



Australian Government
Department of the Environment and Heritage

F A C T S H E E T

Quolls of Australia

Four species of quoll occur in Australia: the northern, spotted-tailed, eastern and western quolls. Once, most parts of Australia were inhabited by at least one of the species.

Captain Cook collected quolls along the east coast in 1770, and recorded 'quoll' as their local Aboriginal name. Quolls were often seen by early settlers, who called them 'native cat', 'native polecat' and 'spotted marten', names based on familiar European animals.

Since 1770, all four species have declined dramatically in numbers. This is mainly because of habitat loss or change across Australia, and introduced predators such as foxes and cats.



Western quoll

Illustration © Sue Stranger

Quolls are carnivorous marsupials with a pointed snout, a long tail and brown to black fur distinctively spotted with white. They are lively, attractive animals, with bright eyes, a moist pink nose and many sharp teeth.

The largest species, the spotted-tailed quoll, eats birds, reptiles and mammals such as bandicoots, possums, echidnas and rabbits. The smaller quolls eat mainly insects, birds, frogs, lizards, snakes, small mammals and fruit. Quolls also eat carrion (dead animals), and sometimes scavenge around campsites and rubbish bins.

Like most Australian mammals, quolls are mainly active at night. Typically, they spend the day in one of their many dens, although spotted-tailed quolls and northern quolls sometimes forage and bask in the sunshine. Their large home ranges can extend for several kilometres in each direction from a smaller core range, and the range of a male quoll often overlaps those of several females. An interesting feature of their behaviour is the use of

shared latrine (toilet) sites in open spaces such as rock ledges, for marking their territory and other social functions.

Male quolls travel widely during the breeding season, with mating occurring during winter. All four species have a gestation period of 21 days. Because they are marsupial mammals, their young are born tiny and undeveloped and must work their way to the pouch, where they attach themselves to a teat to feed. Only the spotted-tailed quoll has a true pouch. In the other species, the young are protected by shallow folds of skin around the teats. As the pups grow, they dangle from the mother's belly; later, she carries them on her back.

Quolls reach sexual maturity at one year. They have a naturally short life span, with smaller quolls living an average of only two years, and the larger spotted-tailed quoll about four to five years. The northern quoll is particularly short-lived.

Western quoll

Scientific name:

Dasyurus geoffroii

Common names:

Chuditch, western native cat

Average head-body length:

36 cm (male); 31 cm (female)

Average tail length:

30.5 cm (male); 27.5 cm (female)

Average weight:

1.3 kg (male); 0.9 kg (female)

Once relatively abundant across semiarid Australia in every mainland state, the western quoll today survives only in the far south-west of Western Australia, living in jarrah forests, drier woodlands and mallee shrubland. It is listed as nationally vulnerable.

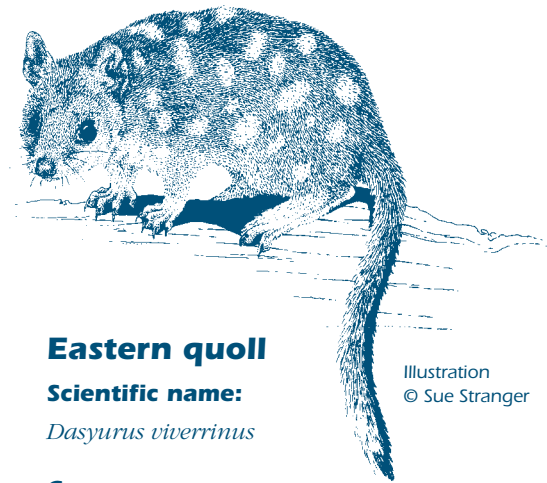
The dramatic decline of populations has been due to habitat loss and change resulting from rabbit and livestock grazing, changing burning patterns, and clearing of native vegetation. Competition with and predation by foxes and cats also affect population numbers, and individuals are sometimes killed by motor vehicles, illegal shooting, or trapping in poultry runs.

About the size of a small cat, the western quoll is mainly brown, with conspicuous white spots. Its tail is long, largely unspotted, and ends in a brush of long black hairs. It is usually solitary and nocturnal, hunting mainly on the ground for small vertebrates up to the size of a rabbit, and for a range of other food including birds, reptiles, lizards, frogs, crayfish, large insects and carrion.

Litters of up to six young, born mostly in June and July, outgrow the pouch by their ninth week. They are weaned by 22–24 weeks and then soon leave the mother's territory.

Fox baiting appears to be allowing quoll numbers to begin to recover. Predator removal, sometimes combined with

fencing, has allowed some western quolls to be returned to parts of the species' former range in the south-west.



Eastern quoll

Scientific name:

Dasyurus viverrinus

Common names:

Eastern quoll, native cat, quoll

Average head-body length:

37 cm (male); 34 cm (female)

Average tail length:

24 cm (male); 22 cm (female)

Average weight:

1.3 kg (male); 0.9 kg (female)

The eastern quoll once ranged over much of south-eastern Australia, but is now all but extinct on the mainland. It is still common in Tasmania, where it lives in open forest, heath, scrubland and cultivated land. If the foxes recently introduced to Tasmania become established, the security of the quoll population, already threatened by continuing habitat loss, would be further reduced.

Factors that have helped to make the eastern quoll scarce on the mainland include clearing and degradation of habitat; predation and competition by foxes, cats and wild dogs; and perhaps an epidemic of unknown cause in the early 1900s.

The eastern quoll has a delicate build, white-spotted black or fawn fur, and a plain tail, sometimes with a pale tip.

It hunts alone by night and feeds on small animals, grass, soft fruit and carrion. Females, with a home range of only a few hundred metres, share dens with other males and females, except when they are rearing young. Males rarely share dens with other males, and often move up to a kilometre a night between dens.

After mating between mid-May and early June, the female gives birth to as many as 30 tiny young (6 mm long) but she only has teats for six, so the others perish. By the end of October the pups are weaned and must fend for themselves.

Spotted-tailed quoll

Scientific name:

Dasyurus maculatus

Common names:

Spot-tailed quoll, tiger cat

Head-body length:

38–76 cm (male); 35–45 cm (female)

Tail length:

37–55 cm (male); 34–42 cm (female)

Weight:

up to 7 kg (male); up to 4 kg (female)

The spotted-tailed quoll is the largest native carnivore left on mainland Australia. It lives in forest, woodland and dense coastal heathland. The quoll's distribution has decreased markedly since European settlement, and it is now uncommon across most of its range.

The small Queensland subspecies is nationally endangered and the larger south-eastern subspecies, although common in Tasmania, is listed as nationally vulnerable.

Much of the spotted-tailed quoll's habitat has been cleared or fragmented. Other likely threats include predation by foxes; competition with foxes and feral cats; poison baiting for dogs, foxes and rabbits; and chance events such as bushfires and disease. However, the discovery of foxes in Tasmania threatens the quoll's continued security on the island.



Illustration by Barbara Cameron-Smith

Considerably larger than the other quolls, the spotted-tailed quoll has unmistakable colouring — red-brown with bold white spots along the entire body and tail.

It is largely nocturnal and eats small to medium sized mammals and birds, such as possums and rosellas, and also large insects, spiders and scorpions. It forages in trees and on rock faces as well as on the ground.

Mating takes place between April and July and the average litter size is five. Pups are weaned and independent by 18 weeks.

The distribution of quolls in Australia



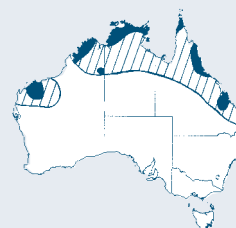
western quoll



eastern quoll



spotted-tail quoll



northern quoll

 past distribution  present distribution

Source: Strahan R (1995) (ed) Mammals of Australia. Reid Books, Sydney

Northern quoll

Scientific name:

Dasyurus hallucatus

Common name:

Northern quoll

Head-body length:

12–31 cm (male); 13–30 cm (female)

Tail length:

13–31 cm (male); 20–30 cm (female)

Weight:

0.4–0.9 kg (male); 0.3–0.5 kg (female)

The northern quoll once occurred across northern Australia from the Pilbara of Western Australia to south-eastern Queensland. Its range has become fragmented, largely over the last few decades, and it is now found in six main locations. It is most common in rocky, sparsely vegetated areas and open woodlands, sometimes near human habitation, within 50 kilometres of the coast.



Reasons for the species' recent decline are not understood, but changing grazing and fire regimes and other impacts that degrade the habitat are the most likely causes.

The smallest of the quolls (about the size of a large kitten), the northern quoll has grey-brown to brown fur with large white spots, and an unspotted tail. It is the most tree-based of the four quolls, and its diet includes small mammals, reptiles, worms, ants, termites, moths, honey and soft fruit.

Northern quolls, generally solitary and nocturnal, make their dens in rock crevices, tree holes or, occasionally, termite mounds. In flat, open grasslands, all males die after mating, but in rockier habitats, where the populations appear to be less stressed, males may live for two years.

Litters average six pups and are born in the dry season between June and September. The young are carried for eight to ten weeks, and weaned at about five months.

In April 2003, some northern quolls were transferred to several islands off the Arnhem Land coast in the Northern Territory, to establish secure populations as a precautionary measure while the impacts of cane toads on quoll populations are further studied.

Further reading

Menkorst P and Knight F (2001). *A Field Guide to the Mammals of Australia*. Oxford University Press, Melbourne.

Strahan R (1995). *Complete Book of Australian Mammals*. The Australian Museum. Reed, Chatswood.

Definitions of conservation status terms

Extinct — there is no reasonable doubt that the last member of the species has died.

Extinct in the wild — the species is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range.

Critically endangered — the species is facing an extremely high risk of extinction in the wild in the immediate future.

Endangered — the species is not critically endangered but it is facing a very high risk of extinction in the wild in the near future.

Vulnerable — the species is not critically endangered or endangered but it is facing a high risk of extinction in the wild in the medium-term future.

Conservation dependent — the species is the focus of a specific conservation program without which the species would become vulnerable, endangered or critically endangered within a period of five years.

For more information, contact:



Australian Government

Department of the Environment and Heritage

GPO Box 787, Canberra ACT 2601

Community Information Unit 1800 803 772

Web site www.deh.gov.au



Natural Heritage Trust

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