock alignments and this disclaimer by the station personnel, it seems reasonable to conclude that this, too, is an aboriginal feature of the site. There were no artifacts or hearths near or inside the shelter.

The shelter measures 4 feet deep, 32 inches high (at its highest point), and 37 inches wide (at the entrance, its widest point). The roof is constructed of long rock slabs laid out side by side and covered by smaller rocks. Although exposed to the sun in the early hours of the morning, the interior of the shelter is in shade for the rest of the day. The shelter is situated on the end of a small promontory which juts out onto the lake bed. About 20 feet beyond the end of the promontory is an alignment of 27 collapsed rocks extending 83 feet farther out.

We had our first clue as to how this shelter might have been used while we were camped at the spring. During the day we noticed that, from time to time, emus emerged from behind the promontory and stopped in the gap, 20 feet in width, between the shelter and the collapsed alignment. After examining us for a while, these emus always retreated. During our first morning there, we noticed several sets of emu and kangaroo tracks which showed that the animals had passed through



FIG. 6. The rock-slab shelter. The rule (lower left) measures 6 inches over all.

the gap during the night to within about 300 feet of our camp. At this point they must have noticed our presence at the spring, for the tracks indicated that the animals then turned around and retreated through the gap and around the point.

From observation of the movements of game to and from the spring, it seems likely that the rock-slab shelter and the adjacent alignment served as a fairly sophisticated game trap. A hunter would have been able to crouch inside the shelter, thus concealing himself effectively from approaching game. The animals would tend to avoid the rock alignment, just as they do now, and pass close to the promontory where the shelter is situated. The hunter could either spear the animal from close range as it passed through the gap or wait for it to pass and then block the gap, driving it toward the spring where other hunters waited. The other small alignments at the site may also have assisted the hunters, by preventing animals from running too far to the north along the shore. If the animals fled too far out onto the lake bed, they would have become bogged and would then have been easy prey. Escape up the shore slope could have been blocked by other hunters, who would hardly need to stir from their campsites, because the habitation area was situated on this slope. The use of blinds constructed of brush or piled rocks in conjunction with natural defiles close to a water



FIG. 7. View of habitation area, facing southeast.

source is a common hunting pattern even currently among aborigines in the Gibson Desert (Gould, 1967, pp. 42-44). It appears likely that this kind of hunting was practiced at Kunturu as well.

THE HABITATION AREA

Remains of the habitation area are situated about 250 feet up slope from the spring. Throughout the Gibson Desert today the aborigines place their campsites uphill if possible for better visibility, and far enough from the water source not to frighten game away. This behavior would account for the location of the habitation area at Kunturu and also fits well with the previously advanced interpretation of the rock-slab shelter and small alignments as components of a hunting trap.

At least eight roughly oval living surfaces are visible in the habitation area. These can be recognized by: (1) concentrations of chipped stone tools and flakes on the surface of each living area; (2) the fact that, unlike most of the slope, these surfaces are almost completely clear of rocks and stray rubble; (3) one of these living surfaces contains a hearth; and (4) unlike the surrounding slope, they tend to form level surfaces (or, in other words, definite terraces).

There may be additional, less well-preserved living surfaces on the slope, for stone tools and flakes are scattered down the slope all the

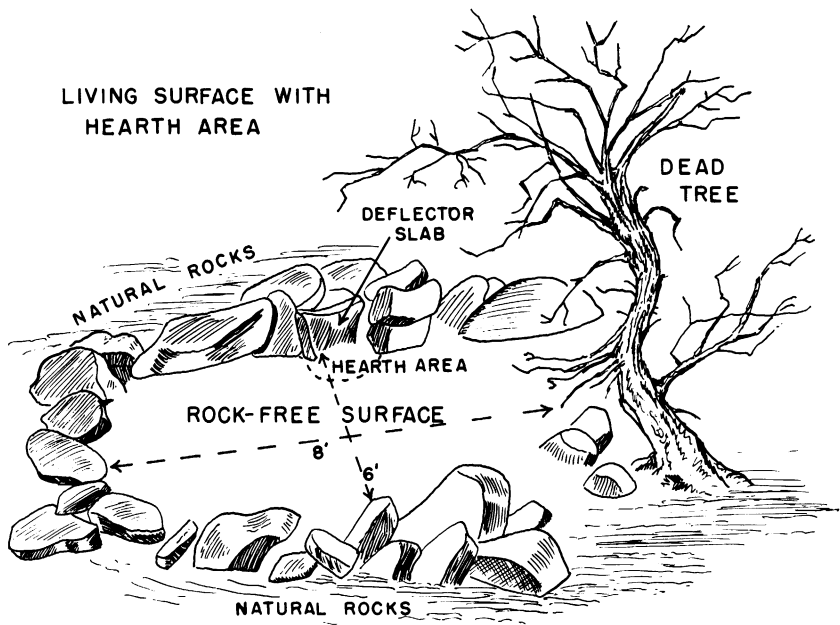


FIG. 8. Sketch of the living surface.

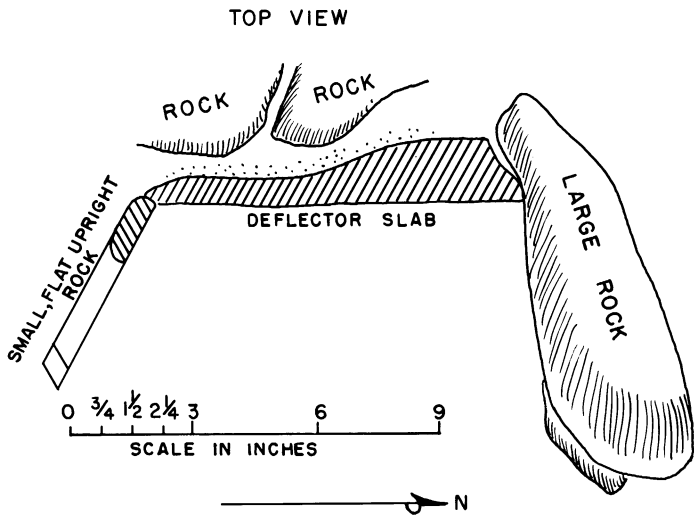


FIG. 9. Sketch of hearth, drawn to scale.

way to the spring. The eight best-defined living surfaces have been drawn in on the contour map of the site (fig. 5); the lines enclosing them must be regarded as somewhat arbitrary and approximate. In several places in the habitation area are small rock piles (almost large enough to be called cairns) which were clearly not caused by any natural agency. These tend to occur between the living surfaces, suggesting that they were, in fact, dumps for rocks which the inhabitants cleared from the living surfaces. The living surfaces are close together; it would have been easier to pile the rocks in this manner than to try to throw them out at random.

One of the best-preserved living surfaces contained a hearth marked by a concentration of charcoal and two upright slabs of rock which served as deflectors (figs. 8 and 9).

Several test pits were excavated in the habitation area and on the slope below. The fill in each of these was thin and almost completely sterile of cultural materials. The deepest of these pits extended only 9 inches down before reaching bedrock.

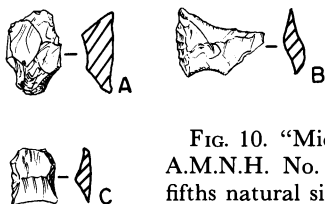


FIG. 10. "Microlithic" tools. A. A.M.N.H. No. 85-2405. B. A.M.N.H. No. 85-2406. C. A.M.N.H. No. 85-2407. All three-fifths natural size.

CHIPPED STONE TOOLS

A total of 32 stone tools was collected from the surface of the site, together with two chipped stone cores and 125 untrimmed flakes. All the tools recovered from the site are unifacially chipped. Three are small, geometric tools, with very fine secondary retouch. An examination under polarized light made it clear that the raw material for these three tools is definitely clear quartz and not European-made glass. Two of these tools are tiny, crescent-shaped "lunates," whereas the third is a fairly steep-sided, scraper-like implement (fig. 10A-C). All three are too small to have been hand held and must have been hafted, probably to wooden handles. These small tools are comparable to similar items recovered from the Bullsbrook Site near Perth¹ and to some other small

¹ Personal communication with Mr. Ian Crawford, Curator of Anthropology, Western Australian Museum, Perth.

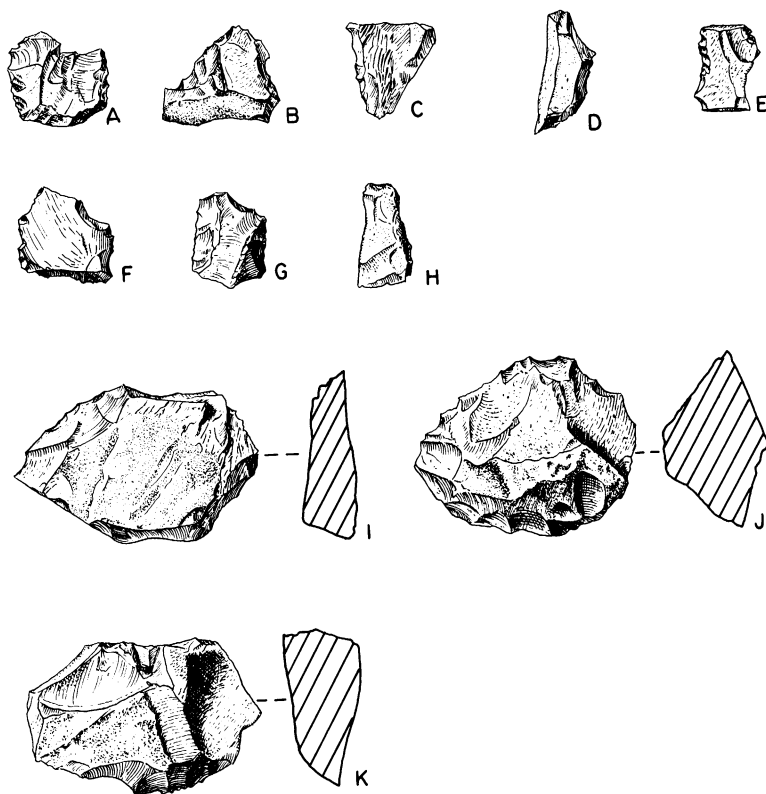


FIG. 11. Stone adze flakes. A. A.M.N.H. No. 85-2394. B. A.M.N.H. No. 85-2390. C. A.M.N.H. No. 85-2396. D. A.M.N.H. No. 85-2400. E. A.M.N.H. No. 85-2401. F. A.M.N.H. No. 85-2402. G. A.M.N.H. No. 85-2403. H. A.M.N.H. No. 85-2398. I. A.M.N.H. No. 85-2395. J. A.M.N.H. No. 85-2393. K. A.M.N.H. No. 85-2404. L. A.M.N.H. No. 85-2387. M. A.M.N.H. No. 85-2388. N. A.M.N.H. No. 85-2391. All three-fifths natural size.

tools we found on the surface of a site at Oudabunna Homestead, about 20 miles north of Lake Moore. From these finds it is becoming apparent that there is a microlithic technology in southwestern Australia of importance and extent comparable to that known from the eastern states of Australia.

Except for one tool of reddish jasper, the remainder of the implements are made from a fine-grained indurated siltstone ranging in color from dark gray to dark grayish green. There is a belt of this material near Mullewa and another near Mingenew, both about 125 miles west of Lake Moore. Perhaps there is evidence here for trade or long-

distance transport, but it is also possible that this material occurs naturally in other, unexplored areas closer to the site. These tools were shown to the aboriginal informants, who identified some of them quite readily. As in the case of the other interviews, the identifications were fragmentary but agreed with one another although obtained independently.

Fourteen stone adze flakes, termed variously “mana” and “mata” by

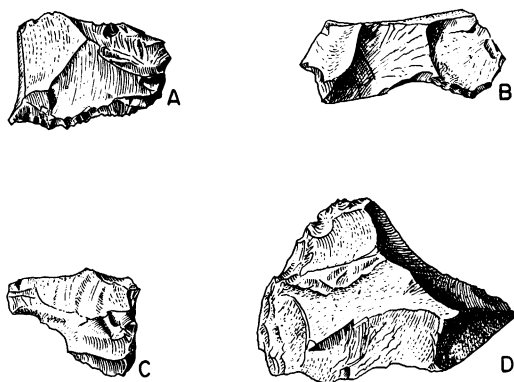


FIG. 12. Probable spokeshaves. A. A.M.N.H. No. 85-2392. B. A.M.N.H. No. 85-2409b. C. A.M.N.H. No. 85-2408. D. A.M.N.H. No. 85-2409a. All three-fifths natural size.

different informants, were recognized. These flakes all show signs of wear and secondary chipping. We were told these were hafted to the end of the spearthrower (“miru”) with gum obtained from the blackboy tree (*Xanthorrhoea preissii*). The aborigines agreed that these adze flakes were used mainly to work wood, by a drawing of the adze flake toward the body to shave away the surface of the wood in much the same manner as is widely observed today among aborigines living farther out in the Gibson Desert (Mountford, 1941, pp. 312–316). As in the case of present-day stone adzes in the Gibson Desert, these flakes were worn down and resharpened until they became too narrow to be held in place by the haft. Thus the specimens range from a relatively un-worn discoidal flake (fig. 11A) to a couple of much-worn and extremely narrow slugs (fig. 11B and C). The remaining adze flakes illustrated in figure 11 represent various intermediate stages of wear. These tools are generally triangular in cross section and are less regular in appearance than the desert varieties. Four of these specimens (fig. 11D–G) show signs of maximum wear along the sides of the flake at right angles to

the original striking platform (the more common practice in the Gibson Desert). Under magnification, there is visible the same "steplike" wear that has the appearance of minute parallel ridges across the face of the worn edge, such as those commonly found on the worn slugs of adzes discarded by the Gibson Desert aborigines.

The informants also mentioned to us that some of the untrimmed flakes in the collection would have been suitable as "tjimari" (circum-

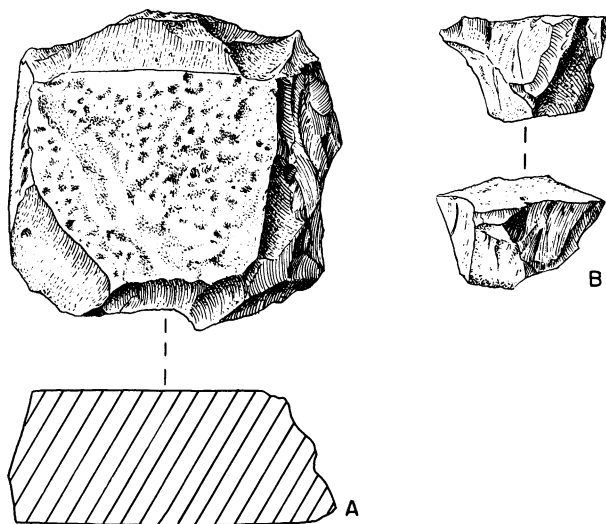


FIG. 13. Stone cores. A. A.M.N.H. No. 85-2384. B. A.M.N.H. No. 85-2385. Both three-fifths natural size.

cision knives).¹ However, there was no way to be certain about these, since the flakes showed no secondary working.

Four fairly thin flakes from Kunturu show wear in the form of a narrow concavity along one edge (fig. 12A-D). There are signs of the same "steplike" wear at these places as was noticed on the stone adzes, and, in addition, there are signs of a slight shine to the over-all flake surface in three of these cases. The suggestion here is that these tools were hand held as spokeshaves for the trimming of spear shafts, digging sticks, and similar wooden tools. We have observed stone flakes similar to these in use as spokeshaves among aborigines elsewhere in the Gibson

¹ These are regarded as sacred objects and are never shown to women or children. Thus, this explanation was given only to me, not to my wife.—R. A. G.

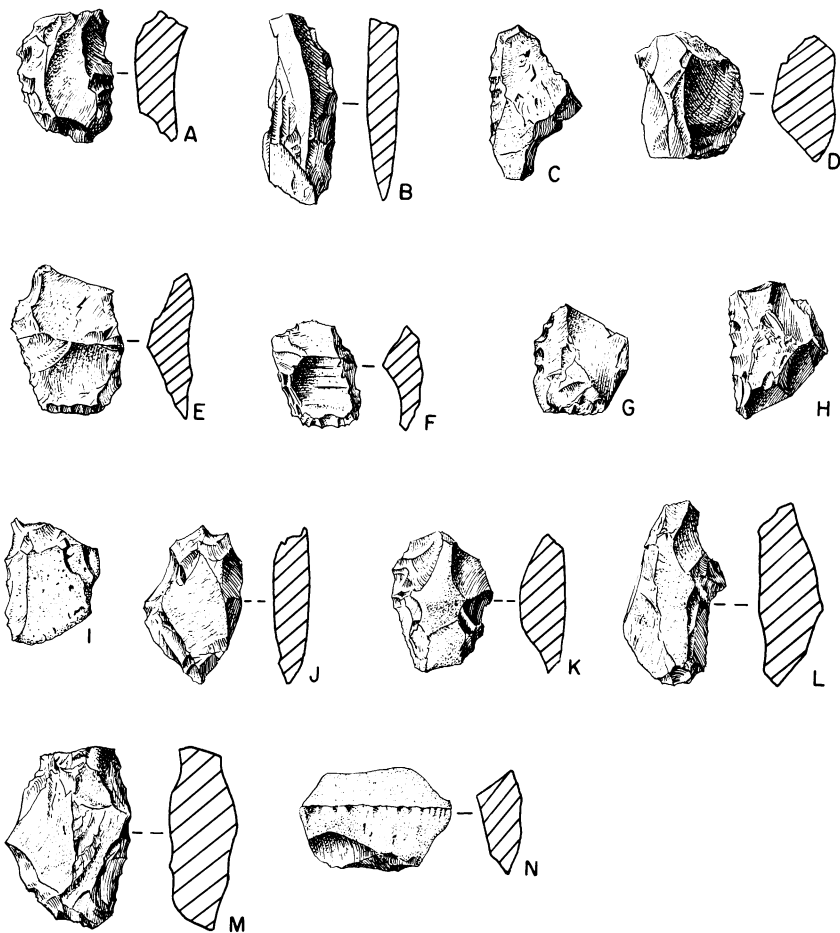


FIG. 14. Stone tools of uncertain use. A. A.M.N.H. No. 85-2415. B. A.M.-N.H. No. 85-2414. C. A.M.N.H. No. 85-2411. D. A.M.N.H. No. 85-2397. E. A.M.N.H. No. 85-2417. F. A.M.N.H. No. 85-2413. G. A.M.N.H. No. 85-2412. H. A.M.N.H. No. 85-2416. I. A.M.N.H. No. 85-2399. J. A.M.N.H. No. 85-2386. K. A.M.N.H. No. 85-2389. All three-fifths natural size.

Desert, particularly among Ngatatjara and Pintupi people living in the region north of the Warburton Ranges.

Finally, there is a residue of stone tools for which no definite interpretation can be advanced. All the tools bear signs of at least some secondary trimming, although on inspection it becomes apparent that several of these tools are merely fragments. Most of the tools seem to

have been intended for scraping tasks of some kind, and several are so small that they must have been hafted to some kind of handle. But beyond that it is hard to generalize.

ACKNOWLEDGMENTS

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REFERENCES

- BERNDT, R. M., AND C. H. BERNDT
1964. The world of the first Australians. Sydney, Ure Smith Pty., Ltd.
- CURR, E. M.
1886. The Australian race. Melbourne, John Ferres, Government Printer, vol. 1.
- FORREST, J.
1875. Explorations in Australia. London, Sampson Low, Marston Low, and Searle.
- GILES, E.
1889. Australia twice traversed. London, Sampson Low, Marston, Searle, and Rivington.
- GOULD, R. A.
1967. Notes on hunting, butchering, and sharing of game among the Ngatatjara and their neighbors in the west Australian desert. Kroeber Anthropol. Soc. Papers, no. 36, pp. 41-66.
- GREGORY, A. C., AND F. T. GREGORY
1884. Journals of Australian exploration. Brisbane, James C. Beal, Government Printer.
- MOUNTFORD, C. P.
1941. An unrecorded method of manufacturing wooden implements with simple stone tools. Trans. Roy. Soc. South Australia, vol. 65, pp. 312-316.

