

Reproductive effort of urban Little Ravens: nest site selection and brood defence

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Altricial birds' reproductive effort typically includes choosing an optimal nest site and protecting it in some manner against species constituting a threat to successful breeding. Pairs of urban Little Ravens *Corvus mellori* nested predominantly in tall eucalypts with a broader, denser canopy and fewer neighbouring trees of similar or greater height than control trees 100 m distant. Nest-trees also had fewer neighbouring trees of similar or greater height and 1.2 x greater estimated visibility over 100 m horizontally at nest height than nearby paired control trees of the same height. The main advantage of such distinctive nest sites may be providing superior surveillance for intruding nest predators and competing conspecifics. Nine identified bird species invaded Little Raven nest-trees during breeding, particularly honeyeaters and lorikeets; twenty-seven bird species intruded into 40 m zones around Little Raven nest-trees, the most frequent being the types of bird mentioned above and Common Mynas *Acridotheres tristis*. However, Little Ravens defended their nest site aggressively, and usually successfully, only against potential nest predators (currawongs and magpies) and competing conspecifics. Aggressive response rates to intrusions by these species, however, appeared to be rather low, but many possible factors affecting brood defence decisions were unknown in this study and may be influential. Literature indicates that the main species eliciting brood defence in other *Corvus* species are (1) raptors, including predators and nest usurpers of corvids, (2) other known predators of avian broods (e.g. kookaburras), (3) large (e.g. cockatoos) and smaller (e.g. pigeons and honeyeaters) birds seemingly posing little threat to nesting corvids, and (4) competing conspecifics. Reproductive effort expended on nest site selection by urban Little Ravens was probably limited, given the frequent re-use of nests. However, aggressive brood defence appeared costly, mainly because of the energetic behaviour and likely injury risk involved rather than the actual response rate.