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New Harpirhynchinae Dubinin (Acariformes: Harpirhynchidae) —intracutaneous and feather-base parasites of birds

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Abstract

Seven new species of intracutaneous parasites of the subfamily Harpirhynchinae Dubinin (Acariformes: Cheyletoidea: Harpirhynchidae) are described: *Anharpyrhynchus elizae* **sp. nov.** from *Cyanocitta cristata* (type host), *Cyanocitta stelleri* (Passeriformes: Corvidae), and *Colaptes auratus* (Piciformes: Picidae) from the USA; *Anharpyrhynchus apodus* **sp. nov.** from *Lichmera indistincta* (type host) and *Phylidonyris novaehollandiae* (Passeriformes: Meliphagidae) from Australia; *Anharpyrhynchus lukoschusi* **sp. nov.** from *Manorina flavigula* (type host) and *Certhionyx pectoralis* (Passeriformes: Meliphagidae) from Australia; *Fainharpirhynchus legatus* **sp. nov.** from *Legatus leucophaeus* (Passeriformes: Tyrannidae) from Trinidad and Tobago; *Fainharpirhynchus mossi* **sp. nov.** from *Myiarchus crinitus* (Passeriformes: Tyrannidae) from an unknown locality in North America; *Perharpyrhynchus caprimulgus* **sp. nov.** from *Caprimulgus fossii* (Caprimulgidae: Caprimulgiformes) from Mozambique; *Perharpyrhynchus elseyornis* **sp. nov.** from *Elseyornis melanops* (Charadriiformes: Charadriidae) from Australia. Keys to females of the genera *Anharpyrhynchus*, *Fainharpirhynchus*, and *Perharpyrhynchus* are provided and data on hosts and distributions of all known intracutaneous harpirhynchines are summarized. In addition, a new non-subcutaneous harpirhynchine is described: *Trichorhynchiella myiarchus* **sp. nov.** from feather bases of *Myiarchus crinitus* (Passeriformes: Tyrannidae) from an unknown locality in North America.

Key words: Acari, birds, mites, intracutaneous parasites, systematics

Introduction

The subfamily Harpirhynchinae Dubinin (Acariformes: Cheyletoidea: Harpirhynchidae) includes about 76 species in 11 genera represented by permanent parasites of birds belonging to 16 orders (Skoracki *et al.* 2012; Bochkov & Galloway 2013; Bochkov & OConnor 2013, 2014). Most of these species are ectoparasites living on the surface of the host's skin belonging to the genus *Harpyrhynchoides* (40 species; however, a few are able to form intracutaneous cysts [Fain 1994]). Harpirhynchine mites of three genera live at the bases of the host feathers: *Metharpyrhynchus* (4 species), *Neharpyrhynchus* (15 species), and *Trichorhynchiella* (2 species). Representatives of the remaining seven genera live within the skin of their hosts and induce dermal capsules or skin lesions. The great majority of these intracutaneous harpirhynchines were described and illustrated by Fain (1972, 1976, 1995) and, to a lesser degree, Fritsch (1954). Only two species of the genus *Harpirhynchus* (Bochkov & Literak 2006; Bochkov & Mertins 2010) plus the monobasic genus *Fainharpirhynchus* Bochkov and Galloway, 2013 have been described since (Bochkov & Galloway 2013).

In this work we describe seven new species of intracutaneous harpirhynchines belonging to the genera *Anharpyrhynchus*, *Fainharpirhynchus* and *Perharpyrhynchus*. In addition, a third species of the feather-base dwelling genus *Trichorhynchiella* is also described. Keys to species of these genera are provided and information about intracutaneous harpirhynchines is summarized in Table 1. Material for all new species was gathered by the

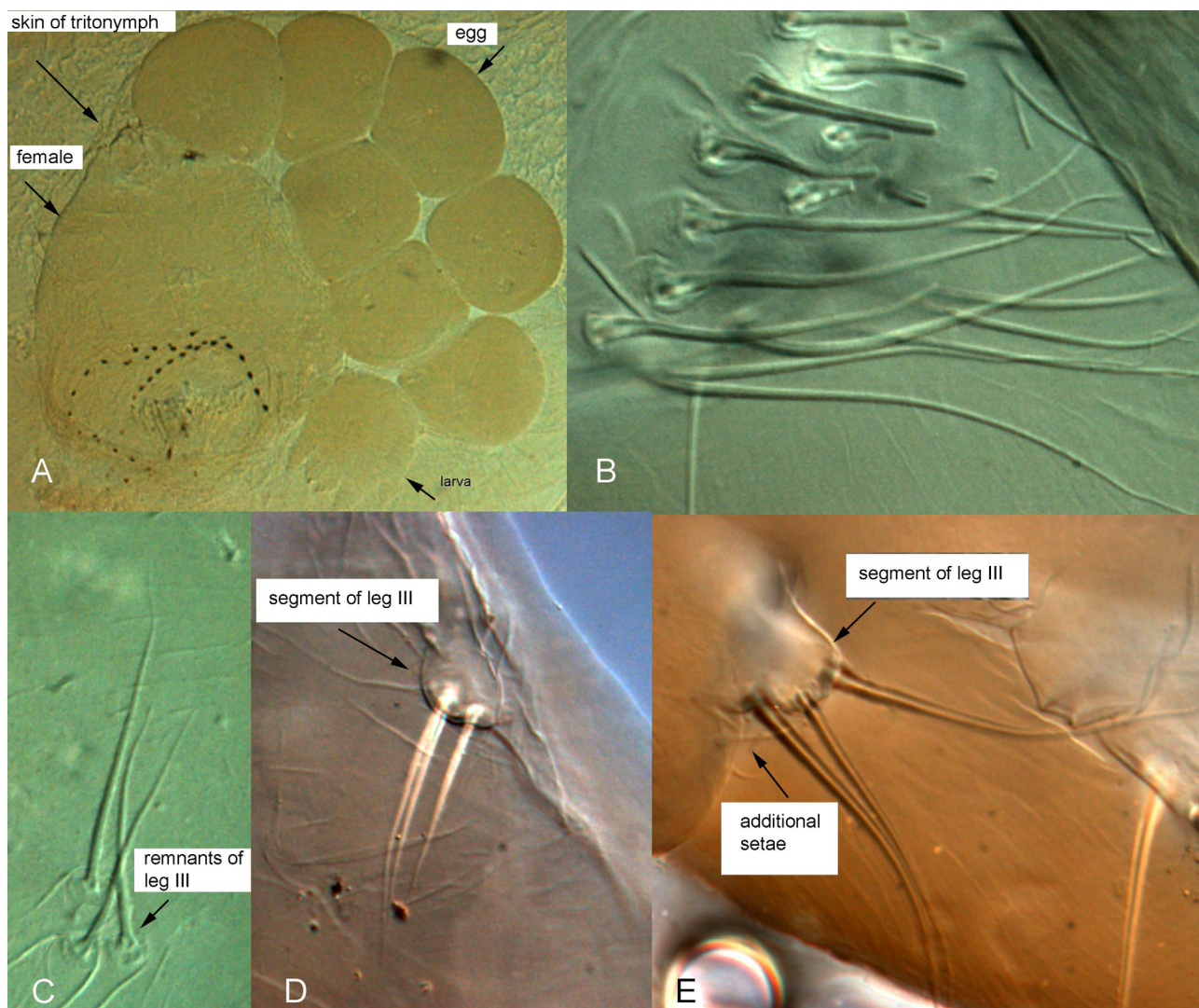


FIGURE 19. *Anharpyrhynchus* ssp. nov., female. *Anharpyrhynchus apodus* sp. nov. (A–C): A—female, eggs and larva in tritonymphal skin; B—leg IV in dorsal view, C—leg III in dorsal view; *Anharpyrhynchus lukoschusi* sp. nov. (D): leg III in dorsal view; *Anharpyrhynchus monstrosus* (Fritsch) (E): leg III in dorsal view.

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