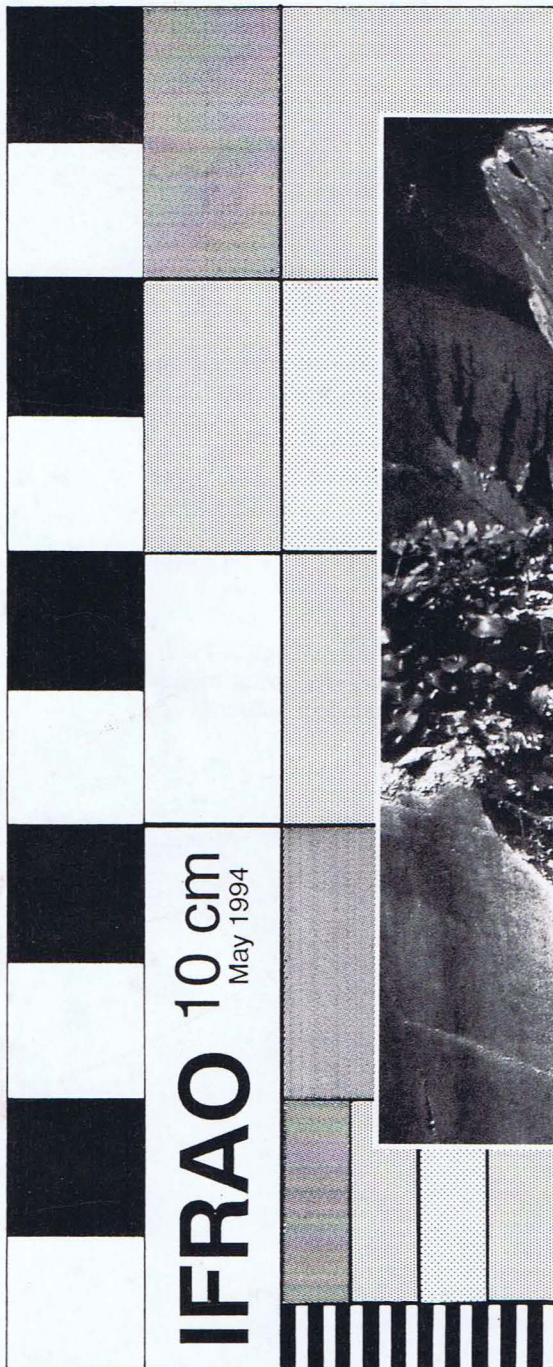


**Australian Rock Art Research Association (AURA)
and International Federation of Rock Art Organizations (IFRAO)**

ROCK ART RESEARCH

Volume 12, Number 1

MAY 1995



Côa valley, Portugal. Photograph by M. Simões de Abreu.



KEYWORDS: *Beeswax - Native bee - Rock art - Wandjina - Ethnography - Kimberley*

BEESWAX ROCK ART IN THE KIMBERLEY, WESTERN AUSTRALIA

David Welch

Abstract. Beeswax obtained from the hives of native bees has been pressed onto rockshelter walls in order to make various designs. This paper describes and illustrates this form of rock art in the Kimberley region. General notes on the Aboriginal uses of beeswax and the significance of the native bee to the Kimberley tribes are included.

Introduction.

The first published account of beeswax figures in rock art was by Brandl (1968), who described this art form in the region now known as Kakadu National Park. He used the term 'collage technique' to describe the application of lumps of beeswax in definite shapes to rock surfaces. Beeswax figures from this region have subsequently been illustrated and discussed by Edwards (1979), Welch (1982), Walsh (1988) and Chaloupka (1994). Chaloupka has described the Kakadu region's Aboriginal names for the different native bees, their honey, and the uses for the beeswax obtained from the hives.

In the Kimberley region, only one example of a beeswax figure has been published (Utamarra and Vinnicombe 1992), and mention has been made of the existence of anthropomorphic figures and a Wandjina head (Walsh 1991: 132). Crawford (1968) has illustrated paintings of native beehives and given accounts of some of the related mythology. Akerman (1979) has provided a detailed account of the Aboriginal names and significance of the bees and their honey ('sugarbag').

In other areas of Australia, rare examples of beeswax art have been noted in the Victoria River headwaters and the Keep River area. Both these areas are located between the Kimberley region to the west and the Kakadu region to the east. Well over a thousand kilometres to the east, a pressed beeswax pellet has been added to a painted flower-like motif in north Queensland's Princess Charlotte Bay area (Walsh 1988: 240-1).

Comparing my research in both the Kakadu and Kimberley regions, one finds that sites with beeswax figures are relatively common in the Kakadu region where motifs include animals, squatting females, simple human figures with 'spears' and 'spearthrowers', and rows of pellets. Pellets of beeswax have also been placed on painted figures in Kakadu in the position of the eyes, joints and sexual organs.

However, in the Kimberley region, beeswax figures are far less common, and these will be discussed here.

The Australian (stingless) native bees

Australia has more than ten species of stingless native

bees which have recently been divided into two genera (Dollin and Dollin 1994). These are the *Trigona*, which are black with thick white hair on the face and sides, and *Austroplebeia*, which are black with tiny yellow markings. Previously, *Plebeia* was a subgenus of *Trigona*, and this has now been reassigned to the separate genus of *Austroplebeia*. Australian native bees are small black insects which look superficially similar to the common fly. They have no sting and make their nests in the hollow trunks and branches of trees, in the ground, or in rock crevices, including sometimes in the back of rockshelters and in building cavities.

The Aborigines of the Ngarinjin, Worora, and Wunambal tribes of northern Kimberley recognise three distinct types of native bee (Akerman 1979). The name of each varies from tribe to tribe. Using the Ngarinjin language, *namiri*, the largest, is the only one that lives in the ground or in rock crevices, but it can also live in trees. Its honey is thick and syrupy. *Narra* is the next down in size, and lives exclusively in hollow trees. Its honey is the most fluid. *Wanangka* is the smallest and also lives exclusively in trees.

These three types are recognised by entomologists as three distinct species, but their scientific names have changed since Akerman's 1979 paper (Graham Brown, pers. comm.). *Namiri*, the largest, is *Trigona hockingsi* (Rayment 1932: 106) which is also found across the Northern Territory and north-east Queensland. The worker bee averages 4.5 mm in length. *Narra* is now known as *Austroplebeia essingtoni* (Cardale 1993: 319), about 4 mm in length, and this bee is also found across the coastal Northern Territory. *Wanangka* is an unnamed *Austroplebeia*, about 3.6 mm in size.

As Aborigines walk through the bush they keep an eye out for any sign of these bees. When seen the bees are followed to their hive whereby the honey can be scooped out and eaten. Sometimes, when a beehive was located high in a tree, notches were cut with a stone axe into the trunk to allow footholds in order to climb the tree. The stone axe was often used to widen the hive entrance and to cut into the tree to obtain the contents of the hive. Trees can be seen today in the Kimberley that have old footholds

still visible on them. Akerman notes that the stone axe in the Kimberley was usually owned by the women rather than the men. He also noted that it was the women who did the final work in making a stone axe, grinding the edge and hafting the stone.

In Arnhem Land in the Northern Territory of Australia, sometimes when a stone axe is made it is decorated by painting it with ochre pigments. Often the design painted is simply dots, and I have been told by Aborigines that these dots represent the bees whose wax was used to bind the axe head to the handle. In turn, the design is placed on the stone axe because that implement was so important in obtaining the beehives for honey and wax.

Once the hive is reached, handfuls of the hive contents can easily be scooped out without any danger because the native bee has no sting. The contents of the hive are put into the mouth, and this may include the honey, wax, pollen and some of the bees themselves. The sweet honey is sucked from these clumps, and the remaining material, consisting mainly of wax, then becomes a useful commodity.

Rock paintings of bee hives occur regularly throughout the Kimberley region. They often appear in a segmented or compartmental form, representing the pollen and honey pots (Figure 1).

Beeswax resin in the Kimberley

Of the three types of bee, the *namiri* (Ngarinjin) is the largest, is slow flying, and has thick-walled honey pots which do not have to be handled as delicately as the others. The wax extracted from *namiri* is called *njal*. After the honey was chewed or squeezed from the comb, the remaining wax was then beaten and mixed with powdered charcoal or ochre before being used (Akerman 1979). This beeswax is easily moulded when fresh, but dries out to a hard consistency when exposed to light and air. However, it can be softened and re-used if needed, simply by heating

it over a fire.

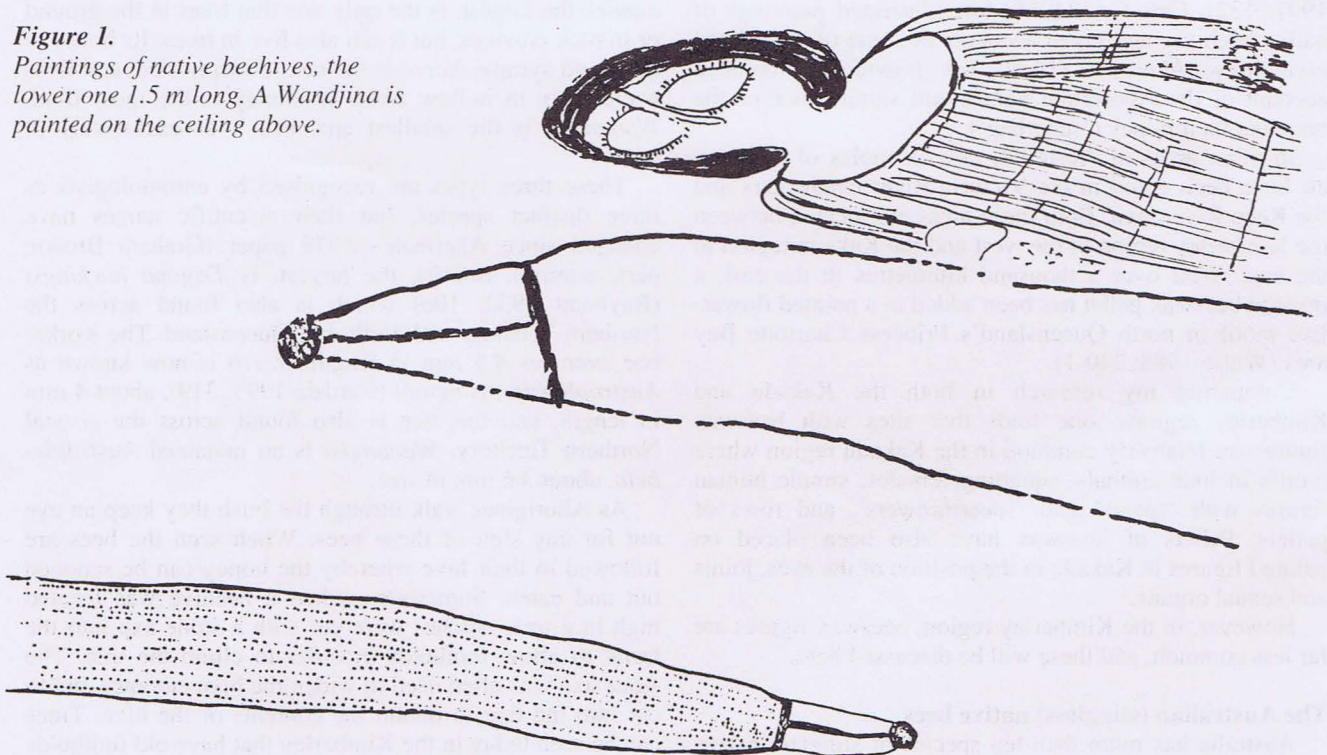
Beeswax was used in the following ways:

- (A) Hafting and binding, along with bush string, such as in:
 - (1) Stone axe heads to wooden handles
 - (2) Spearpoints made from stone, hardwood, metal or glass to spear shafts
 - (3) Stone adzes (chisels) to wooden handles
 - (4) Hardwood hooks to spearthrowers
 - (5) Feathers to body adornments and ornaments
 - (6) Pearlshell and other items to bush string to make pendants, necklaces etc.
- (B) Sealing and water-proofing items such as the bark bucket, *garagi*, or the bark coolamon, *ann gum*.
- (C) Repairing items such as filling in a knot hole in the wood of a spearthrower, or filling a hole in a broken baler-shell water container.
- (D) To form the mouthpiece on didgeridoos. (It is thought that didgeridoos may have been introduced to the northern Kimberley in historic times.)
- (E) Children played with the wax like a plasticine and used it to make models.

Beeswax resin was similarly used in various ways across the rest of northern and coastal Australia where native bees occurred. Stingless bees are found on other continents, including Africa and tropical America. Irian Jaya and Papua New Guinea to Australia's north also have similar bees, and the indigenous people there use beeswax extensively in making their body decorations and artefacts. However, there are no reports yet of beeswax rock art from these areas. In central Australia, where these bees do not occur, resin for artefacts is obtained primarily from spinifex grass (*triodia* sp.), and it is the honey ant that provides a sweet component to the diet.

Figure 1.

Paintings of native beehives, the lower one 1.5 m long. A Wandjina is painted on the ceiling above.



Other resins used by Kimberley Aborigines in artefact production were extracted from trees such as the cypress pine and from the root of the ironwood tree. These other resins are harder and more brittle when they set, they set quicker, and they lack the adhesive properties of the beeswax resin. It is for this reason that they are less suited for application to a rock surface as an art form. If used, they were probably more likely to peel from the rock with subsequent weathering. I have not yet recognised any other resins in Kimberley rock art, but in the Kakadu region, Chaloupka (pers. comm.) has seen an ironwood resin figure.

Beeswax rock art in the Kimberley

My research in the Kimberley would suggest that the incidence of sites with beeswax figures is about four or five per thousand art sites, compared with an incidence of about twenty-five to thirty per thousand in the Kakadu region. These sites are widely scattered and no concentration of sites has yet been discovered. All beeswax figures appear in the rockshelters of the quartz-sandstone areas. Some shelters have only single motifs while one shelter has been found containing eight figures.

Other researchers have also found beeswax figures to be rare. Kim Akerman saw one turtle figure at a coastal site (pers. comm.), and Pat Vinnicombe recorded a figure identified as *Djangarr*, a lightning figure, by Aboriginal informants in 1981 (Utemara and Vinnicombe 1992). This figure was identified as a 'painting' by her informants who at first did not recognise that beeswax had been used. After discovering that beeswax had been the art medium, the informants remembered how they had made small models with beeswax when they were children (P. Vinnicombe,

pers. comm.). At a nearby site she saw other weathered human-like figures in beeswax.

Beeswax art occurs either as motifs made entirely of this material, or it forms part of otherwise painted motifs. The *Djangarr* figure illustrated by Utemara and Vinnicombe (1992) is an example of this latter form. Its body and penis outline are in beeswax, while the infill on the penis is in red ochre.

The known motifs of Kimberley beeswax figures include the following categories:

- (1) Simple human figures
- (2) Animals ('dingo', 'turtle')
- (3) Wandjina and other spirit figures
- (4) Animal tracks (macropod)

The rows of pellet dots seen commonly in the Kakadu region and any evidence of 'contact' beeswax art have not yet been identified in the Kimberley.

It is interesting to note that the Reverend Love (1930: 8) was shown a shelter in the Kimberley where a line of beeswax had been made in order to form a drip line to divert rain water from damaging a painting. This is a remarkable example of early rock art preservation by Aboriginal people.

One large occupation shelter has been found that contains eight beeswax figures in various states of preservation (Figure 2). Towards the back of the sloping roof, the beeswax appears relatively dark, glistening and fresh. It can be indented with the tip of one's fingernail. This is level (A) in Figure 2. However, the beeswax figures on the vertical rock face below, more exposed to the weather and sunlight, appear whiter, hard, brittle, cracked, and parts have dislodged from the rock surface (level B).

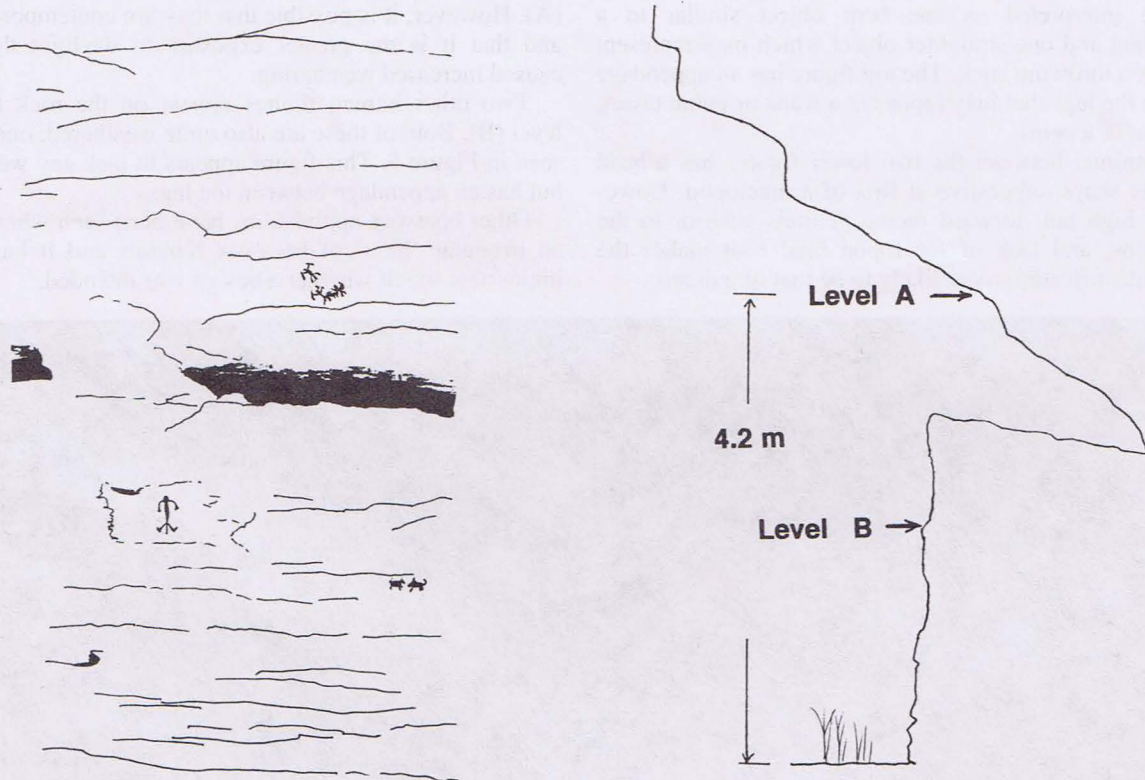


Figure 2. Plan and profile view of rockshelter with beeswax art.



Figure 3. Beeswax of fresh appearance. Lower human figures 17 cm tall.

Figure 3 depicts a composition of three human figures and an animal at level (A). Each human figure holds what may be interpreted as one bent object similar to a boomerang and one straighter object which may represent a club or a throwing stick. The top figure has an appendage between the legs that may represent a waist or pubic tassel, ornament or a penis.

The animal between the two lower figures has a head and body shape suggestive at first of a macropod. However, the high tail, forward facing genitals anterior to the hind limbs, and lack of macropod hind foot makes the correct identification more likely to be that of a dingo.



Figure 5. Weathered beeswax figure, 29 cm tall.

Figure 4 depicts two more animals of similar form at level (B). The difference in weathering is apparent, making these two figures appear much older than those at level (A). However, it is possible that they are contemporaneous and that it is the greater exposure to daylight that has caused increased weathering.

Two other human figures appear on the rock face at level (B). Both of these are also quite weathered, one being seen in Figure 5. This figure appears to lack any weapons, but has an appendage between the legs.

Other beeswax applications have been seen where only an irregular 'blob' of beeswax remains and it has been impossible to tell whether a design was intended.



Figure 4. Two beeswax animals of weathered appearance. Complete design 27 cm across.



Figure 6. Beeswax Wandjina figure, the feet extending below the rock ledge.

Beeswax Wandjina figures

The Wandjinas are very important ancestral beings who typically have a crescent-shaped headdress and a face without mouth. There are many paintings of Wandjinas across the northern Kimberley (Figure 1).

Figure 6 depicts a beeswax form of a full-length Wandjina figure found in a river gorge. It is located in a small recess, facing slightly downstream, and would be covered by water for at least a few days, if not weeks, each year during the peak of the Wet Season flooding. As well as this, the morning sun shines directly into the small shelter. Most of the figure is on a vertical face and appears very weathered because of its exposed position. However, the feet of the Wandjina continue under the rock ledge and appear darker and fresher. They can just be seen in the photograph, but Figure 7 has been drawn to assist the reader. This excellent example demonstrates how it is the sun or light exposure that mostly determines the rate of beeswax deterioration.

The features that enable one to identify this as a Wandjina are the head/headdress shape and the 'chest' line with the central chest decoration, *rungoo* (Walsh 1988: 186). This chest design variation is found on some Wandjinas. Figure 8 has been drawn as a possible reconstruction of the original figure.



Figure 7. Drawing of beeswax Wandjina in Figure 6, 59 cm tall.

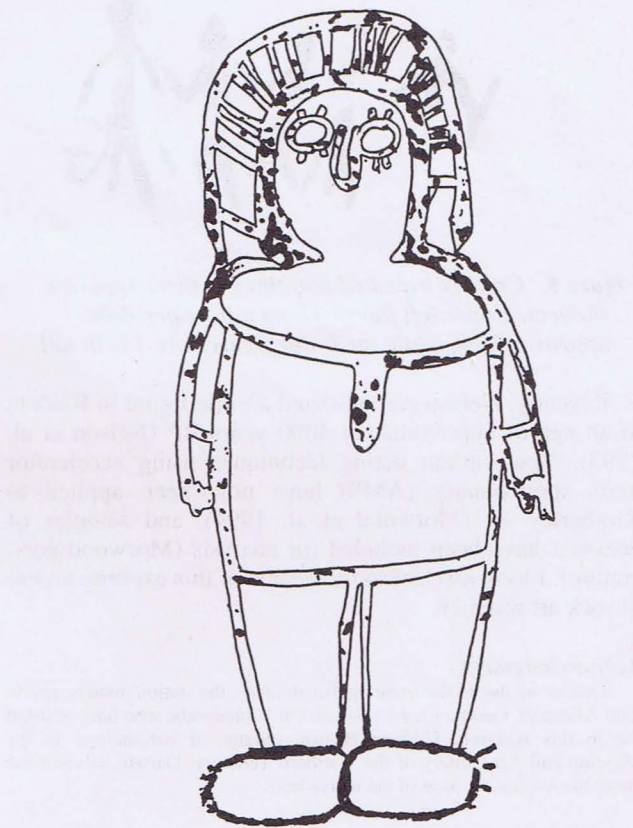


Figure 8. Drawing of Wandjina with reconstruction of possible original figure.

Although this Wandjina was located in a small recess, the flat rocks of the river bed in front of the shelter were covered in well patinated 'grinding hollows'. These grinding hollows are large cupules, about 10 cm in diameter, often found in occupation sites across northern Australia and are of great antiquity (Welch 1982: 82). Their occurrence at this particular location suggests that occupation of the site may predate the Wandjina figure.

Antiquity

The motifs seen in beeswax appear also in the painted art forms of the Kimberley. As for the simple human figures, the painted equivalent is often found in an orange-red pigment, appearing to be amongst the topmost paintings wherever superimposition occurs. Examples from three different sites are illustrated in Figure 9.



Figure 9. Crudely executed paintings at three separate shelters. Upper left figure 37 cm tall, upper right approx. 17 cm, while the lower figures are 14 cm tall.

Recently, Nelson carbon-dated a turtle figure in Kakadu to an age of approximately 4000 years BP (Nelson et al. 1993). New carbon dating techniques using accelerator mass spectrometry (AMS) have now been applied to Kimberley art (Morwood et al. 1994), and samples of beeswax have been included for analysis (Morwood pers. comm.). I look forward to the results of this exciting aspect of rock art research.

Acknowledgments

Thanks are due to the traditional custodians, the station owners, and to Kim Akerman, George Chaloupka and Pat Vinnicombe who have assisted me in this research. Graham Brown, curator of entomology at the Museum and Art Gallery of the Northern Territory, Darwin, advised me about the re-classification of the native bees.

Dr David Welch
2 Falcon Court
Wulagi, N.T. 0812
Australia

Final MS received 16 February 1995.

Résumé. De la cire d'abeille provenant de ruches d'abeilles indigènes a été pressée sur les parois d'abris-sous-roche de façon à produire une variété de motifs. Cet article décrit et illustre ce genre d'art rupestre dans la région du Kimberley. Des notes générales sur les usages de la cire d'abeille par les aborigènes sont incluses, ainsi que sur l'importance de l'abeille indigène aux tribus du Kimberley.

Zusammenfassung. Bienenwachs von Stöcken der Wildbienen wurde in die Wände von Abris gepresst um verschiedene Felskunst Motive zu schaffen. Dieser Artikel beschreibt und illustriert derartige Formen von Felskunst im Kimberley Gebiet von Australien. Allgemeine Bemerkungen über die Verwendung des Bienenwachses durch Aborigines, sowie die Bedeutung der Wildbienen für die Kimberley Stämme sind eingeschlossen.

Resumen. La cera de abejas obtenida de las colmenas de abejas nativas ha sido apretada sobre paredes de abrigos rocosos para hacer varios diseños. Este artículo describe e ilustra esta forma de arte rupestre en la región de Kimberley. Se incluyen notas generales sobre los usos Aborígenes de la cera de abejas y la importancia de la abeja nativa para las tribus de Kimberley.

REFERENCES

- AKERMAN, K. 1979. Honey in the life of the Aborigines of the Kimberleys. *Oceania* 49(3): 169-78.
- BRANDL, E. 1968. Aboriginal rock designs in beeswax and description of cave painting sites in western Arnhem Land. *Archaeology and Physical Anthropology in Oceania* 3: 19-29.
- CARDALE, J. C. 1993. Hymenoptera: Apoidea. In W. W. K. Houston and G. V. Maynard (eds), *Zoological catalogue of Australia*. AGPS Vol. 10, Canberra.
- CHALOUPKA, G. 1994. *Journey in time*. Reed, Chatswood.
- CRAWFORD, I. M. 1968. *The art of the Wandjina*. Oxford University Press, Melbourne.
- DOLLIN, A. and L. DOLLIN 1994. Australian stingless bees. (Information sheet) North Richmond, N.S.W.
- EDWARDS, R. 1979. *Australian Aboriginal art: the art of the Alligator Rivers region, Northern Territory*. Australian Institute of Aboriginal Studies, Canberra.
- LOVE, J. R. B. 1930. Rock paintings of the Worrora and their mythological interpretation. *Journal of the Royal Society of Western Australia* 16: 1-24.
- MORWOOD, M. J., G. L. WALSH and A. WATCHMAN 1994. The dating potential of rock art in the Kimberley, N.W. Australia. *Rock Art Research* 11: 79-87.
- NELSON, D. E., C. CHIPPINDALE, G. CHALOUPKA, P. TAÇON and J. R. SOUTHERN 1993. AMS dating of beeswax rock art in northern Australia. *The Artefact* 16: 52.
- RAYMENT, T. 1932. The stingless bees of Australia. *Victorian Naturalist* 49: 104-7.
- UTEMARA, D. with P. VINNICOMBE 1992. North-western Kimberley belief systems. In M. J. Morwood and D. R. Hobbs (eds), *Rock art and ethnography*. Occasional AURA Publication 5, Australian Rock Art Research Association, Melbourne.
- WALSH, G. L. 1988. *Australia's greatest rock art*. E. J. Brill/Robert Brown and Associates, Bathurst.
- WALSH, G. L. 1991. Rock painting sizes in the Kimberley and Victoria River District. *Rock Art Research* 8: 131-2.
- WELCH, D. 1982. *Aboriginal rock art of Kakadu National Park, Northern Territory of Australia*. Big Country Picture Co., Darwin.

NOTES FOR CONTRIBUTORS

Manuscripts of major research papers should preferably be from 4000 to 8000 words. Longer articles will be considered on the basis of merit. Submissions should comprise the original together with one copy, typed in double-space, with a wide margin on one side of each page. Underline words to be italicised and identify each page by number and author's surname. The preferred method of submission is on a 5.25 inch double-sided, double density (DS-DD) diskette written in *MS Word*, together with a hard copy. The content of the paper should be outlined by three to five keywords (e.g. 'Petroglyphs - patination - ethnography - Pilbara') placed above the title. The manuscript must include an abstract of 50 to 100 words, summarising the article.

Spelling and punctuation in this journal follow the *Style manual for authors, editors and printers of Australian government publications* and the *Macquarie dictionary*; where the two disagree the former has precedence. Footnotes should not be used. The bibliography and references in the text should follow the style indicated in this issue.

If line drawings are included they must be larger than the intended published size (preferably by a factor of 1.5 to 2) and line thicknesses, stippling, lettering sizes etc. must be selected accordingly. Photographs should be black and white gloss prints of high contrast. Photographs of rock art which were obtained by physical enhancement or other interference will be categorically rejected. In regions where traditional indigenous rock art custodians exist, their approval must be obtained before submission of any illustrations of rock art, and where copyright applies the author must obtain the appropriate consent. Captions (on a separate sheet) are required for all illustrative material, together with an indication in the text as to where they, and any tables and schedules, are to be placed.

Announcements intended for a specific issue of this journal ought to be available at least two months before the month of intended publication. Galley proofs are issued of all articles and must be returned promptly after correction by the author(s). Each author or group of authors receive thirty free copies of their article, additional reprints are available at cost.

All correspondence should be addressed to:

The Editor
Rock Art Research
P.O. Box 216
Caulfield South, Vic. 3162
Australia

Telephone: Melbourne (03) 523 0549

