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REMBRRANGA ETHNOGRAPHICAL NOTES

ABSTRACT: During archaeological research and documentation of the cave paintings on the upper reaches of the Cadell River (Northern Australia), the Czechoslovak Anthropos Expedition to Arnhem Land came into contact with a group of Aborigines under the leadership of an old man Mandarrg. The band was one of the last groups permanently living in the bush. Although they had contact with Aborigines living on government or mission stations, they still maintained a perfect knowledge of all original techniques and traditions. During a short stay with them, when the men led by Mandarrg built themselves a hut near the expedition camp, I took notice of a number of things, particularly of a technological nature – the building of the hut, the preparation of food, manufacture of stone implements, bark painting, rock painting, making and throwing of spears, hunting with dogs and their relationship to the dogs. This article is a reprint of a previously published article (Jelínek J., 1979: *Anthropologie (Brno)* 17, 2–3: 307–323).

KEY WORDS: Rembranga – Cadell River – Arnhem Land – Mandarrg – Rock painting – Hut – Stone manufacture – Spear – Woomera

During archaeological research and documentation of the cave paintings on the upper reaches of the Cadell River, the expedition came into contact with a group of Aborigines under the leadership of an old man Mandarrg. This was really an extension of his family, since it included, apart from himself and his four wives, four sons, six daughters, and a distant relative together with his wife and small son of the latter. This man was not quite healthy, apparently suffering from some mental illness, for he never remained alone, nor did he go limiting alone. The others maintained that he did not know his way in the bush. His relationship to and position in the group were

interesting. He was one of the last to sit down to their communal meals. The other members of the group paid little attention to him. He was not called to meals separately, nor did anyone make him aware of his special position. He was silently tolerated and supported by the others. The last member of the band to mention was a middle-aged man, who was apparently with them only temporarily. His relationship was not clear. He had been seen some days before at a circumcision ceremony on the Maningrida government station.

Mandarrg had two more sons, but they were not living with the group at that time.

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Abstract, Key words, links to the Figures added and Figures renumbered by Editors.

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The band was certainly one of the last groups permanently living in the bush. Though they had contact with Aborigines living on government or mission stations, and owned a variety of things such as a steel knife, an axe, tin containers made from cans, pieces of clothing, etc., they still maintained a perfect knowledge of all primitive techniques and traditions, which they also used when necessary.

During a short stay with them, when the men led by Mandarrg, built themselves a hut near the expedition camp, I took notice of a number of things, particularly of a technological nature – the building of the hut, the preparation of food, manufacture of stone implements, bark painting, rock painting, making and throwing of spears, hunting with dogs and their relationship to the dogs.

THE MANUFACTURE OF STONE IMPLEMENTS

Several stone implements, blades and points, all of the most recent type, were found in the sand close to the hut. Since, as indicated by the remains of fireplaces and of corroboree bones, Mandarrg had fairly often used the same camp site in the past, it was difficult to decide whether the implements had been made by Mandarrg himself, or by some one else. Now, if stone implements were at hand, and if they were required, Mandarrg used them for simple tasks. More often, of course, he used the steel knife belonging to his son Bunganyial. Mandarrg's devotion to this son was great, and they were seldom apart. Thus Mandarrg normally could use of the steel knife.

In an attempt to find out whether the stone implements used by Mandarrg were merely found or actually made by him, I asked him whether he made such tools. His answer was in the affirmative, and he led us to a large, mushroom-shaped rock formation on the opposite (the left), bank of the river, about 500 metres from our camp. He seemed to know the place well, since he went among the boulders, through a rocky maze, unhesitatingly taking the shortest and the only scalable route.

When we started our way up this large rock formation, he indicated an overhanging rock, in whose shelter were hidden three human skulls and several long bones, and said that he had lived here with his group during the last rainy season (1968 to 1969). I asked him if he did not mind that there were skulls in the vicinity. The answer was negative, with the explanation that the skulls were very old.

On the summit, beneath the overhang of the mushroom-shaped rock, there were traces of fireplaces and a few stone tools were lying at random on the surface (all of recent blade-type) and above all a great number of flakes of all kinds, together with several cores (*Figure 1*). The cores often had a flat ventral side (the original surface), and flakes had been removed from the dorsal side. These cores were plane-shaped. The second group of cores was discoidal – these cores have been worked on both sides. The flakes obtained from them were usually shorter. It must be added, that the ceiling and walls of the rock overhang were richly decorated with paintings. There was none of the oldest type of paintings of dynamic human figures here. On the other hand there were several monochrome red animal figures, ancient anthropomorphic figures with signs of the incipient X-ray style and polychrome figures of primitive style. There were neither developed X-ray style paintings, nor white paintings belonging to the youngest layer. The place seems to have served as workshop for the manufacture of tools for many generations. It was used as living site only exceptionally, if at all. Among other things it is rather inaccessible. It is the highest point of the area, and so it is far from water. Nearer to the river there are plenty of overhanging rocks in more accessible places, more suitable for long-term occupation.



FIGURE 1. Upper Cadell River. Stone tool workshop high up in the rocks. This figure was in Jelinek (1979) labelled as Table I, Fig. 4.



FIGURE 2. Upper Cadell River. Mandarrg making stone flakes on his heel. This figure was in Jelínek (1979) labelled as Table I, Fig. 1.

First Mandarrg looked for a suitable hammerstone. He weighed various stones in his hand and then he chose one about twice the size of a man's fist. Then he chose suitable raw material. He tested and examined some of the bigger discarded cores, as well as stones not yet worked. He also examined the edges of large boulders and the ceiling of the rock-overhang. Here and there in all these places there were traces of older blows. He ran his hammerstone once or twice over the place chosen on the rock edge then followed a heavy blow. When he managed to separate a suitable piece of raw material of the required size, he sat down and began to make stone blades. He usually worked them on the soft part of his heel (*Figure 2*). Hammerstone and core were both of the same material. He held the core on his left heel with his left hand so that the place struck was partly enclosed by his thumb, holding thus the chipped-off blade and preventing it from falling on the ground. The blows were medium-heavy and accurate. The flake was, of course, often a failure. Mandarrg examined it and threw it away. If it was fairly good, but broke to two pieces, he would shake his head and click his tongue as if in disappointment. Before each blow he scraped the hammerstone across the core edge in the place where the blow was to fall. If the core was still quite big, but only a small striking surface had been left, he modified it in

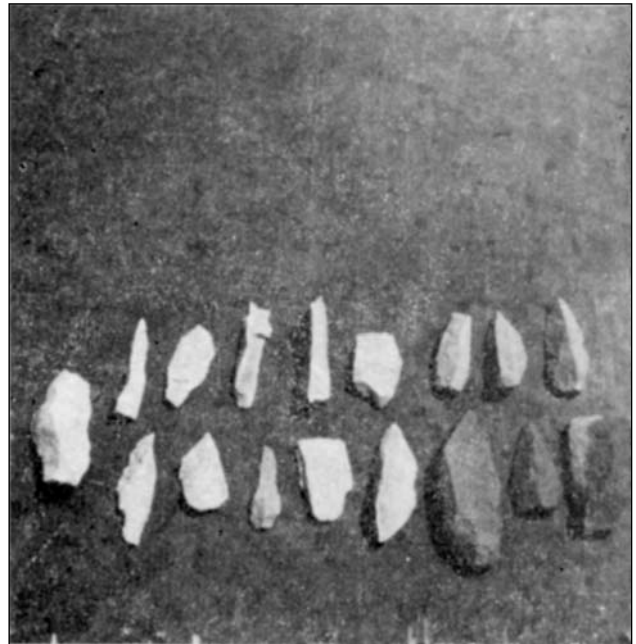


FIGURE 3. Upper Cadell River. Stone flakes and tools made by Mandarrg in one afternoon. They were selected and brought down from the workshop to the camp. This figure was in Jelínek (1979) labelled as Table I, Fig. 5.

his hand with heavy blows, either in the air (he often knocked it out of his left hand onto the ground), or placing it on the hard base of the rock surface. When making on his heel, he directed the blows obliquely to the striking surface of the core. The successful flakes were examined by Mandarrg wistfully from all sides. He was so engrossed in his work that he was neither aware of anyone around him nor of the fact that he had cut his ankle with the sharp edge of the core. After a total of two hours of work he put to one side seventeen flakes (*Figure 3*). He trimmed three of them slightly (*Figure 4, 5*), one of them on the ventral side (during archaeological survey at the Bulman waterhole on the Wilton River we found only two examples of ventral trimming). During trimming both the hammerstone and the flake being trimmed are held in the hand, the whole process reminds of striking up sparks from a flint.

Mandarrg announced that the seventeen selected pieces would be good as spear points. He picked up an old, broken blade point from the ground. It seemed to be a discarded one – it had no bulb left from the blow and the wide angle of the original flake was also missing. With a few blows Mandarrg trimmed it into a suitable shape and added it to the other points he had made.



FIGURE 4. Upper Cadell River. Final trimming of a stone tool against the stone-bank edge. This figure was in Jelinek (1979) labelled as Table I, Fig. 2.

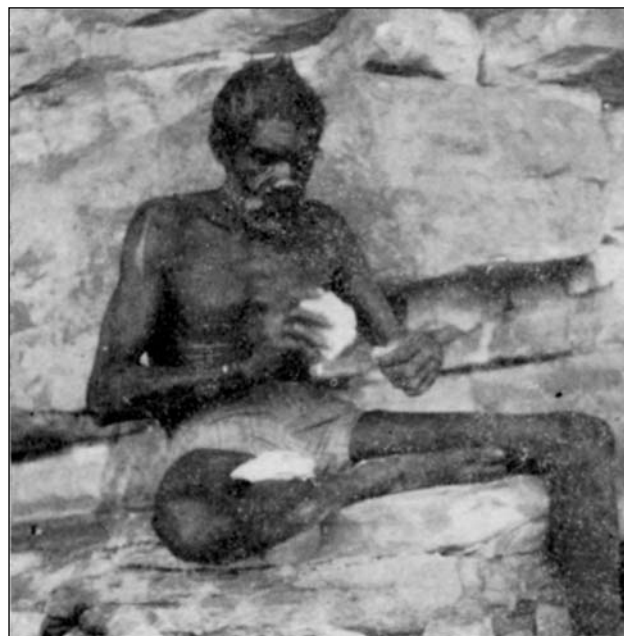


FIGURE 5. Upper Cadell River. Final trimming (retouch) of a stone tool in hand. This figure was in Jelinek (1979) labelled as Table I, Fig. 3.

Another flake lacked the pointed shape of most of the others; it ended in a sharp crosswise edge. Mandarrg described it also as being suitable for a spear point. The truth is however, that in the camp all the blades made by Mandarrg were put to the post supporting the roof and he used them in various ways: as knives for cutting bark and butchering killed animals, as scrapers for making ropes and strings from bark; as drills, for boring small depressions into wood for fire-making with drilling slicks – and finally he used a blade with a crosswise sharp edge as a chisel for making thin bark in preparation for painting (*Figure 6*). With this stone chisel in his right hand he chopped the outer side of the bark and pulled off the cut fibres with his right hand. The best seventeen blades (with the exception of the above-mentioned chisel) really ended up as spear points. These stone tools were never hafted, they were always held directly in the hand. Most blades and points may be considered as multi-purpose tools, although they serve mostly as spear points and knives. The material used in all cases was heavily silicified fine local sandstone.

It must be added that Bunganyial, the son of Mandarrg, was also able to make stone tools, though not so perfectly as Mandarrg.



FIGURE 6. Upper Cadell River. Mandarrg using stone flake as a chisel to work the eucalyptus bark. This figure was in Jelinek (1979) labelled as Table I, Fig. 6.

SHELTERS AND THEIR CONSTRUCTION

On the Rembranga territory we found a whole series of huts whose roofs rested on vertical posts with forked ends (*Figure 7–11*). I observed the building of such a hut by the men of Mandarrgs group. Using a digging stick of about 120 cm long (commonly used by the Aborigines to dig up yam tubers) they first lapped a tree trunk, to find out, whether the bark was thick enough. Then they cut or tore the bark off (lengthwise) with the help of the same stick, as high as they could reach, in order to obtain the longest possible pieces of bark. Then they peeled it off with the same stick in as big pieces as possible. In this way they obtained four large pieces of paper bark. To cut the forked supports they used a steel axe. They cut three posts and for the fourth they used the natural fork of a living tree. Two and two posts were connected with a stick; on the framework obtained in this way they threw the green eucalyptus branches left over from cutting the posts and then placed three pieces of paper bark on top of the construction. The fourth bark was separated into thinner layers and was put on the sand inside the hut. They used these barks as sleeping mats, sometimes putting a flat stone under their head. They often used large pieces of bark as covers. This protected

them to some extent from the cold, against mosquitoes at night, and against the flies, if they slept during daytime.

The main purpose of these huts was obviously to yield protection against the sun. Several fires were made around the hut, as necessary. At night they often lit a fire right beside the hut and lay close to it to get some warm. Besides this most common type of hut, with a height ranging from 60 cm to 170 cm we occasionally found (e.g., at Bamyili or at the Bulman Waterhole on the Wilton River) just a few thickly leaved branches, broken or cut off and leaned against a tree trunk, in order to provide temporary shade. The Aborigines sometimes built shelters with saddle roofs, usually not more than 100 cm high. These roofs are supported by two vertical posts forked at their ends. These posts carry the beam forming the ridge of the roof (*Figure 8*). The posts are braced by oblique stakes always two at the front and two at the back, standing on the ground or resting on other forked sticks, usually shorter than the main ones. Sometimes there were notches in the oblique stakes for the lengthwise sticks, forming the network of the roof; they are covered with pieces of paper or stringy bark from the eucalyptus tree sometimes weighted with stones. In exceptional cases three forked sticks in line



FIGURE 7. Upper Cadell River. A shelter with the roof made of paper bark and eucalyptus branches. Before the shelter are two spears. This figure was in Jelínek (1979) labelled as Table II, Fig. 1.



FIGURE 8. Bulman waterhole (Upper Wilton Hirer). Typical bark shelter. This figure was in Jelínek (1979) labelled as Table II, Fig. 2.



FIGURE 9. Wilton River. The skeleton of a bark shelter. This figure was in Jelínek (1979) labelled as Table II, Fig. 3.



FIGURE 10. Wilton River. A rough shelter against the sunshine. This figure was in Jelínek (1979) labelled as Table II, Fig. 4.



FIGURE 11. Wilton River. A sunshine protection. This figure was in Jelínek (1979) labelled as Table II, Fig. 5.

were also used as supports of saddle roofs. In this case two sticks formed the ridge of the roof and there were six oblique stakes, i.e., two for each forked support. The dimensions of the huts varied, apparently according to the number of people they were supposed to accommodate. The length of such a shelter varies from 100 to 400 cm. The fireplaces were scattered around the huts at random, their number ranging from one to four – I never found more than four around one hut. This is quite natural since the Aborigines leave these huts after a time – either when too much rubbish, remnants of food, etc. attracting large numbers of insects, has accumulated around the hut, or when it becomes uncomfortable for other reasons. In such a case they move to other place and build a simple shelter there. Almost all huts have a flat stone for various forms of hammering, smashing or rubbing. There are different kinds of fireplaces. Those in the very vicinity of the hut serve for heating. Usually only wood is used as fuel. The position of the other fireplaces varies; they may be up to 600 cm from the hut. Some of them contain stones about the size of a fist, probably for food cooking; in others there are pieces of termites' nests, keeping hot for a long time, after being burnt. Sometimes there were stones for baking, placed in a slightly dish-shaped hole, around which the earth had been heaped. There was also a piece of discarded paper bark, showing the way in which the meat is being



FIGURE 12. Upper Cadell River. Fire making by drilling. This figure was in Jelínek (1979) labelled as Table VII, Fig. 4.



FIGURE 13. Upper Cadell River. Fire making by drilling. The sparks are in bark bast. This figure was in Jelínek (1979) labelled as Table VII, Fig. 5.

prepared. There were three fireplaces besides the hut of Mandarrg's group. The first was used by Bunganyial for melting bee wax when making spears; he then transferred the whole fireplace to the edge of the hut, where it served as a source of heat. Two more fireplaces appeared on the other side of the hut, both for cooking food.

Mandarrg's group usually produced fire by using two sticks of the same kind of dry wood (*Figure 12, 13*). One of them formed a base, in which a shallow depression had been made with a steel knife, a stone point, or with a pointed bone; the other piece of wood was then placed into the depression and was twisted back and forth between the palms of the hands. A slight downward pressure was applied on the base, held down with one foot. Due to the downward pressure the hands slipped slowly down the drilling stick. At this stage the drilling was interrupted, the stick was once more grasped between the palms at the top, and the drilling continued, until a small pile of brown wood dust was formed, which gradually began to smoke, and then gave off a bright spark. The glowing dust is then caught into a dry, rumpled stringy bark, prepared beforehand and can be easily fanned into flame. Producing fire by this method takes less than a minute.

PREPARATION OF FOOD, HUNTING

The preparation of food was very simple. The legs of a kangaroo or an emu were broken (*Figure 14*) and tied and the whole animal was thrown on the fire, to burn off the hair, or in case of emus the feathers remaining after plucking. Then the animal was drawn. The entrails, especially the fat, heart and liver, were considered a delicacy and were consumed raw. The carcass of the animal was carelessly tossed on the fire, or on its edge and the meat was eaten only slightly singed, almost completely raw. With kangaroos the procedure was like this: they opened the stomach and wet the raw liver in the green digested contents of the stomach, not paying much attention to the white roundworms, parasites of the kangaroo, abounding in their stomachs. Anyhow, they are not harmful to people. The gutted kangaroo or emu was then placed on stones heated up in the fireplace and further hot stones were placed on top of it (*Figure 15*). The meat and stones were then covered with leaves, paper bark and with a mixture of charcoal and hot sand. After 20 or 30 minutes the kangaroo or emu was removed from the stones and eaten half-roasted. It was interesting that the Aborigines declined to eat our tinned meat, saying that it was dry and flavourless. They picked out the rice and potatoes, but left the meat untouched.

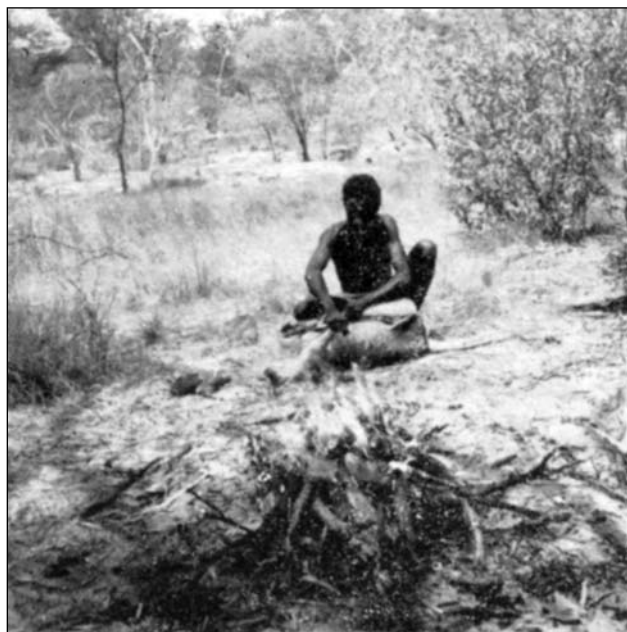


FIGURE 14. Upper Cadell River. Food preparing. The legs of the kangaroo are broken before scorching the fur. This figure was in Jelínek (1979) labelled as Table III, Fig. 2.



FIGURE 16. Upper Cadell River. The fish (barramundi) is put on the hot stones and eucalyptus leaves to be baked. This figure was in Jelínek (1979) labelled as Table III, Fig. 4.



FIGURE 15. Upper Cadell River. Food preparing. Ready kangaroo is put out of the fire. This figure was in Jelínek (1979) labelled as Table III, Fig. 3.



FIGURE 17. Upper Cadell River. A Rembranga man eating baked opossum on a paper bark sheet. This figure was in Jelínek (1979) labelled as Table III, Fig. 5.

They were apparently accustomed to eat completely fresh, succulent meat, for all their meat is eaten immediately. They caught fish (*Figure 16*) with (steel) hooks or stuck them with fishing spears. They stalked on the banks or used branches overhanging the water, waiting until a suitable fish appeared on the surface, to be sure of spiking it with the three-pronged spear. If a fish swam deeper they did not attempt to throw the spear. On one occasion they speared a crocodile with a fish-spear, whereupon it plunged wildly into the billabong with the spear in its back. Bunganyial leapt into the water to catch the crocodile (Johnstoni), but the animal managed to shake the spear loose among the roots of the high, undercut bank and dived below the surface, so that it was no longer possible to follow its movements. Bunganyial quickly jumped out of the water. The Aborigines hunted buffalo with large spears with big metal points, either by crawling towards them or by chase. The chase continued until the hunter was able to get close enough to the exhausted animal and then spear it.

They were not fastidious about meats. Lizards, opossum (*Figure 17*) and the small green parrot were all considered good food. When a flight of these little birds settled in a bush near the camp, one of Mandarrg's sons removed the point from his spear, slowly approached the bush with the spear shaft raised, and from a distance of a few metres threw it hard into the group of birds. The blunt wooden end knocked one of the parrots dead to the ground. The hunter explained that he had wanted to knock the bird for the fun of it, but since it was dead, it would be good for food. They often caught various small marsupials among the rocks with bare hand. We can say that all of them were passionate hunters, though most of the food was gathered by women. We often saw them in the surrounding area gathering yams and other vegetables and fruits, as well as small animals. Irrespective of who killed the animal, all or most of those present joined in the meal. In most cases, especially with larger animals, the hunter alone, or with the help of others prepared the kill. This was, however, not a strict rule. They use various types of hunting; by stalking, waiting or by ambushing. The bush was often set alight and the hunters waited nearby for the game driven out by the burning grass. Special delicacy was honey and no effort was spared to obtain it. They ate it together with the larvae.

Generally speaking two or three of the men went out hunting about every second day. This usually took 2–3 hours, seldom more. The group found its food easily enough and none of them was undernourished, though

none had traces of subcutaneous fat. It follows that most of the day could be spent in various other occupations. Both meals and sleep were irregular. Several hours each day were devoted to singing, music and entertainment.

RELATIONSHIP TO DOGS

The relationship of the Aborigines to their dogs is worth of special attention. As far as we were able to find out, Mandarrg's group had about four dogs. Their number was uncertain, because the dogs wandered free in the bush and returned to the camp irregularly. They mostly ran about or lay in the shade of the trees. If they were in the camp at mealtimes, they received their share with the humans. They rarely took meat out of the Aborigines' hands. They were rather shy. As soon as one of the men stood up and took his spear to go hunting, they ran up and set off with him. They chased the game for him in the same manner as when they hunted for themselves. They were often absent the whole day or night. They wandered in the bush, following their own pursuits. Of course, they also mated with dingo. The coexistence of these dogs with people was a rather loose form of symbiosis. Except for providing food for them and going hunting with them the Aborigines did not pay too much attention to the dogs.

THE DISCOVERY OF A PAINTED HUT

On October 11, 1969, when the expedition got as far as the upper reaches of the Wilton River, I set off on foot up the stream. I reached the rocky Bulman Gorge. About 100 m downstream from here, on a sandbank on the right bank of the river I found a deserted hut made of bark and decorated with paintings (*Figure 18*). Though there are occasional mentions in literature of paintings on the walls of bark huts. There is no reference by any author having seen such a painted hut with his own eyes. Nor does there is any photographic or pictorial record. So it seems that the hut found below Bulman Gorge is not only the last specimen of its kind, but it is also the only find fully proved by documentary evidence. The hut was situated on an extensive, about 50 m long, sandbank. The rear wall faced north, towards Bulman Gorge, and the front one south, i.e., downstream. Like most Aboriginal huts it was built on four posts carrying a bark roof. All four posts, firmly embedded in the sand, had forked ends. The right-hand front and rear posts and the left-hand front and rear posts were joined with sticks. Across these



FIGURE 18. The Discovery of the painted Aboriginal bark shelter in Bulman Gorge, Central Arnhem Land N.T. Australia. This figure was in Jelínek (1979) labelled as Table VIII, Fig. 1.

three further sticks were laid loosely and were covered with pieces of bark. The longest piece of stringy bark formed the central section of the rear wall and was a few centimetres deep in the sand. This piece was bent at right angle to form the central part of the roof as well. Only the inner side of the bark was painted, after completing the construction of the hut. This can be proved by the fact that the paint had run downwards on the vertical part, and also by the fact that on the ceiling the painting was interrupted by the sticks forming the framework of the roof. Besides the piece of stringy bark there were four pieces of paper bark on the roof and the barks were weighted down with nine big stones. Two of them, the flattest ones, bore traces of colour, revealing that they had originally been used for mixing paint. The rear posts were 135 cm high; the front ones measured only 120 cm. The hut was 160 cm wide and was 130 cm deep. Around it there were many traces of human activities. Behind the rear wall there were food remains, about 20 shells of the *Unio* shellfish. Alongside the hut lay pieces of peeled and rumpled stringy bark strands, evidently prepared for making ropes and strings; at the right-hand rear post there was a flat stone with traces of red, yellow and the black colours. On it lay two irregular pieces of stone. Inside the hut, near the rear wall, lay a 120 cm long stick, of the type used by the Aborigines for digging up yam



FIGURE 19. One side of the engraved and coloured pebble found in the bark shelter. This figure was in Jelínek (1979) labelled as Table VIII, Fig. 5.



FIGURE 20. Reverse side of the engraved and coloured pebble found in the bark shelter. This figure was in Jelínek (1979) labelled as Table VIII, Fig. 6.

tubers or for peeling off paper bark. There was also a piece of red haematite and a round, flat pebble (*Figure 19, 20*). Its surface bore traces of rubbing, polishing, carving and of red paint in irregular lines. This was probably a Murrayian sacred stone, analogous to similar painted stones described by Kupka (1972). In front of the hut lay a straight piece of liana, cleanly cut at both ends. It is possible that it was chopped with a steel axe. The posts supporting the hut also seemed to have been cut with a metal axe. In front of the left-hand front post I found a broken irregular stone and a large flat flake, trimmed to the shape of a semicircular knife or scraper.

150 cm to the left of the hut there was a small fireplace with scorched stones. It apparently served for cooking. A second ash-strewn fireplace was close to the right side of the hut. Such fires usually serve as sources of heat for the Aborigines at night. About 230 cm in front of the hut was a third fireplace, with eight tortoise shells scattered around it and with a large, perfectly trimmed stone-blade knife (*Figure 21*). The tortoise shells ranged in size from 25 to 35 cm and their upper and lower parts were split at the edges. Most of them had three small round holes in the upper part, showing that they had been speared with a three-pronged spear made of steel wire. This and the use of metal axe for cutting wood were the only signs of contacts with civilization. The stone blade was 12 cm

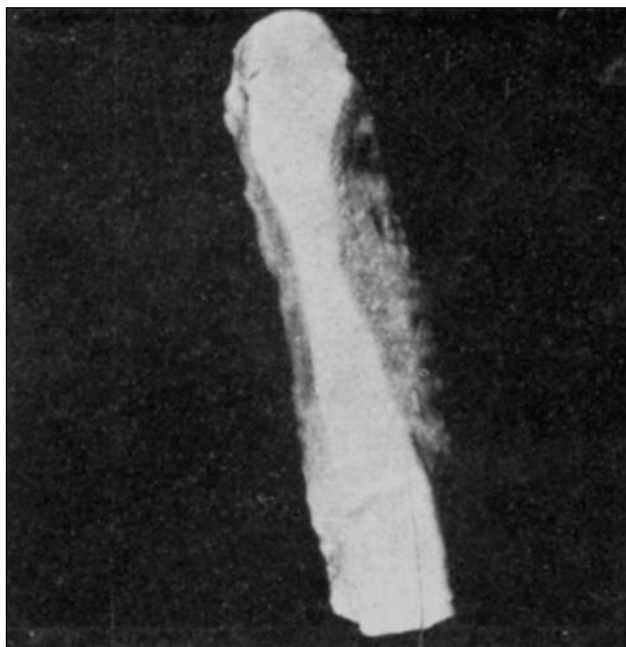


FIGURE 21. Stone knife found near the bark shelter. This figure was in Jelínek (1979) labelled as Table VIII, Fig. 4.

long, perfectly worked along its long sides. It was made of light, strongly silicified sandstone, with a clear percussion bulb on the ventral side. The distal end was blunted with three counter blows. It is perhaps a re-processed, originally large knife or dagger, or spear point.

The grass in front of the hut seemed to have been burnt during the construction. On the day the hut was found the billabong was some 30 m distant. About 150 cm above the actual water level there was a horizontal black line along the sandy bank. This was from the ashes of the burnt grass settling on the water surface and washed ashore. From the time of the construction of the hut to the day of its discovery the level of the billabong had fallen by 150 cm. On the other hand the undisturbed ashes in the fireplaces, the colour on the stone and the complete greasiness of the tortoise shells showed that it had not rained since the construction of the hut. No human footprints had been preserved around it. According to our estimates the hut had been built at least two months before and had been abandoned at least one month before.

It may also be important that there is a cave in the rocky Bulman Gorge, with paintings on the rock face near its entrance. Some of the paintings are red, thread-like archaic static-type anthropomorphic figures; others are apparently of a later date, but bearing no marks of the X-ray style. These paintings are some 200–250 m from the hut and its occupant knew about them, without doubt. We speak of one occupant – the small dimensions of the hut indicate in all likelihood that there was one; at the most there were two, inhabitants.

On the inner side of the bark there are paintings of a kangaroo (*Figure 22*) and of a supernatural being, a spirit (on the rear wall), and of a goanna (on the ceiling, *Figure 23*). The most frequently used colours are red (haematite) and white (clay), then yellow (limonite) and some black (diluted charcoal), used for painting the kangaroo's muzzle only.

The kangaroo painting is high. The body is in white, the contours and details of the body are in red and yellow lines. It is a large male kangaroo painted in perfect X-ray style. Inside the body are drawn the spine, joints, gullet, heart, lungs, liver and stomach. The head and the ends of the hind legs have been repainted. Drops of white colour clearly showed that the painting had been done in vertical position, i.e., after completing the erection of the hut. Somewhat higher and to the right of the kangaroo is the supernatural figure of a spirit, with beaked head, clawed fingers and unnatural bending of the hind legs, painted on an irregular white background in red. There are irregular lines inside the body. The figure is reminiscent



FIGURE 22. X-ray painting on the vertical bark sheet (a kangaroo and a spirit figure). This figure was in Jelínek (1979) labelled as Table VIII, Fig. 2.

of certain paintings of evil spirits called "mamandi". On the ceiling of the hut there is a painting of a goanna in X-ray style, less detailed than the kangaroo. This may be so because painting on the ceiling is surely less comfortable. The upper part of the trunk had been repainted and has been blurred. The tail was first painted bending to the left and in the final version straight. The main part of the painting is white, the outline and details are red. A simple spine and the marking of joints show affinity to the X-ray style. The split tongue and the shape of the body indicate that it is a goanna.

The fact that this was a relatively small hut, in the vicinity of cave paintings, the perfect execution of the paintings in it, the spirit painting and the discovery of the decorated pebble raise the possibility that the stay in the hut could be associated with some ritual matter. It is also interesting that the hut was completely isolated; there were no signs of Aboriginal habitation in the vicinity. The style of the paintings is clearly related to cave paintings in X-ray style.

MAKING WOOMERA

They selected a stringy bark eucalyptus (*Figure 24*) and cut transversally up and down the selected piece of



FIGURE 23. X-ray painting on the horizontal bark sheet (goanna). This figure was in Jelínek (1979) labelled as Table VIII, Fig. 3.

bark which they then stripped down with the help of an axe. Then they chopped off a longitudinal piece of wood with help of several wood wedges. This piece of wood was about 100 cm long, 15 cm wide and 3 cm thick. Than Bunganyial, Mandarrg's son, produced rough woomera shape by chopping. Because the piece was not quite straight he straightens it against his own head or between tree branches. The final shape was reached by scraping (*Figure 25*), using big steel knife. At the woomera end he cut a small notch with the knife. Obliquely into this notch he inserted a small wooden hook (*Figure 26, 27*). This was cut from the fresh wood and hardened in fire. Than he wormed piece of bee wax in fire and put in into the notch at the woomera end. Into this he inserted the small wooden hook. Than he bound the tooth into its position by bark string which he covered again with warm wax. Than the whole surface of the object was painted red with white simple ornament.

THE SPEAR

Bunganyial used cca 150 cm long straight branches of fresh wood, peeled the bark and cut off smoothly the side branches. When not straight enough he straighten the wood bowing it in corresponding side (*Figure 28*). The thicker end of the shaft was crushed with



FIGURE 24. Upper Cadell River. Preparing wood for woomera (spear-thrower). This figure was in Jelínek (1979) labelled as Table V, Fig. 6.



FIGURE 25. Upper Cadell River. Shaping the wood for spear-thrower. Note how the axe is hold. This figure was in Jelínek (1979) labelled as Table VI, Fig. 1.



FIGURE 26. Upper Cadell River. Preparing the hook for spear-thrower. This figure was in Jelínek (1979) labelled as Table VI, Fig. 2.



FIGURE 27. Upper Cadell River. Fixing the spear-thrower hook with bitumen. This figure was in Jelínek (1979) labelled as Table VI, Fig. 3.



FIGURE 28. Upper Cadell River. Straightening the spear shaft. This figure was in Jelinek (1979) labelled as Table VI, Fig. 4.

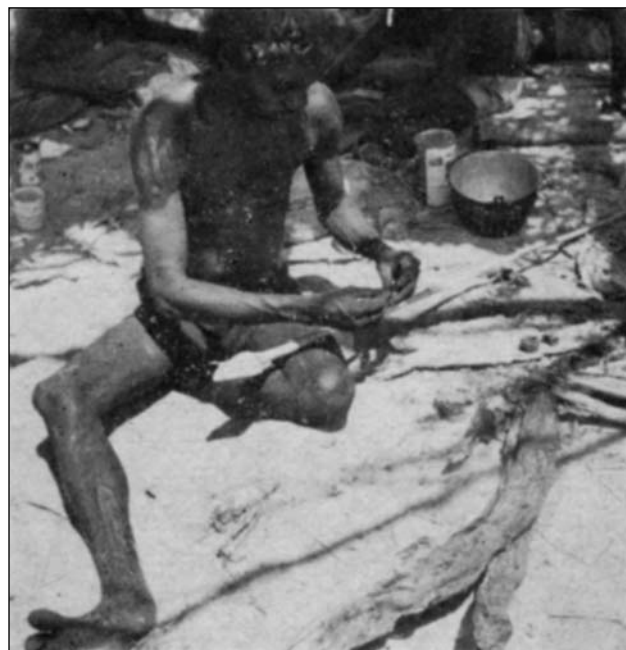


FIGURE 29. Upper Cadell River. Making a spear. The stone point is inserted. This figure was in Jelinek (1979) labelled as Table VI, Fig. 5.



FIGURE 30. Upper Cadell River. Making a spear. The spearhead is fixed with bitumen. This figure was in Jelinek (1979) labelled as Table VI, Fig. 6.



FIGURE 31. Upper Cadell River. Spear making. Drilling a socket for spear-thrower hook. This figure was in Jelinek (1979) labelled as Table VII, Fig. 2.



FIGURE 32. Upper Cadell River. The spear is painted. This figure was in Jelínek (1979) labelled as Table VII, Fig. 1.



FIGURE 33. Upper Cadell River. Throwing a spear with a spear-thrower. This figure was in Jelínek (1979) labelled as Table VII, Fig. 3.

hammerstone and then a stone point was inserted and glued with warmed bee wax (*Figure 29*). Then it was fastened by bark string and covered again by wax (*Figure 30*). With a round wet stick they smoothed the surface which they finely repaired by burning stick. In the other thin end of the shaft he drilled a small socket with the bone point (*Figure 31*). The whole shaft was finally ornamented by painting similar to the woomera decoration (*Figure 32, 33*).

The string, which Bunganyial used when spear making was made in following way, he brought some long eucalyptus roots which he found in a cave where they were growing through the cave ceiling. Then he put the root on flat stone and beat it with another stone so that the bark was easy to peel down in one piece. This he again beat and crashed by hammerstone and finally tore it into long thin stripes of fibres. Two such stripes he rolled together. By rolling the end of one or both other stripes of fibres he added next by rolling them into the former ones. So he produced string of the desired length. Sometimes he used even the bast layer of stringy bark (*Figure 34, 35*). He separated the surface rough bark from the bast which he tore into stripes of fibres. These he chew some time to soften them. Then he produced the string as described above.

FIRE MAKING

Bunganyial used dry sticks of a bush. One he cleaned and slightly pointed. This was the fire drill. The second stick (thicker one) he cleaned as well and split and with a steel knife made a socket for the drill and a notch where wood dust produced by drilling can fall down (*Figure 12*). This piece was the hearth. When making fire, he put first a piece of smooth bark (inner side up) and the hearth laved on it holding it by foot. He put the drill into the small hole and drilled it between his stretched palms. When pressing the fire drill down he moved slowly with the palms down the drilling drill. When being too low he quickly changed the palms to the upper end of the drill and continued to drill. In the hole appeared black wood dust, which fell down on the bark through the notch. Finally the smoke appeared (after 15–20 seconds). When red glowing colour appeared he took a soft dry bark stripes which he used as tinder, put it on the glowing wood dust and softly blew till the flames appeared. Then he added some dry grass and wood (*Figure 13*).

BARK PAINTING

The Arnhem Land Aborigines use for bark painting the stringy bark of the eucalyptus tree. They knock the



FIGURE 34. Upper Cadell River. A bast string is made with the help of a stone flake from the eucalyptus with the help of a stone flake from the eucalyptus bark. This figure was in Jelinek (1979) labelled as Table II, Fig. 6.



FIGURE 35. Upper Cadell River. Bast string making. The ready fibres are in the hairs. Note the stone tool in the arm string. This figure was in Jelinek (1979) labelled as Table III, Fig. 1.

trunk of the tree with a stick, to find whether the bark is thick enough. They then cut the bark of the selected tree at the top and at the bottom, insert a digging stick below the bark and rip it off. They cut the bark with a stone or steel knife (Figure 36, 37) and the cut belt of bark is then torn off. They sear the thinned bark over a campfire (Figure 38) and put it with its internal side on sand warmed up by the sun and put some stones on it, to straighten it. A few hours later the straightened bark can be used for painting. Mandarrg from the Rembranga tribe, living on the Upper Cadell River painted the bark in the following way.

First he roasted in the fire several pieces of resin, then crushed and mixed them with water. Then he crushed some red colour on a flat stone (Figure 39), added the water with the dissolved resin, which served as bonding agent. Then he painted the whole surface of the bark on both sides, even the edges and thus he obtained a slight red ground. During painting he added from time to time some crushed pigment and water with resin. As brushes he used wider or narrower strips of stringy bark. He crushed the end of the strip between two stones and chewed it. For fine hatching lines and contours he used a fine brush from the loose veins of a pandanus leaf.

Similarly as for rock painting he used white China clay and red haematite. First he painted the outlines of the body of a fish in black (Figure 40) and then filled the inside with black. He called the black pigment *gundjarid* and he said that he always used it, since his ancestors had used it too. In fact the Aborigines use black pigment (charcoal dissolved in water) very seldom. When the black background was finished he painted the backbone and intestinal canal in red as two thick lines and he added a pair of gills, separating the head from the body. Then he bordered the whole fish, including the black outline, with thin white line. Inside the body he hatched first the central belt in white. With a fine pandanus brush he made the lines in the direction from his body away (Figure 41). After hatching the central part of the body he continued with the dorsal part, then with the bottom rear part from the intestinal canal to the caudal fin and finally the belly. Only then did he paint the caudal fin and the eyes. Mandarrg left the surface of the bark outside the painted object free – at this point he is very close to the style known from the western part of Arnhem Land, differing from the style used in Milingimbi (eastern Arnhem Land), where every inch of the bark is filled at least with hatching.

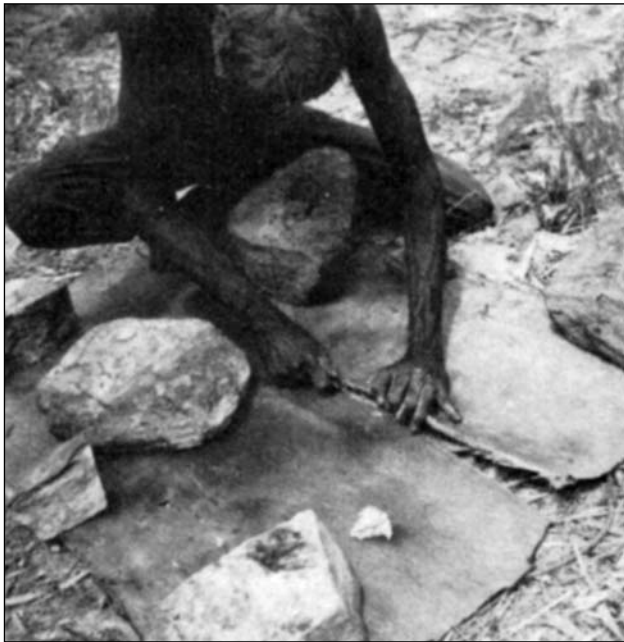


FIGURE 36. Upper Cadell River. Preparing a bark sheet for painting. Cutting the bark with a stone knife. This figure was in Jelínek (1979) labelled as Table IV, Fig. 1.

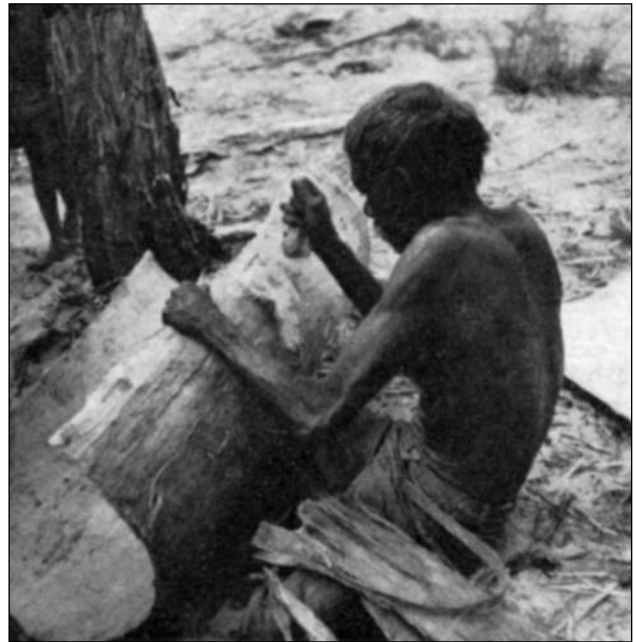


FIGURE 37. Upper Cadell River. Preparing bark sheet for painting: working the bark with a stone chisel. This figure was in Jelínek (1979) labelled as Table IV, Fig. 2.



FIGURE 38. Upper Cadell River. Preparing bark for painting drying bark sheet in the fire. This figure was in Jelínek (1979) labelled as Table III, Fig. 6.



FIGURE 39. Upper Cadell River. Bark painting. First stage of a barramundi painting. The colour is prepared on a flat stone. This figure was in Jelínek (1979) labelled as Table IV, Fig. 3.



FIGURE 40. Upper Cadell River. Bark painting. Second stage. Outlines and main lines are designed in white colour with the help of fine bark brush. This figure was in Jelinek (1979) labelled as Table IV, Fig. 4.



FIGURE 41. Upper Cadell River. Bark painting. The fine hatching is done with fine brush made of pandanus leave fibres. This figure was in Jelinek (1979) labelled as Table IV, Fig. 5.

ROCK PAINTING

Mandarrg's oldest son Bunganyial painted a white crocodile with eggs inside its body (*Figure 42*), at the workshop for making stone tools. He started painting from the tail (*Figure 43*) and then he painted the hind legs (*Figure 44*), the body in dorsal view, and finally the head (*Figure 45*), again in lateral view, similarly as the tail.

He painted the tail so as to accentuate its characteristic crest. The eggs were in fact unpainted circular rock surfaces inside the white body of the crocodile (*Figure 46*). Bunganyial kept the white China clay diluted with water and saliva in his mouth. After completing the painting with a chewed strip of stringy bark he sputtered the rest of the paint on his left hand put on the rock. Thus arose a typical white hand stencil. On our question, what it was, Bunganyial explained that it was his hand, since it is his rock, because he painted the crocodile. In fact he marked his property.

The white colour used was taken from the nearby billabong, where it formed a layer beneath the water (*Figure 47*). Bunganyial discovered it during the dry season, but now he had to dive below the surface and to

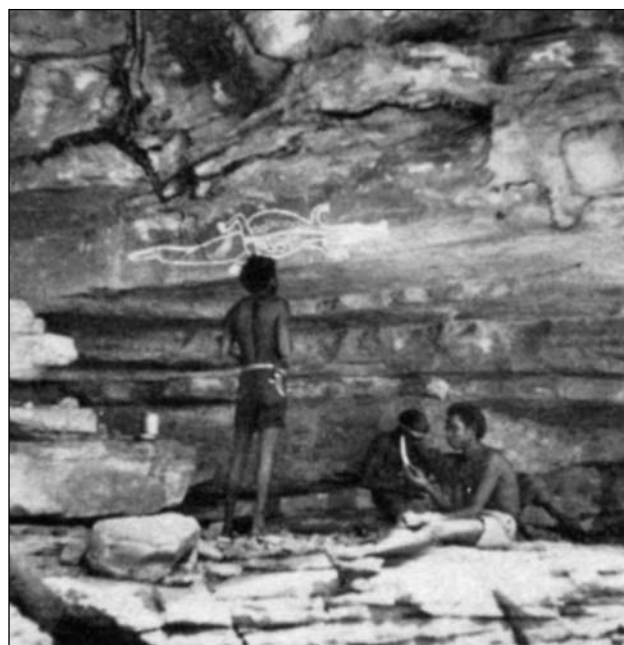


FIGURE 42. Upper Cadell River. Crocodile rock painting in a simple X-ray style. This figure was in Jelinek (1979) labelled as Table V, Fig. 5.

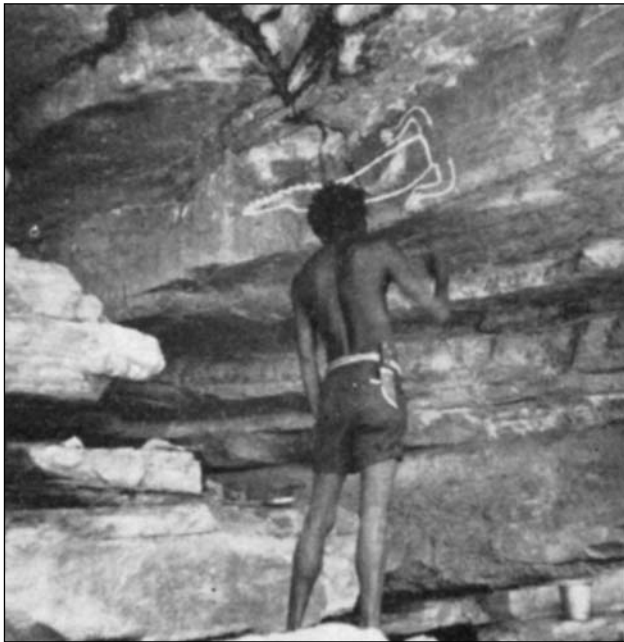


FIGURE 43. Upper Cadell River. The process of crocodile painting on a rock wall in a stone tool workshop. The painter starts with a tail. This figure was in Jelínek (1979) labelled as Table V, Fig. 1.

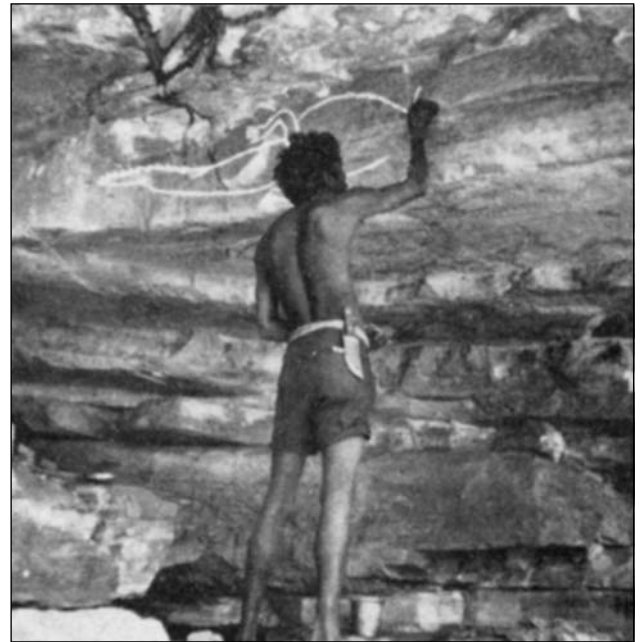


FIGURE 44. Upper Cadell River. The crocodile painting. The tail is in side view, the body in a vertical view. This figure was in Jelínek (1979) labelled as Table V, Fig. 2.

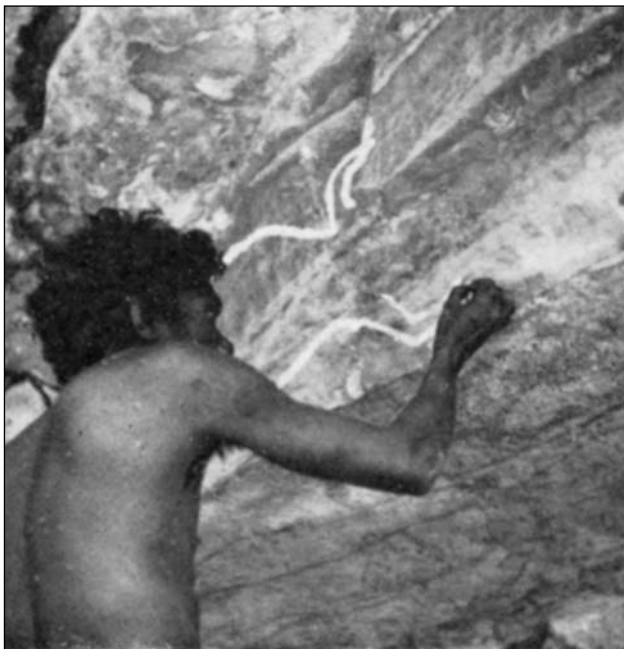


FIGURE 45. Upper Cadell River. The crocodile painting. The bark brush is used. This figure was in Jelínek (1979) labelled as Table V, Fig. 3.

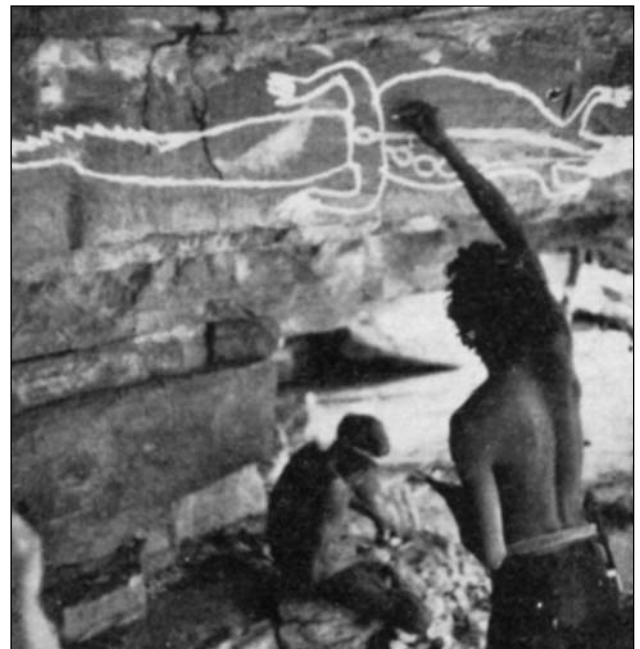


FIGURE 46. Upper Cadell River. The painting of a crocodile. The eggs are designed. This figure was in Jelínek (1979) labelled as Table V, Fig. 4.



FIGURE 47. Upper Cadell River. White clay for rock painting is collected. This figure was in Jelínek (1979) labelled as Table IV, Fig. 6.

scrape the clay with a sharp stick or with hands. On the shore he kneaded it into the shape of a big cone, and he carried it in a fork of three twigs. He considered the deposit of the white colour his private property and the others recognized his claim. Bunganyial owned also a deposit of red pigment – of haematite – at a place that was at the same time one of his "dreaming sites".

ROCK-ART IN THE REMBRANGA TERRITORY – CENTRAL ARNHAM LAND

During our survey in the traditional tribal territory of the Rembranga people we visited studied rock art galleries in Beswick, Bokolo, Bulman Gorge, Yaimani and on the Upper Cadell River (*Figure 48–51*). Near Cadell River Crossing we met a group considering themselves Rembranga and claiming the territory theirs. Some of the rock paintings were made by these people. We regard therefore even the Upper Cadell River region as Rembranga territory.

The rock paintings in Beswick were studied and described by Macintosh (Macintosh 1952).

In Bokolo, near a Rembranga sacred ground, the venue of a recent Kunapipi ritual, there are three rock art galleries. The main site is called Dadbu that is Snake Site. Compared with other Arnhem Land sites, the

paintings here are very simple, even primitive. The X-ray characters are only rudimentary (e.g., the central longitudinal line in the animal body) and are also quite rare. Most paintings lack any X-ray character. In few cases some engraved lines and simple engraved figures were found. Even these figures appear only exceptionally in the Arnhem Land art. In one superimposed group of paintings an engraved crocodile figure was found. Red colour prevails in all paintings. The white paintings, representing in most of the other galleries the latest art, are quite exceptional here.

All these features show that the locality has only a marginal position, compared with other galleries found in north and central Arnhem Land.

The third locality we studied comprises three galleries in Bulman Gorge. The first two galleries are right in Bulman Gorge, in the vicinity of the big cave. The oldest paintings here belong to the archaic style; they are in red and picture some characters similar to the other archaic style paintings in Arnhem Land (Brandi 1974, 1978, Chaloupka 1978, Jelínek 1979). The third group of paintings found above the Bulman Gorge has characteristic archaic-style kangaroo paintings, resembling the archaic paintings we found on the Upper Cadell River or in the Deaf Adder Creek region (Brandi 1974, Jelínek 1979). Recent paintings in white are absent also here. The Yaimani Creek galleries contain two chronological groups of paintings: archaic ones, mostly in red colour and representing mainly human stick figures. To the second group belong simple X-ray paintings. The X-ray style of this region never reached the degree of development we saw in the East Alligator River Area. The latest paintings are mostly in white. The site, as we learned from the Aborigines, is a sacred place (Dreaming site) of Bunganyial, the oldest son of Mandarrg. Mandarrg is half-Rembranga and half-Dangbon, but the whole family is considered Rembranga. In 1971 they were still living between the upper reaches of the Tonkinson and Cadell Rivers.

Near Cadell River Crossing there are numerous galleries and rocks with rock paintings. The oldest paintings, preserving only the red colour, are dynamic figures, often with boomerangs and with spears held in hand, without the use of woomera. The X-ray characters found in the later paintings (red, yellow or white) are always very simple. Four paintings (on the left bank) of barramundi fish are in elaborate X-ray style, but this painting was influenced, no doubt, by the East Alligator River style of X-ray paintings, characterized with rich hatching and complicated anatomical features. There is only one such painting in the Cadell River Crossing area.



FIGURE 48. Bokolo. An example of a rock painting style from Bokolo gallery. This figure was in Jelínek (1979) labelled as Table IX, Fig. 1.



FIGURE 49. Upper Cadell River. An example of the recent simple X-ray style from the Arnhem Land interior. This figure was in Jelínek (1979) labelled as Table IX, Fig. 2.



FIGURE 50. Upper Cadell River. A spirit figure in a local variant of X-ray style (note the crest on the right leg of the figure). Right is a simple symbol of a spirit figure (head down). This figure was in Jelínek (1979) labelled as Table IX, Fig. 3.



FIGURE 51. Upper Cadell River. Developed X-ray style as an import from the East Alligator River area. This figure was in Jelínek (1979) labelled as Table IX, Fig. 4.

The latest paintings made by Mandarrg and his family are mostly in white, sometimes in white and red. The X-ray style is not so elaborate. It is important to know that Mandarrg visited Oenpelli in the late forties, i.e., he is familiar with the developed X-ray style of the East Alligator River area.

At two sites near Cadell River Crossing we found rock art galleries and stone tool workshops. In both cases the majority of the used cores was of planconvex type. One workshop (on the right bank) was accompanied with archaic paintings only. The other workshop (on the left bank of the river) contained archaic and simple X-ray paintings. Both sites were situated high in the rocks, several hundred metres from the river.

Chronologically we can divide the rock paintings found in the Rembranga territory into archaic, later prehistoric and recent ones. The archaic paintings preserved up to these days are mainly in red, and cannot be found in the southern part of the traditional Rembranga territory, where strong southern influence can be traced in the rock art. Archaic paintings are found in Central Arnhem Land – they belong stylistically to similar groups of archaic paintings in the East Alligator River area, on the Deaf Adder Creek, Kimberley's, on the Cap York Peninsula and in Eastern Arnhem Land, where Bradshaw figures, forming a local group, belong to the same archaic art family. The simpler X-ray paintings, later, but still prehistoric, are usually in red, yellow, less often in white and black. They are characteristic of Central Arnhem Land and we can find them on the Upper Cadell River, Middle and Upper Liverpool River, partly even in some localities in the East Alligator River area (e.g., Obiri, Red Lily Lagoon), in Deaf Adder Creek, and even in El, Sherano. The East Alligator River area developed a special elaborate style with complex anatomical details and rich hatching. This region has even some other characteristic features, one of them being the earliest knowledge of woomera, compared with other rock paintings in Central, South and West Arnhem Land. The elaborate X-ray style had reached partially even the Deaf Adder Creek area, El Sherano and several localities of the traditional Gunwingu territory. Wide-spread use of the white colour in recent paintings is characteristic of the Central Arnhem Land, of the traditional Gunwingu area, and partly even of the west and north.

This chronological and regional distribution reveals different stylistic influence on comparing the southern and northern parts of the Rembranga territory. The original simple X-ray style in the southern part of Arnhem Land is influenced by southern elements, and in the north mainly by the East Alligator River area.

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