

7. Macropods

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1 TAXONOMY, DISTRIBUTION AND BIOLOGY

The Super-family Macropodoidea includes 19 species in New Guinea and 49 species in Australia, with three species common to both. Another six species have become extinct in Australia since European settlement, and the ranges and distribution of many others have reduced significantly. There are three extant Families: the musky rat-kangaroo (*Hypsiprymnodon moschatus*) is the only living member of the Family Hypsiprymnodontidae. All other species are placed in the Families Potoroidae and Macropodidae. In this chapter and others in this volume members of the Super-family Macropodoidea are referred to as 'macropods', a term meaning 'big foot'. Although not strictly correct it is in common usage and generally recognised as the term that encompasses kangaroos, wallabies, potoroos, bettongs and the musky rat-kangaroo. Strictly speaking the derivative 'macropodoids' should be used for the Super-family and 'potoroids' for the Family Potoroidae and 'macropodids' for the Family Macropodidae.

The Macropodoidea are a diverse group ranging in size from 0.5–90 kg body weight and are found throughout Australia. They occupy almost all terrestrial habitats including tropical rainforests, woodlands, open grasslands, deserts, mountains, islands and rocky

cliffs (Strahan 1995; Menkhorst 2001). Some species are arboreal, some live in caves and two species are fossorial (Tyndale-Biscoe 2005). Most are nocturnal, while the medium and larger species tend to be crepuscular. They are essentially sedentary, occupy a persistent home range and include solitary non-social species through to gregarious species that live in well-organised societies. The degree of gregariousness generally increases with body size, openness of habitat and proportion of grasses in the diet.

The teeth (diprotodont) and feet (syndactylus) of macropods place them in the Order Diprotodontia. With the exception of the tiny musky rat-kangaroo, they are distinguished from other marsupials by foregut fermentation, hopping and embryonic diapause.

The musky rat-kangaroo is considered the closest to the ancestral stock from which all kangaroos evolved. Although it superficially resembles the other rat-kangaroos, it is only distantly related. Furthermore, it bounds using all its legs rather than hopping. It is the only macropod with five toes on the hind foot, with digit one being opposable. It is omnivorous and its teeth and stomach, which is simple, resemble those of possums more than other macropods. It does not exhibit embryonic diapause (Strahan 1995; Tyndale-Biscoe 2005).

The Subfamily Potoroinae includes nine species of rat-kangaroo (including bettongs and potoroos), which