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A NEW SPECIES OF *SIMOPELTA* FROM COSTA RICA  
(Hymenoptera: Formicidae)

ROY R. SNELLING<sup>1</sup>

**ABSTRACT:** *Simopelta paeminosa*, new species, is described from Puntarenas Province, Costa Rica. Diagnostic features of this species are: tridentate mandibles with acute basal tooth; no median clypeal spine; rugose cephalic and alitrunk integument. This species appears to be most closely allied to *S. williamsi* of Ecuador.

The ponerine genus *Simopelta* was reviewed by Gotwald and Brown (1966), who discussed the generic characters, listed the known species and

described two new species. They also published

<sup>1</sup>Natural History Museum of Los Angeles County, Los Angeles, California 90007.

observations on the behavior of *S. oculata* Gotwald and Brown made by Brown in Costa Rica. These observations reaffirmed the army antlike behavior of the foraging workers.

The following new species from Costa Rica was included in a vial containing three workers, two males and one mangled larva of *Gnamptogenys simplex* (Emery). The two males are not fully colored and one has the wings torn off on one side. It seems likely that the *Gnamptogenys* represent the prey of the *Simopelta*; unfortunately, the collector after three years, was unable to recall details of the collection.

***Simopelta paeminosa*, new species**

Figure 1

**Diagnosis.** Clypeus without median spine; eyes small; mandibles tridentate, basal tooth acute; head, alitrunk and petiole coarsely rugose; integument blackish brown.

**Holotype worker:** TL 4.1; HL (occipital margin to anterior border of frontal lobes) 0.9; HW (without eyes) 0.7; WL 1.5; greatest diameter of eye 0.06; scape L (chord, without basal neck) 0.8 mm; CI 81. Abbreviations and measurements as in Brown (1958).

Similar to worker of *S. williamsi* but differing as follows:

1. Mandibles more slender, the basal tooth acute.
2. Antennal scapes longer; in full face view, extending beyond occipital margin by about twice the apical breadth.
3. Petiolar node longer, about as high as long.
4. Rugulae of head and alitrunk not transversely oriented. In *S. williamsi*, those of the occiput and pronotum, especially, are decidedly transverse; in *S. paeminosa* the rugulae are very irregular, mostly oblique, though a few may be partially or wholly transverse. The gaster is shiny, with well separated distinct punctures.

**Paratype series.** Variation in ten randomly selected individuals, but including apparently largest and smallest specimens: TL 3.8-4.2; HL 0.90-0.95; HW 0.70-0.73; ML 0.43-0.50; WL 1.40-1.50 mm; CI 71-81.

Color, basically blackish brown, mandibles, flagellum, legs brownish. Pronotum with brownish areas of irregular extent. Gastric apex light brownish.

Holotype and 21 paratype workers, 4 mi south of San Vito de Java, Puntarenas Province, Costa

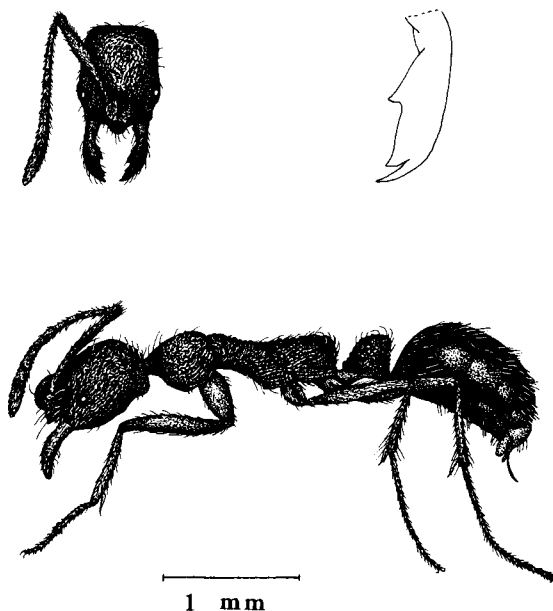


Figure 1. *Simopelta paeminosa*, new species. Above, head in frontal view and enlarged outline of mandible. Below, lateral aspect. Figures by Ruth Ann DeNicola.

Rica, 15 August 1967 (R. W. McDiarmid). Holotype and most paratypes in the Natural History Museum of Los Angeles County. Paratypes deposited in American Museum of Natural History and Museum of Comparative Zoology.

**Etymology.** *Paeminosus*, L., rough or uneven, in allusion to the roughened integument.

The rugose integument of this species seems to indicate a relationship to *S. williamsi*. That Ecuadorian species, however, has the rugulae transverse on the occiput and dorsum of the alitrunk. In *S. williamsi*, too, the basal tooth of the mandible is truncate rather than acute.

In the key to *Simopelta* workers by Godwald and Brown, *S. paeminosa* fails at couplet 5 since it does not accord with either alternative. The other Central American species are punctate rather than rugulose.

LITERATURE CITED

- Gotwald, W. H., Jr. and W. L. Brown, Jr. 1966. The ant genus *Simopelta*. *Psyche*, 73: 261-277.

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