

# Threatened species of the Northern Territory

## Arnhem leaf-nosed bat

### *Hipposideros inornatus*

#### Conservation status

##### Australia: Endangered

Environment Protection and Biodiversity Conservation Act 1999

##### Northern Territory: Vulnerable

Territory Parks and Wildlife Conservation Act 1976

#### Description

The Arnhem Leaf-nosed Bat is a moderately large (30 g) insectivorous bat, with large and acutely pointed ears. It is typically a uniform pale brown or pale grey-brown above and slightly paler below. The squarish nose-leaf is very well-developed, with a raised upper portion and three secondary leaflets on the side.

This species was previously considered to be a distinctive subspecies of the Diadem Leaf-nosed Bat *Hipposideros diadema*, which is distributed from the Asian mainland through to the Solomon Islands. The Arnhem Leaf-nosed Bat is now recognised as a distinct species<sup>1</sup>. Among Australian bat species, it is most similar to *H. d. reginae* from north-eastern Queensland.

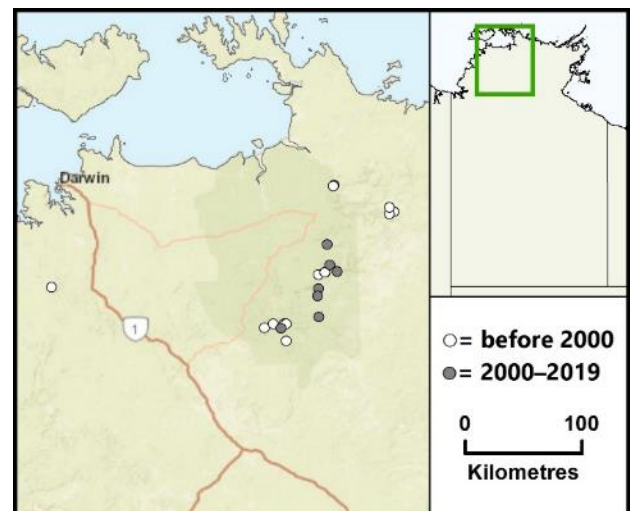
#### Distribution

The Arnhem Leaf-nosed Bat was first collected relatively recently, in 1969<sup>2</sup>. Since this time, the species has been recorded primarily from the western Arnhem Land sandstone massif, particularly Deaf Adder Gorge and upper South Alligator River area. It has also been recorded at one site, Tolmer Falls, in Litchfield National Park<sup>3</sup>, but has not been recorded there since 1984<sup>1</sup>.



Credit: I. Morris

NT conservation reserves where reported: Kakadu National Park and Litchfield National Park.



Caption: Known localities of the Arnhem Leaf-nosed Bat in the NT ([nrmmaps.nt.gov.au](http://nrmmaps.nt.gov.au))

#### Ecology and life-history

The Arnhem Leaf-nosed Bat roosts in caves or abandoned mine adits in cool draughty areas close to water<sup>1,4</sup>. Little is known of its foraging

habitat, but it has been reported foraging in riparian areas and in tall open eucalypt forests.

The diet of the Arnhem Leaf-nosed Bat consists of large invertebrates including beetles (Coleoptera) and moths (Lepidoptera)<sup>5</sup>.

## Threatening processes

The disappearance of the Arnhem Leaf-nosed Bat from Litchfield National Park may have been due to disturbance from humans visiting roosting caves<sup>4</sup>. This threat has now been ameliorated at this site. The known sites in western Arnhem Land are generally remote and very rarely visited.

## Conservation objectives and management

Research priorities for the Arnhem Leaf-nosed Bat are to: i) undertake surveys to better understand the distribution of the species, including establishing whether the species is still extant in Litchfield National Park; ii) investigate habitat use and identify key habitat requirements; iii) locate important roost sites; and iv) investigate breeding phenology to determine when the species may be most sensitive to disturbance.

Management priorities for the species are to: i) maintain controls over visitation to sites known to be used for roosting and breeding (these controls are currently in place in Kakadu and Litchfield National Parks), and ii) establish a non-intrusive monitoring program in at least one site.

## References

- <sup>1</sup> Churchill, S., 2008. Australian Bats. 2nd Ed. Allen and Unwin, Sydney.
- <sup>2</sup> McKean, J.L., 1970. A new subspecies of the horseshoe bat *Hipposideros diadema* from the Northern Territory, Australia. West. Aust. Nat. 11, 138–140.
- <sup>3</sup> McKean, J.L., Hertog, A.L., 1979. Extension of range in the horseshoe bat. North. Territ. Nat. 1, 5.
- <sup>4</sup> Corbett, L., Richards, G., 2002. Bat survey: Gunlom land trust area. Report to Parks Australia North. EWL Sciences, Darwin
- <sup>5</sup> Milne, D.J., Burwell, C.J. Pavey, C.R., 2016. Dietary composition of insectivorous bats of the Top End of Australia. Aust. Mammal. 38, 213–220.