

Prof. Dr. K. Gößwald

Amerson

Rev. Brasil Ent. 8:175-180 - 15-V-958 - S. Paulo

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DISCOVERY OF THE ANT GENUS WADEURA IN BRAZIL  
(Hymenoptera: Formicidae)

BY

WALTER W. KEMPF, O.F.M.

C. P. 5.650, São Paulo, SP  
(with 5 figures)

The genus *Wadeura* is one of the more recent additions to the roster of genera in the ant subfamily Ponerinae. The first and only two known species were described in 1939 by Dr. N. A. Weber. *W. guianensis* (type of the genus) was taken near the Oro-noque River in British Guiana and based upon a single, very small, nest series, of which only the holotype has been preserved. The other species, *W. haskinsi*, was found upon several occasions on Barro Colorado Island in the Panama Canal. As far as I could check up, no other specimens have since been detected. Hence I was much surprised when, about two years ago, I captured specimens of the same genus in Agudos, State of S. Paulo, Brazil. A nido-type specimen of *haskinsi*, kindly forwarded by Dr. W. L. Brown, Jr., of the Museum of Comparative Zoology at Harvard, not only confirmed my generic placement, but likewise proved that the Agudos specimens were identical with the Panamanian *haskinsi*. Inasmuch as this species was only briefly diagnosed by Weber and, for the first time, a female is also available, I decided to redescribe, and present detailed figures of, this species and to discuss its diagnostic characters.

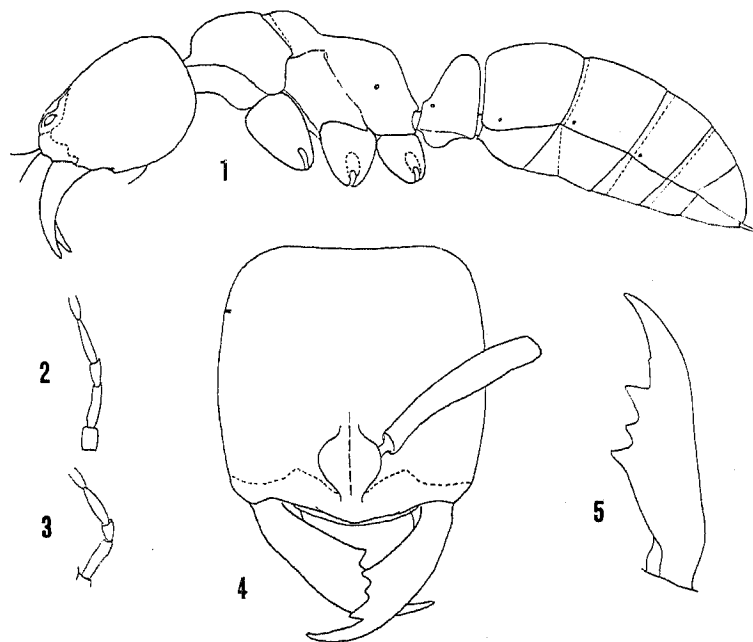
*Wadeura* ants combine with a generally *Ponera*-like habitus distinctive mandibles of the piercing type and, in the worker caste, the absolute lack of eyes, the somewhat bulging mesonotum, and the light brown color, perhaps indicative of the hypogaecic life to which these insects are doubtless addicted and which accounts for their apparent scarcity.

*Wadeura haskinsi* Weber

*Wadeura haskinsi* Weber, 1939, Ann. Ent. Soc. Amer. 32:104, Fig. 7-b (worker; Panama Canal Zone: Barro Colorado Island).

TYPES — Three syntype workers in the Coll. of Dr. Weber. Nidotype specimens and others in the Coll. of the Museum of Comparative Zoology at Harvard University, of Dr. C. P. Haskins, and in my own.

WORKER (Fig. 1) — Total length 5.9-6.1 mm; maximum length of head capsule (without mandibles) 1.18-1.25 mm; max.



*Wadeura haskinsi* Weber — Fig. 1 - Worker in profile; Fig. 2 - Maxillary palpus; Fig. 3 - Labial palpus; Fig. 4 - Head in dorsal view; Fig. 5 - Mandible.

width of head 1.18-1.21 mm; max. length of scape 0.82 mm; max. length of thorax 1.75-1.78 mm. Light brown; head capsule reddish-brown; mandibles ferruginous.

Head (Fig. 4) capsule quadrate, opaque, densely, finely and rather sharply reticulate-punctate above, finely striato-rugose below; its maximum length scarcely or not exceeding the maximum width; the lateral borders scarcely convex, the occipital border feebly emarginate, the occipital corners rounded. Median portion of

clypeus perpendicular, with a central, obtusely dentate swelling. Frontal carinae subsemicircular. Eyes completely wanting. Mandibles (Fig. 5) smooth and shiny, with sparse, conspicuous, piliferous punctures, elongate, narrow, longer than scape, terminating in a slender, acute tooth; their outer border somewhat sinuate, their inner border, about halfway between the apex and the base, with two stout, triangular teeth — the distal slightly larger than the proximal —, having between them usually one smaller, exceptionally two much smaller, triangular teeth; at the base of the apical tooth is a rudimentary denticle. Maxillary palpi (Fig. 2) four-segmented, the proximal segment short and strongly incrassated. Labial palpi (Fig. 3) three-segmented. Scape subclavate, slightly incrassated distad, failing to attain the occipital margin by a distance equalling its apical width, when reflexed directly backwards. Funiculus filiform rather than moniliform, the constrictions between the segments very feeble. All funicular segments at least slightly longer than broad; segments I — VI and XI noticeably longer than broad; segment III at least slightly longer than segment II.

Thorax shinier than head, superficially reticulate-punctate. Pronotum, in dorsal view, lunate, with backwardly directed horns, somewhat broader than the transverse mesonotum, its lateral border immarginate. Posterior pronotal border overlapping the anterior margin of the mesonotum, with which it is not ankylosed. Mesonotum strikingly bulging and raised above the level of the epinotum. Thorax strongly constricted laterally between meso and epinotum, the basal face of the latter tapering off cephalad to nearly a point at the junction of the mesonotum. Mesoepinotal suture obsolete. Lateral border of basal face of epinotum immarginate; declivous face almost as long as basal face. Pectinate mesial spurs on all three pairs of tibiae, smallest on the second pair. Lateral tibial spurs of middle and hind legs simple, small, scarcely recognizable on the middle legs, on account of the strong, spurlike, thick, scattered bristles on the apex and extensor face of tibiae and on the tarsi.

Petiole rather shiny, cuneiform, with rounded apex, a slanting anterior face and nearly vertical posterior face, bearing antero-ventrally a rounded lobe; in dorsal view, transversely trapezoidal with rounded angles.

Gaster still shinier than thorax, the superficial punctures smaller and more scattered. First segment broader than long, separated from the following by the typical, yet not very strong, Ponerine gastric constriction; second segment broadest, about one and three fourth times broader than long.

Pilosity of fine, usually not very long, more or less standing and rather sparse hairs; present on mandibles, scape, frontal carinae, ventral face of head, dorsum of thorax, coxae, flexor face of femora, tibiae, tarsi, petiole, and more abundantly on gaster. Very long bristles — probably of sensory function — projecting from the clypeus, ventrally from the mandibles and behind the oral opening. Moderately abundant appressed, silky, golden-yellow pubescence all over the insect; densest on head and appendages.

FEMALE (undescribed) — Dealate. Total length 7.0 mm; max. length of head capsule 1.28 mm; width of head 1.28 mm; max. length of scape 0.89 mm; max length of thorax 2.21 mm. Extremely resembling the worker, except for the peculiarity of the caste. Compound eyes present, rather small, their greatest diameter 0.18 mm, situated in front of the half of the sides of the head, separated from the mandibular insertion by a distance shorter than their own diameter. Ocelli small, forming an equilateral triangle. Scutum rather strongly punctured, yet shiny, slightly broader than long. Lateral mesoepinotal constriction absent. Lateral spurs of middle and hind legs slightly more distinct.

SPECIMENS EXAMINED — 7 workers and 1 female, as follows: Panama C.Z., Barro Colorado Island, Zetek trail, C.P. Haskins: 1 worker (nidotype), in my collection. — Brazil, State of S. Paulo, Agudos, Fazenda S. Antonio, in front of the Franciscan Seminary, W. W. Kempf leg., several stations: a) Dec. 19, 1954, under a brick upon soft, sandy soil: 5 workers; b) Dec. 28, 1955, upon the mound of *Pheidole* sp., 50 m. away from station I: 1 dead, partly damaged worker; c) Jan. 2, 1956, 10 m. from station I, under a brick, below the scaffolding of a construction: 1 dealate female (in the collection of the author, of Dr. T. Borgmeier, and the Museum of Comp. Zoology, Harvard).

DISCUSSION — In the original diagnosis Dr. Weber assigned *Wadeura* to the vicinity of the Indo-malayan *Pseudoponera* and the Ethiopian *Promyopias*, basing his judgement upon similarity in mandibular structure. While I am not prepared to discuss this placement, I still like to point out that aforesaid classification was sponsored by Emery's and Wheeler's arrangement of the tribe Ponerini, based principally upon the number and condition of apical spurs on the middle and hind tibiae. The value of this character has recently been questioned. Since the tibial apices, specially of the middle leg, of *W. haskinsi* (condition of *guianensis* not known) bears several heavy, spinelike setae, the "identification of a spur rudiment of similar size becomes — as Brown (1953, p. 9) puts it in the even more striking case of *Centromyrmex* — an academic exercise".

The foregoing description of *haskinsi* disagrees with Weber's original diagnosis as regards the proportions of the head capsule. Whereas Weber states that the head, "excluding mandibles, (is) distinctly longer than broad", I found out, carefully measuring both the Panamanian and the Agudos workers, that generally length and width of the head are equal, only one specimen presenting a slightly greater length measurement. The divergence in total length of the insects (Weber: 4.4-4.6 mm; presently given range: 5.9-6.1 mm) is due to the different methods of obtaining this measurement. Dr. Weber used the standar procedure of a single, linear spread measurement, which pays no attention to the position of the individual moveable tagmata. The presently adopted method is a synthetic one, which expresses the total length as the sum of the maximum length of the head with closed mandibles, thorax, petiole and normally contracted gaster.

*W. haskinsi* is a close relative of *guianensis*, differing from the latter (according to Weber's description and figures) in somewhat larger size, in having the head at least as long as broad, in mandibular tooth structure, shorter antennal scape, shorter 2nd funicular segment and less moniliform funiculus of the antennae.

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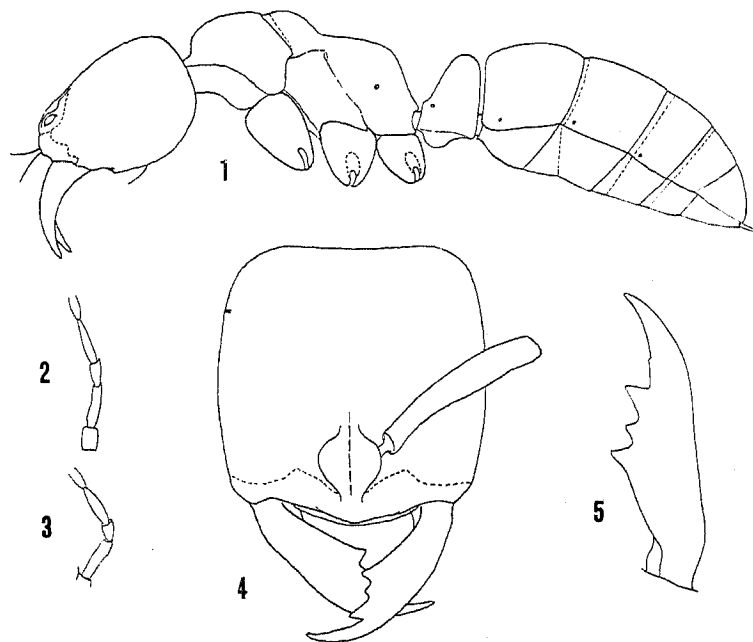
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*Wadeura haskinsi* Weber

*Wadeura haskinsi* Weber, 1939, Ann. Ent. Soc. Amer. 32:104, Fig. 7-b (worker; Panama Canal Zone: Barro Colorado Island).

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