

Predation of the Esturine Gastropod *Littorina scabra* by Lewin's Honeyeaters *Meliphaga lewinii*

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Lewin's Honeyeaters *Meliphaga lewinii* are regularly mistnetted and banded* at Cowiebank (26°58'S., 153°04'E.), some 11 km east of Beerburum, south-eastern Queensland. The study area comprising remnants of coastal forest, mangrove and salt-marsh areas has been described (Liddy 1982). After release from the mistnets, birds are restrained in calico bags prior to examination and banding. Most birds are so restrained for between five and twenty minutes and many birds defecate in the holding bags. Since August 1978, material excreted by Lewin's Honeyeaters was collected from the holding bags, soaked in water, and then dissected with tweezers and probe. Obvious seeds and arthropod remains were separated and, if possible, identified.

Lewin's Honeyeaters were handled a total of 281 times between August 1978 and March 1984 and excreta was collected from most of these birds: of interest was the discovery that two birds defecated shells of the esturine gastropod *Littorina scabra*. Two shells were defecated by one bird on 7 May 1983, together with seeds of the Ruby Saltbush *Enchylaena tomentosa* and *Lantana camara*. Another bird defecated a single shell of *L. scabra* on 23 July 1983, together with one seed of the Broad-leaf Pepper Tree *Schinus terebinthifolia*. All three gastropod shells were about 4 mm in length.

L. scabra has a snail-like shell and is illustrated, for example, by Coleman (1977) and Leah and Turner (1977). It occurs not uncommonly, but patchily, on mangroves at Cowiebank. Only a few shells as small as those defecated by the honeyeaters have been located at Cowiebank.

The Ruby Saltbush occurs as a prostrate shrub along much of the landward edge of mangrove and salt-marsh areas at Cowiebank and the fruits are occasionally eaten by Lewin's Honeyeaters. As the first two *L. scabra* were defecated with 15 *E. tomentosa* seeds, it was speculated that the *L. scabra* were ingested while the bird was feeding on *E. tomentosa* fruits. However I have been unable to locate *L. scabra* on *E. tomentosa* at Cowiebank, although it may be abundant elsewhere in salt-marsh vegetation at suitable tide levels (David Reid, pers. comm.). It thus seems likely that the *L. scabra* were taken from mangroves. Insects form a significant portion of the food of Lewin's Honeyeaters and it is possible that small *L. scabra* are ingested whenever the birds encounter them whilst seeking insects amongst the mangroves. Esturine gastropods do not appear to have been recorded previously as an item of food for any species of honeyeater.

Acknowledgements

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References

- Coleman, N. (1975), What Shell is That? Hamlyn, Dee Why West.
- Leah, R. and T. Turner (1977), Mangroves of Australia. University of Queensland Press, St Lucia.
- Liddy, J. (1982), 'Food of the Mistletoebird near Pumicestone Passage, south-eastern Queensland,' *Corella* 6: 11-15.

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