Rusty monitor *Varanus semiremex*

The rusty monitor *Varanus semiremex* extends along the coast from Yeppoon to Weipa. It is found in mangroves and in Melaleuca (paperbark) forests. Processes that threaten this species are damage or clearance of habitat; illegal collection; loss of hollow trees; and poisoning from eating cane toads. Key measures to protect this species include minimising clearance of habitat; establishing protective buffers; minimising illegal collection; and controlling feral animals.

Rusty monitor Varanus semiremex
Photo: © Steve Wilson, Queensland Museum

Description

The rusty monitor is a small goanna which grows to a length of 60cm. This species comes in two colour forms. The eastern form is greyish brown with sparse to dense black spots over the neck, upper body and limbs. The northern form has a dark body with reddish-brown to white rings aligned across the body. The side of the head, underside of neck and chest are rusty yellow-brown, which gives the lizard its common name. The tail is dark grey above and white underneath. The base of the tail is round in cross section, but the posterior two thirds of the tail are laterally compressed. The rusty monitor has a slender build and very sharp, fine claws that assist with climbing.

Habitat and distribution

The rusty monitor is found in coastal and estuarine mangroves and paperbark forest associated with creeks, rivers, swamps and lakes up to 70km from the Queensland coast. The species has also been observed in open forest, gallery forest along waterways and on small islands.

The rusty monitor has been recorded in coastal and sub-coastal areas from Boyne Island near Gladstone, north to the Weipa region of western Cape York, and on Hinchinbrook Island.

Conservation status

The rusty monitor is listed as rare under the Queensland *Nature Conservation Act 1992*. It is not listed as a threatened species under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

Note: The 'rare' listing category will be phased out by 2010. Species currently listed as rare under the *Nature Conservation Act 1992* will be reassessed and their listing status may change.

Biology and ecology

The rusty monitor is a tree-dwelling lizard, sheltering in hollow limbs or holes in trees. An occupied hollow may be indicated by discarded crab's legs scattered around the base of the tree. To escape threats, the rusty monitor will seek protection in a tree hollow, water, or the tree canopy. Their diet includes lizards, fish, crabs and invertebrates. The rusty monitor forages on the ground, in foliage and trees. The species does not need access to drinking water as it obtains its water requirements from prey. Ritual combat between males has been recorded in October in the Weipa region. Rusty monitors lay eggs in the wet season. There is currently limited information on clutch size, and egg-laying sites.

Threats to the rusty monitor

Clearing of coastal habitat is the greatest potential threat to the rusty monitor. Much of the southern part of this species' range is in areas subject to coastal development for urban and industrial purposes – for example "dune scrubs" of central and northern Queensland which contain paperbark swamps. Availability of a sufficient number of suitable hollows may be essential to its survival.

Estimated distribution of the rusty monitor in Queensland.

The rusty monitor has been subject to pressure from illegal collection in the past, however the intensity of current illegal collection is unknown. Previous collecting activities have resulted in destruction of home trees and localised reduction of populations.

There are two known records of the rusty monitor being poisoned from eating cane toads. Cane toads are present throughout much of the range of this species. Feral pigs are also known to severely damage wetland habitat and this may impact on rusty monitors by reducing prey availability.

Specific threats to the rusty monitor include:

- clearance of habitat;
- fragmentation of mangrove habitat;
- illegal collection;
- loss of hollow trees; and
- poisoning from ingesting cane toads.

Managing threats

The recommendations below should be considered against local conditions, regional ecosystem values and this species' requirements. Habitat and biological characteristics required by the rusty monitor are described in the above sections 'Biology and ecology' and 'Habitat and distribution'.

Using buffers

Establish a protective buffer with a 100m radius around any hollow-bearing tree known to be used by the rusty monitor.

Other than for essential roads, fire breaks and infrastructure, clearing should not occur in mangroves or paperbark forest where the rusty monitor occurs.

Feral animal control

Control or eradicate, where feasible, feral pigs and cane toads on sites where the rusty monitor occurs. The Department of Natural Resources and Water has information on weed and pest animal management on their website, visit http://www.nrw.qld.gov.au/pests/index.html to obtain copies of their fact sheets. Information includes details on prevention and various methods of control and local contact details.

Other issues

Please report any suspected illegal collection activities to the Environmental Protection Agency/Queensland Parks and Wildlife Service on the EPA Hotline 1300 130 372.

References

Cameron, E.E. and Cogger, H.G. 1992. The Herpetofauna of the Weipa region. *Technical Reports of the Australian Museum*, No. 7. The Australian Museum, Sydney.

Cogger, H.G. 2000. *Reptiles and Amphibians of Australia*, 6th Edition, Reed New Holland, Sydney.

Cogger, H.G., Cameron, E.E., Sadlier, R.A. and Eggler, P. 1993. *The Action Plan for Australian reptiles*. Australian Nature Conservation Agency, Canberra.

Ehmann, H. 1992. *Encyclopaedia of Australian Animals: Reptiles*. Angus and Robertson, Australia.

Fitzgerald, M. 1990. *Rattus rattus*: the introduced Black Rat, a successful predator on the introduced Cane Toad *Bufo marinus* in Northern New South Wales. *Herpetofauna* 20(1).

Greer, A.E. 1989. *The Biology and Evolution of Australian Lizards*. Surrey Beatty and Sons, Sydney.

James, C.D., Losos, J.B. and King, D.R. 1992. Reproductive Biology and Diets of Goannas (Reptilia: Varanidae) from *Australian Journal of Herpetology*. 26(2):128-136.

Wilson, S. 2005. *A field guide to reptiles of Queensland*. Reed New Holland, Sydney.

Wilson, S. and Swan, G. 2003. *A complete guide to reptiles of Australia*. Reed New Holland, Sydney.

ORIGINAL AUTHOR: M. Fitzgerald, NRW, May 1997.

REVISED: Internal update and review, Nature Refuges Branch, EPA, 2007.

REVIEW: R. Johnson, EPA, 2007.

PROFILE CONTACT OFFICER: Senior Conservation Officer, Nature Refuges Branch, Sustainable Communities Division,

ecosystem.conservation@epa.qld.gov.au

00572-0607_Dec07