# Our Diminishing Heritage

The Boodie or Lesueur's Rat Kangaroo is yet another example of an Australian marsupial which has declined in range and numbers since the advent of the white man. It was once found over a large part of the mainland and on some islands off the Western Australian coast, but now appears to be extinct over most of its former range and has not been recorded on the mainland of Western Australia for over thirty years. However, it is still fairly common on Bernier and Dorre Islands in Shark Bay and on Barrow Island, west of Dampier.

Boodies were first recorded during Freycinet's second visit to Shark Bay in 1824 and are unique among the macropods because of their burrowing habits. Boodies live in large colonies in communal burrows with multiple entrances. On Barrow Island a burrow has been found with 30 entrances. Wood Jones (1924), linked the shrinking range of the species in South Australia with the spread of rabbits and foxes; Troughton (1941) suggested that poisoning (combined with foxes) was the reason, but Finlayson (1958) ascribed the decline mainly to foxes, since boodies and rabbits had apparently coexisted for some years before the spread of the fox. It is also probable that the alteration of vegetation brought about by the extensive grazing of sheep was a major factor. In fact, if it was pertinent to apportion the blame, it would be difficult to say who or what caused the decline in the status of the Boodie; unfortunately insufficient studies of the animal were made until the species had nearly reached its present status, by which time of course, it was too late.

The Boodie is a small wallaby and is grey-brown in colour, although this varies between a creamy colour under the belly to a dark brown on the back. The claws of the forefeet are white which distinguishes it from the Western Hare Wallaby which it resembles in colour. The ears are short and the tail is nearly hairless. It is a nocturnal animal and thus is seldom seen except by artificial light at night, or dimly in the late dusk.

If pursued, boodies will emit a succession of grunts and chuckles, and, if handled, will scratch savagely and attempt to bite. Because of their nocturnal habits the behaviour of the Boodie has been studied closely only in captivity. In 1964, Eleanor Stoddart of the Division of Wildlife Research, C.S.I.R.O., Canberra, studied six females and two males from Bernier Island, for about three months. It was found that there was little territorial domination but that the boodies formed into two social groups. The older male was dominant and had four females and the younger male had two females. The males were aggressive towards each other with the younger one usually running away from the older male, but on several occasions they did fight, lying on their sides and lashing out with their feet.

Although it appears likely that the Boodie is now extinct on the mainland, the island populations appear secure. Bernier and Dorre Island are "A" Class Fauna and Flora Reserves and suffer little or no human interference. Only the presence of goats on Bernier Island has presented a threat to the existing population, and periodic attempts to totally eliminate these goats are made by the Department (see S.W.A.N.S., Vol. 2, No. 3, Winter, 1971). Barrow Island on the other hand, although also an "A" Class Fauna Reserve, does receive human usage as the site of an oil exploration programme initiated in 1963 by Western Australian Petroleum Pty. Ltd. (now a commercial oil field). However, as a result of the responsible attitude of this company, and its co-operation with the Department, it would appear that in this case development and conservation can go hand-in-hand. Research officers make regular visits to monitor the status of the vegetation and the fauna, and it would appear that the Boodie is holding its own on Barrow Island.

In December 1972, a Departmental party spent two hours visiting a small unnamed island four or five miles south of Barrow Island. Here they discovered one recently dead Boodie, some skulls and several burrows, indicating a hitherto unknown population.

## BOODIE

(LESUEUR'S RAT KANGAROO)

### Bettongia lesueur





Entrance to a Boodie's burrow. The hat gives a comparison of the size of the entrance.

#### **DISTRIBUTION:**

Western Australia (Islands off the west coast; Bernier, Dorre and Barrow).

Probably extinct on the mainland.

Once common in S.A., N.T., south western N.S.W.

#### LOOKS:

Resembles small wallaby.

General colour—dark brown to grey.

Belly-cream coloured.

Feet-light tan.

Claws of forefeet-white.

Ears—short.

Tail—almost hairless.

#### LENGTH:

Head and body-280 450 mm.

Tail-250-330 mm.

A male specimen in the W.A. Museum measures 620 mm overall with a tail length of 305 mm. A female specimen 550 mm (tail 265 mm).

#### **WEIGHT:**

Full data is not available, but five females from Barrow Island and two from Dorre Island averaged 1090 g. Two males from Dorre Island averaged 1370 g. A male specimen at the W.A. Museum weighed 1300 g; and a female 1020 g. Weight may vary from island to island.

#### **BREEDING:**

Rat Kangaroos in general produce young throughout the year. The Boodie may differ in that it may have a seasonal breeding pattern. (On Bernier Island most births occur between February and September). Nests are of simple construction inside the burrow, although the Boodie expends much energy on construction.

Birth follows 22 days after mating.

Young leave the pouch between 113 and 120 days old.

Where further conception follows closely on birth, the embryo is delayed in its development for up to four months while the previous joey is suckled in the pouch.

#### DIET:

Not a lot of research has been done but it is likely that boodies are predominantly vegetarians eating grasses and roots; they may also eat insects, etc.