

Threatened species of the Northern Territory

Atlas moth

Attacus wardi

Conservation status

Australia: Not listed

Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Vulnerable

Territory Parks and Wildlife Conservation Act 1976



Credit: L. Willan © CSIRO Australia*

Description

The Atlas Moth is a very large, spectacular insect, with a wingspan of up to 19 cm. It is rusty-brown with a double white band and a large irregular white spot on each wing. The Atlas Moth is the smallest member of the genus *Attacus*, but is the second-largest moth in Australia.

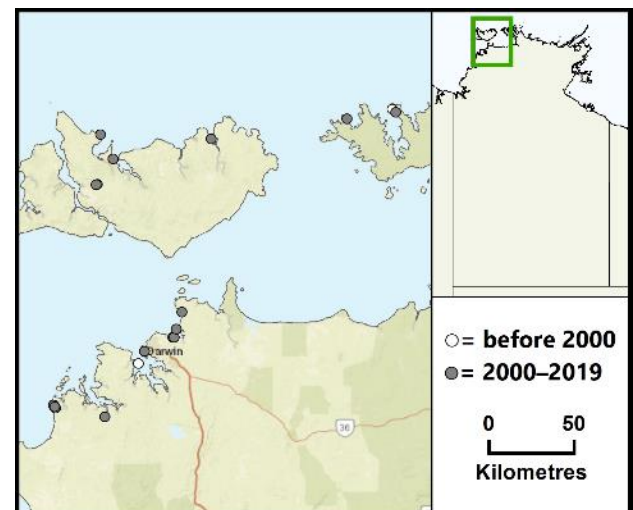
The species was originally described as a subspecies of *Attacus dohertyi* from the Oriental Region. It was not until 1989 that the Atlas Moth was recognised as a full species, and was allied instead to *A. intermedius*¹.

Distribution

The Atlas Moth is a narrow-range endemic species restricted to high-rainfall coastal areas of the north-western Top End and northern Kimberley². In the Northern Territory (NT), the species has been recorded at several localities on Melville Island, Arau Point and Black Point on the Cobourg Peninsula, and at several coastal localities from Dundee Beach to Gunn Point in the Darwin region. Only a single record has been collected from the Kimberley in Western Australia: a specimen collected from Lesueur Island in December 1974.

Although it has been suggested that the Atlas Moth might also occur further east in the Top End—given the distribution of the larval food plant and availability of suitable habitat³—no evidence of its occurrence there has been obtained². Records from Cape York Peninsula in Queensland¹ are considered to be erroneous.

NT conservation reserves where reported: Garig Gunak Barlu National Park and Tree Point Conservatiopn Area.



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

Ecology and life-history

The preferred breeding habitat of the Atlas Moth is the edges of large patches of monsoon forests where the larval food plant *Croton habrophyllus* grows³. Critical breeding habitat appears to be coastal semi-deciduous vine thickets. The species also breeds in wetter monsoon forests, such as Maxwell Creek, that have a substantial component of evergreen plants associated with permanent water.

Adult Atlas Moths are nocturnal and short-lived. They are usually present during the latter half of wet season from January to March, but have also been recorded in April and November². They may be seasonally abundant within the limited flight period.

Threatening processes

Two potentially significant threats have been identified for the Atlas Moth³: Inappropriate fire regimes, especially destructive fires that penetrate the forest edges and destroy cocoons containing diapausing pupae during the long dry season; and incursion by introduced African grassy weeds, which modify and exacerbate the fire regime. Incursion by exotic *Acacia mangium* into rainforest and vine-thicket edges on the Melville Island is another potential threat. Habitat clearing for forestry plantations on Melville Island likely adversely impacted the Atlas Moth.

The decline of the Atlas Moth in the Darwin region was probably associated with heavy use of insecticides during World War II, habitat loss caused by cyclone Tracey in 1974 and urban development⁴. For example, the patches of coastal monsoon rainforest at East Point and Lee Point, the most likely habitats of the Atlas Moth in Darwin, were temporarily eliminated and significantly reduced in extent by cyclone Tracey, and have taken several decades to recover⁵⁻⁶. Presumably the species has not been able to recolonise these patches from elsewhere.

Conservation objectives and management

There is no existing conservation program for the wild population of the Atlas Moth in the NT.

Research priorities for the species are to: undertake surveys on Cobourg Peninsula to establish if the species is still extant, and elsewhere in coastal areas of the Top End to locate additional populations; and establish a monitoring program to detect possible changes in range or abundance and quantify the impact of threatening processes.

References

- ¹ Peigler, R.S., 1989. A revision of the Indo-Australian genus *Attacus*. The Lepidoptera Research Foundation, Beverly Hills.
- ² Braby, M.F., Nielsen, J., 2011. Review of the conservation status of the Atlas Moth, *Attacus wardi* Rothschild, 1910 (Lepidoptera: Saturniidae) from Australia. *J. Insect. Conserv.* 15, 603–608.
- ³ Lane, D.A., Martin, G., Weir, R.P., 2010. The life history of *Attacus wardi* Rothschild (Lepidoptera: Saturniidae) from the Northern Territory, Australia. *Aust. J. Entomol.* 37, 115–127.
- ⁴ G. Martin personal communication
- ⁵ Panton, W.J., 1993. Changes in post World War 2 distribution and status of monsoon rainforests in the Darwin area. *Aust. Geogr.* 24, 50–59.
- ⁶ Franklin, D.C., Matthews, R., Lawes, M.J., 2010. History of the East Point monsoon forest. *North. Territ. Nat.* 22, 2.

* https://moths.csiro.au/species_taxonomy/attacus-wardi/