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Description of *Antiteuchus* (*Antiteuchus*) *kerzhneri*, a new discocephaline stink bug (Heteroptera: Pentatomidae)

Описание *Antiteuchus* (*Antiteuchus*) *kerzhneri* – нового щитника из подсемейства Discocehalinae (Heteroptera: Pentatomidae)

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КЛЮЧЕВЫЕ СЛОВА: *Antiteuchus*, Discocephalinae, Pentatomidae, новый вид, систематика.

ABSTRACT: A new species from Peru, South America, *Antiteuchus kerzhneri*, is described in the *'incurvaria'* species group of the nominate subgenus. Notes are provided to separate this species from other related species.

РЕЗЮМЕ: Из Перу описан *Antiteuchus kerzhneri*, **sp.n.**, относяшийся к группе '*incurvaria*' номинативного подрода. Приведены данные об отличиях нового и близких к нему видов.

Introduction

The neotropical genus *Antiteuchus* Dallas is the most speciose genus of the nominate tribe of the subfamily Discocephalinae. Rolston [1990] provided a key to the 'broad-headed' discocephaline genera, but there is no recent key to the remaining genera in the tribe. The genus can, however, be recognized by the suite of characters given by Ruckes [1964], primarily the head is longer than the interocular width, the lateral margins of the head are subparallel and not reflexed, antennal segment II is less than half the length of segment III, the males usually have a medial process on the posterior margin of the last abdominal tergite, and the proctiger is usually not completely sclerotized.

Ruckes [1964] revised *Antiteuchus*, splitting the genus into two subgenera, and the nominate subgenus into two species groups '*incurvaria*' and '*parallela*' species groups. Altogether, he described or redescribed a total of 32 species. Unfortunately, he lacked specimens of many other new species. Thirteen new species have been described subsequently, plus there has been one new synonym [Engleman 1976, Engleman & Rolston 1983, Rolston 1991, 1993], thus bringing the current total of known species to 44.

The subgenus *Neodine* Kirkaldy differs from the nominate subgenus particularly by the more elongate scutellum. The post frenal portion of the scutellum is longer than the basal portion, extending to or beyond the apex of the abdomen. The nominate subgenus is further divided into two species groups. Although a combination of characters are often given to separate the two species groups, apparently the only character that works consistently is the condition of the last abdominal tergite in male specimens. In the '*parallela*' species group, the posterior margin of the last abdominal tergum is provided with a fringe of fine setae; this fringe is absent in male specimens of the '*incurvaria*' species group.

Ruckes [1964] originally included 13 species, 9 of them new, in the '*incurvaria*' species group. Engleman [1976, 1983 in Engleman & Rolston] added five more species, and Rolston [1991, 1993] described an additional four species, but also synonymized one. This brings the total known species in this group to 21. Engleman and Rolston [1983] provided a key to all known '*parallela*' group species, and Rolston [1993] provided a key to all 21 species of the '*incurvaria*' species group.

Two years ago, Guy Couturier, ORSTOM, Institut Francais Recherahes Scientifique en Cooperation, forwarded several specimens of an unidentified species of *Antiteuchus* that had been collected from a cultivated Palm, *Mauritia flexuosa* L. f. in Peru. After careful examination, it is now apparent that these specimens represent an undescribed species belonging in the '*incurvaria*' species group of the nominate subgenus. I am grateful to Dr. Couturier for sending the specimens and for giving me the opportunity to describe this species herein; it is also an honor to dedicate this paper to Izya Kerzhner, one of the most renowned heteropterists of our time.

Antiteuchus (Antiteuchus) kerzhneri Rider, **sp.n.**
Figs 1–13.

MATERIAL EXAMINED. Holotype ♂, labeled a) "Peru - Loreto Mazán 20-8-03 J. Vasquez col.", b) "Planta hospedera *Mauritia flexuosa* Arecaceae", deposited in the Museo de Entomologia de la Universidad Agraria de la Molina, Lima, Peru. Paratypes (9 ♂♂, 10 ♀♀): 9 ♂♂, 8 ♀♀, labeled as holotype; 2 ♀♀, labeled a) "Iquitos - Peru Mazan, Rio Napo 11-07-01 J. Vasquez & C. Delgado Col.", b) "Host plant *Mauritia flexuosa* Palmae". Paratypes are deposited in the American Museum of Natural History, New York, NY, USA (1 ♂, 1 ♀); the British Museum of Natural History, London, Great Britain (1 ♂, 1 ♀); the Museo de Entomologia de la Universidad Agraria de la Molina, Lima, Peru (1 ♀); the Museum National d'Histoire Naturelle, Paris, France (2 ♂♂, 2 ♀♀); the U.S. National Museum of Natural History, Washington, DC, USA (1 ♂, 1 ♀), the Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia (1 ♂, 1 ♀); and the author's collection (3 ♂♂, 3 ♀♀).

DIAGNOSIS. Median tergal process on posterior margin of last abdominal tergite of male elongate, expanded apically, reniform. Each paramere with three lobes, dorsal lobe curved laterally, broadly rounded apically; middle lobe curved cephalad, acute apically; lateral lobe digitiform, narrowly rounded apically. Each lateral pygophoral appendage curving mesad, with single stout, sharp tooth near inner basal angle. Antennal segments I–III entirely dark brown, segment IV with narrow, pale annulus near base, segment V also with pale basal annulus, but may also be somewhat pale near apex.

DESCRIPTION. Brown to dark brown, with several to many pale flavescent marks between punctures; punctures dark brown. Female specimens tend to have more flavescent marks than male specimens. Abdominal venter somewhat paler, reddish brown in male specimens, more flavescent in female specimens.

Lateral jugal margins not, or only slightly reflexed, sinuous, nearly parallel for middle third of distance from eye to apex; head broadly rounded apically, apical jugal margins curving mesad, contiguous in front of tylus (Fig. 2). Antennal segments I–III entirely dark brown, segment IV dark brown with narrow, pale annulus near base, segment V also with pale annulus near base, but apex also often pale; segment III about four times length of segment II. Venter of head nearly impunctate, with at most a few weak punctures or brown spots below eyes. Bucculae pale. Rostrum elongate, reaching to anterior margin of VIIth abdominal segment in male specimens, to middle or beyond of segment V in female specimens (abdominal segments are extended forward in male specimens).

Anterolateral margins of pronotum straight, narrowly reflexed; humeral angles rounded, each anterior angle with small laterally projecting tooth. Narrow, transverse, submarginal depressed band paralleling anterior margin of pronotum behind interocular part of head, another weak, transverse depressed band behind pronotal calli. Scutellum reaching beyond anterior margin of abdominal segment VI, broadly rounded apically, lateral margins of scutellar tongue subparallel. Apical angle of each corium reaching to posterior margin of abdominal segment VII; apical margin slightly sinuous to slightly convex; hemelytral membranes opaque to slightly fumose near basal angles, veins not darkened. In pale specimens, sometimes each corium has a vague, dark spot near apex of r + m vein.

Thoracic pleura coarsely and thickly punctate, impunctate evaporative areas excepted. Ivory spot (callus) on each mesopleuron and metapleuron small, that on mesopleuron removed from lateral margin by at least its own width, that on metapleuron removed from posterior margin by its own width. Ostiolar rugae reaching slightly over half the distance to lateral metapleural margin, with step-down about one-third this distance. Legs mottled, with numerous dark punctures, especially on superior surfaces and on apical half of femora; tibiae with dark annulus near base and apex, with a few dark punctures in between; tarsi paler, with hint of reddish coloration on basal tarsal segment, and sometimes on apex of tibiae.

Connexiva clearly visible when coria in resting position, largely pale to brown, with dark brown bands along incisures. Abdominal venter pale brown to reddish brown, spiracles black. Median sulcus reaching from base to near apex of abdomen in female specimens, reaching only to middle of abdomen in male specimens. Abdominal segments normally transverse in female specimens; strongly extended anteriorly in male specimens forming sharp V-shaped medial margin, medial width very narrow, except for segment VII very wide, medial width of segment VII nearly as great as width of all other abdominal segments together. Posterior margin of last abdominal tergite in male specimens distinctly membranous, lacking setae (Fig. 10), produced medially into elongate process which is expanded apically, distinctly reniform (Fig. 10).

Lateral pygophoral appendages elongate, curving mesad apically, with single stout tooth near inner basal angle; articulates with pygophore (Fig. 6). Posteroventral margin of pygophore broadly and shallowly convex (Fig. 6). Proctiger quite large, with large lateral infuscate tumescence on each side near middle, and distinct medial ridge (Figs 7–9), posterior margin V-shaped (Fig. 8). Each paramere trilobate, dorsal lobe curving laterad, broadly rounded apically; middle lobe curving cephalad, acute apically, ventral lobe, elongate, digitiform, narrowly rounded apically (Figs 11–13).

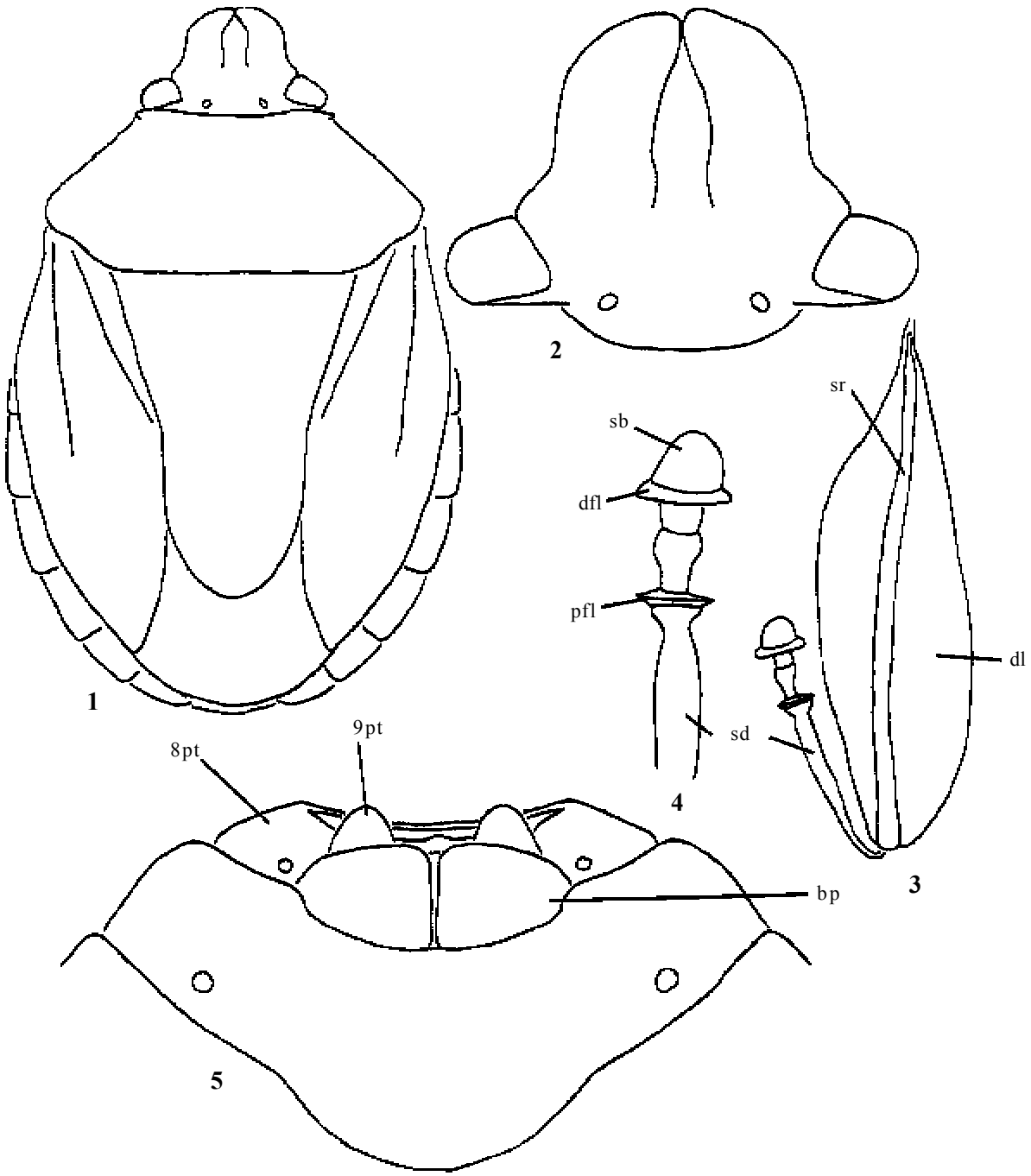
Basal plates relatively large, mesial margins nearly straight, nearly contiguous near base; posterior margins convex (Fig. 5). Ninth paratergites rounded apically, extending beyond apex of abdomen (Fig. 5); spiracles present on eighth paratergites (Fig. 5). Sclerotized rod elongate, narrowed apically (Fig. 3), spermathecal bulb rounded, lacking processes; spermathecal duct constricted just below proximal flange, otherwise relatively broad (Fig. 4).

Measurements (mm; holotype in parentheses): Total length 9.52–11.15 (10.00); width across humeri 5.51–6.27 (5.70); medial length of pronotum 2.15–2.58 (2.15). Medial length of scutellum 4.85–5.40 (5.07); basal width 3.55–4.12 (3.93); width at distal end of frena 2.20–2.40 (2.17); length from distal end of frena to apex of scutellum 2.25–2.60 (2.36). Length of head from apex to imaginary line drawn through posterior margins of ocelli 1.82–1.99 (1.91); width across eyes 2.75–3.05 (2.89); intraocular width 1.58–1.81 (1.66); intraocellar width 0.84–0.87 (0.87); ocellar diameter 0.11–0.15 (0.13); distance from ocellus to adjacent eye 0.31–0.39 (0.36). Length of segments I–V of antennae 0.74–0.81 (0.77), 0.60–0.69 (0.66), 1.77–1.88 (1.88), 1.86–2.06 (2.01), and 2.05–2.20 (2.05), respectively. Length of segments I–IV or rostrum 0.96–1.13 (1.11), 2.16–2.34 (2.34), 1.27–1.35 (1.34), and 1.11–1.16 (1.16), respectively.

DISTRIBUTION. Peru (Loreto).

BIOLOGY. All specimens examined were collected from the inflorescences of *Mauritia flexuosa* (Arecaceae).

COMMENTS. This new species keys to couplet 10 in Rolston [1993], and appears to be related to the two species that key there: *Antiteuchus cuspidatus* Ruckes, 1964, and *A. tessalatus* (Westwood, 1837). In both of these species, however, each paramere possesses four lobes; the parameres in *A. kerzhneri* **sp.n.** have only three. Also, the tergal process is more expanded apically with a distinct notch in the end, giving it a reniform appearance. The coloration of the antennal segments, as given by Rolston [1993], and the structure of the lateral pygophoral appendages are different.



Figs 1–5. *Antiteuchus kerzhneri* **sp.n.**, female: 1 — dorsal habitus; 2 — head, dorsal view; 3 — spermatheca; 4 — spermathecal pump; 5 — sternite VII and genital plates, caudoventral view. Symbols: 8pt — 8th paratergites; 9pt — 9th paratergites; bp — basal plates; dfl — distal flange; dl — dilation of spermatheca; pfl — proximal flange; sb — spermathecal bulb; sd — spermathecal duct; sl — sclerotized rod.

Рис. 1–5. *Antiteuchus kerzhneri* **sp.n.**, самка: 1 — габитус, сверху; 2 — голова, сверху; 3 — сперматека; 4 — насос сперматеки; 5 — VII стернит и генитальные пластинки, сзади. Обозначения: 8pt — VIII паратергиты; 9pt — IX паратергиты; bp — базальные пластинки; dfl — дистальный фланец насоса сперматеки; dl — расширение протока сперматеки; pfl — проксимальный фланец насоса сперматеки; sb — резервуар сперматеки; sd — проток сперматеки; sl — склеротизованная часть протока сперматеки.

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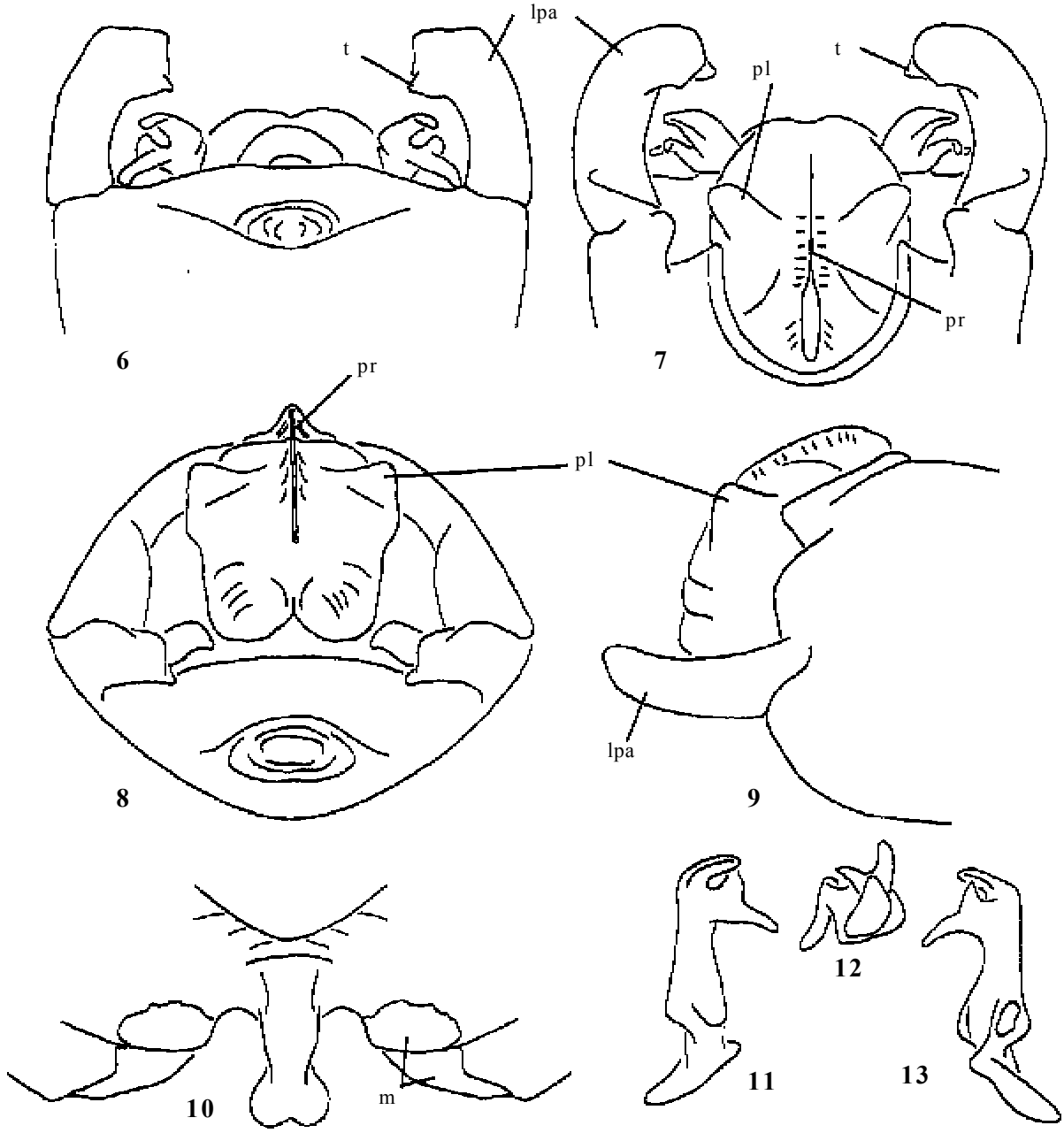
References

Engleman H.D. 1976. *Antiteuchus rolstoni*, a new species of Discocephalinae from Colombia (Hemiptera: Heteroptera: Pentatomidae) // Journal of the Kansas Entomological Society Vol.49. No.4. P.533–536.



Figs 6–13. *Antiteuchus kerzhneri* **sp.n.**, male: 6 — pygophore, ventral view; 7 — pygophore, dorsal view; 8 — pygophore, caudal view; 9 — pygophore, lateral view; 10 — median process on abdominal tergite VII, dorsal view; 11 — right paramere, posterolateral view; 12 — right paramere, ental view; 13 — right paramere, mesodorsal view. Symbols: lpa — lateral pygophoral process; pl — proctigeral lobe; pr — proctigeral ridge; m — membranous margin of abdominal tergite VII; t — tooth on lateral pygophoral appendage.

Рис. 6–13. *Antiteuchus kerzhneri* **sp.n.**, самец: 6 — пигофор, вентрально; 7 — пигофор, дорсально; 8 — пигофор, сзади; 9 — пигофор, сбоку; 10 — медиальный вырост на VII тергите, дорсально; 11 — правый парамер, сзади-сбоку; 12 — правый парамер, сверху; 13 — правый парамер, внутренняя стороны сверху. Обозначения: lpa — боковой отросток пигофора; pl — лопасть проктигера; pr — гребень проктигера; m — мембранозный край VII тергита; t — зубец на боковом отростке пигофора.

Engleman H.D. & Rolston L.H. 1983. Eight new species of *Antiteuchus* Dallas (Hemiptera: Pentatomidae) // Journal of the Kansas Entomological Society. Vol.56. No.2. P.175–189.

Rolston L.H. 1990. Key and diagnoses for the genera of 'broad-headed' discocephalines (Hemiptera: Pentatomidae) // Journal of the New York Entomological Society. Vol.98. No.1. P.14–31.

Rolston L.H. 1991. *Antiteuchus ruckesi*, a new discocephaline from Peru (Hemiptera: Pentatomidae) // Journal of the New York Entomological Society. Vol.99. No.2. P.235–239.

Rolston L.H. 1993. A key and diagnoses for males of the *incurvia* species-group of *Antiteuchus* Dallas with descriptions of three new species (Hemiptera: Pentatomidae: Discocephalinae) // Journal of the New York Entomological Society. Vol.101. No.1. P.108–129.

Ruckes H. 1964. The genus *Antiteuchus* Dallas, with descriptions of new species (Heteroptera, Pentatomidae, Discocephalinae) // Bulletin of the American Museum of Natural History. Vol.127. No.2. P.47–102.