

A NEW *APHAENOGASTER* (HYMENOPTERA: FORMICIDAE) FROM SOUTHERN NEW MEXICO

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Abstract.—*Aphaenogaster punctaticeps*, n. sp. is described from the northern Chihuahuan Desert of south-central New Mexico, USA. It is closely related to *Aphaenogaster texana* (Emery). The workers of the two species can be easily distinguished in that the posterior border of the head of *A. punctaticeps* is moderately pointed (rounded in *A. texana*) and the dorsum of the head is primarily punctate (rugose with punctures in the interrugal spaces in *A. texana*).

During an intensive investigation of the ant fauna of a site in the northern Chihuahuan Desert of south-central New Mexico (Jornada Long Term Ecological Research Area), an undescribed species of the genus *Aphaenogaster* was collected. The following is a description of this species.

Aphaenogaster punctaticeps, new species

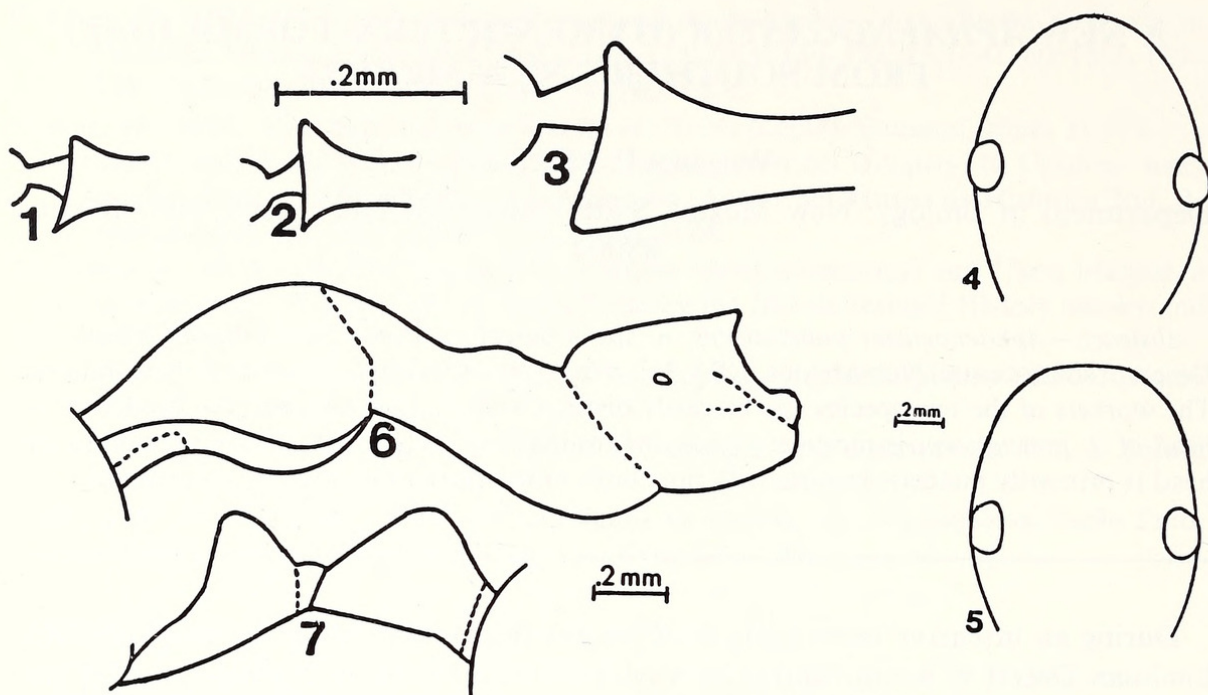
Description. Worker: (Abbreviations as defined by Snelling, 1981.) HL 1.32–1.40 mm, HW 0.94–1.00 mm (at anterior border of eye), SL 1.58–1.70 mm, EL 0.21–0.23 mm, EW 0.17–0.18 mm, CI 71, SI 168–170, OI 24–27, PNW 0.23–0.26 mm, PPW 0.32–0.35 mm, WL 1.11 mm.

Mandible with large apical tooth, subapical tooth about one half as large, first basal tooth subequal in size to subapical tooth, other teeth poorly defined, mandible striate; clypeus with well defined depression on anterior border, two rugae present posterior to notch; frontal area with median carina, smooth and somewhat shining on both sides of carina; frontal carinae large and protruding almost perpendicular to surface of head; rugae present on malar region, a few poorly defined rugae present posterior to frontal area, but absent on most of rest of dorsum of head, which is strongly punctate; base of scape simple (Fig. 1); eyes exceed margins of head in full face view, posterior margin of head moderately pointed (Fig. 4).

Dorsum and sides of mesosoma moderately punctate, including both faces of propodeum; propodeal spines poorly developed (Fig. 6). Petiole and postpetiole (Fig. 7) finely punctate with a few costulae on posterior face of postpetiole. Gaster smooth and shining.

Scares with numerous appressed white setae; dorsum of head with numerous truncated long hairs (max. length 0.25 mm); submentum with a few decumbent hairs; dorsum of pronotum with 8 truncated hairs, the anteriormost weakly spatulate (max. length 0.13 mm); mesonotum with 6 truncated hairs (max. length 0.13 mm) pro-

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Figs. 1-7. 1. Base of the scape of the holotype of *A. punctaticeps*. 2. Base of the scape of a specimen of *A. texana* (collected in Culberson Co., Texas). 3. Base of the scape of a cotype of *A. huachucana*. (Figs. 1-3 drawn to same scale.) 4. Outline of the dorsal view of the head of *A. punctaticeps*. 5. Outline of the dorsal view of the head of *A. texana* (specimen collected in Culberson Co., Texas). (Figs. 4, 5 drawn to same scale.) 6. Lateral view of the mesosoma of the holotype of *A. punctaticeps*. 7. Lateral view of the petiole and postpetiole of the holotype of *A. punctaticeps*. (Figs. 6, 7 drawn to same scale.)

podeum with one small hair anterior to base of spine; dorsum of petiole with 6 truncate hairs, postpetiole with 8 similar hairs; gaster with numerous weakly truncated hairs (max. length 0.14 mm).

Head and mesosoma concolorous reddish-brown, petiole, postpetiole and gaster slightly darker.

Female and male: unknown.

Type material. Holotype and paratype worker, collected together at a bait on the Jornada Experimental Range, Dona Ana Co., NM on 7 Aug. 1979 by Wendy Wisdom. The holotype is deposited in the United States National Museum, the paratype in the Los Angeles County Museum of Natural History.

Etymology. From Latin, referring to the punctate head.

Remarks. This species is closely related to *A. texana* (Emery) to which it would go in the most recent key to the North American species (Creighton, 1950). It differs from *A. texana* in that the posterior border of the head is moderately pointed whereas it is rounded in *A. texana* (Figs. 4, 5). In addition, the dorsum of the head is almost completely punctate whereas it is rugose with the interrugal spaces coarsely punctate in *A. texana*. Occasionally the dorsum of the head of specimens of *A. texana* is not completely rugose, but at least the sides of the head and the region posterior to the frontal area have coarse rugae in such specimens. It is also related to *A. huachucana*

Creighton (and *A. huachucana crinimera* Cole), but can be easily distinguished by the shape of the base of the scape. *Aphaenogaster huachucana* has an antennal scape with an enlarged blunt angular lobe which projects forward (Fig. 3). The lobe in *A. punctaticeps* and *A. texana* is much smaller and sharply pointed (Figs. 1, 2). The propodeal spines are slightly larger than those on the cotypes of *A. huachucana*, but the spines of specimens of *A. huachucana* from the Chiricahua Mountains of south-eastern Arizona tend to be larger than those of the cotypes, reducing the importance of this character in defining *A. huachucana*. The shape of the head of *A. punctaticeps* in dorsal view is more similar to that of *A. huachucana* than it is to *A. texana*.

The key in Creighton (1950) can be modified as follows to accommodate this new species:

- 20. Large workers 5.5 mm in length; female 7 mm in length [female unknown in *A. punctaticeps*] 20a
- Large workers 4.5 mm in length; female 5.5 mm in length ... *texana* subsp. *carolinensis*
- 20a. Dorsum of head with prominent coarse rugae; common in southern United States *texana*
- Dorsum of head without prominent coarse rugae, a few poorly defined rugae present posterior to frontal area, rest of head punctate; rare, collected only in southern New Mexico *punctaticeps*

This is apparently a very rare ant. Despite several years of extensive collecting using a variety of methods and at differing times, we have not seen this species again.

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