Revision of the genus *Psorus* Bergroth, 1914  
(Hemiptera: Pentatomidae: Discocephalinae) *

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Abstract

The monotypic genus *Psorus* Bergroth is revised and two new species from the Brazilian Amazon region are described and illustrated: *P. paraensis* sp. nov. (Pará State) and *P. manauara* sp. nov. (Amazonas State).

Key words: Heteroptera, Discocephalini, neotropics, new species, taxonomy

Introduction

The genus *Psorus* was established by Bergroth (1914) in the family Pentatomidae, subfamily Discocephalinae, to include *P. cassidiformis*, based on a female specimen from French Guyana. Rolston (1981) included it in the tribe Discocephalini. This genus is very poorly represented in entomological collections. Additional specimens found in Brazilian as well as in North American and European collections represent two new species, which are described in this paper.

Material and methods

Fourteen specimens were studied, belonging to the following collections: American Museum of Natural History, New York, New York, USA (AMNH); Coleção Zoológica Prof. Paulo Bünheim, Fundação Universidade do Amazonas, Manaus, Amazonas, Brazil (CZPB); Departamento de Zoologia, Universidade Federal do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil (UFRG); Instituto Nacional de Pesquisas da Amazônia, Manaus, Amazonas, Brazil (INPA); Museum National d’Histoire Naturelle, Paris, France (MNHN); Museu Paraense Emílio Goeldi, Belém, Pará, Brasil (MPEG); Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil (MZSP); National Museum of Natural History, Washington, D. C., USA (NMNH). Measurements are in millimeters. The terminology of the genitalia characters follows Dupuis (1970) and Becker and Grazia (1992).

*Psorus* Bergroth, 1914

*Psorus* Bergroth, 1914: 423–425; Rolston, 1981: 41
Type species: *Psorus cassidiformis* Bergroth, 1914 by monotypy.
Etymology: *psorus* = freckled

**Description.** Body of medium size (10.0–15.0); broadly oval, mildly convex above and beneath; surface hispid with short, fine, suberect stiff hairs arising between fine, somewhat dense dark brown punctures, giving a velvet aspect to dorsum. Dorsal and ventral surfaces variegated in yellow and brown. General color castaneous to ochraceous with dark brown to ferrugineous punctures, irregularly distributed or forming patches on posterior half of pronotum, scutellum and corium. **Head** slightly longer than median length of pronotum, feebly declivous, provided with anteocular, spatulate lobes exceeding width through eyes and preceded by a deep sinus; antelobular margins somewhat explanate and reflexed; juga elevated into crest centrally above apex of tyulus; eyes large, vertically elliptical in lateral aspect, substylate, and elevated above surrounding disc; interocellar distance three times distance from ocellus to eye. Antennae five-segmented, pubescent, reaching nearly to middle of scutellum; segment I not attaining apex of head, II shorter than I, almost half as long as III, IV, and V; V fusiform. antenniferous tubercles not visible from above. Antennal segments mostly castaneous with yellowish rings or macula: segment I with a median macula; II with basal and apical rings; III with median and apical rings; IV with broad median ring; segment V with basal and apical rings; in some specimens, segments I–III reddish. Bucculae arising anteriorly opposite antenniferous tubercles, moderately elevated posteriorly, parallel; buccular canal wide and deep. Rostrum reaching metacoxae; segment I short, not exceeding the anterior margin of proctiger: II shorter than III and IV combined. **Pronotum** about three times as wide as long medially, suberectiform in outline, lateral portions explanate, their margins arcuate; anterior apical angles reaching, at least, anterior margins of eyes and there provided with a small, acute lobe separated from margin by a deep narrow notch; surface slightly convex, with broad shallow transverse groove across middle of disc. Humeri weakly tumid, emarginate; posterior margin almost straight, posterior angles obsolescent. With small tumescence laterad. **Scutellum** long, nearly reaching apex of body, about one-half again as long as wide at base; frenum not reaching middle of scutellar lateral margins; base convex, with three tubercles; another prominent, median, obtuse tubercle present at about the base of post frenal lobe; apex obtusely emarginate or almost truncate, anteapical margins very feebly reflexed.

**Hemelytra.** Almost as long as scutellum; costal margins reflexed near the base, than obtusely angulated at the third abdominal segment; membrane short and narrowly visible beneath scutellum; apex of membrane rectilinear in males and rounded in females. Veins darker than membrane forming, at least, two basal cells with 7 or 8 longitudinal veins, sometimes bifurcate at apex.

**Prosternum** broadly and deeply sulcate; mesosternum tumid, impunctate, broadly and shallowly sulcate, posterior margins shallowly notched centrally; metasternum flat, hexagonal, margins distinctly elevated into thin carina-like edges. Metapleural evaporatorium occupying most of the sclerite; ostiolar peritrema lanceolate reaching the end of evaporatorium area.

**Legs.** Procoxae apart from mesocoxae; metacoxae closer to mesocoxae than to each other; tibiae hemicylindric, broadly sulcate above. Femora with a preapical dark castaneous macula; femora and tibiae covered with castaneous dots. **Abdomen** shallowly and broadly furrowed to fifth sternite. Each connexival segment with transverse dark castaneous macula near anterior margin; posterolateral angles not developed. Spiracles more than twice as far from lateral abdominal margin as from anterior margin of segment. **Trichobothria** lateral to an imaginary longitudinal line connecting spiracles. Ventrable surface dark castaneous, rarely punctured, sometimes with yellow areas on propleura and along lateral third of abdomen. **Male:** Pygophore opening widely posteriorly, posterolateral angles projecting backward. Pygophore excavated on each side of proctiger and along inner wall of posterolateral angles. Ventral rim elevated, with median excavation in “U” shape, expanded laterad toward apex of posterolateral angles of pygophore. Long pubescence covering ventral surface of posterolateral angles of pygophore; short pubescence covering ventral wall of pygophore and proctiger. Proctiger (segment X) cylindrical, open posteriorly, well developed, and obscuring parameres in dorsal view; ventral wall expanded posteriorly into a process. **Phallos:** Basal plates of articulatory apparatus as wide as phallosca; *processus capitati* delicate, moderate in size; phallotheca strongly sclerotized, inflated laterad.
and ventrad, pyriform in dorsal and ventral views; conjunctiva absent; vesica tubular, strongly reduced in size relative to phallotheca. **Female**: Posterior border of urosternite VII with semielyptical arc, apical angles virtually as long as laterotergites 8. Gonocoxites 8 well developed and obscuring gonocoxites 9, lateral margins folded with median margins of laterotergites 8; surface of gonocoxites 8 with many obliquely disposed sulci. Laterotergites 8 shorter than laterotergites 9; spiracles at basal angles. Posterior margins of laterotergites 9 rounded, forming together a semicircle; median margins strongly excavated, embracing laterally segment X. Gonapophyses 9 and thickenings of vaginal intima heavily sclerotized and projecting in a spear tip-like structure. *Chitinellipsen* present. Ectodermal genital ducts: *orificium receptaculi* opening at apex of the spear tip-like projection. *Ductus receptaculi* dilated before anterior flange; *pars intermedialis* with basal half dilated. *Capsula seminalis* semiglobose, with three fingerlike processes.

**Distribution** (Fig. 15). Trinidad; French Guyana; Brazil: Amapá, Pará, Amazonas; Peru: Madre de Dios.

**Comments.** *Psorus* is allied to a few genera of Discocephalini that have a long scutellum, the body somewhat depressed, the dorsal surface variegated, color castaneous to ochraceous with dark brown to ferruginous punctures which are irregularly distributed or form patches, tubercles on the scutellum, the metasternum broadly hexagonal causing the metacoxae to be placed closer to the corresponding mesocoxae than to each other. These genera are *Coriplatus* White, *Abascantus* Stål, and *Pelidnocoris* Stål (Stål 1867, 1872, Ruckes 1966a, Ruckes & Becker 1970, Becker 1977). *Psorus* can be distinguished from these by its short rostrum, the entire anterolateral margins of pronotum, and the presence of laterotergites 9. Three other genera – *Alcippus* Stål, *Paralceippus* Becker & Grazia, and *Eurystethus* Mayr—can also be compared to the genera above (Ruckes 1966b, Becker & Grazia 1986, 1989); but the latter three have a short scutellum and their laterotergites 9 are also present. *Psorus* can be distinguished from them by the anterolateral margins of pronotum clearly surpassing the level of eyes; and by scutellum being long and having tubercles distinct in number, position, and size. *Psorus* shares with *Eurystethus* the well developed and tube-like proctiger (segment X) with the anal orifice opening posteriorly.

*Psorus cassidiformis* Bergroth, 1914

(Figs. 1–3, 14)

*Psorus cassidiformis* Bergroth, 1914: 425.

Measurements. Body length: 14.5–15.2; head length: 2.7–3.2; head width: 3.2–3.7; pronotum width: 8.7–10.3; pronotum length: 2.8–3.2; abdominal width: 8.8–10.8.

**Male.** Dorsal rim of pygophore with median third almost rectilinear. Median margins of posterolateral angles of pygophore almost rectilinear. Proctiger (segment X) as long as posterolateral angles of pygophore; apex of process of ventral wall obtusely rounded. Parameres hardly visible from dorsal side; in ventral view attaining middle of proctiger. Lateral margins of parameres almost rectilinear (Figs. 1–2).

**Female** (Fig. 14). Posterior margins of gonocoxites 8 slightly angulate; folded areas along lateral margins of gonocoxites 8 and median margins of laterotergites 8 more conspicuous than in *P. paraensis*, not obscured by the gonocoxites 8 (Fig. 3).

Psorus cassidiformis Bergroth, 1914. 1-2, male, pygophore; 1—dorsal view; 2—ventral view; 3, female, genital plates (pla—posterolateral angle; dr—dorsal rim; vr—ventral rim; Gc8—gonocoxites 8; La8, laterotergites 8; La9—laterotergites 9; pa—paramere; pyg—pygophore; VII—urotergite VII; x—abdominal segment X. Scale = 1 mm).

Psorus paraensis sp. nov.
(Figs. 4–11)

Etymology: the species is named for the type locality.

Type-locality: Brazil: Pará, Belém.

Holotype male with the following labels: a) BRAZIL, Pará, 5 km East of Belém, 22.VIII.1973 b) R. T. Schuh (MPEG). Paratypes: 2 females and 2 males, same data as holotype (AMNH, UFRG); Belém, female, 16.1.1963, Pirelli, col. Duret 788/93 (MNHN).

Description. Measurements. Body length: 13.0–15.2; head length: 2.8–3.7; head width: 3.2–3.7; pronotum width: 8.5–9.5; pronotum length: 2.7–3.2; abdominal width: 8.8–10.5.

Male. Dorsal rim of pygophore with median third slightly convex. Median margins of posterolateral angles of pygophore conspicuously angulated before apex. Proctiger (segment X) a little shorter than posterolateral angles of pygophore; apex of process of ventral wall truncate. Parameres more visible from dorsal side; in ventral view surpassing middle of proctiger (Figs. 4–5). Lateral margin of parameres indented (Fig. 7). Phallus: phallotheca with three times and a half the length of vesica (Figs. 8–10).

Female. Posterior margins of gonocoxites 8 uniformly rounded. Folded areas along lateral margins of gonocoxites 8 and median margins of laterotergites 8 covered by gonocoxites 8 (Fig. 6). Basal half of pars...
intermedialis with twice diameter of distal half. Diameter of ductus receptaculi before and after vesicular area almost the same (Fig. 11).

**Distribution.** Brazil: Pará State.

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**FIGURES 4–6.** *Psorus paraensis* sp. nov. 4-5, Pygophore; dorsal and ventral view respectively; 6, female genital plates. (Scale = 1 mm).

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*Psorus manauara* sp. nov.

(Figs. 12–13)

**Etymology:** the species is named for its type locality.

Type-locality: Brazil: Amazonas, Manaus.

Holotype male with the following label: a) BRAZIL. Amazonas, **Manaus**, Reserva Ducke (INPA).

**Description.** Measurements. Body length: 10.7; head length: 2.3; head width: 2.4; pronotum width: 6.8; pronotum length: 2.2; abdominal width: 7.2.

Male. Dorsal rim of pygophore with median third very slightly concave, with 1+1 tiny projections at base of posterolateral angles. Posterolateral angles of pygophore clearly truncate at apex, median margins indented.
FIGURES 7–11. Psorus paraensis sp. nov. 7, Left paramere, latero-ventral view; 8–10, Phallus: dorsal, ventral and lateral view respectively; 11, Gonocoxites and gonapophyses of ninth segment and ectodermal genital ducts (bp—basal plates; ch—chitinelipsen; cs—capsula seminalis; dc—dorsal connective; dr—ductus receptaculi; df—distal flange; finger like processes; G9—gonapophyses 9; Gc9—gonocoxites 9; La9—laterotergites 9; pc—processus capitati; pco—pars communis; pi—pars intermedialis; pf—proximal flange; ph—phallotheca; sg—secondary gonopore; tp—finger-like processes; tvi—thickening of vaginal intima; v—vesica; va—vesical area; x—segment X. (Scale = 1 mm).
FIGURES 12–13. *Psorus manauara* sp. nov. Pygophore; dorsal and ventral view respectively. (Scale = 1 mm).

FIGURE 14. *Psorus cassidiformis* Bergroth, 1914, female, dorsal view. (Scale = 4 mm).
FIGURE 15. Distribution of the species of *Psorus*.

**Proctiger** (segment X) surpassing posterolateral angles of pygophore; apex of process of ventral wall obtusely rounded as in *P. cassidiformis*. Parameres as in *P. paraensis*, more visible from dorsal side; in ventral view long, reaching apex of proctiger. Lateral and median margins of parameres uniformly converging toward rounded apex. (Figs. 12–13).

**Female. Unknown.**

**Distribution.** Brazil: Amazonas.

**Comments**

The species of *Psorus* can be separated, in males, by the structure of the pygophore: dorsal rim, at median third, rectilinear in *P. cassidiformis*, slightly convex in *P. paraensis*, and slightly concave in *P. manauara*; pos-
terolateral angles clearly truncate at apex as in *P. manauara*, differing from the other two species that have these angles rounded apically: extension of proctiger in relation to posterolateral angles of pygophore variable among species: in *P. cassidiformis* equal in length, in *P. paraensis* proctiger shorter, and in *P. manauara* proctiger is longer than posterolateral angles. In females the posterior margins of gonocoxites 8 can distinguish *P. cassidiformis* and *P. paraensis*.

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**References**


