# Threatened species of the Northern Territory

## Ghost bat

## *Macroderma gigas*

### Conservation status

**Australia: Vulnerable**
Environment Protection and Biodiversity Conservation Act 1999

**Northern Territory: Near Threatened**
Territory Parks and Wildlife Conservation Act 1976

### Description

The Ghost Bat is the largest species of microchiropteran bat in Australia and one of the largest in the world. It is pale grey to brown on the back and lighter on the belly. The wing membranes are pale cream to brown. The ears are very large, are joined together above the head and each has a large tragus. Although the nose-leaf is large, it is relatively simple. Unlike most microchiropteran bats, the Ghost Bat has large conspicuous eyes. There is a tail membrane but no tail.

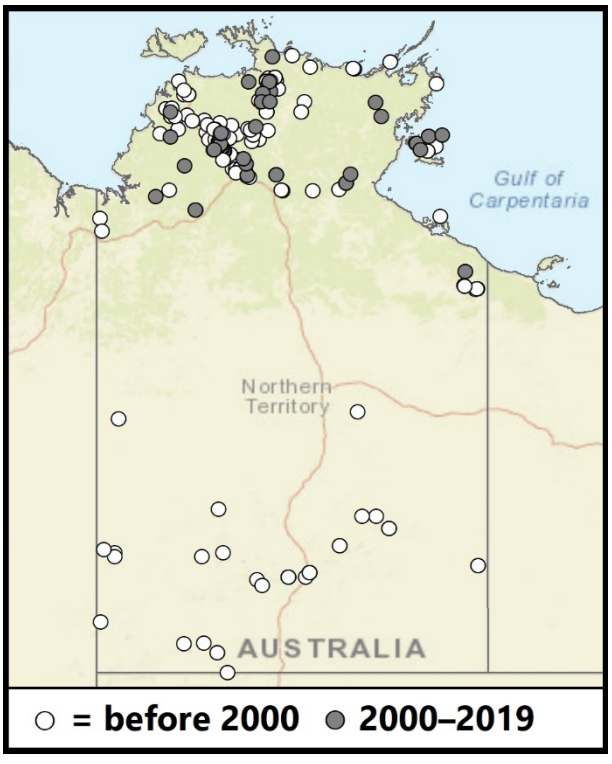
### Distribution

The Ghost Bat is now found in the Pilbara region of Western Australia, the Kimberley and Top End, and northern and eastern Queensland. The species also occurred widely, albeit sparsely, across Central Australia, but became extinct there in the 1960s to 1980s[1].

The distribution of Ghost Bats is influenced by the availability of suitable caves and mines for roost sites. One of the largest known Ghost Bat colonies occurs in a series of gold mine workings at Pine Creek in the Northern Territory (NT).

Credit: B. Taubert

Elsewhere in the NT, recent records have been collected throughout the mainland Top End north of approximately 17° latitude, as well as on Elcho Island, Groote Eylandt and other nearby islands. Twenty-five roost sites have been located within the Ghost Bat's current distribution in the NT.




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

NT conservation reserves where reported: Cutta Cutta Caves National Park (NP), Kakadu NP, Keep River NP, Kintore Caves Conservation Reserve, Litchfield NP, Limmen NP, Nitmiluk NP, Umbrawarra Gorge NP. Formerly occurred in areas that are now within Tjoritja/West MacDonnell NP and Uluṟu-Kata Tjuṯa NP.

## Ecology and life-history

The Ghost Bat is primarily insectivorous but also feeds on other bats, small terrestrial mammals, birds, frogs and reptiles. It perches in vegetation and flies out to attack passing prey, or actively flies over surfaces, such as the ground, searching for prey.

Ghost Bats use several roosts or perches each night, but often return to the same daytime roost. Daytime roosts are often in a deep crack or cave and may change seasonally. Females usually aggregate in maternity roosts when breeding, but few such sites are known. The largest known site is near Pine Creek.

## Threatening processes

The most significant threats to the Ghost Bat are habitat loss and habitat degradation due to mining. Habitat alteration from grazing by livestock and feral herbivores, inappropriate fire regimes and weed invasion can negatively impact foraging by Ghost Bats. The species is susceptible to Cane Toad *Rhinella marina* toxin and individuals have been found dead with chewed toads in their throats in Kakadu National Park[2].

In the NT, the roosting site supporting the largest known colony is an adit (horizontal ventilation tunnel for a mine) near Pine Creek that is in danger of collapse. This site also experiences disturbance from cavers, ecologists and members of the general public entering the adit. Ghost Bats are easily disturbed and such disturbance can cause loss of young and/or abandonment of the roost site.

## Conservation objectives and management

Research and monitoring priorities for the Ghost Bat are to: i) monitor local sub-population sizes of all known colonies, but especially those at Pine Creek and in Kakadu National Park; and ii) undertake additional surveys, especially to locate breeding sites, in remote parts of the NT.

Management priorities for the species are to: i) assess the structural integrity of the Pine Creek adit and investigate ways to secure the site for Ghost Bats; ii) avoid disturbance to roost sites from mining and other activities; and iii) educate people not to disturb roost sites, especially at the Pine Creek roost.

## References

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