

Common Mynas attack Common Brushtail Possums and nesting Southern Boobook, and diet of the nesting Boobooks

Susan Trost¹ and Jerry Olsen^{2*}

¹44 Wybalena Grove, Cook ACT 2614, Australia

²Building 15, Institute for Applied Ecology, University of Canberra, Canberra ACT 2601, Australia

*Corresponding author. Email: Jerry.Olsen@canberra.edu.au

Abstract. Over a 30-night period a Common Myna *Acridotheres tristis* was observed attacking Common Brushtail Possums *Trichosurus vulpecula* and harassing a female Southern Boobook *Ninox boobook* near her nest. One night a Myna that had been attacking Possums was chased by the male Boobook, which appeared to be chasing it as prey. We did not observe further attacks by Mynas after this night. Common Mynas were found in the dietary analysis for this pair of Boobooks.

Introduction

Fitzsimons (2006) described an attack by Common Mynas *Acridotheres tristis* on Common Coatis *Nasua nasua* in the Melbourne Zoo. He noted that Mynas have been implicated in the eviction of small Australian mammals such as Sugar Gliders *Petaurus breviceps* from tree-hollows and in the mobbing of possums, but there are no detailed published accounts of aggression towards Australian mammals. Fitzsimons (2006) noted two possible reasons for the attacks by Mynas—anti-predator aggression and competition for nest-hollows.

While monitoring the nest of a pair of Southern Boobooks *Ninox boobook* with a single nestling in parkland in the suburb of Cook in Canberra, Australian Capital Territory, from 14 October 2006 to 3 January 2007, we observed three incidents where a Common Myna vigorously attacked Common Brushtail Possums *Trichosurus vulpecula* as they left their day-roosts. We had previously reported Boobooks attacking Brushtail Possums at this nest, and Possums entering the nest-hollow and evicting a nestling (Olsen & Trost 2009). The tree, an Apple Box *Eucalyptus bridgesiana*, had about eight Common Brushtail Possums, at least one Sugar Glider, unidentified bats, and a nesting Southern Boobook that all emerged at dusk or later each night. The Myna launched attacks from the top of this tree at possums and at the female owl as they emerged. All tried to dodge these attacks.

Methods

We visited the area on several nights per week at sundown, and stood 10–30 m from the Southern Boobooks' nest to watch activity around the nest. We located the Boobooks at either the nest or roost, 30 minutes before dusk, and observed them from just before to 1.5 h after the birds left the nest. We collected regurgitated pellets and prey remains from under the nest and roost during daylight. However, if there was any danger of flushing the owls, we waited until they left the roost and then searched the ground by torchlight. Twenty-four regurgitated pellets and feathers were collected from 2006 to 2008.

Analysis of prey

Analysis of Southern Boobook prey followed the methods

of Olsen *et al.* (2006) and Trost *et al.* (2008). A.B. Rose identified prey species from pellets and prey remains, counting body parts to estimate the minimum number of prey items in a pooled sample of pellets and prey remains, in order to minimise biases (Collopy 1983; Marti 1987; Simmons *et al.* 1991; Seguin *et al.* 1998). Feathers were identified by comparison with feather collections and museum specimens when necessary. Bones, hair, and scales were identified by microscopy following Brunner & Coman (1974) for mammalian hair and by comparison with museum reference material. We did not assume that one pellet represented one individual prey item. Numerical frequency and percentage were calculated for all prey species.

Observations and discussion

The following observations took place over 30 nights in the period from 24 November to 28 December 2006 (all times in Australian Eastern Daylight Time):

24 November, 2019 h. Shortly after leaving the nest, the female Southern Boobook was swooped at by a Common Myna and ducked back into her nest-hollow. She emerged again at 2030 h when it was darker, and began hawking insects and delivering food to the Boobook nestling.

19 December, 2044 h. The female Boobook was attacked by three Common Mynas when she left the nest-hollow. She returned to the hollow and came out after the Mynas moved away. Over the following four nights a Myna attacked a Common Brushtail Possum in the same tree.

20 December, 2056 h. A Myna flew at the Possum when it left the tree-hollow.

21 December, 2048 h. A Possum was attacked by a Myna as it attempted to run along a tree-limb. (The Possums used this branch as a link to another tree that they used to reach the ground.)

23 December, 2035 h. Shortly after the Possum left its hollow, a Myna flew at it and, with its beak, struck the Possum three times on the rump. The Possum growled back each time but this did not deter the Myna, which struck it a fourth time.

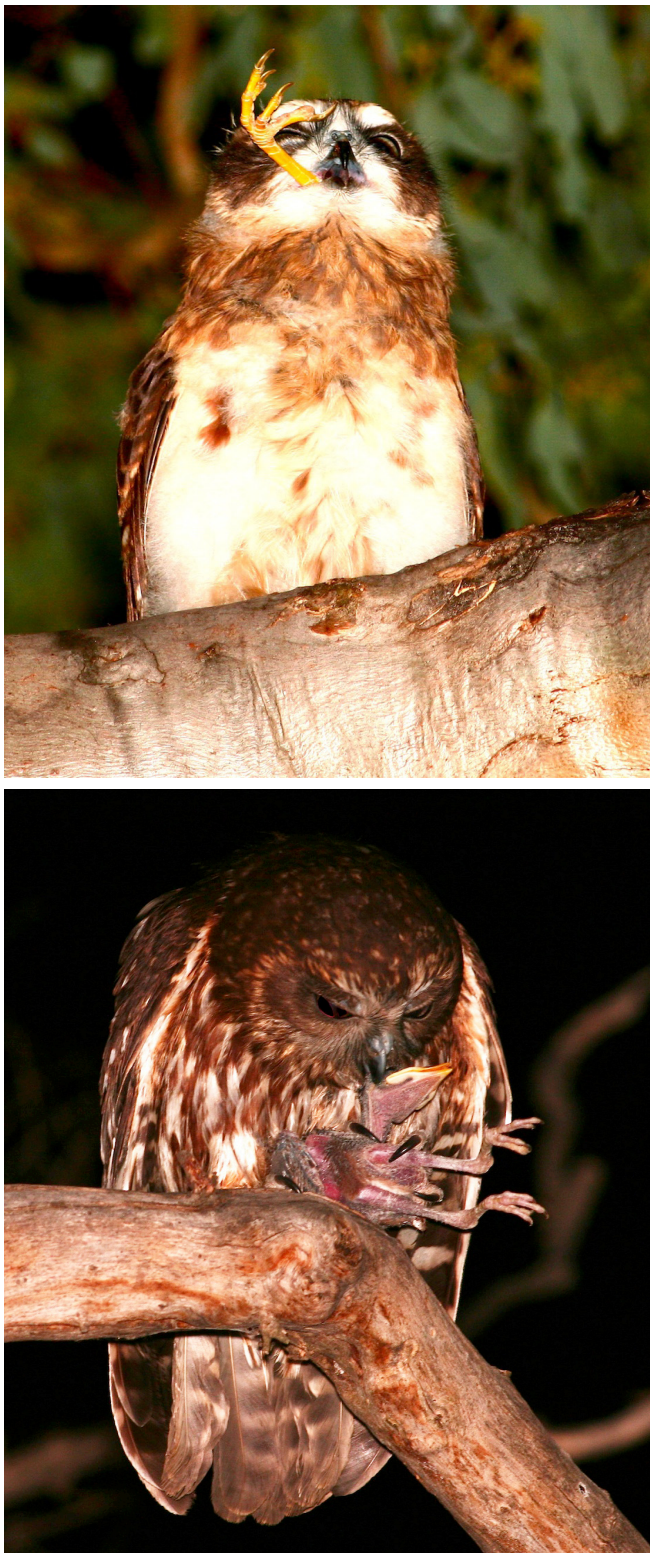


Figure 1. Top: Fledgling Southern Boobook swallowing leg of a Common Myna just delivered by an adult. Bottom: Female Southern Boobook with nestling Common Myna. Photos: Jerry Olsen & Susan Trost

On the same night (23 December), the male Boobook arrived at the nest and immediately attacked the Myna that was harassing the female Boobook and possums. He tail-chased the Myna through branches in the nest-tree and an adjoining tree; eventually both disappeared from view. The male Boobook appeared to chase the Myna as prey, because when the male and female Boobooks chased possums as enemies they clacked their beaks in warning

Table 1. Breeding diet of a pair of Southern Boobooks at Cook, ACT, 2006–2008 (number and percentage of prey items), based on analysis of pellets, prey remains and observations; a = adult, f = fledgling, j = juvenile, n = nestling.

Prey species	No.	%
Birds		
Crested Pigeon <i>Ocyphaps lophotes</i>	1	1.1
Crimson Rosella <i>Platycercus elegans</i>	1	1.1
Eastern Rosella <i>Platycercus eximius</i> (a)	11	12.5
Eastern Rosella <i>Platycercus eximius</i> (j)	3	3.4
Noisy Miner <i>Manorina melanocephala</i>	4	4.5
Australian Magpie <i>Gymnorhina tibicen</i> (j)	1	1.1
Magpie-lark <i>Grallina cyanoleuca</i>	5	5.7
House Sparrow <i>Passer domesticus</i>	1	1.1
Fairy Martin <i>Petrochelidon ariel</i>	1	1.1
Common Myna <i>Acridotheres tristis</i> (a)	7	8.0
Common Myna <i>Acridotheres tristis</i> (f/n)	2	2.3
Mammals		
House Mouse <i>Mus musculus</i>	2	2.3
Gould's Wattled Bat <i>Chalinolobus gouldii</i>	5	5.7
Invertebrates		
Huntsman spider (Heteropodidae)	1	1.1
Wolf spider (Araneae, Lycosidae)	9	10.2
Grasshopper (Orthoptera)	4	4.5
Cricket (Orthoptera)	1	1.1
<i>Phoracantha</i> sp. (Cerambycidae)	1	1.1
Longicorn beetle (Cerambycidae)	4	4.5
Scarab beetle (Scarabaeidae)	7	8.0
Carab beetle (Carabidae)	5	5.7
Christmas beetle <i>Anoplognathus</i> sp.	3	3.4
Beetle (Coleoptera)	2	2.3
Cockroach (Blattodea)	2	2.3
Moth (Lepidoptera)	4	4.5
Reptiles		
Marbled Gecko <i>Christinus marmoratus</i>	1	1.1
Total	88	100

(Olsen 2011) but it could have been a combination of nest protection and predation. The male Boobook did not beak-clack at the Myna. The Myna did not return after that night.

There was a difference in the behaviour of the male and female Boobooks towards the Myna. The female returned to the nest-hollow to avoid the harassment, but the male attacked the Myna. Male Boobooks are smaller and more agile than females, and we have observed females crash into trees and bushes; an eye injury in one female may have been caused by hitting branches (ST & JO pers. obs.). Less agile Boobooks, especially females, may be at risk of eye injury from Mynas.

The attacks by Common Mynas against possums and Southern Boobooks could be linked to a scarcity of nest-

hollows but, more likely, Mynas were defending their eggs and nestlings. If the opportunity arises, possums may consume eggs and young birds (Fitzsimons 2006) such as Mynas, and we have recorded Mynas as prey of Boobooks at this nest-site (Figure 1, Table 1; Olsen 2014).

Acknowledgements

Particular thanks go to A.B. Rose for his analysis of the Southern Boobook prey. Thanks go also to Stephen Debus, James Fitzsimons, Julia Hurley, Grant Palmer and Dalice Trost for helpful comments on the manuscript.

References

- Brunner, H. & Coman, B. (1974). *The Identification of Mammalian Hair*. Intaka Press, Melbourne.
- Collopy, M.W. (1983). A comparison of direct observations and collections of prey remains in determining the diet of Golden Eagles. *Journal of Wildlife Management* **47**, 360–368.
- Fitzsimons, J.A. (2006). Anti-predator aggression in the Common Myna *Acridotheres tristis*. *Australian Field Ornithology* **23**, 202–205.
- Marti, C.D. (1987). Raptor food habits studies. In: Giron Pendleton, B.A., Millsap, B.A., Cline, K.W. & Bird, D.M. (Eds). *Raptor Management Techniques Manual*, pp. 67–80. National Wildlife Federation, Baltimore, Maryland, USA.
- Olsen, J. (2011). *Australian High Country Owls*. CSIRO Publishing, Melbourne.
- Olsen, J. (2014). *Australian High Country Raptors*. CSIRO Publishing, Melbourne.
- Olsen, J. & Trost, S. (2009). Common Brushtail Possum *Trichosurus vulpecula* evicts juvenile Southern Boobook *Ninox novaeseelandiae* from its nest-hollow. *Australian Field Ornithology* **26**, 46–52.
- Olsen, J., Fuentes, E., Rose, A.B. & Trost, S. (2006). Food and hunting of eight breeding raptors near Canberra, 1990–1994. *Australian Field Ornithology* **23**, 77–95.
- Seguin, J.F., Bayle, P., Thibault, J.C., Torre, J. & Vigne, J.D. (1998). A comparison of methods to evaluate the diet of the Golden Eagle in Corsica. *Journal of Raptor Research* **32**, 314–318.
- Simmons, R.E., Avery, D.M. & Avery, G. (1991). Biases in diets determined from pellets and remains: Correction factors for a mammal and bird eating raptor. *Journal of Raptor Research* **25**, 63–67.
- Trost, S., Olsen, J. & Rose, A.B. (2008). Winter diet of Southern Boobooks *Ninox novaeseelandiae* in Canberra 1993–2004. *Corella* **32**, 66–70.

Received 20 January 2015, accepted 8 April 2015,
published online 24 March 2016

