

# The role of interspecific competition in determining macrohabitat use by the black rat and brown rat at Bradley's Head, NSW

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**Abstract.** We investigated macrohabitat use in populations of the black rat (*Rattus rattus*) and the brown rat (*Rattus norvegicus*) at Bradley's Head, New South Wales. The study site included a zoological park and surrounding bushland reserve on a headland of Sydney Harbour. These two environments provided quite different macrohabitat types. The bushland reserve contained a dense mix of native and introduced plant species, while more open and disturbed habitats were located within the zoo. Between December 2000 and June 2001 we found a clear difference in the habitat use patterns of the two species. Only 3 of 30 *R. rattus* trapped were caught within the zoo grounds. For *R. norvegicus*, 51 of 82 individuals were trapped within the zoo grounds, revealing a preference for an area that contained a large food source in the form of a refuse pit. The removal of approximately 73% of *R. norvegicus* from within the zoo grounds by poisoning failed to elicit a change in habitat use by *R. rattus*, as measured by both trapping and radio-tracking. Of the 12 radio-collared *R. rattus* tracked after the removal, none moved into the zoo grounds. Perceived predation risk may play an important role in determining the habitat use patterns of *R. rattus* at Bradley's Head.