

# **Post-fledging spatial use by a juvenile Wedge-tailed Eagle *Aquila audax* using satellite telemetry**

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Despite considerable knowledge on aspects of the ecology of the Wedge-tailed Eagle *Aquila audax*, information on home range size has been limited to estimates based on visual observations and nesting densities. This study aims to provide a methodological and theoretical framework for the potential applications and recommendations for the use of satellite tracking to research eagles. In November 2012 a juvenile Wedge-tailed Eagle was captured soon after fledging and released with a GPS (Minitrack™) tracking unit fitted via a backpack style harness. The unit was scheduled to take location fixes at 90-minute intervals between 0530 and 2200 hr. Location data from the eagle's first six weeks postfledging were analysed using the minimum convex polygon (MCP) and fixed kernel methods and showed that, over time, there was a significant increase in area used and distance travelled per day. This study, the first time a Wedge-tailed Eagle has been satellite tracked for research, serves as a pilot study.

## **The Tasman Masked Booby *Sula dactylatra tasmani* of Nepean and Phillip Islands in the Norfolk Island Group**

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Tasman Masked Booby *Sula dactylatra tasmani* pulli were banded in breeding colonies on two islands five kilometres apart in the Norfolk Island Group from 1975 to 2010: 7755 young were banded on Nepean Island and 3372 on Phillip Island. The number of pulli banded was used to estimate colony size for Nepean Island. The size of this breeding colony in the early years of the study was greater than all previously published estimates. However, colony size declined towards the end of the study. Of the pulli banded on Nepean Island, 1490 individuals were recaptured a total of 2085 times. Within the Norfolk Island Group breeding adults appeared mainly faithful to their natal colonies. While non-breeding birds from Nepean Island used Phillip Island as a roost, the reverse was less common. Thirty-two individuals banded on Nepean Island were recovered away from the Norfolk Island Group. The range of these Norfolk Island birds was found to overlap those of this subspecies from other breeding sites and that of the subspecies *S. d. personata*.

## **Assessment of band recoveries for three Australian eagle species**

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Band recoveries to 2012 were analysed for the White-bellied Sea-Eagle *Haliaeetus leucogaster* ( $n = 11$ , recovery rate = 6%), Wedge-tailed Eagle *Aquila audax* ( $n = 55$ , recovery rate = 7%) and Little Eagle *Hieraaetus morphnoides* ( $n = 30$ , recovery rate = 9%) in Australia (for Wedge-tailed Eagle eastern Australia only). Juvenile/immature Sea-Eagles ( $n = 8$ ) were recovered within 3.5 years (0–41 months, mean 13 months), 0–1824 kilometres (mean 268 km) from the banding site. Adults ( $n = 3$ ) were recovered at the banding site; one notable lifespan was 19+ years. Of 60 Sea-Eagles wing-tagged in the coastal Northern Territory, 1978–1994, four (recovery rate = 7%) were juveniles recovered/resighted within 1–4 years, 30–90 kilometres from the banding site, whereas territorial adults were resighted on their territories over the ensuing year. Juvenile/immature Wedge-tailed Eagles ( $n = 55$ ) were recovered 0–821 kilometres from the banding site (mean 130 km, 95% within 300 km), 1–72 months later (mean 11 months); one banded on Kangaroo Island was recovered on the adjacent mainland (13+ km across sea). Little Eagles (mostly aged as ‘first year or older’ and unsexed) were recovered 0–2884 kilometres from the banding site (mean 219 km, 80% within 200 km), 1–311 months later (mean 60 months); notable lifespans were of 19–26 years, but average lifespan may be approximately five years in the sheep–wheat belt. Human-related mortalities, either deliberate (persecution) or accidental (e.g. collisions, interactions with infrastructure), formed a large proportion of the reported public recoveries of each species.

## **Some vocalisations of the Grey Falcon *Falco hypoleucos***

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Sound-recordings of some calls of the Grey Falcon *Falco hypoleucos* (adult cackle calls, juvenile begging whines) are described and presented as sound spectrograms, and compared with some equivalent calls of the Peregrine Falcon *F. peregrinus* (adult female cackle, juvenile begging whine, probable juvenile cackle). The Grey Falcon cackle calls are similar to those of the Peregrine, though variously softer and clearer, more ‘squeaky’ and/or more guttural (the Peregrine cackles being more strident and whining). Grey Falcon juvenile begging calls are more falsetto than those of the Peregrine. Fundamental frequencies differ slightly (Grey Falcon adult female cackle calls at ~700 Hz, Peregrine at ~1 kHz for juvenile begging calls, ~2 kHz for adult female cackle calls). The vocal data are consistent with the phylogenetic position of the Grey Falcon as basal to the Peregrine and ‘great falcon’ groups.

## **Ageing Southern Boobook nestlings and fledglings**

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An Ornithological Note – No Abstract