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## *Polytes debra*, a new species from Peru (Heteroptera: Scutelleridae: Pachycorinae)

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**Abstract.** A new species of *Polytes* Stål, *P. debra* Eger (Heteroptera: Scutelleridae: Pachycorinae) is described based on a single female collected in Peru. The new species is described and figured and compared to *P. ruth* (Breddin), its most similar congener. A revised key to species of *Polytes* is provided.

**Key Words.** *Polytes*, New World.

**Introduction**

The genus *Polytes* Stål was revised by Eger (1990) and included 18 species. An additional species, that was described in *Pachycoris* Burmeister was subsequently added to the genus (Eger 1994). During a collecting trip to Peru in 2012, I collected a single female of an undescribed species that is described herein.

**Materials and Methods**

Terminology for external female genitalia follows McDonald (1966). Photos were taken and edited using Auto-Montage™ software (Syncroscopy, Cambridge, UK). All measurements are given in mm.

***Polytes debra* Eger, new species**

**Description.** Dorsum (Fig. 1) densely, finely punctate, punctures provided with short curved setae. Dorsal coloration black with following orange markings: pair of large macules on pronotum, each contiguous with posterior pronotal margin and occupying a large part of each side of pronotum; cicatrices mesially and thin longitudinal line between cicatrices; large transverse macule stretching across scutellum beginning at about 1.0 mm posteriad of basal margin and extending nearly half-way to apex of scutellum; and claval vein on hemelytra. Anterolateral pronotal margins, lateral margin of hemelytra basally, lateral margin of connexiva and extreme apex of scutellum bordered with thin pale line; apex of tylus pale. Venter black (Fig. 2) with the following pale markings: fine line along lateral margins of pronotum, hemelytra basally, and abdomen; fine line on posterior margin of seventh sternite mesially, this not as wide as tibial diameter; base of head, and parts of first two rostral segments, and anterior margin of prosternum. Ventral punctation moderately dense laterally, sparse mesially, most provided with fine curved setae. Length of body 10.5, width at widest point 7.2.

Head broadly rounded apically (Fig. 3), relatively short, width at 1/4 of distance from apex to base equal to about 3/4 of head length; lateral margin before eyes sharply angled; length 2.1, width 3.05, interocular distance 1.95, interocellar distance 1.0. Length of antennal segments 1–5: 0.7; 0.6; 0.7; 1.3; 1.6. Rostrum reaching posterior margin of metasternum, length of segments 1–4: 1.1; 1.6; 0.65; 1.0.

Pronotum rather evenly convex, slightly impressed submarginally along anterolateral margins; anterolateral margins convex, carinate, posterolateral margins sinuate, posterior margin concave. Length of pronotum at meson 3.25, width across humeri 6.65. Scutellum strongly convex, 7.1 long, maximum width 7.1. Legs black, coxae and trochanters somewhat lighter colored and with some pale markings.

Abdominal venter uniformly black except for pale markings mentioned previously. Mid-ventral length of segments 3–7: 0.6; 0.6; 0.45; 0.5; 1.9.

Female genital plates (Fig. 4). First gonocoxae elongate, relatively thin, moderately punctate and wrinkled, provided with few long setae; posterior margins broadly concave laterally, narrowly convex mesially; mesial margins contiguous, distinctly but narrowly elevated. Exposed portion of second gonocoxae small, pale. Ninth paratergites elongate; mesial margins rounded, narrowly overlapping; sparsely punctured, provided with sparse long setae mesially; anterior margins laterally and posterior margins mesially pale-bordered. Eighth paratergites narrow, sparsely punctured; posterior margins pale, provided with row of long setae.

**Type Material.** HOLOTYPE: female, labeled: a) PERU: San Martín Dept., Mirador Alto Mayo, Km 374 on 5N, 18-X-2012, 1960 m., J. E. Eger. b) S 05°40'07.9", W 077°45'22.0". Deposited in the Florida State Collection of Arthropods, Gainesville, FL. There are no paratypes.

**Comments.** *Polytes debra* is similar to *P. ruth* (Breddin) in overall size, the shape of the head, and the presence of a thin pale line on the posterior margin of the last sternite. The dorsal coloration is quite different, though. The latter species is known only from males which are relatively consistent in coloration (Fig. 5). *Polytes debra* is similar in color except that the pronotal macules are not invaded by a lanceolate marking, and the scutellar macule does not cover most of the scutellum, and is not interrupted mesially by black. In addition, the dorsal surface of *P. ruth* tends to be relatively glabrous and mostly lacks setae in punctation, whereas the dorsal surface of *P. debra* is matte and most punctures are provided with setae (this difference may be an artifact of specimen age); the area around the cicatrices in *P. ruth* tends to be more strongly impressed than in *P. debra*; the lateral margin of the head anterad of the eyes is sharply angled in *P. debra*, smoothly rounded in *P. ruth* (Fig. 6). It is conceivable that *P. debra* is a female of *P. ruth*, but the fact that the coloration of *P. ruth* was relatively consistent and species of *Polytes* for which both sexes are known do not display sexual dimorphism in coloration leads me to believe that this is a distinct species.

Within the fenestra species group, *P. debra* can be recognized by the head broadly rounded anteriorly, the lack of a bilobed pale macule mesially on the posterior margin of the seventh sternite, and the distinctive color pattern. The type of *P. debra* was swept by me along a roadside and immediately recognized as distinctive. I returned to this area and swept and beat intensively, but was not able to find additional specimens.

**Etymology.** This species is dedicated to my wife, Debra Eger, for many years of love, support and encouragement.

### Key to species of *Polytes* (adapted from Eger 1990)

1. Venter stramineous with black median vitta of irregular width; abdominal sternites lacking distinct punctation ..... ***P. nigrovittatus* Eger**
- Venter variously colored, lacking distinct black vitta; abdominal sternites usually distinctly punctured ..... **2**
- 2(1). Dorsal surface uniformly dark reddish-brown except yellow to orange borders and with small, dense, uniform green punctures; second and third visible abdominal sternites shallowly sulcate mesially ..... ***P. velutinus* (Dallas)**
- Dorsal surface not as above, mottled yellow and brown to black, light brown with dark punctures, or black with distinct red or yellow pattern; abdominal sternites convex ..... **3**
- 3(2). Ventral surface predominately stramineous to light brown, with punctation usually distinctly darker than surrounding surface ..... **4**
- Ventral surface predominately piceus to black with punctation concolorous with or slightly darker than surrounding surface ..... **9**



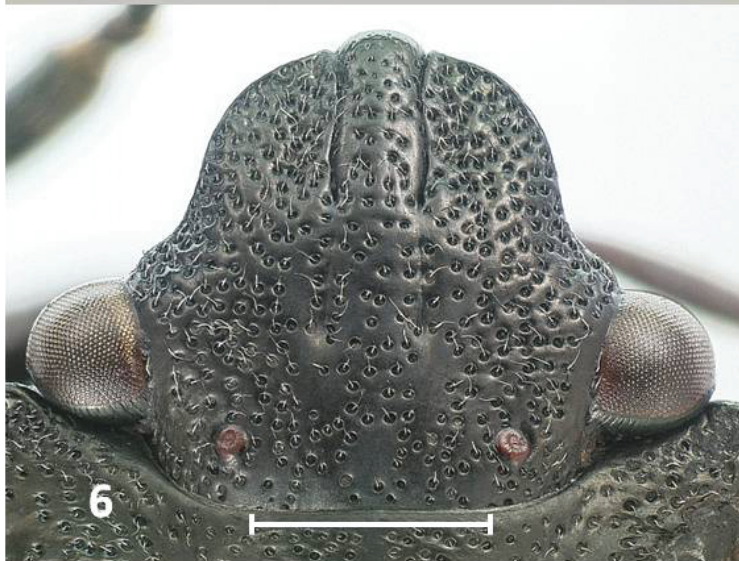
- 4(3). Edges of lateral jugal margins rounded; head narrowly rounded anteriorly ..... 5  
 – Edges of lateral jugal margins sharply angled or carinate; head broadly rounded anteriorly . 6
- 5(4). Sternites usually with dark brown to black macule posterior to spiracles; first conjunctival diverticula sclerotized at apices; length of body 9.0 mm or greater ... *P. lineolatus* (Dallas)  
 – Sternites with red to dark brown punctation, but lacking macules; first conjunctival diverticula entirely membranous; length of body 8.8 mm or less ..... *P. propinquus* (Walker)
- 6(4). Scutellum with 2 large distinct pale macules ..... *P. bimaculatus* Eger  
 – Scutellum lacking distinct pale macules ..... 7



**Figures 1–4.** *Polytes debra*. 1) Habitus, dorsal view. 2) Habitus, ventral view. 3) Head. 4) Female genital plates. Scale bars equal 1 mm.

- 7(6). Dorsal surface densely setose; body shape elongate oval; scutellum at least 1.0 mm longer than wide ..... ***P. granulatus* (Walker)**  
 – Dorsal surface glabrous, setae sparse or lacking; body shape broadly oval; scutellum usually much less than 1.0 mm longer than wide ..... **8**
- 8(7). Scutellum distinctly mottled, usually with pale markings laterally and posteriorly; striated areas on venter of abdomen concolorous with disc; larger, length 9.1–11.8 mm .....  
 ..... ***P. tigrinus* (Vollenhoven)**  
 – Scutellum relatively uniform in color; striated areas on venter of abdomen usually darker than disc; smaller, length 7.7–9.4 mm ..... ***P. obscurus* (Dallas)**
- 9(3). Pronotum with large, impunctate, yellow to orange macule near each lateral margin .....  
 ..... ***P. speculiger* Breddin**  
 – Macules on pronotum, if present, distinctly punctate ..... **10**
- 10(9). Scutellum dark brown to black with five distinct yellow to red vittae .....  
 ..... ***P. leopardinus* Distant**  
 – Scutellum not colored as above, usually with red to yellow macules or fewer than 5 vittae .. **11**
- 11(10). Yellow to orange mesial macule(s) on posterior margin of last abdominal sternite relatively large, diameter greater than least diameter of tibiae ..... **12**  
 – Yellow to orange mesial macule on posterior margin of last abdominal sternite lacking or restricted to marginal band, thinner than least diameter of tibiae ..... **15**
- 12(11). Head narrowly rounded apically; anterolateral pronotal margins slightly convex, almost straight; head of parameres broad ..... ***P. rubromaculatus* Distant**  
 – Head broadly rounded apically; anterolateral pronotal margins distinctly convex; head of parameres relatively thin ..... **13**
- 13(12). Pronotum with four macules; head of parameres short ..... ***P. lattini* Eger**  
 – Pronotum unicolorous or with two macules; head of parameres elongate ..... **14**
- 14(13). Pronotum unicolorous; head of parameres narrowed apically, shank uniformly broad .....  
 ..... ***P. bicolor* Distant**  
 – Pronotum with two red macules; head of parameres broadly rounded apically, shank narrowed mesially ..... ***P. bullocki* Eger**
- 15(11). Head broadly rounded anteriorly, width at 1/4 of distance from apex to base equal to about 3/4 of head length ..... **16**  
 – Head narrowly rounded anteriorly, width at 1/4 of distance from apex to base equal to about 5/8 or less of head length ..... **18**
- 16(15). Body length 9.5 mm or greater ..... **17**  
 – Body length 9.0 mm or less ..... ***P. discrepans* (Uhler)**
- 17(16). Two macules on pronotum with lanceolate projection intruding from posterior margin, in rare cases completely dividing each into two macules; red coloration on scutellum occupying most of scutellum, interrupted mesially by black vitta (Fig. 5) ..... ***P. ruth* (Breddin)**  
 – Two macules on pronotum entire, subquadrate; red coloration on scutellum a broad transverse band occupying about a third of the length of the scutellum, not interrupted mesially .....  
 ..... ***P. debra* Eger**
- 18(15). Parameres pick-ax shaped ..... ***P. confusus* Eger**  
 – Parameres hook-shaped ..... **19**

- 19(18). Head of parameres short, broad .....*P. fenestra* Breddin  
– Head of parameres long, thin .....*P. similis* Eger



Figures 5–6. *Polytes ruth*. 5) Habitus, dorsal view. 6) Head. Scale bars equal 1 mm.



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### Literature Cited

- Eger, J. E., Jr. 1990.** Revision of the genus *Polytes* Stål (Heteroptera: Scutelleridae). *Annals of the Entomological Society of America* 83(2): 115–141.
- Eger, J. E., Jr. 1994.** New synonymy in the genus *Polytes* Stål (Heteroptera: Scutelleridae). *Florida Entomologist* 77(3): 376–378.
- McDonald, F. J. D. 1966.** The genitalia of North American Pentatomoidea (Hemiptera: Heteroptera). *Quaestiones Entomologicae* 2: 7–150.

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