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New family host and records of *Acanthocrios furnarii* (Cordero & Vogelsang, 1928) (Hemiptera: Cimicidae) from Argentina, and implications in the transmission mechanism of cimicid bugs among birds' nests

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Abstract

Acanthocrios furnarii (Cordero & Vogelsang, 1928) [Hemiptera: Cimicidae: Haematosiphoninae] is an ectoparasite on avian hosts from Argentina and Uruguay. It has been mostly found in mud nests of *Furnarius rufus* (Gmelin, 1788) [Aves: Furnariidae], but its true hosts are some of the inquiline birds that use *F. rufus* nests. These inquiline hosts belong to the families Emberizidae, Hirundinidae, Icteridae, Passeridae, and Troglodytidae. Outside *F. rufus* mud nests, *A. furnarii* has been found in nests of other Furnariidae, Hirundinidae, and Passeridae. The present work adds the first nonpasserine host (Falconidae) of *A. furnarii*, together with new records in La Pampa, Argentina. The transmission mechanism of *A. furnarii*, together with all other cimicid bugs from Argentina and adjacent countries, is increased considering this new host; and we also take into account the birds that nidificate in nest boxes, the cavity-nesting birds in trees and earth, and the inquiline birds in stick nests of Furnariidae and Psittacidae.

Key words: bird bugs, Hemiptera, Cimicidae, Falconidae, new host, new records, Argentina

Introduction

Acanthocrios furnarii (Cordero & Vogelsang, 1928) [Hemiptera: Cimicidae: Haematosiphoninae] is an ectoparasite on avian hosts from Argentina and Uruguay. It has been mostly found in mud nests of *Furnarius rufus* (Gmelin, 1788) [Aves: Furnariidae], but its true hosts are the birds of the families Emberizidae, Hirundinidae, Icteridae, Passeridae, and Troglodytidae which regularly use the nests of *F. rufus* (Table 1). Outside the nests of *F. rufus*, *A. furnarii* was found in a stick nest of Furnariidae, in nests of Hirundinidae and Passeridae (Table 1), and inside nests boxes occupied by Emberizidae, Hirundinidae, and Passeridae (Table 2). Based on records of birds that nidificate inside nests of other birds and known hosts, the probable transmission mechanism of *A. furnarii* among birds' nests was proposed for the first time by Turienzo & Di Iorio (2007), and later enlarged and partially corroborated by the addition of new bird hosts (Turienzo & Di Iorio 2010). At the same time, Turienzo & Di Iorio (2010) differentiate between the places where *A. furnarii* were found but the hosts were not verified, and the nests made by bird hosts and infested with *A. furnarii* (Table 1).

The present work adds the first nonpasserine host (Falconidae), together with a new provincial record in Argentina. The transmission mechanism is enlarged considering this new host, and also taking into account the birds that nidificate in nest boxes, the cavity-nesting birds in trees and earth, and the inquiline birds in stick nests of Furnariidae and Psittacidae. An extended probable transmission mechanism of cimicid bugs among birds' nests from Argentina is provided, including not only *A. furnarii*, but also all other cimicid bugs on birds from Argentina and adjacent countries (Fig. 1).