Threatened species of the Northern Territory

Mala (Rufous hare-wallaby)

Lagorchestes hirsutus Central Australian subspecies

Conservation status

Australia: Endangered
Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Endangered (Extinct in the Wild in the NT)
Territory Parks and Wildlife Conservation Act 1976

Description

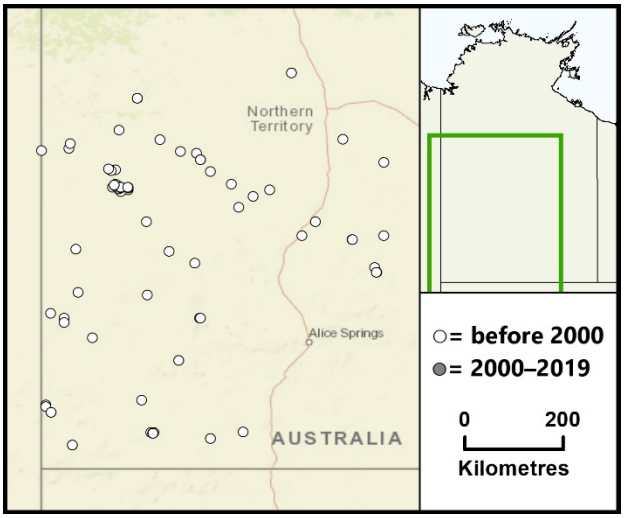
The Rufous Hare-wallaby is a small wallaby (adult body mass 800–1600 g) with relatively small forelimbs and large ears. Three subspecies are recognised. One of these is widely known as the Mala, and referred to as the Central Australian subspecies as it has not been formally described. It is rufous above, with soft shaggy fur, and pale fawn to whitish below. The tail is shorter than the combined head and body length. The subspecies of the Rufous Hare-wallaby that occurs on two islands off the coast of Shark Bay, *Lagorchestes hirsutus bernieri*, is larger, greyer and has a shorter tail, ears and fur. The third subspecies, *L. h. hirsutus*, is similar to the Mala. It is now extinct.

Distribution

The Mala was formerly widespread in central Australia, primarily in the western and central deserts. It became extinct in the wild in 1991, but fortunately a captive population was established in the early 1980s.

Credit: P. Nunn/Alice Springs Desert Park

An introduced subpopulation was established on Trimouille Island, Western Australia (WA), in 1998. Additional subpopulations have been established in large fenced areas free of introduced predators on the mainland, including at Uluṟu-Kata Tjuṯa National Park and Newhaven Sanctuary in the Northern Territory (NT) and at Matuwa (Lorna Glen) in WA.



Caption: Known localities of Mala in the NT (nrmaps.nt.gov.au)

NT conservation reserves where reported: Formerly occurred in the wild in areas that are now included within Uluṟu Kata-Tjuṯa National Park, Watarrka National Park and Tjoritja/West MacDonnell National Park.

Ecology and life-history

Mala were once locally common, though patchily distributed, across the central and western deserts and surrounding semi-arid areas. Habitats used included sandplains, gravelly plains and dunes dominated by spinifex or tussock grasses[1]. Habitat suitability in the Tanami Desert was especially influenced by the patchiness, size and maturity of spinifex hummocks and the diversity of food plants (which was temporally variable in different habitats)[2]; attributes that are strongly shaped by fire. Mala shelter in squats underneath spinifex tussocks or shrubs and in short burrows they construct. The diet of Mala in the Tanami Desert comprised perennial grasses, grass seeds, seeds and bulbs of sedges, forbs and occasionally insects. Dietary composition varied considerably in response to rainfall-driven changes in the availability and relative palatability of plant species. Breeding is continuous under favourable conditions. Generation length is estimated to be 3.5 years[3].

Threatening processes

One of the primary causes of the extinction of the Mala in the wild was altered fire regimes. When Aboriginal people left their traditional country, their practice of regularly burning patches of spinifex ceased. The fire regime shifted to more extensive and intense summer bushfires, which profoundly altered habitat structure and composition, reducing habitat quality for Mala[4]. A second significant driver of extinction was predation by Red Foxes *Vulpes vulpes* and feral Cats *Felis catus*. Indeed, the two last wild subpopulations were extirpated by wildfire and fox predation, and early attempts to reintroduce Mala to the Tanami Desert failed in part due to cat and fox predation. Competition for food and habitat degradation caused by the European Rabbit *Oryctolagus cuniculus* possibly contributed to declines in some areas.

Conservation objectives and management

Priority conservation management actions include: managing and maintaining viable subpopulations in fenced areas free of introduced predators; maintaining the Trimouille Island subpopulation; increasing total population size through constructing or expanding fenced areas; and involving Indigenous groups in Mala conservation[3,5–6].

References

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[2] Lundie-Jenkins, G. 1993. Ecology of the Rufous Hare-wallaby *Lagorchestes hirsutus* Gould (Marsupialia: Macropodidae) in the Tanami Desert, Northern Territory. I. Patterns of habitat use. Wildl. Res. 20, 457–476.

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[5] Lees, C.M., Bennison, K., 2016. Final Report: Mala Population Viability Analysis and Conservation Planning Workshop. IUCN SSC Conservation Breeding Specialist Group, Apple Valley, MN.

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