



Systematics, Morphology and Biogeography

A new species of *Adoxoplatys* Breddin (Heteroptera, Pentatomidae, Discocephalinae) from Argentina


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ABSTRACT

The genus *Adoxoplatys* is distributed from Panama to Argentina. The eight included species are known from a few specimens. In this contribution, a new species from Misiones Province, Argentina, *Adoxoplatys singularis* sp. nov., is described and illustrated; and a key to identify the species of the genus is provided.

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Introduction

The Neotropical tribe Ochlerini was proposed by Rolston (1981) to include 23 genera with a shallowly excavated superior surface of third tarsal segment of the hind legs of the females (Rolston, 1981). The tribe currently comprises 33 genera and 124 species (Garbelotto et al., 2013, 2014; Cervantes-Peredo and Ortega-León, 2014; Simões and Campos, 2014), and its monophyly was recently recovered by Campos and Grazia (2006), supported by the flattened superior surface of third tarsal segment of hind legs in females; a character state shared by *Adoxoplatys* Breddin, 1903, *Neodoxoplatys* Kormilev, 1956 and *Pseudodoxoplatys* Rolston, 1992, the most basal genera in the tribe; the rest of the genera included have an excavated third tarsal segment.

Adoxoplatys is characterized by the depressed body; the four-segmented antennae; the juga surpassing the tylus (except in *A. gallardoi* Kormilev); the rostrum arising well before an imaginary plane bisecting the head at the anterior limit of eyes, and with the second segment of rostrum with well defined intercalary segment at base; the scutellum width at distal end of frena nearly one-half of its basal width; the coria extending well past apex of scutellum; at least anterior femora armed with two irregular rows of small tubercles on ventral surface, and with the medial tubercle at base of abdominal venter broad, flat, apposed by a sulcate metasternum (Breddin, 1903; Kormilev, 1949; Rolston, 1992).

The genus was described by Breddin (1903), to include two new species, *A. comis* and *A. minax*, both from Peru and Bolivia. Kormilev (1949, 1950) redescribed the genus and described three new species: *A. bridarollii* and *A. willineri* from Bolivia, and *A. gii* from Misiones, Argentina. Later, this author described *A. panamensis* from Panama, *A. brasiliensis* from Brazil, and *A. gallardoi* from Misiones, Argentina (Kormilev, 1951). Finally, Kormilev (1955) redescribed the Breddin species, and provided a key to separate all the species included in the genus. Although *Adoxoplatys* has a wide distribution, the eight included species are known from only a few specimens (Kormilev, 1951, 1955; Rolston, 1992), and nothing is known about the biology of this seldom collected group of true bugs.

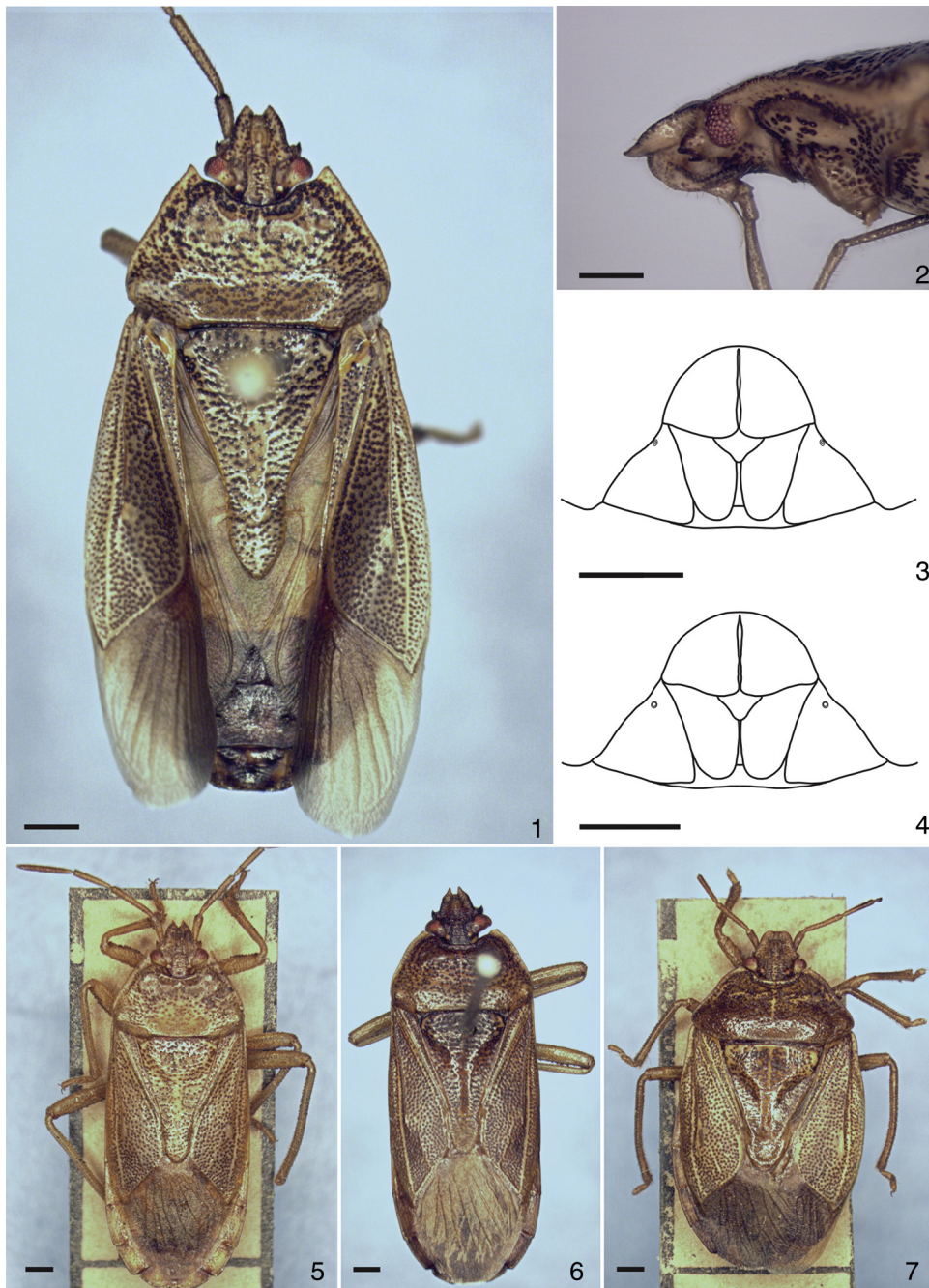
In this contribution, a new species of *Adoxoplatys*, based on one female from Misiones, Argentina, is described and illustrated. Moreover, a key to identify the species of the genus is provided.

Material and methods

The studied material was collected at light in the Iguazú National Park Misiones, Argentina, and is deposited in the Entomological Collection of the Museo de La Plata, Buenos Aires, Argentina (MLP). Type specimens of additional *Adoxoplatys* species deposited in the Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Buenos Aires, Argentina (MACN) were studied. Color images were captured using a digital camera (Micrometrics 391CU, 3.2 m, Accu-Scope, Commack, NY, USA) mounted to a Nikon SMZ1000 stereomicroscope. Multiple focal planes were merged

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Figs. 1–7. (1–3) *Adoxoplatys singularis* sp. nov. (1) Dorsal view. (2) Head and pronotum, lateral view. (3) Female genital plates. (4–5) *Adoxoplatys gii*. (4) Female genital plates. (5) Dorsal view. (6) *Adoxoplatys willineri*, dorsal view. (7) *Adoxoplatys gallardoii*, dorsal view. Scale: 1 mm.

using Micrometrics SE Premium 4 software. The measurements are given in mm.

Results

Adoxoplatys singularis Dellapé & Dellapé sp. nov.

(Figs. 1–3).

Description

Total length 13.1. Body elongate, oval and depressed. Dorsal coloration ochraceous with piceous coarse punctation (Fig. 1). Head

length 2, width 2.1. Jugae long, pointed anteriorly and distinctly exceeding the apex of clypeus, dorsal surface concave with lateral margins raised; eyes carmine-red, oval, interocular distance 1.3; ocelli pale-red, interocellar distance 0.7, distance between the ocelli two times the distance from ocellus to eye. Head with punctures forming a curved line extending from base of head to base of jugae, and surrounding the ocellus. Head with scarce erect setae, more evident on jugae, antenniferous tubercles and margin of bucculae. Antenniferous tubercles stout, with lateral and ventral short piceous projections; insertions of antennae visible from above; length of antennal segments: 0.9; 1.7; 1.4; 1.9. First segment widened toward apex, exceeding apex of jugae; second and third cylindrical, fourth fusiform; antennae pale brown, first segment

darker distally; setose, two basal segments with blackish brown setigerous tubercles. Rostrum reaching the metasternum. Rostral segments length: 0.7; 0.3+1.3; 1.2; 1.2. Bucculae rounded, covering most of rostral segment I in lateral view (Fig. 2). Pronotal length (at midline) 2.3, width 5, sub-trapezoidal; anterior angles flat and produced forward into a long tooth reaching the middle of eyes (Fig. 2), lateral margins reflected and conspicuously notched on anterior half, posterior margin adjacent to scutellum straight with an apparent longitudinal medial pale brown line that extends on scutellum. Pronotum with abundant dark coarse and shallow small punctures; almost glabrous with very short setae emerging from dark punctures. Scutellar length 4.6, width (at base) 3.1, long and flat, with apex slightly acute. Scutellum with abundant dark coarse punctures, and shallow small punctures restricted to basal half; glabrous. Hemelytra surpassing abdomen, glabrous; membrane testaceous, with simple veins. Pleura ochraceous, coarsely punctated; acetabular area and metapleura with less evident punctures; spout peritreme ochraceous and elongate, located anteriorly to the ostiole. Legs ochraceous, femora and tibiae with blackish brown setigerous tubercles, larger (toothlike) on apical ventral half of femora (anterior legs missing). Tibiae with longer and abundant setae distally. Abdominal width 5.2. Protuberance of the third abdominal segment stout, obtuse, directed forwardly at middle, not reaching the hind border of metasternum; abdominal sternites brown, anterior margin of segments III to VII dark brown, paler dorsally, segment VII and genital segments irregularly pigmented dark brown; spiracles concolor, located slightly before the middle of each segment. Abdomen with semierect setae.

Genitalia. Gonocoxites 8 subtriangular, longer than wide, disc uniformly convex; posterior margins subrectilinear, posterolateral angles obtuse. Laterotergites 8 triangular, longer than wide; posterior margins subrectilinear; spiracles placed posterior to posterolateral angle of gonocoxites 8. Gonocoxites 9 exposed, triangular.

Laterotergites 9 elongate and rounded apically, with the lateral basal region depressed; mesial margins not juxtaposed; apices not

surpassing the band connecting laterotergites 8. Segment X visible (Fig. 3).

Type material

Holotype female, Argentina, Misiones, Iguazú National Park, Macuco Trail, 25°40'40.8"S 54°26'55.9"W, 29-X-2012, light trap (MLP).

Etymology

The specific name *singularis* means "alone", in reference to the unique specimen found of this species.

Remarks

Among the nine species of *Adoxoplatus*, four species presented an elongate, subparallel sided body: *A. brasiliensis*, *A. gii*, *A. willineri* and *A. singularis*. These species can be separated by the morphology of the anterior pronotal angles; in *A. brasiliensis* the anterior pronotal angles are anteriorly directed and sickle shaped, in *A. willineri* (Fig. 6) the anterior pronotal angles are small and directed laterally; and in *A. gii* and *A. singularis* the anterior pronotal angles are produced forward, but in *A. gii* it is straight and placed well alongside the eyes (Fig. 5), while in *A. singularis* it is triangular, shorter and remote from the eyes. These two species also differs in the shape of the posterior margins of the gonocoxites 8, in *A. singularis* are subrectilinear while in *A. gii* are slightly concave (Fig. 4).

A. singularis is the third species of the genus *Adoxoplatus* known from Argentina, *A. gii* and *A. gallardoi* are also known from Misiones Province, and presumably also inhabitants of the Paranaense forest. *A. gallardoi* has an oval shortest body and the jugae are as long as the clypeus (Fig. 7).

Key to the species of *Adoxoplatus* (modified from Kormilev, 1955)

1. Anterior pronotal angles projected anteriorly (Figs. 1 and 5)	2
1'. Anterior pronotal angles not projected anteriorly (Figs. 6 and 7)	5
2. Body oval, stout; anterior pronotal angles broad and stout, sickle shaped, reaching the anterior border of antenniferous tubercles	<i>A. minax</i> Breddin, 1903
2'. Body elongate, subparallel sided; anterior pronotal angles narrower	3
3. Anterior pronotal angles sickle shaped	<i>A. brasiliensis</i> Kormilev, 1951
3'. Anterior pronotal angles not sickle shaped	4
4. Anterior pronotal angles straight and placed well alongside the eyes (Fig. 5); posterior margins of the gonocoxites 8 slightly concave (Fig. 4)	<i>A. gii</i> Kormilev, 1950
4'. Anterior pronotal angles triangular, shorter and remote from the eyes (Fig. 1); posterior margins of the gonocoxites 8 subrectilinear (Fig. 3)	<i>A. singularis</i> sp. nov.
5. Body elongate, subparallel sided (Fig. 6)	<i>A. willineri</i> Kormilev, 1949
5'. Body oval, stout (Fig. 7)	6
6. Jugae as long as clypeus (Fig. 7)	<i>A. gallardoi</i> Kormilev, 1951
6'. Jugae longer than clypeus	7
7. Rostrum reaching the abdominal sternite VI	<i>A. comis</i> Breddin, 1903
7'. Rostrum shorter, not surpassing the abdominal sternite IV	8
8. Rostrum reaching the abdominal sternite III or IV in males and females respectively; pygophore with a dentiform process medially	<i>A. bridarollii</i> Kormilev, 1949
8'. Rostrum longer, reaching or almost reaching the posterior border of abdominal sternite IV in both sexes; pygophore with a deep narrow sulcus medially	<i>A. panamensis</i> Kormilev, 1951

Additional examined material

A. bridarollii: Paratype male, Bolivia, Yungas, Chaparé, I-1949, Padre Dr. A. Bridarolli (S.J.) leg. (MACN); *A. gallardoi*: Holotype female, Argentina, Misiones, Puerto Bemberg, II-1951, J.M.A. Gallardo leg. (MACN); *A. gaii*: Holotype female, Argentina, Misiones, Río Urugua-í (not Río Uruguay), 3-IX-1949, A. Gaii leg. (MACN); *A. willineri*: Paratype female, Bolivia, Yungas, Chaparé, I-1949, Padre G. Williner leg. (MACN).

Conflicts of interest

The authors declare no conflicts of interest.

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