

EARLY FLEDGING IN THE NEW ZEALAND FANTAIL *Rhipidura fuliginosa fuliginosa*

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New Zealand Fantails *Rhipidura fuliginosa fuliginosa* form breeding pairs, which retain the same territories and can produce multiple clutches in a breeding season (Heather and Robertson 2005). Fantails have an incubation period of 13–16 days and have a nestling stage of 11–16 days (Heather and Robertson 2005). The minimum time recorded to fledging was 12 days and 11 hours (Blackburn 1965, 1996). Higgins and Peter (2002) however, recorded fledging time as early as ten days. During surveys of nesting success undertaken from 1 November 2006 to 31 January 2007 in Tongariro Forest, Mt Ruapehu, New Zealand (39°12'S, 175°32'E) fledging (defined as chicks leaving the nest of their own free will) was recorded occurring earlier in some of the studied clutches than previously recorded.

Thirty-six nests were monitored daily to determine fledging success rates of pairs of the New Zealand Fantail. All nests were located in a Broadleaf-podocarp forest of Rata *Metrosideros robusta*, Rewarewa *Knightia excelsa*, Rimu *Dacrydium cupressinum*, Tawa *Beilschmiedia tawa*, Kamahi *Weinmannia racemosa* and Kowhai *Sophora tetraptera* with Beech trees *Nothofagus* sp. dominant on the ridge tops. Nests were manually checked 1–2 times a day and exact laying, hatching and fledging dates were recorded. Eight video cameras in waterproof casings were set up 1–3 metres away from eight nests in nearby trees with full view of the nests. Camera equipment was set up during the nest building stage while parent birds were away from the nest to avoid unnecessary disturbance. Recordings were used to identify any predators and were also used to verify the exact fledging time of the nestlings.

The average clutch size in observed nests was 3.7. All nests observed contained either three or four eggs with the exception of one nest, which contained two eggs. Thirty-three per cent of chicks under observation fledged. Fledging times for all the 12 successful nests ranged from 9–16 days, with an average fledging time of 12.7 days. On two occasions nestlings were filmed fledging on day nine after hatching exactly 8 days and 10 hours and 8 days and 14 hours after hatching, without any observed disturbance by predators, humans, or adverse weather. This is one day earlier than the shortest recorded nestling stage (Higgins and Peter 2002). These fledglings had reached the same stage of development as chicks fledging 16 days after hatching: they possessed shorter tails and wing feathers than their parents but were capable of brief flight.

Blackburn (1966) noted that fledging occurred earlier in larger clutches than in smaller clutches since the nestlings in larger clutches (4–5 eggs) become crowded. This does not explain early fledging in this case since the nestlings, which fledged at nine days, came from clutches of both three and four nestlings.

The New Zealand Fantail is a widely used indicator species in New Zealand forests for monitoring depredation rates. It is a widespread species across New Zealand and their nests are relatively easy to find compared with other New Zealand birds. Not taking account the possibility of a shorter fledging time could lead to over estimation of depredation rates by assuming that nests were empty after nine days had been depredated.

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