

SHORT NOTE

Anecdotal evidence of interspecific parental care: feeding and brooding of robin (*Petroica australis*) nestlings by a female bellbird (*Anthornis melanura*)

SOL HEBER

School of Biological Sciences, University of Canterbury, Private Bag 4800, Christchurch 8041, New Zealand

Interspecific feeding behaviour has been observed in 22 bird families and 71 species (Shy 1982). Several explanations have been offered for this unusual behaviour. For example, it is possible that having an exacerbated drive to care for young is generally advantageous, and that feeding heterospecific young is so rare that no evolutionary modification of this trait occurs. Furthermore, although interspecific parental care provides little evolutionary benefit to the feeding bird, individuals engaging in interspecific provisioning behaviour could benefit by increasing their parental abilities (Riedman 1982; Shy 1982) if experience improves nesting success (DeStevens 1978; Lehrman & Wortis 1967).

Here, I report the observation of an interspecific feeding event involving 2 New Zealand passerine species. On 12 Nov 2010, I filmed a South Island robin (*Petroica australis*) nest on Motuara I, Marlborough Sounds, as part of a study on the effects of inbreeding on nestling provisioning (Heber *et al.* 2013). The camera was set up at a distance of 2.5 m from the nest, and all activity was recorded between 6:30 am and 11:52 am. During later analysis of the nest video, I observed that the 11-day old robin nestlings were

frequently fed and brooded by a female bellbird (*Anthornis melanura*; Fig. 1), in addition to being fed by their genetic parents.

While each robin parent fed the nestlings on average 4.94 times per hour (female feeding events: 4.29/hour, male feeding events: 3.17/hour, plus 13 feeding events in which the sex of the parent could not be identified), the female bellbird visited 6 times throughout the 322 min video recording and fed the robin nestlings on 3 occasions, which corresponds to a feeding rate of 0.56 times per hour. The female robin spent 12.3% of the recording time brooding her nestlings (on average 237 s per bout; see Fig. 2), whereas the bellbird brooded the nestlings twice (for 224 and 36 s, a total of 0.005% of the recording time). However, on 3 occasions the bellbird was observed hovering near the nest or hopping on and off the nest, and it is possible that its low feeding rate and short and irregular brooding bouts were due to the 'disturbance' by the robin parents. No aggressive behaviour between the robin pair and the bellbird was observed.

To my knowledge, interspecific feeding behaviour has only been reported in one other case for a New Zealand passerine and involved a male Stewart Island robin (*P. a. rakiura*) feeding nestlings (and later fledglings) of a tomtit (*P. macrocephala*; Masuda 2011). Consequently, my observation

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Correspondence: sol.heber@gmx.de

appears to be the first to document an interspecific feeding by a female bird in New Zealand.

I suggest that the unusual provisioning behaviour of the female bellbird was potentially the result of a 'reproductive error', which may occur if individuals are behaviourally or hormonally primed to provide parental care (Riedman 1982). Unfortunately, the nesting history of the female bellbird was unknown; however, it is possible that she recently experienced the loss of her own brood, and consequently displayed increased responsiveness to a feeding stimulus (Jackson 1941; Lack 1953; Logan 1951; Southern 1952). Increased begging of the robin nestlings in response to movement (such as a passing bird) could have represented such a feeding stimulus to the passing female bellbird (Drózdź *et al.* 2004).

An extract of the video clip of the observation can be viewed at <http://youtu.be/b-AKuhV12lg>.

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Fig. 1. Female bellbird brooding robin nestlings.

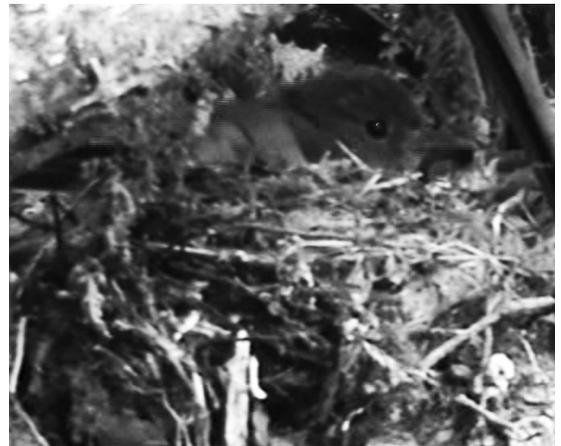


Fig. 2. Female robin brooding her nestlings.

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