

TWO NEW SPECIES OF NEOTROPICAL *ANOCHETUS* MAYR
(HYMENOPTERA : FORMICIDAE)

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SUMMARY

Two new species of *Anochetus* in the *emarginatus* group (*A. elegans* and *A. vallensis*) are described from the Andes of western Colombia. *A. elegans* is the largest species in the genus.

ZUSAMMENFASSUNG

Zwei neue Arten von neotropischen *Anochetus* Mayr (Hymenoptera : Formicidae)

Zwei neue Arten der *emarginatus*-Gruppe der Ameisengattung *Anochetus* aus den östlichen kolumbianischen Anden werden beschrieben. Einen Art, *A. elegans* sp.n., ist das grösste bisher bekannte Mitglied der Gattung.

INTRODUCTION

The ponerine ant genus *Anochetus* was recently revised by BROWN (1978), and since then only one additional neotropical species, a fossil from the Dominican amber, has been described (BARONI URBANI, 1980). An examination of material belonging to this genus in the collection of the Instituto de Zoología Agrícola revealed the presence of two new species that had been collected in the mountains west of Cali, Colombia. For a definition of the measurements and indices used the reader should consult BROWN (1978).

ANOCHETUS ELEGANS SP. NOV.

(Figs. 1a, 2a)

Worker metrics, holotype (paratypes): TL 12.24 (12.51-12.24), HL 2.56 (2.56-2.51), HW 1.85 (1.79-1.77), ML 1.79 (1.85-1.79), SL 3.13 (3.16-3.12), eye

L 0.40 (0.40-0.38), WL 4.00 (4.00-3.90) mm, CI 72 (71-70), MI 70 (72-71), SI 169 (177-176). Head capsule mostly smooth and shining; strigae fanning out from frontal carinae to about two-thirds head length, cleft medially by the smooth posteromedian impression. Median fossa deep at vertex, bounded by well developed nuchal carinae. Eyes large and convex. Mandibles with a serially arranged set of about 12 preapical teeth and denticles; dorsal surface smooth and shining with sparse decumbent hairs. Ventral apical tooth longer than dorsal tooth, and adjoined dorsal by an intercalary tooth one third the length of ventral tooth. Ventral tooth with two erect ventral hairs apically. Palpal formula : 4, 4.

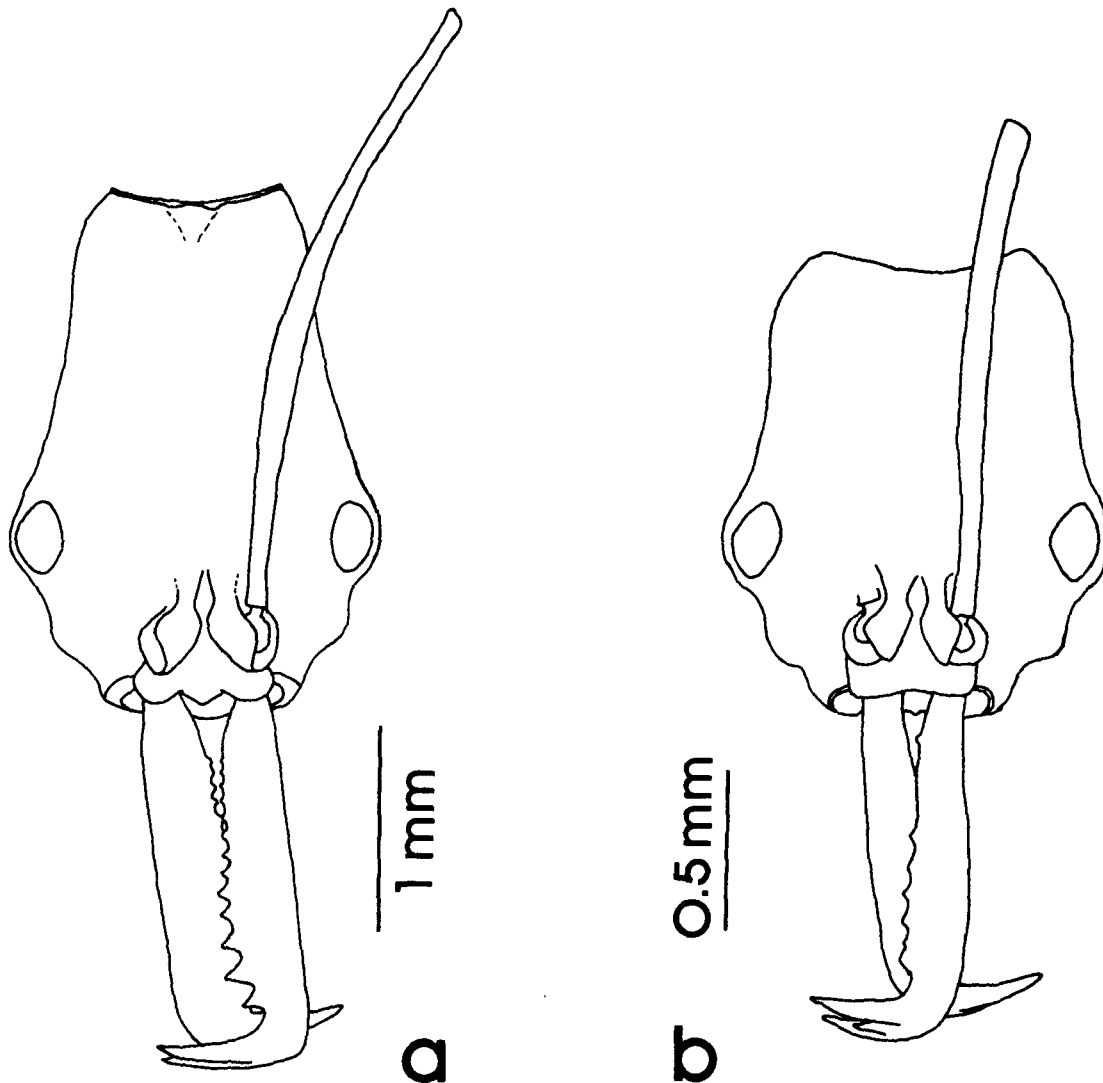


Fig. 1. — Full-face view of the heads of : a) *A. elegans* n. sp., b) *A. vallensis* n. sp

Abb. 1. — Frontalansicht des Kopfes von : a) *A. elegans* n. sp., b) *A. vallensis* n. sp

Cervix and pronotum transversely costate to costulate, sculpture fading away at the pronotal disc and small lateral area. Small area of arched costulae at posterolateral margins of pronotum. Meso- and metanotum and dorsal face of propodeum transversely costulate. From a dorsal view the mesonotal sclerite is about 0.6 as long as wide. In a lateral view the mesonotum rises abruptly from the promesonotal suture and then descends along a straight line to the mesometanotal suture; the metanotum curves up to the sinuate propodeal dorsum. Metanotal spiracles prominent. Propleura reduced to a narrow band of longitudinally elongate small areolae. Mesometapleural suture distinct from base of mid-coxa to mesonotal spiracle. Anepisternum transversely (i.e., perpendicular to the sclerite's median longitudinal axis) costulate, lacking an anterior tooth; katepisternum with some median transverse costulae and very short, curved ridges along the mesometapleural suture, but the rest smooth and shining. Metapleura transversely costulate. Propodeal spiracle opening elliptical. Declivitous face of propodeum mostly smooth and shining, except the costulate lateral and basal margins. Propodeal teeth slightly caudally inclined, cylindrical to conical and bluntly rounded at apex.

Petiolar outline in a lateral view dips into a small concavity after the anterior carina and then ascends along a more or less straight anterior nodal face; a very weak concavity present before the acute and divergent apical spines, which overhang the slightly convex posterior face. Petiole mostly smooth and shining except for transverse costulae along the dorsal anterior margin and base of posterior face; oblique, weak costulae on the anterolateral nodal face. Ventral process rounded and unilobed. Gaster elongate and glabrous with a strongly pronounced constriction after the postpetiole. Viewed laterally, the dorsal outline is gently convex and the ventral outline is anteriorly concave, giving the gaster a petiolate habitus. Coxae smooth and shining.

Some sparse appressed hairs on the inner and ventral coxal faces, and gastric dorsum. Abundant appressed pubescence on the legs. A few erect to suberect hairs on the ventral surface of the meso- and metacoxae and on the gaster. This species is ferrugino-testaceous with a ferruginous cervix and antennal scapes. Mandibles ferruginous with a lighter colored median dorsal area. Queen and male unknown.

The material studied is 3 workers taken from a nest on the ground 20 km W of Queremal, close to the junction of the San Juan and Digua rivers, Valle, Colombia, 1300 m, by W. G. EBERHARD and J. LATTKE on 24 May 1975. The holotype lacks the tibia and tarsus of a foreleg; one paratype is missing both hind legs and a midleg and the other paratype lacks an antenna and the tibia and tarsi of a hindleg. The holotype and a paratype are deposited in the collection of the Instituto de Zoología Agrícola, Maracay, Venezuela.

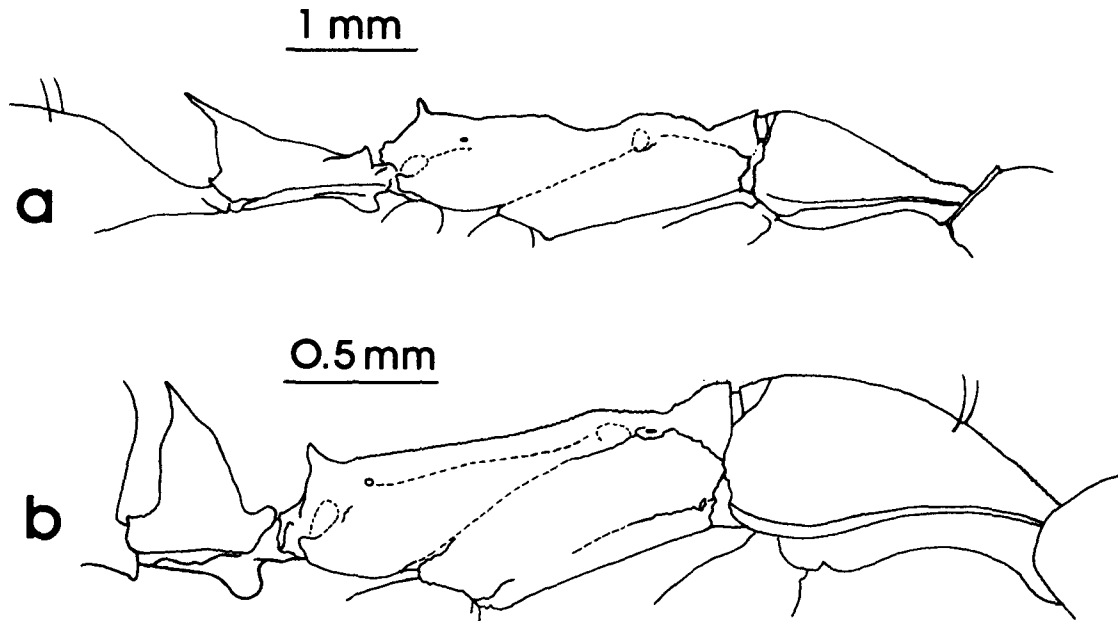


Fig. 2. — Lateral view of the trunk and petiole of : a) *A. elegans* n.sp., b) *A. vallensis* n. sp.

Abb. 2. — Lateralansicht des Thorax und Petiolus von : a) *A. elegans* n.sp., b) *A. vallensis* n. sp.

A paratype will be deposited in the Museum of Comparative Zoology, Harvard University, Cambridge, Mass., U.S.A.

This species, another member of the *emarginatus* superspecies, can be guided to couplet 3 of BROWN'S key (1978 : 572) where it is stranded due to petiolar and gastric characteristics that do not fit any of the alternatives. It closely resembles *A. inca*, but this species lacks propodeal spines and its petiolar spines are blunt, short and not divergent. Even though the gaster of *elegans* may be bell-shaped as seen from above, laterally it is clearly not. There is no median longitudinal sulcus on the propodeal dorsum as in *inca*, and the posterior petiolar face is not as caudally inclined. This species is longer than *inca* (9.5-10.5 mm, Wheeler 1925 : 8), so it is the largest known species of the genus. The related species *A. emarginatus* and *A. striatulus* are smaller, have shorter teeth on the petiolar summit which do not overhang the petiolar posterior face, and both species possess a mesopleural tooth, lacking in *elegans*.

ANOCHEtus VALLENSIS SP. N.

(Figs 1b, 2b)

Worker holotype (paratypes) metrics : TL 7.27 (7.27-6.48), HL 1.49 (1.56-1.43), HW 1.21 (1.24-1.14), ML 1.14 (1.18-1.05), SL 1.52 (1.71-1.43), eye

L 0.23 (0.25-0.23), WL 2.29 (2.41-2.10) mm, CI 81 (82-79), MI 77 (79-70), SI 126 (129-133). Strigae fanning out from the frontal carinae to upper third of eye, spilling weakly beyond occipital ridge and fading out laterally, not reaching nuchal carina and diverging from the posteromedian impression, which has some feeble transverse costulae. Mandibles smooth, with a single row of 4-6 stumpy teeth. Intercalary tooth one third the length of the ventral apical tooth. Antennal scape thickest at midlength; reaching beyond posterior margin of head by more than twice its apical width. Maxillary palps 4 segments, and labial palps 3.

Cervix, anterior and posterior pronotal margins with rough transverse costulae. Pronotum with costulae that arch around posterolateral areas; disc with some weakly impressed convolute costulae. Posterolateral corners of pronotum areolate. Promesonotal suture broad, deeply impressed. Mesonotum with irregular transverse costulae, and a L/W of 0.4, as measured in a dorsal view. Mesopleural teeth well-developed, pointed or blunt. Mesopleura with a smooth and shining median area and transverse costulae along the margins. Metapleura transversely costulate ending in a rounded lobe that projects slightly laterocaudally.

Propodeal dorsum transversely costulate, sculpture fading out between teeth with a few transverse costae at base of declivity. Propodeal spiracle elliptical inconspicuous; teeth sharply pointed, stout triangular laterad, distance between apices of teeth at least 3X their length. Petiole slightly inclined caudally, in lateral view with a straight anterior face that curves caudally at the base of the apical teeth; posterior face with a convex curve below the teeth, then dropping vertically (*fig. 2b*). Petiolar summit with a pair of acute teeth that spread out laterocaudally, slightly overhanging the posterior face; their intervening margin sharply concave. Seen laterally, the ventral process is a rounded, forward-projecting lobe, with several short hairs that curve caudally.

In lateral view the anterior postpetiolar face rises straight to about the same height as the petiolar teeth, then gently convex. Constriction between gaster segments I and II slight. Postpetiolar dorsum shining and feebly rugose with 2 pairs of erect hairs. Ventral profile of gastric segment I gently sinuate. Legs long and slender, front coxae with feeble transverse costulae, tibiae and femora punctulate.

Pronotum with sparse decumbent pilosity and two standing hairs on disc. Gaster with sparse small decumbent hairs, some stout hairs dorsally and ventrally, and a few fine suberect hairs. Trunk and head ferruginous, antennas and legs ferrugino-testaceous, gaster brown-ferruginous to brown.

Queens (one and two, respectively): TL 7.20-6.78, HL 1.52-1.46, HW 1.26-1.18, ML 1.10-1.06, SL 1.50-1.46, eye L 0.26-0.22, WL 2.28-2.20 mm, CI 83-81, MI 72-73, SI 120-124. Queen ergatoid, like worker except for the enlarged gaster.

All the material studied (including the two queens) came from a nest found in a rotten log in a clearing near forest. The locality is along the road to El Carmen, one km S. of the Cali-Buenaventura road exit, 1500 m, Valle Colombia, 28-IX-1975, J. LATTKE, leg. The holotype and several paratypes are deposited in the collection of the Instituto de Zoología Agrícola, Maracay, Venezuela. Other paratypes will be deposited in the following collections: British Museum (Nat. Hist.), Museum of Comparative Zoology (Harvard Univ.), Museu de Zoologia da Universidade de São Paulo (Brasil), Los Angeles County Museum of Natural History (California) and the Florida State Collection of Arthropods (Gainesville).

Within the *emarginatus* group the position of *vallensis* is not clear. It is apparently not a part of the *emarginatus* superspecies, lacking the serially dentate mandibles with more than ten teeth, typical for the group. It is certainly not a member of the *horridus* superspecies, to which it will key to BROWN (1978), as it has no spiniform mandibular teeth. The species of this group also differ in having much shorter mesopleural teeth and smooth femora. If it is forced to the other alternative in the key, the *haytianus* superspecies, we find that their mandibles are too short ($MI < 67$) and their heads narrow considerably more at the vertex than in *vallensis*. If one follows on with the key, it fits couplet 7, *A. kempfi*, which is on the average a slightly larger ant than *vallensis*, with significant differences of ML (0.97-1.05 mm) and MI (64-65). The petiolar spines of *kempfi* are longer (0.20 vs. 0.16 mm) and more slender, overhanging the posterior petiolar face. Ants of the *haytianus* superspecies, to which *kempfi* belongs, are known only from the West Indies and not from the mainland.

BROWN (1978 : 612) states that possibly more isolated species of *Anochetus* remain to be discovered in Andean valleys and foothills ; therefore these two species confirm such expectations. These specimens being the results of a few sporadic collecting trips into mountain valleys in a limited area, and given the great size of the Andean region and the lack of continuous and widespread collecting in it as a whole, there is no doubt that a considerable number of species have yet to be found. Human population pressures are destroying natural habitats at a growing rate in this region and if a number of species are as isolated and endemic as seems indicated, some may eventually be lost without ever being taken. The sampling of biological diversity in such areas needs more immediate attention than do relatively isolated regions of the Guiana Shield and Hylaea.

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