

The Australian Museum Lord Howe Island Expedition 2017—Freshwater Fishes

SALLY E. READER*, AMANDA C. HAY AND MARK A. MCGROUTHER

Ichthyology, Australian Museum Research Institute,
Australian Museum, 1 William Street, Sydney NSW 2010, Australia
sally.reader@austmus.gov.au

ABSTRACT. Historically, three species of freshwater fishes have been recorded from Lord Howe Island, Longfin Eel, *Anguilla reinhardtii*, Southern Shortfin Eel, *Anguilla australis* and Common Galaxias, *Galaxias maculatus*. Both eel species are widespread throughout the island. The Common Galaxias was collected in 1889 (Australian Museum record) and 1962 (Allen *et al.*, 1976). In 1989, Common Galaxias was recorded in the lagoon seaward of Soldiers Creek by Ian Hutton (pers. comm.). During the Australian Museum Expedition in 2017, both eel species were recorded however Common Galaxias were not found. Sampling for fishes was conducted in all known freshwater creeks and drainages on the Island, except for Erskine Valley and an unnamed creek on the eastern side of Mt Lidgbird.

KEYWORDS. Freshwater; Fishes; Eel; *Galaxias*.

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Introduction

During the week of 4–11 March, 2017, Australian Museum Ichthyology staff, Amanda Hay, Mark McGrouther and Sally Reader, surveyed the freshwater fishes of Lord Howe Island. The waterways are typified by short coastal streams, (some with steep inclines initially) and erratic flows often reliant on seasonal rainfall. Many of the upper reaches of streams consist of a series of pools with the substrate often of rock, gravel and sand. The upper catchments are heavily timbered, the watercourses shaded and large amounts of organic matter may be present in the streams. Waterways flowing onto the coastal plain, such as Soldiers Creek on the western side of the island, are characterized by muddy substrates. The lower catchment vegetation is typified by open forest, cattle grazing pasture and grasslands. As the streams reach the coast, tidal influence causes salinity fluctuations.

Previous surveys of the fishes of Lord Howe Island have focused solely on marine species (Allen *et al.*, 1976). The 2017 expedition was the first attempt at a comprehensive survey of all accessible freshwater streams.

Materials and methods

Fishes were collected using backpack electrofisher, dip nets, single-operator seine, two-person fine-mesh seine and baited minnow traps. A representative of each species of fish was retained from most creeks. When identifications were unable to be made in situ the specimens were retained and identified in the laboratory. Additional fishes were identified and quickly returned to the capture location. Fishes retained as museum vouchers were euthanized in accordance with Australian Museum Animal Care and Ethics Approval