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Picobia ictericus sp. n., an ectoparasite of two icterid bird species
from Brazil
(Acari: Prostigmata: Syringophilidae)

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ABSTRACT. A new species of the genus *Picobia* HALLER (Acari: Syringophilidae: Picobiinae) from icterid birds (Icteridae) is described and figured: *Picobia ictericus* sp. n. parasitizing *Pseudoleistes guirahuro* (VIEILLOT) and *Cacicus chrysopterus* (VIGORS) from Brasil. This new species differs from closely related *P. ephianura* SKORACKI et al., 2008 by the length of propodonal setae *vi* 45-55, *ve* 125-145 and *si* 165-175, and the length ratio of terminal setae *fl:hl* 1:1.

Key words: acarology, taxonomy, Syringophilidae, quill mites, *Picobia*, birds, Icteridae.

INTRODUCTION

The mites of the family Syringophilidae are obligatory and permanent ectoparasites of birds. The family is subdivided into two subfamilies, Syringophilinae Lavoipierre represented by 36 genera and Picobiinae JOHNSTON & KETHLEY with two genera (BOCHKOV et al. 2004). The members of the genus *Picobia* HALLER (subfamily Picobiinae) inhabit exclusively quills of body feathers. Up to date, 19 named species of this genus have been recorded from birds of six orders: Piciformes, Columbiformes, Galliformes, Psittaciformes, Upupiformes and Passeriformes (SKORACKI et al. 2004). Until now, picobiin mites fauna of South America has been represented by only one species - *Picobia brotogeris* FAIN et al., 2000 described from *Brotogeris jugularis* (Psittaciformes: Psittacidae) in Brazil (FAIN et al. 2000).

In this paper, we give a description of the next species found in Brazil, *Picobia ictericus* sp. n. parasitizing body feathers of two icterid hosts (Passeriformes: Icteridae): *Pseudoleistes guirahuro* (VIEILLOT) and *Cacicus chrysopterus* (VIGORS).

MATERIAL AND METHODS

The material used in the study was acquired from the bird collection (dry skins) deposited in the Museum of Natural History, Wrocław, Poland (MNHW). Mites were mounted on slides in Hoyer's medium and examined using an Olympus BH2 light microscope with DIC (interference contrast phase) optics. All measurements, including scale bars in the figures are given in micrometers (μm). The idiosomal setation follows GRANDJEAN (1939) as adapted for Prostigmata by KETHLEY (1990). The system of nomenclature for leg chaetotaxy follows that proposed by GRANDJEAN (1944). The application of these chaetotaxic schemes to Syringophilidae was recently provided by BOCHKOV *et al.* 2008. The latin names of the birds follow HOWARD & MOORE (1980). Abbreviations for locations where the materials are deposited: Department of Animal Morphology, A. Mickiewicz University, Poznan, Poland (AMU), Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia (ZISP).

RESULTS

Family: Syringophilidae LAVOIEPIERRE, 1953
Subfamily: Picobiinae JOHNSTON & KETHLEY, 1973
Genus: *Picobia* HALLER, 1878

***Picobia ictericus* SKORACKI & GŁOWSKA sp. n.**
(Figs 1-9)

ETYMOLOGY

The name *ictericus* refers to the family name of the host – Icteridae.

TYPE MATERIAL

Female holotype, four female and four male paratypes (AMU-SYR.223) from quills of *Pseudoleistes guirahuro* (VIEILLOT); Brasil, 1896-1910. Type deposition. All type material is deposited at AMU. Host specimen is deposited at MNHW.

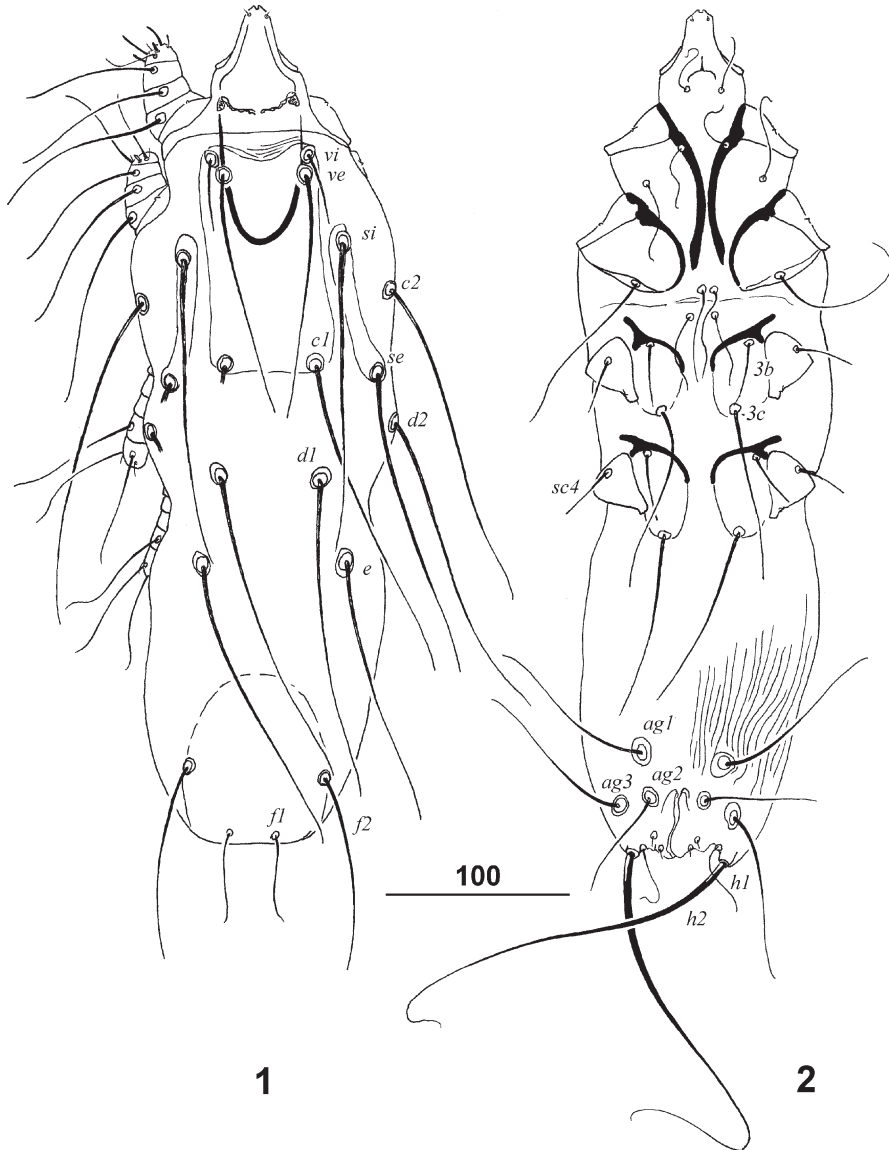
ADDITIONAL MATERIAL

Six females and two males (AMU-SYR.222) from the same habitat of *Cacicus chrysopterus* (VIGORS); Brasil, 1896-1910. All material is deposited at AMU except 2 females at ZISP. Host specimen is deposited at MNHW.

DIFFERENTIAL DIAGNOSIS

Picobia ictericus sp. n. is morphologically similar to *Picobia ephianura* SKORACKI *et al.*, 2008, described from *Ephianura aurifrons* GOULD (Passeriformes: Meliphagidae) from Australia (SKORACKI *et al.* 2008). In females of both species the hypostomal apex

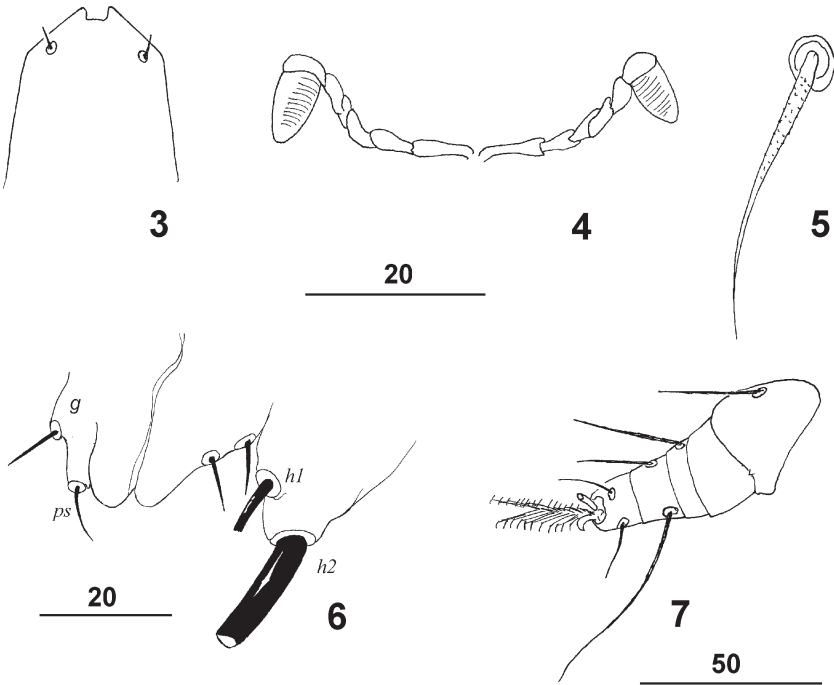
is tapering, the propodonotal shield is divided into three fragments, and one pair of pseudanal setae is present. This new species is distinguished by the following characters: in females of *Picobia ictericus* sp. n. the lengths of propodonotal setae *vi*, *ve* and *si* are 45-55, 125-145 and 165-175, respectively. The length ratio of terminal setae *fl*:*hl* is 1:1. In females of *Picobia ephianura*, the lengths of seta *vi*, *ve* and *si* are 20, 40 and 90 respectively. The length ratio of setae *fl*:*hl* is 1.8:1.



1-2. *Picobia ictericus* sp. n., female: 1 - dorsal view, 2 - ventral view

DESCRIPTION

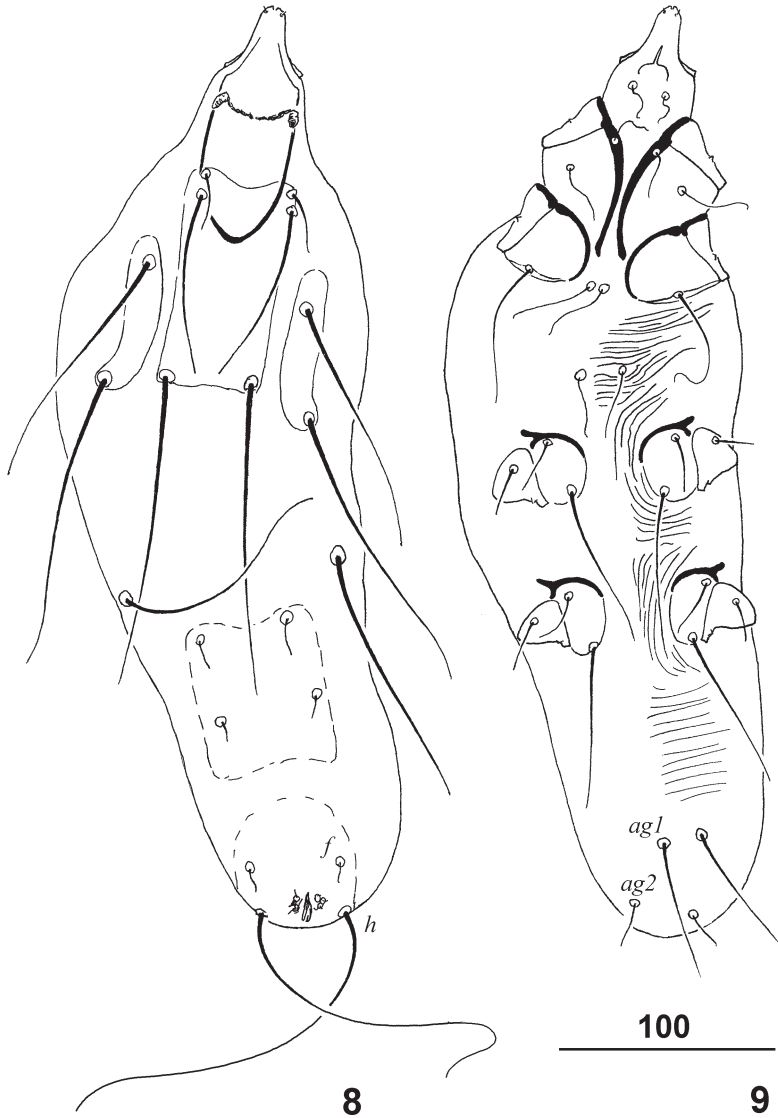
Female (Figs 1-7). Total body length of holotype 455 (455-470) in 4 paratypes. Gnathosoma. Hypostomal apex tapering (Fig. 3). Infracapitulum not punctuated. Peritremes M-shaped, each transverse branch with 5-7 chambers, each longitudinal branch short, with invisible borders between chambers (Fig. 4). Stylophore rounded posteriorly, 130 (120) long. Idiosoma. Propodonotal shield divided into 3 sclerites, two lateral fragments bearing bases of setae *si* and *se* and one median bearing bases of setae *vi*, *ve* and *cl* (Fig. 1). Setae *vi* situated anterior to level of setae *ve*. All idiosomal setae knobbed (Fig. 5). Length ratio of setae *vi:ve:si* 1:2.5:3. Setae *cl* bases located slightly anterior to level of setae *se*. Hysteronotal shield absent. Distances between *d2-d1* and *d1-e* subequal. Pygidial shield well developed, not punctuated. Length ratio of terminal setae *fl:f2* 1:2, *fl:h1* 1:1, *h1:h2* 1:4.6. Length ratio of aggenital setae *ag1:ag2:ag3* 1.5:1:1.5. Setae *ag1* situated anterior to level of setae *ag2*. One pair of genital setae and one pair of pseudanal setae present (Fig. 6). Legs. All coxal fields well sclerotized. All setae of legs I-IV knobbed. Setae *3c* 2.7 times longer than *3b*. Setae *tc'* and *tc''* subequal in length. Antaxial and paraxial members of claw pair similar in shape and size (Fig. 7). Lengths of setae: *vi* 55 (45-50); *ve* 140 (130-145); *si* 175 (165); *se* 180 (190); *cl* 180; *c2* 180 (190); *d1* 170 (165); *d2* 175 (180); *e* 170 (155-160); *fl* 50 (45);



3-7. *Picobia ictericus* sp. n., female: 3 - hypostomal apex in dorsal view, 4 - peritremes, 5 - ornamentation of dorsal idiosomal setae, 6 - vulva, 7 - leg III

f2 100 (85-100); *h1* 55 (45); *h2* 230 (230-235); *ag1* 85 (95-105); *ag2* 60 (55); *ag3* 85 (90); *tc'* 65 (60); *tc''* 75 (60); *sc4* 35 (35); *3b* 40 (35); *3c* 95 (95).

Male (Figs 8 and 9). Total body length 430. Gnathosoma. Hypostomal apex tapering. Peritremes and propodonotal region as in female. Idiosoma. Length ratio of *vi*:*ve*:*si* 1:3:4.3. Hysteronotal shield bearing bases of *d1* and *e* setae. Setae *d2* 13 times longer than *e*. Pygidial shield bearing setae *h1* and *h2*. Setae *ag1* 5 times longer than



8-9. *Picobia ictericus* sp. n., male: 8 - dorsal view, 9 - ventral view

ag2. Legs. Coxal fields I and II well sclerotized, III and IV weakly sclerotized. Setae *3c* 2.4 times longer than *3b*. Lengths of setae: *vi* (20-30); *ve* (85-100); *si* (125-140); *se* (135-145); *c1* (145-160); *c2* (145); *d1* (15-20); *d2* (120-135); *e* (10-15); *h2* (145); *agl* (55-70); *ag2* (15); *tc'* (45-50); *tc''* (50); *3b* (30-40); *3c* (65).

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