

SYSTEMATICS, MORPHOLOGY AND PHYSIOLOGY

Chewing Lice of the Genus *Myrsidea* Waterston (Phthiraptera: Menoponidae) from the Emberizidae and Thraupidae (Passeriformes) in Mato Grosso do Sul, BrazilOLDRICH SYCHRA¹, IVAN LITERAK¹, MIROSLAV CAPEK²

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Malófagos do Gênero *Myrsidea* Waterston (Phthiraptera: Menoponidae) de Emberizidae e Thraupidae (Aves: Passeriformes) no Mato Grosso do Sul

RESUMO - O presente trabalho registra pela primeira vez três espécies de malófagos do gênero *Myrsidea* coletadas de um emberezídeo e dois traupídeos no Mato Grosso do Sul. Caracteres morfológicos de *M. seminuda* são adicionados para a última redescricao da espécie e uma nova chave para identificação de machos do grupo de espécies “*bonariensis*” é apresentada.

PALAVRAS-CHAVE: Cavalaria, sanhaço, pipira

ABSTRACT - This paper presents the first record of three chewing lice species of the genus *Myrsidea* collected from one emberizid and two thraupid hosts in Mato Grosso do Sul, Brazil. Morphological characters of *M. seminuda* are added for the last redescription of this species and a new key to males of ‘*bonariensis* species group’ is presented.

KEY WORDS: Bunting, tanager

Buntings (Emberizidae) and tanagers (Thraupidae and the ensuing “*Genera Incertae Sedis*”) are among the most speciose families within the Passeriformes (Isler & Isler 1999, Dickinson 2003). Of the 510 known species within these passerine families, 171 species occur in Brazil (Sigrist 2006). Although Price & Dalglish (2006, 2007) and Sychra *et al* (2007) reviewed the species of *Myrsidea* Waterston parasitic on passerine birds of the families Thraupidae and Emberizidae, to date no species of this chewing louse genus have been reported from both host families hosts in Brazil. The purpose of this paper is to supplement the papers mentioned above, adding the findings of three species of *Myrsidea* from one emberizid and two thraupid hosts from Brazil.

We conducted fieldwork during 2006 in Mato Grosso do Sul (22°31’S, 53°30’W), Brazil. Birds were captured by mist-netting and chewing lice were collected by visual examination of feathers. For identification, they were subsequently slide-mounted in Canada balsam as permanent slides, following the technique in Palma (1978). Identification of the chewing lice was based on papers by Price & Dalglish (2006, 2007) and Sychra *et al* (2007). The nomenclature of the lice follows Price *et al* (2003) and the bird taxonomy to the family level follows Dickinson (2003). The specimens mentioned in this paper are

deposited in the Moravian Museum, Brno, Czech Republic (MZM) and in the personal collection of the first author.

A total of 37 individuals of 10 bird species belonging to the families Emberizidae and Thraupidae were examined. Fifteen birds of three species were parasitised with chewing lice and are described below.

Myrsidea coronae Price & Dalglish

Type host. *Paroaria coronata* (Miller) (Emberizidae)

Material studied. Six males, seven females, 12 nymphs, ex. *Paroaria capitata* (Orbigny & Lafresnaye) (Emberizidae); **BRAZIL:** Ivinhema River (22°31’S, 53°30’W), Ivinhema, Mato Grosso do Sul, 12.viii.2006, Literák, I. leg.

Remarks. This is the first record of chewing lice from *Paroaria capitata*. Six of eight birds examined were parasitised by *M. coronae*.

Myrsidea ramphoceli Price & Dalglish

Type host. *Ramphocelus carbo* (Pallas) (Thraupidae)

Material studied. Six males, two females, eight nymphs, ex. *Ramphocelus carbo*; **BRAZIL:** Nova Andradina (22°15'S, 53°20'W), Mato Grosso do Sul, 30.vii.2006 and 10.viii.2006; Literák, I. leg. Two males, two females, five nymphs; ex. same host species; Ivinhema River (22°31'S, 53°30'W), Ivinhema, Mato Grosso do Sul, 12.viii.2006, Literák, I. leg.

Remarks. This is the first record of *M. ramphoceli* from Brazil. Six of 12 birds examined were parasitised by *M. ramphoceli*.

Myrsidea seminuda Eichler

Type host. *Thraupis palmarum* (Wied) (Thraupidae)

Material studied. Two males, one female, nine nymphs, ex. *Thraupis sayaca* (L.); **BRAZIL:** Nova Andradina (22°15'S, 53°21'W), Mato Grosso do Sul, 29-30.vii.2006, Literák I & Čapek M leg.

Remarks. This is the first record of *M. seminuda* from Brazil. All three birds examined were parasitised by *M. seminuda*. Although our specimens have fit partially for the redescription of *M. seminuda* presented by Price & Dalglish (2006) (that is, same shape of tergites and relative lengths of the postspiracular setae), they differ by fewer number of tergal setae and smaller dimensions as follows [tergal setae counts and dimensions mentioned by Price & Dalglish (2006) are in parenthesis]:

Female. Tergal setae: I, 27 (27-38); II, 25 (30-41); III, 22 (31-36); IV, 25 (28-37); V, 29 (33-39); VI, 29 (29-36); VII, 23 (27-33); VIII, 16 (16-22). Sternal setae on II, 15 medioanterior and 26 marginal, including cluster of four heavy setae on each side; III, 36; IV, 34; V, 33; VI, 26; VII of subgenital plate, 14; remainder of plate with 12 marginal, 11 anterior setae.

Dimensions (in mm). Preocular width, 0.35; temple width, 0.45 (0.45-0.47); head length, 0.30 (0.31-0.32); prothorax width, 0.28 (0.29-0.31); metathorax width, 0.44 (0.43-0.46); abdomen width at level of segment IV, 0.58 (0.56-0.61); anus width, 0.20 (0.18-0.20); total length, 1.51 (1.48-1.59).

Male. Metanotum with 10 setae on posterior margin. Tergal setae: I, 23-25 (25-29); II, 26-29 (30-35); III, 28-30 (34-42); IV, 29-33 (34-42); V, 31-32 (34-42); VI, 31 (36-39); VII, 28 (31-33); VIII, 19-20 (21-22). Sternal setae on II, 8-11 medioanterior and 18-19 marginal, including cluster of three heavy setae on each side; III, 27-34; IV, 30-33; V, 29; VI, 25; VII, 16-19; VIII, 8-11; remainder of plate, 10-11.

Dimensions (in mm). Preocular width, 0.32-0.33; temple width, 0.41-0.42 (0.41-0.43); head length, 0.27-0.29 (0.28-0.30); prothorax width, 0.26-0.27 (0.27-0.29); metathorax width, 0.36 (0.34-0.40); abdomen width, 0.46-0.47 (0.44-0.46); total length, 1.23-1.25 (1.24-1.28); genitalia width (at level of bases of parameres), 0.10; genital sac sclerite length, 0.09.

These characters increase our knowledge of intraspecific morphological variability of *M. seminuda*. The female collected could be without doubt placed to the couplet 5 in the key to females by Price & Dalglish (2006) and to modified couplet 5a by Sychra et al (2007). On the other hand, whether we try to identify males collected using the key by Price & Dalglish (2006), their couplet 3 is totally unusable. We suggest replace couplets 3 and 4 by Price & Dalglish

(2006) at the end of the key to males of 'bonariensis species group' as follows:

Key to the Males of *Myrsidea* from Thraupidae

- 1 Without well-developed median gap in majority of rows of tergal setae..... 2
 - With well-developed median gap in most rows of tergal setae..... 13
- 2 Metanotum with six, rarely seven, marginal setae, tergite VIII with eight *laciniaesternata* Eichler
 - Metanotum with at least eighth marginal setae, tergite VIII with > 10..... 3
- 3 Tergites IV-VI with not > 18 setae.....
 - *ophthalmici* Price & Dalglish
 - Tergites IV-VI with at least 19 setae..... 4
- 4 Temple > 0.43 wide..... *melanopsis* Price & Dalglish
 - Temple < 0.43 wide..... 5
- 5 Tergite IV with not > 29 setae 6
 - Tergite IV with at least 30 setae..... 8
- 6 Tergite I with < 14 setae, VIII with 14-16
 - *suttoni* Price & Dalglish
 - Tergite I with at least 16 setae, VIII with 15-22..... 7
- 7 Tergite III with > 24 setae; genital sac sclerite as in fig 7 [in Price & Dalglish 2006: 7]; from *Euphonia*
 - *violaceae* Price & Dalglish
 - Tergite III with not over 24 setae; genital sac sclerite as in fig 11 [in Price & Dalglish 2006: 7]; from *Tangara*
 - *cayanae* Price & Dalglish
- 8 Tergite I with < 20 setae *icterocephalae* Price & Dalglish
 - Tergite I with at least 20 setae..... 9
- 9 Genital sac sclerite as in fig 23 [in Price & Dalglish 2006: 17]..... *tangarae* Price & Dalglish
 - Genital sac sclerite as in fig 3 or fig 11 [in Price & Dalglish 2006: 3 and 7]..... 10
- 10 Postspiracular seta on VII as long as on III and V-VI, much shorter than on IV and VIII..... 11
 - Postspiracular seta on VII as long as on IV, much longer than on III and V-VI..... 12
- 11 Tergite VI < 35 setae, tergite VII < 30, temple width at least 0.41..... *cianocephalae* Price & Dalglish
 - Tergite VI with at least 37 setae, tergite VII with > 31, temple width < 0.40..... *larvatae* Sychra
- 12 Total length at least 1.24, from *Thraupis*... *seminuda* Eichler
 - Total length < 1.21, from *Tangara*.....
 - *bonariensis* Malcomson
- 13 Is represented by couplet 12 by Price & Dalglish (2006).

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References

- Dickinson E C (ed) (2003) The Howard and Moore complete checklist of the birds of the world. 3rd edition. Christopher Helm, London, 1039p.
- Isler M I, Isler P R (1999) Tanagers. Christopher Helm, London, 406p.
- Palma R L (1978) Slide mounting of lice: a description of the Canada balsam technique. N Z Entomol 6: 432-436.
- Price R D, Dalglish R C (2006) *Myrsidea* Waterston (Phthiraptera: Menoponidae) from tanagers (Passeriformes: Thraupidae), with descriptions of 18 new species. Zootaxa 1174: 1-25.
- Price R D, Dalglish R C (2007) *Myrsidea* Waterston (Phthiraptera: Menoponidae) from the Emberizidae (Passeriformes), with descriptions of 13 new species. Zootaxa 1467: 1-18.
- Price R D, Hellenthal R A, Palma R L (2003) World checklist of chewing lice with host associations and keys to families and genera, p.1-448. In Price R D, Hellenthal R A, Palma R L, Johnson K P, Clayton D H, The chewing lice: world checklist and biological overview. Illinois Natural History Survey Special Publication 24, x + 501p.
- Sigrist T (2006) Aves do Brasil: uma visão artística. Avis Brasilis, São Paulo, Brasil, 672p.
- Sychra O, Literak I, Capek M, Havlicek M (2007) Chewing lice (Phthiraptera) from buntings, cardinals and tanagers (Passeriformes: Emberizidae, Cardinalidae, Thraupidae) from Costa Rica, with descriptions of two new species of the genus *Myrsidea* (Phthiraptera: Menoponidae). Zootaxa 1631: 57-68.

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