Australian marsupials that have powerful hind limbs, long hind feet and usually move in a hopping gait when travelling fast, are called macropods.

The macropods comprise such a diverse group that they have been divided into three families: the earliest surviving branch of the family tree, the Hypsiprymnodontidae, containing its only living species, the Musky Rat-kangaroo; the relatively archaic Potoroidae, which includes the potoroos and bettongs; and the Macropodidae, consisting of kangaroos, wallabies, hare-wallabies, nailtail wallabies, rock-wallabies, pademelons, tree-kangaroos, the Swamp Wallaby, the Quokka and New Guinea forest wallabies.

The first macropod to be reported by a European was the rather small Tammar Wallaby (*Macropus eugenii*). It was observed by the Dutchman Pelseart, while rescuing survivors from the Batavia, wrecked in 1629 off the coast of Western Australia.

The name kangaroo was given to large macropods by Captain James Cook. It is derived from a word he heard used by the Aborigines around the Endeavour River in North Queensland. The species referred to was probably an eastern race of the Wallaroo (*Macropus robustus*). Today the name kangaroo is used mainly for the five largest macropods: the Eastern Grey Kangaroo (*Macropus giganteus*); the Western Grey Kangaroo (*Macropus fuliginosus*); the Red Kangaroo (*Macropus rufus*); the Wallaroo (*Macropus robustus*); and the Antilopine Kangaroo (*Macropus antilopinus*).

Today about 73 species of macropods are recognised. The taxonomic relationships between various macropod species and genera have been difficult to determine. Many are highly variable, with different colours and patterns in their fur. In the past, numerous varieties or subspecies have been mistaken for distinct species.

Over recent years, it has become possible to separate species through the study of blood serum proteins. Other biological differences, including variability in gestation periods, have also helped scientists understand relationships between macropods. But not all the confusion is the result of variation within each species. Some look very alike. In 1966, it was discovered that the Grey Kangaroo, previously thought to be a single species, actually consists of two - the Eastern Grey and Western Grey. The major difference is the gestation period (the length of time taken for the young to develop in the uterus). The Eastern Grey has a gestation period of 37 days, compared with 30 days for the Western Grey.

The two species live together in western New South Wales and western Victoria but they cannot interbreed.

Reproduction

A characteristic of all marsupials is that they give birth to very small, rather undeveloped young. The mother cleans the pouch just before giving birth, but does not assist the young to make its way from the cloaca to the pouch. The newly born marsupial has well-developed forelimbs, which it uses to drag itself through the mother’s fur. Once inside the pouch it attaches to a teat from which it is nourished over the following weeks.

Studies of reproduction in the Red Kangaroo have showed that the female mates a day or two after she has given birth. The resulting embryo then enters an arrested or dormant phase for about 33 weeks while the previously born offspring is suckled in the pouch. When the pouch young is weaned, or if it dies, the embryo resumes development. This remarkable reproductive pattern has now been observed in several kinds of kangaroos and wallabies and is called ‘embryonic diapause’. 
Conservation

European settlement has caused many native marsupial populations to decline and a few species have become extinct. This is mostly the result of habitat changes, particularly land clearing, altered fire regimes, and the introduction of both placental herbivores (such as sheep, cattle and rabbits) and feral predators (cat, fox, dingo).

A few large macropods have been favoured by the environmental changes and in some areas their numbers have increased. The Red Kangaroo of the arid inland was never very numerous before settlement but now, in many regions of Australia, the pastoral industry has promoted the type of habitat it favours. Dams and bores provide regular watering holes, and improved pastures and annual burning create an abundant supply of soft green herbage. Similarly, the Euro or Common Wallaroo in the Pilbara region of Western Australia has been favoured by the pastoral industry. Watering holes, the deliberate use of fire, and the grazing effects of sheep have caused Euro numbers to expand quite dramatically.

Most of the small macropods have not benefited from European settlement of Australia. Two out of ten species of potoroids have become extinct; two species that once lived on mainland Australia now survive only on islands; one has declined from common to rare and one, which was not described until 1980, is endangered. Smaller macropodid species have also declined, some dramatically, through woodland clearing, competition from rabbits, sheep and cattle, and predation by foxes, feral cats and dingoes.

The Toolache Wallaby (Macropus greyi), a beautiful, agile creature with silver and russet fur and a dark face, is extinct. It was once common in swampy grasslands of South Australia and Victoria, and was heavily hunted last century. This, together with habitat changes brought about by farming, caused its extinction. In Queensland the Bridled Nailtail Wallaby and the Northern Bettong are endangered and the Desert Rat-Kangaroo is presumed extinct.

Further Information

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