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Australian Museum Surveys of the Vertebrate Fauna of Coolah Tops National Park, NSW

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Abstract. Coolah Tops, c. 360 km northwest of Sydney, at the western end of the Liverpool Range, in central western New South Wales, is a fertile basalt plateau that rises to over 1000 m, and so is cooler and wetter than the surrounding drier and hotter western slopes. It represents a western outlier of tall moist montane forest and may therefore have served as a mesic refuge during arid climatic cycles. Despite its high biodiversity and biogeographical interest, Coolah Tops National Park and the surrounding area was very poorly represented in natural history museum collections. This report details the results of two field trips that Australian Museum Research Institute (AMRI) vertebrate staff made to Coolah Tops in May and November 2018. During these surveys, 109 vertebrate species were recorded in the National Park. In total, 160 specimens and associated tissues of 39 species were added to Australian Museum collections. An additional 51 tissue samples from three bird and six mammal species, as well as 13 skeletal remains of six mammal species were also added. This field work has continued to document the vertebrate biodiversity of Coolah Tops National Park and has significantly increased the AM's holding of specimens and genetic samples from this biologically significant area of NSW. Some of this recently collected material has already been incorporated into several research projects and it will continue to be utilized by AMRI and other researchers for decades to come.

Introduction

Despite its high biodiversity, the phylogeography of mesic southeastern Australia remains poorly understood (Byrne *et al.*, 2011). In eastern New South Wales, the role of the peaks of the Great Dividing Range in providing mesic refugia during past aridity cycles and the impacts of major river valleys as barriers to gene flow in shaping the phylogeography of the region is only just being recognized and explored (Chapple *et al.*, 2011; Frankham *et al.*, 2012; Hazlitt *et al.*, 2014). However, ongoing research is hampered by a lack of suitable samples from key taxa and areas.

Coolah Tops, c. 360 km northwest of Sydney, in central western New South Wales, lies at the western end of the Liverpool Range (Fig. 1), and is a fertile basalt plateau that rises to over 1000 m elevation (NPWS, 2002). As Coolah Tops is cooler and wetter than the surrounding lowlands, it is likely to have served as a mesic refuge for fauna and flora during previous arid climatic cycles. The tall moist forests of Coolah Tops are in contrast to the drier forests and woodlands that dominate the surrounding lowlands (Kavanagh, 1995). However, this close proximity of different habitats has resulted in an area of great biological interest, where eastern and western faunas occur in close proximity and sometimes intermingle.

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