▲ Numbat *Myrmecobias fasciatus*. Drawing by Martin Thompson, courtesy Western Australian Museum.

The Numbat in Central Australia

by J.A. Friend, P.J. Fuller and J.A. Davis

Few people realise that the numbat,a distinctively-striped mammal of the State's South-west, was once found in many localities across southern Australia. In 1866, Gerard Krefft wrote that this termite-eating marsupial occurred near the junction of the Murray and Darling Rivers in western New South Wales, while in 1895, a specimen which is now in the National Museum of Victoria was collected on the New South Wales-South Australia border. Several specimens now in the South Australian Museum were collected in South Australia over fifty years ago, mostly from the northwest corner of that State. The numbats which occurred in eastern Western Australia, South Australia and western New South Wales were redder in colour than those of south Western Australia, and have been described at different times either as a different species or subspecies, *rufus*, and dubbed the rusty numbat.

The lack of recent specimens and recorded sightings of numbats outside Western Australia's South-west has caused zoologists to fear that the desert form of the numbat has become extinct.

The most recent proven record of the rusty numbat was from Warburton around 1950, when a skin from that area was donated to the Western Australian Museum. In 1977, Andrew Burbidge and Phil Fuller of the Western Australian Wildlife Research Centre interviewed Aboriginal people in the Warburton and Giles regions about the status of a number of mammal species. They were told that the *walpurti*, as the numbat was known, used to exist there, but was "finished" in those areas (Burbidge and Fuller, 1979).

In July 1982 our party left Perth on a 19 day expedition through central Australia. Our purpose was to investigate the status of the desert numbat and to gather as much information as possible about its habitat and biology, to enable comparison with the numbat of the South-west. Of most interest, naturally, was the possibility that populations of the rusty numbat might still exist in some remote areas.

We hoped that interviews with Aboriginal people of the desert tribal groups would cast light upon some of these questions. The route proposed therefore took in as many Aboriginal communities as possible.

The planned itinerary was to travel first from Perth to Warburton, where the largest numbers of Ngaanyatjarra people are based. From there an easterly course through the range country would be taken, via Jameson, Blackstone and Wingelinna, into South Australia near Kalka and Pipaljatjara (formerly known as Mt Davies Camp). Our plan was then to visit Amata and Ernabella, travelling south to Mimili in the Everard Range, then north on the Stuart Highway to the Ayers Rock turnoff. From here the return trip would be through Docker River back into Western Australia, to Warrakuna (Giles) and back to Warburton after a side trip to the Clutterbuck Hills in the central Gibson Desert. The final leg of the journey was to be west along the Gunbarrel "Highway" and to Wiluna, then back to Perth.

Permission to travel through Aboriginal lands and to speak with the people was granted by the respective councils in Western Australia, South Australia and the Northern Territory.

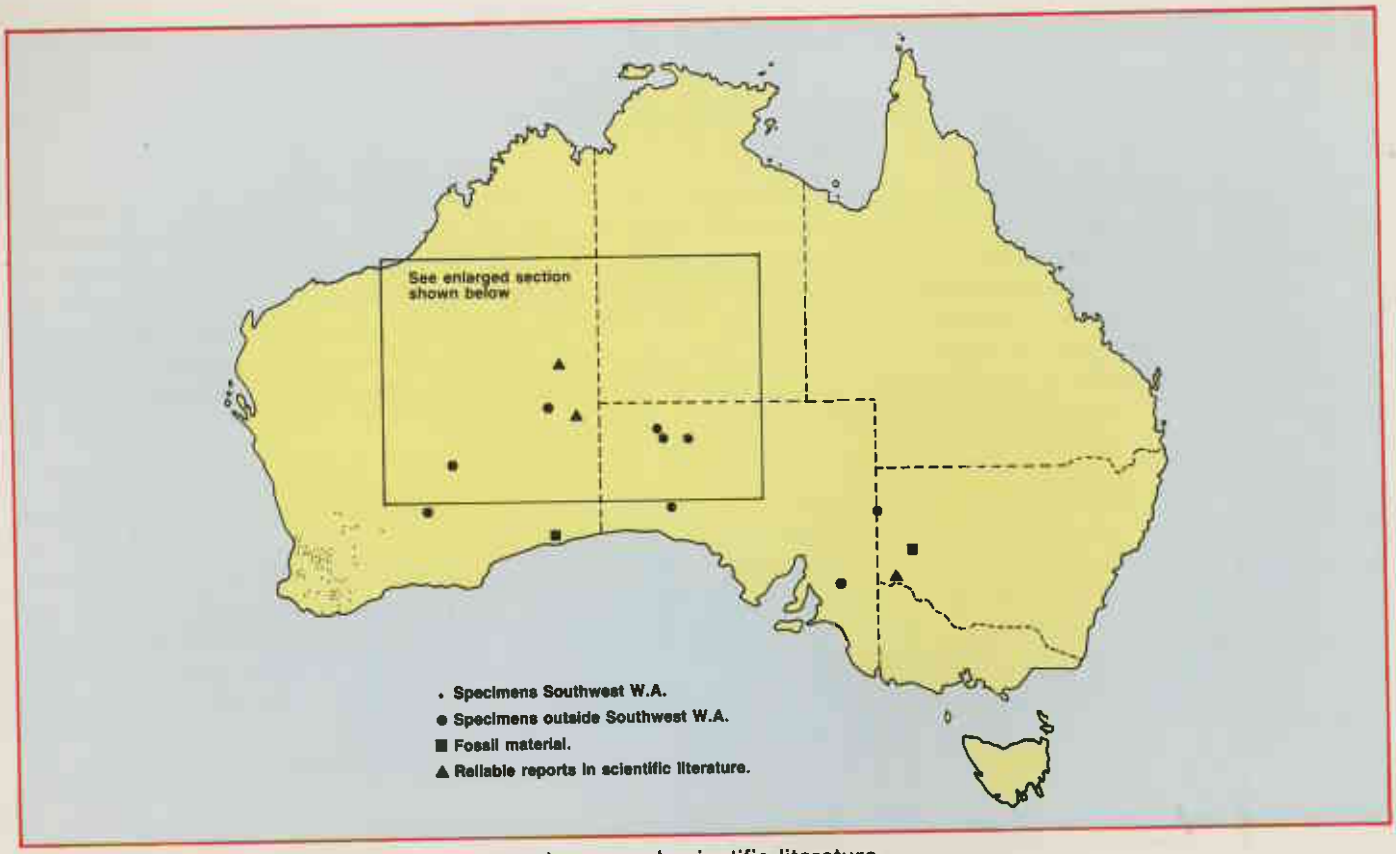
Our conversations with Aboriginal people were greatly assisted by the fact that we were able to show them the skin of a numbat from the southwest. This always generated great interest, sometimes surprise and usually mirth in the older people, who were nearly all familiar with the animal. In Warburton, our efforts were made very much more fruitful by the willing assistance of Herbert Howell, who has studied the Ngaanyatjarra dialect for many years and translated very ably for us.

In total, we visited 26 camps and settlements, and interviewed 36 groups of people. They included members of the Ngaanyatjarra, Pitjantjatjarra, Yangkuntjarra, Pintupi, Putitjarra and Matjiltjarra peoples. The information we collected in this way was remarkably uniform, considering that most events related had happened over thirty years ago. The readiness of the Central Desert people to share their knowledge with us, and their warmth and friendliness made this expedition a most memorable and enlightening experience.

The name used to identify the animal we produced was *walpurti* (pronounced "wahl-boor-dee") by people in all settlements we visited besides Wiluna. The name "numbat" is an aboriginal name which was used by the people of the King George Sound (Albany) district.

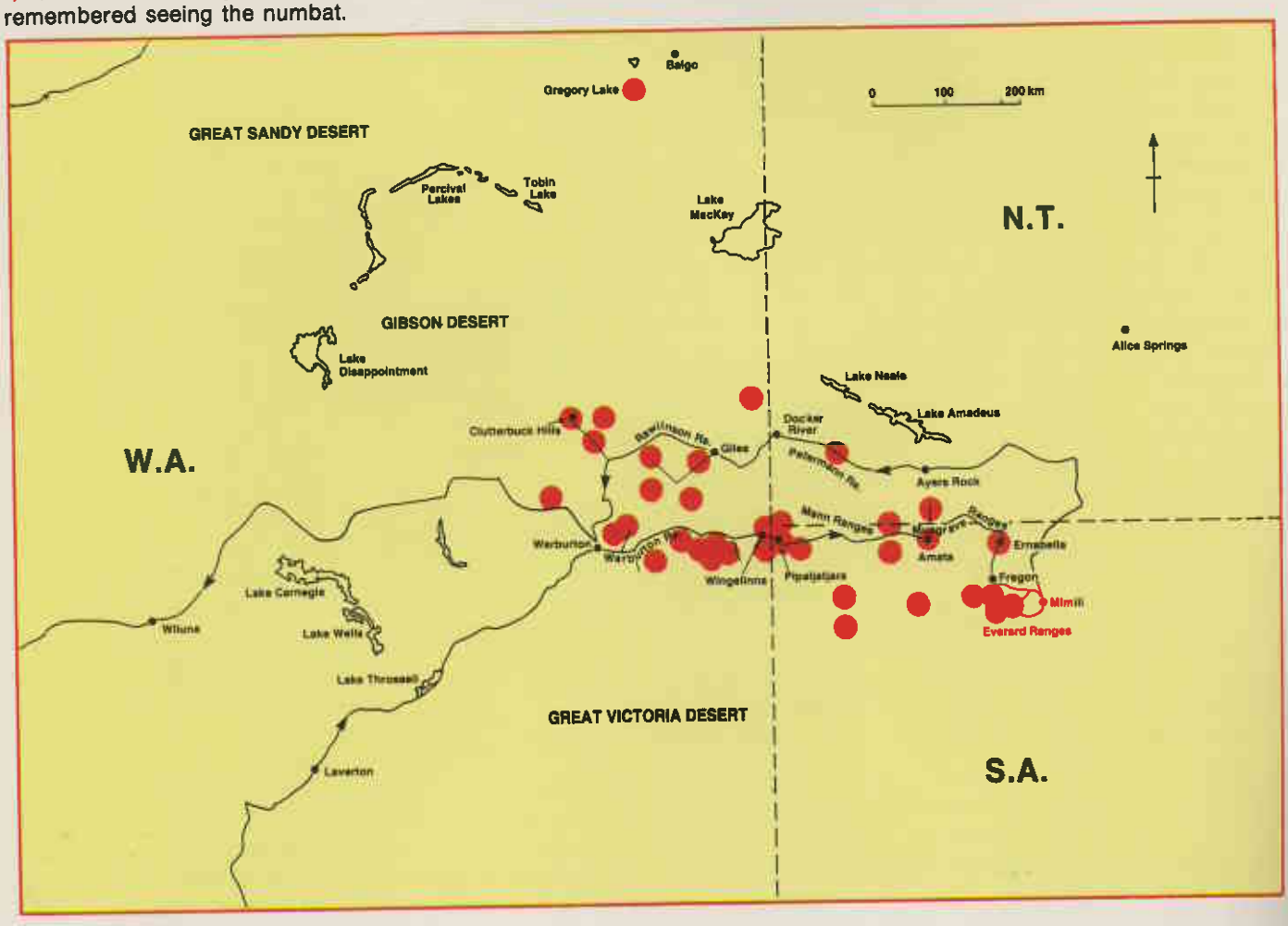
The first comment of most people after they had identified the *walpurti* was that it was "good *kuka*" (meat). One old man showed us which cuts should be eaten by each different member of a family, while another pointed out that if the underside of the neck was eaten, it would cause open sores (like ulcers) to break out on the skin of the eater. (This part of the numbat contains both the sternal gland and the greatly enlarged salivary glands. At certain times of the year, the male numbat's sternal gland secretes an oily liquid thought to be used in scent-marking).

Most desert people who knew the *walpurti* were at least forty years old. They could generally provide a lot of information about the animals' habits, although some had only seen one or two individuals. This information was usually corroborated by people in different areas. The youngest person interviewed who had seen the



▲ Records of the numbat from museum specimens and scientific literature.

▼ Route followed by expedition through Central Australia. Shaded circles indicate areas where Aboriginal people remembered seeing the numbat.



▲ The habitat of the *walpurti* included spinifex-mulga country similar to this area between the Musgrave and Everard Ranges in South Australia. (Photo A.Friend.)

▼ Wandoo woodland at Dryandra, near Narrogin W.A., where a population of numbats exists today. (Photo A.Friend.)

walpurti was a girl of about 25 years from Patjarr (Clutterbuck Hills) who, with her young brother, saw one when she was a little girl. We assume that this was approximately fifteen years ago, in the late 1960's and constitutes the most recent sighting of the rusty numbat so far reported.

The map shows the areas in which we were told the *walpurti* had lived. The report of its former existence in the Lake Gregory area was given to us by a Mantjiltjarra man now living in Wiluna, with an accurate account of the feeding and other habits of the animal. This reported occurrence is corroborated by information supplied to Andrew Burbidge and Phil Fuller in 1979 by a Kokatja man from Lake Gregory Station.

Thus it appears, from information given to us, that the *walpurti* was widespread in central Australia. It appear also to have been quite common in places. At Angata, west of Amata, we were told that the end of the *walpurti's* tail was used as a decoration by both men and women, the men placing two on each side of the beard, and the women hanging "lots" from their hair, *walpurtis*, therefore, were presumably common enough for the Aborigines to obtain them in quantity. There are accounts of white travellers in central Australia finding the remains of many individual *walpurtis* around Aboriginal campfires. In his book "The Red Centre", the prominent mammalogist, H.H. Finlayson, recounts an incident in the 1930s where at his request, some doggers agreed to obtain specimens of *Myrmecobius* from an area where it still existed.

The species was sufficiently numerous that the men were able to procure ten specimens. Unfortunately they were not familiar with the normal procedures of museum collecting and only kept the scaps!

The questions which we asked generally concerned the biology of the *walpurti* and naturally most of the answers we were given related to experiences in hunting it. We were told that it lived in spinifex and mulga, as well as sandhill country, but not in the rocky ridge country. It lived in hollow logs and burrows, and the people used to smoke it out or break open the logs, or dig it out from a burrow. Much care had to be taken when digging out *walpurtis*, as they were most adept at escaping and could run extremely fast (faster than a dingo, one man said).

The female placed her young in a burrow which she dug herself. Sometimes the male and female could be found together in a burrow with the young which were present in winter and spring.

Most people agreed that the *walpurti* ate termites and sometimes ants (they had different names for these unrelated groups of insects) which it dug out of the ground. A few people at Warburton said independently that the carcasses of dead animals were the main food of *walpurtis*, but we didn't hear this anywhere else. It is possible that some insects or their larvae might have been taken from decomposing flesh on occasions.

There was also some disagreement on the time of day at which the *walpurti* was usually abroad. The majority said that it fed and ran around during the day, and slept at night. A few told us also that it rested during the very hot weather, coming out in the late afternoon. This corresponds to the behaviour of the numbat in the South-west, which takes refuge in logs between midday and late afternoon on hot summer days. About a quarter of the people interviewed said that the *walpurtis* fed at night and slept during the day, however; it is impossible to say whether they were reporting real observations, or whether their conclusions were based on limited experience. If a resting animal had been dug out during the heat of the day, the hunter may have concluded that it had nocturnal habits.

During conversations, many aspects of the *walpurti's* behaviour were described to us. These acccounts left little doubt that the *walpurti* was the same animal as the numbat of the South-west. Several people mentioned its habit of basking in the sun, and standing on hind legs looking at its hunters before running away. It didn't bite, and generally made no sound, although north of Amata, an old man gave us an accurate rendition of the hissing noise sometimes made by a very angry numbat!

Walpurti burrows were described to us in detail, and on several occasions, men drew diagrams in the sand showing a straight narrow shaft sloping down at a shallow angle, widening out into a chamber at the end. Several also picked up a handful of dead grass and indicated that the chamber was filled or lined with this material, and one told us how the *walpurti* carried it to the burrow in its mouth. The shaft of the burrow was between one and two metres long. In most of these details, the burrow resembles that used by the numbat in wandoo and jarrah forest, although the materials used to line the chamber are different.

Some of the information given to us about *walpurtis* corresponds to aspects of the numbat's life-style only now coming to light from research at Dryandra, in the southwest of the State. One woman described how the female *walpurti* carried the young on her back. Recently, a female numbat has been seeen several times carrying her young this way while moving them from one burrow or log to another. The tendency of male and female to share a burrow while the young are still present has also been shown by radio-tracking studies at Dryandra.

Intricately bound up with these accounts of the ways of the *walpurti* were stories showing its cultural significance to the Aborigines. There were a number of "dreaming" stories about the animal, and we were told several times that it was a "big story down Mimili way". The special place of the *walpurti* is at the western end of the Everard Range. We were taken there by the Yangkuntjarra man who is custodian of the story about the *walpurti* and *tjalku*, the bilby (*Macrotis lagotis*). He took us to a waterhole in a small gorge where according to the story the *walpurti* originated. It is interesting to note that the areas near the Everard Musgrave Ranges were among the

last South Australian strongholds of *Myrmecobius*, reported by H.H. Finlayson (1933).

Another story, which we learnt at Kalka, in the North-west corner of South Australia, related how the *walpurti's* colouring originated. The perentie (*Varanus giganteus*, a large goanna) and the *walpurti* made a pact that each would paint the other's body. The *walpurti* painted spots on the perentie, and that met his approval. Then the perentie painted black and white stripes across the *walpurti's* back. The *walpurti* looked over his shoulder, and seeing the stripes, didn't like the pattern, so he picked up red snad and threw it over his back to cover them. This story aptly describes the way in which the red of the *walpurti's* upper back merges with the sharply-defined black and white stripes of the rump.

During our expedition it became apparent that the *walpurti's* disappearance from the area occurred over relatively few years. It was stated earlier than most people who knew the animal were older than about forty. This leads us to speculate on possible causes of its rapid decline.

In the forty or fifty years since the time when *walpurtis* were common in central Australia, there have been two major changes which might account for the fairly sudden disappearance of this species, and of numerous other small to medium sized mammals which disappeared over the same period.

The first is the build up in numbers of the introduced red fox, (*Vulpes vulpes*) an extremely efficient predator which is able to dig burrowing animals out of their refuges.

According to Finlayson (1961), the fox was already present in the Musgrave and Everard in 1932, although still in quite small numbers. By 1956, he reported, it outnumbered the dingo in some areas. The feral cat (*Felis catus*) is another introduced predator which occurs in central Australia, but has been there at least since last century.

The other major change occuring during the same period related to patterns of burning. When the central Australian Aborigines lived their taditional hunting life-styles, they burnt patches of country to force their quarry out of hiding (Finlayson, 1936) and to promote new growth, to provide food for the herbivorous species which they hunted. In addition, small fires were lit as signals, and to regenerate some of the food plants used by the people. These practices resulted in a tight mosaic of vegetation of different fire-ages and probably reduced the occurrence of large summer fires.

▼ Changes in patterns of burning may have been a factor in the decline of the numbat in Central Australia. (Photo P.Binden.)

▲ The "*walpurti's* place", Everard Range, South Australia.

Once the missions were established in the 1920s and 1930s, the desert people began to leave their traditional homelands, being encouraged to do so by the authorities during the 1950s and 1960s, until there were very few still living off the land. It has been suggested that the resulting change in fire regime caused the decline of at least one central Australian mammal, the western hare-wallaby, *Lagorchestes hirsutus* (Bolton and Latz, 1978). This formerly-abundant small macropod is now known in mainland Australia only from a small area of the Tanami Desert remaining subject to cool winter fires of limited extent.

Burning in the centrtal desert now largely takes the form of extensive summer wildfires (Burbidge and Fuller, 1979). Although *walpurtis* lived in burrows and may have survived the fire itself, an extensive wildfire would have left them in huge tracts of burnt land with very little cover from predators. The effect of changed burning practices on the availability of termites and ants as food for the *walpurti* is not known.

On the question of the *walpurti's* persistence in central Australia, our interviews gave little hope that any populations might still exist. However, many desert people are now moving back into their tradional homelands, where in many cases, nobody has lived for twenty to thirty years. Perhaps a remnant population of the *walpurti* may yet be discovered.

ACKNOWLEDGEMENTS

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Editor's Note:

For reasons of economy the number of issues of SWANS has been reduced from 4 to 3 each year. The revised dates for publishing are now May 1st, September 1st, and the last day of each year.