

Evolutionary biology of the genus *Rattus*: profile of an archetypal rodent pest

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Abstract. *Rattus*, with at least 61 valid species, is the single largest genus of mammals. It belongs to a much larger assemblage of 'modern' murines, known informally as the 'new endemics', and distributed from South Asia to Indonesia. The first members of the genus *Rattus* probably evolved in the late Pliocene, around three million years ago. Early forms of *Rattus* underwent a rapid dispersal across the greater part of island Southeast Asia, despite the presence of a well-established rodent fauna in most areas. Today, the descendants of these early invaders survive on various islands and on scattered high mountain peaks. *Rattus* species probably colonised Australia only within the last 1–2 million years; nevertheless, they succeeded in colonising all major habitats including sandy desert. Within *Rattus*, the Norway rat (*R. norvegicus*) appears to have few, if any, immediate relatives. In contrast, the black rat (*R. rattus*) has numerous close relatives spread across mainland and island Southeast Asia. Three or more distinct species are probably included within the *R. rattus* complex. At least 15 species of *Rattus* are significant agricultural pests. Five of these are true commensals and three species now exist solely within the human environment. The role of these species in causing agricultural damage and in the dispersal and transmission of both human and wildlife pathogens is discussed.