



## ***Atelophyllodes* gen. n., a new feather mite genus of the family Proctophyllodidae (Astigmata: Analgoidea) from lyrebirds (Passeriformes: Menuridae)**

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### **Abstract**

We describe a new feather mite genus *Atelophyllodes* gen. n. (Proctophyllodidae: Proctophyllodinae) with two new species from lyrebirds (Passeriformes: Menuridae) in Australia: *Atelophyllodes menurae* sp. n. (type species) from *Menura novaehollandiae* Latham, 1802, and *A. atyeoi* sp. n. from *M. alberti* Bonaparte, 1850. The unique features of *Atelophyllodes* that differentiate it from all other described genera of the subfamily Proctophyllodinae involve the structure of opisthosomal lobes in males: lobes are short and wide, with three pairs of extensions bearing bases of setae *h*<sub>2</sub>, *h*<sub>3</sub> and *f*<sub>2</sub>, and lack terminal lamellae on their posterior margins.

**Key words:** Proctophyllodinae, Australian endemics, basal oscines

### **Introduction**

The family Proctophyllodidae, the most species-rich family of feather mites, currently includes over 400 species in 40 genera and 2 subfamilies (Gaud & Atyeo 1996; Hernandez *et al.* 2007; Mironov 2009). Most representatives of this family inhabit large feathers with well developed vanes, such as the primary and secondary flight feathers, tail feathers, and greater covert feathers of wings, where they are located in the corridors created by barbs on the ventral side of the vanes. The exceptions are a few highly specialized genera in the subfamily Pterodectinae, which live inside quills of hummingbirds (Trochilidae). Proctophyllodids are almost entirely restricted to passerines (Passeriformes) and hummingbirds (Apodiformes: Trochilidae), with a few species known from other bird orders (Caprimulgiformes, Charadriiformes, Coraciiformes, Gruiformes, Musophagiformes, Piciformes, Psittaciformes and Trogoniformes) (Gaud & Atyeo 1996). Both subfamilies, Proctophyllodinae and Pterodectinae, appear to have originated on the common ancestor of passerines and have diversified in parallel with this vast group of hosts, with secondary colonizations of non-passerine hosts (Mironov 2009). Many passerine species bear representatives of both Proctophyllodinae and Pterodectinae, which sometimes live on the same feathers but occupy different locations along the vane (Mironov 2009; also numerous field observation by SM of live birds of the families Alaudidae, Dendrocolaptidae, Emberizidae, Sylviidae and Turdidae).

Despite the diversity of Australian birds, there has been very little exploration of their proctophyllodid fauna. This is particularly true for Australia's endemic passerine families. For example, up to now, lyrebirds (Menuridae), which represent the earliest lineage of oscines (Jønsson & Fjeldså 2006), were known to host only a single species from the subfamily Pterodectinae (the monotypic genus *Megalodectes* Park & Atyeo, 1971) (Trouessart 1885; Park & Atyeo 1971). Here we describe two new species of proctophyllodids that represent a new genus of the subfamily Proctophyllodinae found on the two extant species of lyrebirds.