



## Water Rat (Rakali) *Hydromys chrysogaster* (Geoffroy, 1804)



Photo: Babs & Bert Wells/DEC

### Size

Head and body length

231-345 mm in males

245-370 mm in females

Tail length

227-320 mm in males

242-325 mm in females

### Weight

0.40-1.30 kg in males

0.30-1.00 kg in females

### Subspecies

None officially recognised.

### Description

The Water Rat is a large 'old endemic' native rodent highly adapted to an aquatic lifestyle, with partial webbing between the three central toes of its hind feet to aid in swimming. Fur colour is variable across its body, from pale slate grey to black above and white to vivid orange below. The fur is dense, water-repellent, soft and lustrous.

The tail is long, thick and muscular with a characteristic white end tip. The muzzle is broad and long, with oversized whiskers, and the ears are small. It has distinct dentition suited to its carnivorous lifestyle, with a pair of basin-shaped molars. In the eastern states it is the only freshwater mammal apart from the platypus.

### Other Common Names

There are over 50 Aboriginal names across Australia which includes Murit-ya, Ngoor-joo and Ngurju in south-west Western Australia (WA). 'Rakali' is the adopted common name from the indigenous language in the Murray Darling. Other common names include beaver rat and native otter.

### Distribution

The Water Rat is widely distributed around Australia as well as Papua New Guinea and some adjacent islands. It occurs in fresh, brackish-water and coastal habitats in the south-west and Kimberley's of WA, though also occurs in marine environments along the Pilbara coastline and offshore islands.

For further information regarding the distribution of this species please refer to [www.naturemap.dpaw.wa.gov.au](http://www.naturemap.dpaw.wa.gov.au)

### Habitat

The Water Rat occupy habitats in the vicinity of permanent water, be this fresh, brackish or marine. In the south-west of WA they have been shown to prefer areas with riparian vegetation, better water quality and a degree of habitat complexity. Woody debris, rock ledges and wetland islands are likely to be important areas for feeding and refuge.

### Behaviour

Nests are constructed in logs or at the end of tunnels dug into banks. In the winter months, the Water Rat spends less time in the water, and tends to feed on larger vertebrate prey. Prey is often carried to a frequently used feeding site. Unlike many other Australian rodents, the Water Rat is not entirely nocturnal, with activity usually high at sunset, though animals have been seen during the day. Individuals form and defend territories (particularly larger males). Home ranges in the southern coastal areas of WA have been recorded as 7-10 ha, though these vary with habitat.

## Diet

The Water Rat is an opportunistic predator, feeding upon crustaceans such as marron, crabs and gilgies, large aquatic insects, fish and mussels. They are also known to feed on frogs, lizards, small mammals, fresh carrion, and birds. On Barrow Island (off-shore WA) they are known to feed on turtle eggs and hatchlings.

## Breeding

The Water Rat is known to breed throughout the year, but most breeding appears to occur from spring to late summer. Studies have identified that social factors, individual age, and climate can influence the time of breeding. Individual females usually breed when eight months old. Gestation is approximately 34 days. Litters consist of up to three-to-four young, which stay near the mother until they gain independence after eight weeks. Animals are relatively short-lived, reaching 3-4 years in the wild.

## Threatening processes

Natural predators include snakes, birds of prey, large fish and possibly quolls.

The Water Rat is at risk from introduced foxes and cats. The direct and indirect impacts of exotic rodents are unknown.

Significant declines in populations have occurred in the south-west of WA due to habitat loss and degradation, particularly through salinization, acidification and eutrophication of wetlands and waterways.

The Water Rat is susceptible to changes in hydrology and their habitats are at risk from climate change.

Illegal traps such as 'opera house traps' used for marron and crab fishing in public water ways and legal traps in private property frequently result in Water Rat.

## Conservation status

IUCN Red List of Threatened Species

Least concern (Version 3.1)

## Management

- Maintain, enhance and protect riparian habitats, for example through fencing, revegetation, leaving natural features (rocks, logs)

- Control introduced foxes, rodents and cats
- Do not use illegal harmful traps for marron fishing such as opera house traps, or on private property, modify trap entrances to ensure Water Rats are unable to enter.

## Other interesting facts

- The Water Rat, Platypus and seals are the only amphibious Australian mammals.

## Selected references

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### Further information

Contact your local office of the Department of Environment and Conservation.

See the department's website for the latest information: [www.dec.wa.gov.au](http://www.dec.wa.gov.au).

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