

# 15. Rodents

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## 1 TAXONOMY, DISTRIBUTION AND BIOLOGY

All of the approximately 60 extant species of Australian rodents belong to the family Muridae, the largest and most widespread of all mammalian families (Musser & Carleton 2005). Various species groupings have been proposed for Australian rodents at different times and further changes to the taxonomy are likely to take place in the future (Watts 1973; Strahan 2002; Musser & Carleton 2005). The most recent comprehensive taxonomic review is by Musser and Carleton (2005), in which these species are placed in six Divisions (an informal classificatory rank between Subfamily and genus).

- *Pseudomys* Division. Comprises about 50 species in at least 10 genera including:
  - five species of hopping mouse (genus *Notomys*);
  - five species of rock-rat (genus *Zyzomys*);
  - two species of tree-rat (genus *Mesembriomys*);
  - one species of rabbit-rat (genus *Conilurus*);
  - greater stick-nest rat (*Leporillus conditor*).

In older literature, this group was often treated as a distinct Subfamily (Pseudomyinae or Conilurinae) or Tribe (Conilurini) within Muridae. All but two members of this group are endemic to Australia, with the brush-tailed rabbit-rat (*Conilurus penicillatus*) and the delicate mouse (*Pseudomys delicatulus*) also found in New Guinea (Flannery 1995).

- *Uromys* Division—mosaic-tailed rats. Comprises six species—four *Melomys* spp and two white-

tailed rats (genus *Uromys*). Related species and three related Genera are found in New Guinea (Flannery 1995). This group was formerly treated as a distinct Tribe (Uromyini) within Muridae.

- *Hydromys* Division—water rat (*Hydromys chrysogaster*). Other members of the genus *Hydromys* and related genera are found in New Guinea (Flannery 1995). This group, together with the next, was often treated as a distinct Subfamily (Hydromyinae) or Tribe (Hydromyini) within Muridae.
- *Xeromys* Division—water mouse (*Xeromys myoides*). Other related genera are found in New Guinea (Flannery 1995).
- *Pogonomys* Division—prehensile-tailed rat (*Pogonomys mollipilosus*) (scientific name in doubt, see Appendix 1). Six other *Pogonomys* species and related genera are found in New Guinea (Flannery 1995). This genus was formerly included in a Tribe Anisomyini, which otherwise included many New Guinean genera.
- *Rattus* Division—true rats. Eight species are found in Australia.

In recent literature the first five groups are often referred to as the Old Endemics and sometimes treated as a distinct Subfamily, the Hydromyinae. The term ‘Old Endemics’ is a useful one for the various groups that entered Australia at the very end of the Miocene period, approximately 5 million yr ago. The true rats are often referred to as the New Endemics due to their