

Why pair? Male reproductive success in a socially monogamous marsupial

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I studied the mating systems of two neighbouring populations of bobucks, *Trichosurus cunninghami*, in the Strathbogie Ranges, north-eastern Victoria, between 1999 and 2003. One population inhabited a small forest patch, the other linear roadside remnant habitat. As is typical of mammals, the roadside population was polygynous; males had large home ranges that overlapped those of two or three females, and males sired multiple young per year. In contrast, the forest population was socially monogamous. Pair-members shared den-trees, had strongly overlapping home ranges and stayed close to one another during the activity period; pair-bonds ended only after the death of one pair-member. In the forest population, all adult males were immigrants and young males often remained unpaired for up to one year after dispersing into the site. I assessed the reproductive success of paired and unpaired males and found that both sired an average of 1.2 young/year. This prompts the question: Why do males enter enduring pair-bonds? The answer appears to be linked with differential mortality of young born to females of different ages, the fact that preferred den-trees are a limited resource at this site and are effectively controlled by females (den-trees are used exclusively by family groups and are inherited by daughters from their mothers) and that some males, although paired, successfully sired extra-pair young.

