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Chewing lice of the genus *Myrsidea* (Phthiraptera: Menoponidae) from New World warblers (Passeriformes: Parulidae) from Costa Rica, with descriptions of four new species

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Abstract

Four new species of chewing lice of the genus *Myrsidea* parasitic on members of the avian family Parulidae are described. They and their type hosts are: *Myrsidea basileuteri* ex *Basileuterus rufifrons*, *M. myiobori* ex *Myioborus miniatus*, *M. paleno* ex *Parkesia motacilla* and *M. zeledoni* ex *Phaeothlypis fulvicauda*. Records of undescribed *Myrsidea* representing new louse-host associations for *Basileuterus tristriatus* and *Parula pitiayumi* are also discussed.

Key words: Amblycera, Menoponidae, *Myrsidea*, lice, new species, Parulidae, new host-louse associations, Costa Rica

Introduction

The New World warblers belong to the family Parulidae comprising 114 species, with 53 of them recorded in Costa Rica (Garrigues & Dean 2007). Despite the high proportion of Costa Rican species, data concerning their chewing lice are scarce and incomplete. At present only one species of chewing lice of the genus *Myrsidea*—*M. ridulosa* (Kellogg & Chapman, 1899)—has been reported from a parulid host, *Dendroica petechia* Linnaeus, from California, U.S.A. (Kellogg & Chapman 1899: 135) and the Galapagos Islands (Palma & Price 2010). The aim of this paper is to present new data on the species composition and distribution of chewing lice of the genus *Myrsidea* found on New World warblers in Costa Rica, including the description of four new species (Table 1).

Material and methods

We conducted fieldwork during the 2004, 2009 and 2010 at seven study sites in Costa Rica. For detailed locations and methods of chewing louse study see Sychra *et al.* (2006) and Kounek *et al.* (2011).

The taxonomy of the birds follows Clements *et al.* (2010). In the following descriptions, all measurements are in millimeters. Abbreviations for dimensions are TW, temple width; HL, head length at midline; PW, prothorax width; MW, metathorax width; AW, abdomen width at level of segment IV; TL, total length; ANW, female anus width; GW, male genitalia width; GSL, genital sac sclerite length. The new species are attributed to the first two authors only. The type specimens of the new species described in this paper are deposited in the National Biodiversity Institute, Santo Domingo de Heredia, Costa Rica (INBio). Other material is deposited in the Moravian Museum, Brno, Czech Republic (MZM).

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