

THE



SUNBIRD



Journal of the

**QUEENSLAND ORNITHOLOGICAL SOCIETY
(Birds Queensland)**

Volume 50

Pages 19-23

2023

THE SUNBIRD

Chief Editor

Richard Noske

Assistant Editor

Stephen Prowse

Production Editor

Annette Neill

The Sunbird is published by the Queensland Ornithological Society Incorporated (Birds Queensland). All issues of *Sunbird* and individual articles are available for download in PDF format to both members and non-members from the Birds Queensland website. They are also available online via the Informit e-Library (<https://search.informit.org>), by agreement with Birds Queensland.

The aims of Birds Queensland are to promote awareness and appreciation, as well as conservation and scientific study of birds, with particular emphasis on the birds of Queensland. The society holds a general meeting and several field excursions each month. All members receive a monthly newsletter. For enquiries, including membership, and back copies of *Sunbird* please contact us via email or visit our website.

The Secretary

PO Box 3784

South Brisbane BC Qld 4101

www.birdsqueensland.org.au

secretary@birdsqueensland.org.au

ISSN 1037-258X

Queensland Ornithological Society Inc.

Front Cover: Weebill in flight © Rodney Appleby

Predation of nestling Weebills by the Torresian Crow and Square-tailed Kite

Richard A. Noske

Centre for Biodiversity and Conservation Science, University of Queensland, St Lucia, Qld, 4072
Email: rnoske@tpg.com.au

Abstract

Nest predation is the major cause of nest failure in birds, but is rarely witnessed by human observers without the aid of cameras. I describe direct observations of the predation of two nests of the Weebill *Smicrornis brevirostris*, one involving a Torresian Crow *Corvus orru* and the other, a Square-tailed Kite *Lophoictinia isura*. This adds to the single previous documented record of Weebill nest predation, which involved a Pied Butcherbird *Cracticus nigrogularis*.

Introduction

Nest predation is the major cause of nest failure in birds, both globally and within Australia (Ricklefs 1969; Martin 1993; Ford *et al.* 2001; Remeš *et al.* 2012; Guppy *et al.* 2017). Moreover, nest predation has been implicated in the long-term decline of several Australian bird species (Ford *et al.* 2009). While a large number and variety of nest predators has been reported, their relative or absolute role in nesting ecology is poorly understood (Major & Gowing 1994; Fulton & Ford 2001; Debus 2006; Fulton 2018). Data on predator identity mainly derives from four lines of evidence: direct observations, artificial nest experiments, analyses of stomach contents, and the deployment of cameras at natural nests (Fulton 2018). Direct observations of nest predation provide the most reliable and informative data on predator identity, but they are extremely rare and normally require large investments of time (Guppy *et al.* 2014).

The Weebill *Smicrornis brevirostris* is the most widely distributed member of the Australasian Warbler family (Acanthizidae), yet no detailed studies have been conducted on its breeding biology. Its domed nests are typically well concealed among foliage, though some have little or no cover (Plate 1). While studying a population of this species in Durikai State Forest, 39 km west of Warwick, southeast Queensland, I inadvertently recorded a case of nest predation by a Torresian Crow *Corvus orru*. In this paper, I describe this event, as well as an instance of a Square-tailed Kite *Lophoictinia isura* robbing a Weebill nest.

Observations

On 11 September 2021 I discovered an active nest of Weebills near the boundary between Durikai State Forest and a wide railway corridor (28°11'40"S, 151°36'42"E; 512 m asl). The vegetation at this site was eucalypt woodland, dominated by Tumbledown Gum *Eucalyptus dealbata* and Narrow-leaved Ironbark *E. crebra*. The nest was situated among dense foliage ~1 m from the top of an 18 m-high Yellow Box *E. melliodora*, which was sparsely flowering. I set up a video-recording camera (Sony Handycam HDR-CX130) on a tripod ~10 m from the base of the nest tree to record behaviour at the nest, and started the video at 11:46 hrs. The video recorded for 140 min, stopping at 14:06 hrs, and the camera was retrieved later that afternoon. The video was subsequently downloaded as an MPG file (VLC) for analysis.



Plate 1. Two nests of Weebills at Durikai State Forest, showing variation in concealment (R. Noske)

During the 15 min prior to my starting the video, the behaviour of the Weebills indicated that they were brooding young nestlings. Birds were twice seen entering and remaining in the nest for over 1 min, but the area around the nest was too densely-foliaged to determine if the birds were carrying prey. In addition, strong winds persisted throughout the recording, with gusts blowing the nest area off the screen for ~70% of the video duration. Two minutes after the start, a Noisy Friarbird *Philemon corniculatus* arrived just below the nest, climbed rapidly upwards and immediately began to tug violently at the top of the nest. After 22 s, the Friarbird flew off with a small wad of whitish downy material.

After 2.1 h, an adult Torresian Crow flew into the top of the clump of foliage containing the nest, and after 65 s, flew off with the whole nest in its bill, as shown in a series of screenshots over 1 s (Plates 2, 3). An object next to the head of the Crow (Plate 2) seems likely to be one of the Weebills attempting to defend its nest. The Weebill(s) returned to the site and hopped around the remnants (~1 cm³) of the nest 5.7 and 8.0 min after the event, and at least one more time before the video finished. A White-naped Honeyeater *Melithreptus lunatus* landed below the nest 20.3 min after the event, and after climbing to the nest remnants, flew off 12 s later, possibly with some nest material. The Weebills were last seen circling (11 s) the nest remnants 46 min before the video stopped, but additional visits may have been missed due to the effect of the strong winds on visibility of the nest area.

In 2005, I witnessed predation of a Weebill nest by a Square-tailed Kite in the Top End of the Northern Territory. On 20 July, while conducting a bird survey on Coomalie Farm (13°00'31"S, 131°10'00"E; 37 m asl), 70 km SSE of Darwin, I watched the Kite descend into the uppermost foliage of a 3.7 m-high Ironwood *Erythrophleum chlorostachys* sapling, whereupon it reached down and began ripping apart the nest of a pair of Weebills that I had discovered earlier that day. Soon the Kite flew off, possibly with a portion of the nest, and when I inspected the nest site immediately afterwards, I noted that the nest had been ripped open and was empty.



Plate 2. Video screenshot showing Torresian Crow flying with Weebill nest in bill. Object to left of Crow and behind nest is apparently Weebill harassing Crow in defence of its nest (R. Noske).



Plate 3. Video screenshot of Torresian Crow flying with Weebill nest in bill (R. Noske)

Discussion

There are no known documented records of predation of Weebill nests in the literature, but the BirdLife Australia Nest Record Scheme contains an observation of a Pied Butcherbird *Cracticus nigrogularis* taking a nestling (Higgins & Peter 2002). Pied Butcherbirds are

renowned as predators of adult and nestling birds (Higgins *et al.* 2006), but my observation appears to constitute the second documented record of a passerine being depredated by the Torresian Crow. The latter species is omnivorous, feeding mainly on invertebrates and plant material, especially seeds, which comprised 43% and 31% by volume, respectively, of over 7,000 items found in the stomachs of 147 specimens collected at Jandowae, Southeast Queensland (Rowley & Vestjens 1973). The remaining 26% comprised the unidentified remains of vertebrates, mostly mammals. Nevertheless, Torresian Crows have been reported preying on the eggs and young of a cormorant *Phalacrocorax* sp., the eggs of Cattle Egrets *Ardea ibis* and an Australian Pelican *Pelecanus conspicillatus*, and a nestling Noisy Miner *Manorina melanocephala* (Rose 1999; Higgins *et al.* 2006). The adult Weebill is demonstrably smaller (n nominate subspecies, 5.5-7.8 g; Higgins & Peter 2002) than any of the abovementioned species.

Although the Australian Raven *C. coronoides* co-occurs with the Torresian Crow in Durikai SF, the many calls heard during replay of the video left no doubt that the nest predator belonged to the former species. It is possible that the Crow was made aware of the nest by the Noisy Friarbird which stole nest material, though the latter incident took place 2 h before the nest was depredated. The theft of nest material by honeyeaters is common, but poorly documented, though Noisy Friarbirds have been reported stealing nest material from active nests of Regent Honeyeaters *Xanthomyza phrygia* and White-naped Honeyeaters (Ley *et al.* 1997).

In contrast to the Torresian Crow, the Square-tailed Kite is renowned as a predator of nestling birds of many species (Marchant & Higgins 1994; Debus 2017), including species as large as the Crested Pigeon *Ocyphaps lophotes* (Lutter *et al.* 2004) and Noisy Friarbird (Cameron 1976). Near Bundaberg, coastal southeast Queensland, 46% of the 240 items in pellets under a nest were small birds, mostly nestlings and fledglings, including passerines, and 36% were birds' eggs (Barnes *et al.* 2001). Studies in northern coastal New South Wales found nestling birds in 76-100% of pellets examined (Brown *et al.* 2000; Griffiths *et al.* 2002; Lutter *et al.* 2004). Discarded nests of a Silvereye, Grey Fantail *Rhipidura albiscapa*, Varied Sittella *Daphaenositta chrysoptera* and small honeyeaters have also been found under Kites' nests (Brown *et al.* 2000; Griffiths *et al.* 2002; Lutter *et al.* 2003; Robinson *et al.* 2016). All of the above refer to species with open cup-shaped nests, although Cameron (1992) found a wrecked domed nest of an Inland Thornbill *Acanthiza apicalis* under a nest of a Square-tailed Kite. These records suggest that Kites often bring both nests and their contents to the nest, rather than tearing open the nests to extract the chicks.

Acknowledgments

I thank Graham Fulton and Steven Debus for their constructive comments on an earlier version of this manuscript.

References

- Barnes, C.P., Zillmann, E.E., Rose, A.B. & Debus, S.J.S. 2001. Diet and biology of the Square-tailed Kite *Lophoictinia isura* in south-eastern Queensland: nest-building to post-fledging. *Australian Bird Watcher* 19: 28-43.
- Brown, B., Brown, F. & Debus, S.J.S. 2000. Further observations on a pair of Square-tailed Kites nesting near Grafton, New South Wales. *Australian Bird Watcher* 18: 270-273.
- Cameron, A.C. 1976. Nesting of the Square-tailed Kite. *Sunbird* 7: 42-48.
- Cameron, C.A.C. 1992. Further notes on Square-tailed Kites nesting in South-East Queensland. *Sunbird* 22: 30-31.

- Debus, S.J.S. 2006. The role of intense nest predation in the decline of scarlet robins and eastern yellow robins in remnant woodland near Armidale, New South Wales. *Pacific Conservation Biology* 12: 279-287. doi:[10.1071/PC060279](https://doi.org/10.1071/PC060279)
- Debus, S. 2017. *Australasian eagles and eagle-like birds*. CSIRO Publishing, Clayton South, Victoria.
- Ford, H.A., Barrett, G.W., Saunders, D.A. & Recher, H.F. 2001. Why have birds in the woodlands of southern Australia declined? *Biological Conservation* 97: 71-88.
- Ford, H.A., Walters, J.R., Cooper, C.B., Debus, S.J.S. & Doerr, V.A.J. 2009. Extinction debt or habitat change? Ongoing losses of woodland birds in north-eastern New South Wales, Australia. *Biological Conservation* 142: 3182-3190. doi:[10.1016/j.biocon.2009.08.022](https://doi.org/10.1016/j.biocon.2009.08.022)
- Fulton, G.R. 2018. Avian nest predation in Australian temperate forest and woodland: a review. *Pacific Conservation Biology* 24: 122-133.
- Fulton, G.R. 2019. Meta-analyses of nest predation in temperate Australian forests and woodlands. *Austral Ecology* 44: 389-396.
- Fulton, G.R. & Ford, H.A. 2001. The pied currawong's (*Strepera graculina*) role in avian nest predation: an artificial nest and predator removal experiment. *Pacific Conservation Biology* 7: 154-160. doi:[10.1071/PC010154](https://doi.org/10.1071/PC010154)
- Griffiths, H., Lutter, H., Rose, A.B. & Debus, S.J.S. 2002. Breeding and diet of a pair of Square-tailed Kites *Lophoictinia isura* on the mid-north coast of New South Wales. *Australian Bird Watcher* 19: 184-193.
- Guppy, M., Guppy, S., Marchant, R., Priddel, D., Carlile, N. & Fullagar, P.A. 2017. Nest predation of woodland birds in south-east Australia: importance of unexpected predators. *Emu* 117: 92-96.
- Guppy, M., Guppy, S., Priddel, D. & Fullagar, P. 2014. Nest predators of a woodland bird community in south-east Australia. *Australian Zoologist* 37: 105-116.
- Higgins, P.J. & Peter, J.M. 2002. *Handbook of Australian, New Zealand and Antarctic Birds, Vol. 6: Pardalotes to Shrike-thrushes*. Oxford University Press, Melbourne.
- Higgins P.J., Peter, J.M. & Cowling, S.J. 2006. *Handbook of Australian, New Zealand and Antarctic Birds. Vol. 7: Boatbill to Starlings*. Oxford University Press, Melbourne.
- Ley, A.J., Oliver, D.L. & Williams, M.B. 1997. Theft of nesting material involving honeyeaters (Meliphagidae). *Corella* 21: 119-123.
- Lutter, H., Dinnie, R. & Debus, S.J.S. 2003. Square-tailed Kites breeding in northern coastal New South Wales: post-fledging diet and behaviour. *Australian Field Ornithology* 20: 94-104.
- Lutter, H., Lutter, M., Rose, A.B. & Debus, S.J.S. 2004. Breeding biology and diet of the Square-tailed Kite on the mid-north coast of New South Wales. *Australian Field Ornithology* 21: 141-157.
- Major, R.E. & Gowing, G. 1994. An inexpensive photographic technique for identifying nest predators at active nests of birds. *Wildlife Research* 21: 657-666.
- Marchant, S. & Higgins, P.J. 1994. *Handbook of Australian, New Zealand and Antarctic Birds. Vol. 2: Raptors to Lapwings*. Oxford University Press, Melbourne.
- Martin, T.E. 1993. Nest predation among vegetation layers and habitat types – revising the dogmas. *American Naturalist* 141: 897-913.
- Ricklefs, R.E. 1969. An analysis of nesting mortality in birds. *Smithsonian Contributions to Zoology* 9: 1-48.
- Remeš, V., Matysioková, B. & Cockburn, A. 2012. Long-term and largescale analyses of nest predation patterns in Australian songbirds and a global comparison of nest predation rates. *Journal of Avian Biology* 43: 435-444. doi:[10.1111/J.1600-048X.2012.05599.X](https://doi.org/10.1111/J.1600-048X.2012.05599.X)
- Robinson, J.L., Cooper, B.R. & Franklin, D.C. 2016. Shadows of change: Square-tailed Kites *Lophoictinia isura* nesting in the Bendigo area of Victoria. *Corella* 40: 61-68.
- Rose, A.B. 1999. Notes on the diet of some passerines in New South Wales, II: Butcherbirds to Starlings. *Australian Bird Watcher* 18: 164-78.
- Rowley, I.C.R. & Vestjens, W.J.M. 1973. The comparative ecology of Australian corvids. V. Food. *CSIRO Wildlife Research* 18: 131-155.

