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The Late Cenozoic Passerine Avifauna from Rackham's Roost Site, Riversleigh, Australia

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ABSTRACT. The Riversleigh World Heritage Area, north-western Queensland, is one of the richest Cenozoic deposits in Australia for passerine fossils. Most of the Riversleigh passerine remains derive from the late Cenozoic Rackham's Roost Site. Here we describe 38 fossils from this site, which represent eight extant families of passerine birds. These fossils include the oldest records of Maluridae (fairywrens and allies), Acanthizidae (acanthizid warblers), Pomatostomidae (Australo-Papuan babblers), Petroicidae (Australasian robins), Estrildidae (estrildid finches), Locustellidae (songlarks and grassbirds) and Acrocephalidae (reed warblers) in Australia, and the oldest records globally of Maluridae, Acanthizidae, Pomatostomidae, Petroicidae and Estrildidae. The fossils also include the oldest known representatives of the major radiation Passerida sensu stricto in the Australian fossil record, indicating that the second dispersal event of this group had already occurred in this region at least by the early Pleistocene. In describing the Rackham's Roost fossils, we have identified suites of postcranial characters that we consider diagnostic for several Australian passerine families. These osteological characters can be used in future palaeontological, morphological and phylogenetic studies. The overrepresentation of small animals and the fragmentary condition of their remains suggests that the extant carnivorous Ghost Bat, Macroderma gigas (Megadermatidae) was the primary accumulator of the Rackham's Roost assemblage. The taxonomic composition of the Rackham's Roost passerine avifauna corroborates the palaeoenvironmental interpretation of this site as open woodland with a grassy understorey, perhaps next to a riparian forest. These passerine remains also provide a record of the avian component of the endangered Ghost Bat's diet in this part of northern Australia, an area from which it has recently disappeared.

KEYWORDS. Passeriformes; fossil bird; osteology; late Cenozoic; Riversleigh; Australia

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