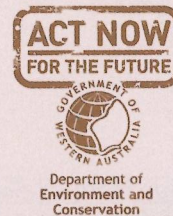


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Shark Bay World Heritage Notes



ENVIRONMENT AND CONSERVATION DISTRICT OFFICE, DENHAM, WESTERN AUSTRALIA

ENDANGERED MAMMALS OF BERNIER AND DORRE ISLANDS

Bernier and Dorre Islands are nature reserves for the conservation of flora and fauna and are two of the most important areas for mammal conservation in Australia.

The islands provide the last natural sanctuary for several mammal species that were once widespread on mainland Australia but are now threatened with extinction. The island habitats are one of the nominated World Heritage values of Shark Bay.

Five mammal species that occur on these islands are listed under the State and Commonwealth legislation as endangered, that is, being in danger of extinction if threatening processes continue. They are also on the world Conservation Union's Red List, an international list of threatened species.

Three species of marsupial (Western Barred Bandicoot, Banded Hare-Wallaby and Rufous Hare-Wallaby) exist nowhere else in the wild. Planning is underway to reintroduce populations of each of these endangered species to the mainland and other islands. Sites such as Dirk Hartog Island, Heirisson Prong and Peron Peninsula may be suitable for re-introductions, but much work is needed to control cats, foxes and rabbits before populations of endangered species can be relocated. Re-introduction programs will give greater security for the survival of these species, but the critical requirement for their conservation is to protect their last stronghold, Bernier and Dorre Islands. Extensive or frequent wildfire or the establishment of introduced predators such as cats could cause the extinction of Bernier and Dorre's endangered mammals. Whilst access to Dorre Island is by permit only, day visits to Bernier Island are permitted. Visitors must however abide by the following – no pets, no firearms and please take care with cigarette butts. The following information gives a profile of each of the endangered species.

Banded Hare-Wallaby (*Lagostrophus fasciatus*)

The banded hare-wallaby was once widespread in semi-arid lands of south-west Western Australia, but no animals have been found there since 1906. It was commonly found sheltering in thick scrub and thus, was probably adversely affected by the clearance of native vegetation for agriculture. Competition from rabbits, and predation from cats may have also contributed to this species' decline and it is thought that the banded hare-wallaby had become extinct on the mainland before the arrival of the fox in Western Australia. It is common amongst Acacia scrub beneath which it forms runs to provide shelter during the day. The dark bands across the lower back and rump are distinctive. An attempt to re-introduce the wallaby to Dirk Hartog Island was undertaken in the 1970's but was unsuccessful due to predation by cats and the effects of intense drought.

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Rufous Hare-Wallaby (*Lagorchestes hirsutus*)

The rufous hare-wallaby, also called the Mala, was once widespread throughout the arid and semi-arid zones of Central and Western Australia, though its distribution had become severely restricted by the 1930's. A small population, less than 50 animals, survived in the Tanami Desert up to 1991, when the last mainland animals disappeared as a result of feral cat predation and fire. The species now only survives on Bernier and Dorre Islands and in captive breeding enclosures at zoos. Currently, there are attempts to return captive bred animals to the Tanami Desert. The population of the Rufous Hare-Wallaby on Bernier and Dorre Islands undergoes marked fluctuations in abundance in response to drought and fire. The Mala shelters in scrapes or short burrows and often occurs amongst dunes and heath behind the beach. The animal's stomach is adapted to a diet with a high content of plant fibre, particularly seed heads and young leaves of sedges and grasses. Aborigines hunted mainland populations of the Mala with fire. The meat was considered a great delicacy and the blood was cooked in the body cavity and used as medicine for the elderly. Aborigines were known to pluck and spin the thick woolly fur to form string.

Western Barred Bandicoot (*Permales bougainville*)

The small, soft furred Western Barred Bandicoot once occurred in semi-arid areas throughout the southern half of Australia, but now only occurs on Bernier and Dorre Islands. It was last reported on the Australian mainland in the 1940's along the Canning Stock Route. Its disappearance is thought to be the result of predation by foxes and feral cats, competition from rabbits and habitat clearing. On Bernier and Dorre Islands the Western Barred Bandicoot is common in sandhills behind beaches. During the day it occupies a well concealed nest made from grasses and other vegetation in a hollow dug under low scrub. At late dusk it emerges to forage for food which includes insects, seeds and roots obtained by digging or hunting.

Burrowing Bettong (*Bettongia lesueur*)

The Boodie, also known as the Burrowing Bettong, is a member of the rat kangaroo family. They dig for much of their food (underground fungi, roots, tubers and invertebrates) but also feed on termites, seeds and fruits. The Boodie is the only member of the kangaroo family to inhabit burrows on a regular basis. The burrows in which these animals spend the day often have many entrances forming complex warrens with interconnecting deep passageways. Boodies and their burrows are common on both Bernier and Doore Islands. The Boodie was one of the most common mammals of arid and semi-arid mainland Australia. Its decline started in the nineteenth century and it had disappeared from Victoria by 1863. The disappearance of the Boodie in Western Australia appears to coincide with the establishment of the fox. The last mainland population disappeared from the Gibson Desert in the early 1960's. On Dirk Hartog Island, where there are no rabbits or foxes, the feral cat has been implicated in its extinction which occurred in the 1920's. The Boodie is now only found on Bernier and Dorre Islands and now on Barrow and Boodie Islands off the Pilbara coast. Currently, there is a program for the re-introduction of the Boodie onto Heirrisson Prong in Shark Bay. About 40 Boodies have been re-introduced since 1992 and this is a valuable program for studying how the animal interacts with cats, fox and rabbits.

Shark Bay Mouse (*Pseudomys fieldi*)

Skeletal remains suggest that the Shark Bay Mouse was once widespread in the semi-arid areas of Western Australia. The first specimen was collected near Herald Bight on Peron Peninsula in 1858 by a scientist on board Captain Denham's ship *HMS Herald*. Another was collected at Alice Springs in 1895. Since then it has never been seen on the mainland and why it disappeared is not known. The Shark Bay Mouse is the rarest of Australia's native mice, occurring naturally only on Bernier Island. The Shark Bay Mouse is significantly larger than the House Mouse and has a distinctive black-flecked, brown, long shaggy coat. On Bernier Island, the mouse is found mainly in tunnels amongst the Spinifex on the white beaches close to the ocean. It feeds on flowers, leaves and stems and is mainly active at night. In 1993, to assist with conservation of the Shark Bay Mouse, a number of animals were transferred to Doole Island in Exmouth Gulf. The population on Doole Island is reproducing and increasing in size.