

## A SECOND AFRICAN SPECIES OF THE DACETINE ANT GENUS *CODIOMYRMEX*<sup>1</sup>

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*Codiomyrmex* Wheeler, *sensu* Brown 1948, includes 4 previously described, worker-based species: *C. thaxteri* Wheeler, 1916 (Bull. Mus. Comp. Zool., 60 (8): 327, Port of Spain, Trinidad); *C. loveridgei* Brown, 1953 (Am. Midl. Nat., 50 (1): 21-23, Nyika Plateau, Nyasaland); *C. semicomptus* Brown, 1949 (Breviora, 108: 9-11, Shipton's Flat, Queensland, Australia); and *C. flagellatus* Taylor, 1962 (Breviora 152: 7-9, Clump Point, Queensland, Australia). Several others originally described in the genus have been placed elsewhere by Brown (1948).

### *Codiomyrmex tetragathus* new species

*Holotype*. A unique worker taken in a Berlese funnel by a native collector of the Museu do Dundo: ANGOLA: Dundo, Route Turismo ( $\pm 7^{\circ} 02' S.$ ,  $20^{\circ} 51' E.$ ), Forêt-galerie, R. Luachimo, 28-III-1962 (ANG. 16888).

*Type Deposition*. Museu do Dundo, Lunda, Angola.

*Description*. The holotype has the following dimensions (for parameters of measurement and abbreviations see Brown, 1953): TL *c.* 2.4 mm; HL 0.62 mm; HW 0.49 mm; CI 79; Scape length (SL) 0.25 mm; ML 0.15 mm; MI 24; WL 0.60 mm.

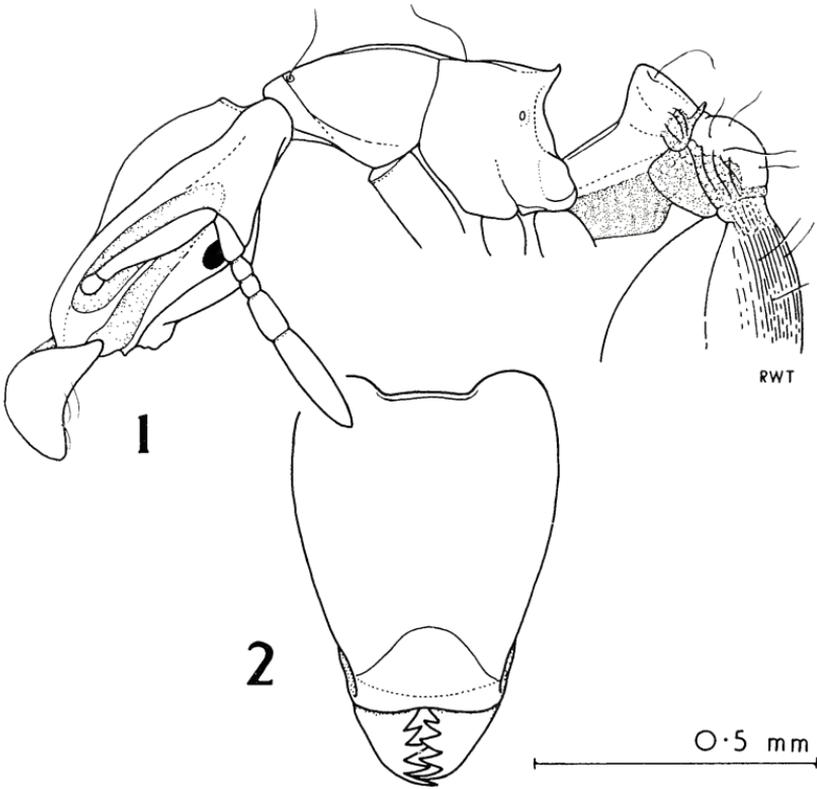
Cephalic dorsum as shown in Figure 2; occipital lobes well developed; short intervening transverse occipital border moderately arched, narrowly carinate. Center of frons elevated, convex, its lateral parts and dorsa of occipital lobes flat to feebly concave, extreme edges forming a slightly raised flange, contours smoothly rounded throughout. Clypeal disc flat, anterior portion sloping fairly abruptly to the shallowly emarginate leading edge. Antennal scrobes strong, completely obscured in facial view, divided anteriorly by a narrow longitudinal ridge; ventral border cariniform, ending anteroventrally in a small tooth. Maximum ocular diameter 0.06 mm; antennae as usual for genus (Figure 1). Mandibles strongly convex; rising from clypeus. Masticatory border bearing two sets of teeth: an apical

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series of 3 subequal denticles about 0.01 mm high, and a main series of 5 strong, acute teeth of the type normally seen in *Codiomyrmex*. Of the latter, the 3rd is largest (*c.* 0.06 mm high), 2nd and 4th slightly smaller, 1st and 5th smallest (*c.* 0.05 and 0.04 mm high, respectively). Apices of large teeth, especially the 5th, inclined posteriorly. Denticles of apical series mounted on a process about 0.04 mm high and slightly wider at base, so that their apices are aligned with those of the major teeth. Basal lamella arising immediately behind posterior tooth, partly obscured by clypeus, apparently triangular. Labrum transverse, distal border strongly biconvex with a deep, acute median cleft.

Mesosomal profile as in Figure 1; dorsum transversely flat to feebly concave, lateral margins defined by a fine carina. Sides almost without sutures except the pro-mesonotal. Pronotum transversely marginate in front;  $0.57 \times$  as wide as head,  $2.15 \times$  as wide as propodeum. Humeral angles each with a low papilliform elevation. Promesonotal suture lacking on mesosomal dorsum, mesonotum and propodeum separated by a fine transverse carina. Propodeal declivity strongly concave; teeth only slightly divergent, their tips minutely hooked upwards; infradental lamellae weak; spiracles simple, unflanged. Petiolar profile as in Figure 1; peduncle with a pair of fine dorsolateral longitudinal carinae; node rising to a narrow transverse crest, its dorsum feebly convex in posterior view. Postpetiolar disc elliptical, almost twice as wide as long. First gastric segment  $0.85 \times$  as broad as long,  $1.2 \times$  as broad as deep; sides submarginate basally; basigastric costulae distinct, crowded, evenly developed, extending back to mid-length of segment. Usual complement of areolate spongiform material on petiole and postpetiole; posterodorsal bridges of both segments reduced to fine carina-like vestiges; anteroventral pad lacking on gaster.

Mandibles shining, with a few scattered punctures; scapes finely shagreened. Clypeus and anterior part of frons shining; remaining cephalic dorsum and antennal scrobes less lucid, with coarse granular shagreening. Mesosomal dorsum moderately shining, with effaced shagreening overlain by vestigial fine longitudinal costulae on promesonotum, several median costulae moderately distinct. Sides of mesosoma smooth to coarsely shagreened, generally shining, especially on pronotum and propodeum. Propodeal declivity strongly shining. Petiolar peduncle finely shagreened, node more coarsely so, its dorsum with 2 fine longitudinal costulae near midline. Postpetiole finely longitudinally costulate. First gastric tergum, behind basigastric costulae, with a finely etched reticulate microsculpture. Legs shagreened.



Figs. 1-2. *Codiomyrmex tetragathus* n. sp.; holotype worker: Fig. 1. Head, mesosoma, petiole and postpetiole in lateral view. Fig. 2. Head in frontal view.

Mandibles each with several hairs ventrally; distal edge of labrum with a row of fine looped hairs, forming a thin tangle in its median cleft. Body hairs few, elongate, 0.1-0.24 mm long, arranged in erect bilateral pairs; completely lacking on head. Mesosoma, petiole and postpetiole with 2, 1, and 4 pairs respectively, distributed as in Figure 1. Petiolar and postpetiolar tergites also with a few fine reclinate lateral hairs which arch back over their posterolateral fungi-form masses. First gastric tergite with three basilateral pairs, and 1 pair on dorsum near its posterior margin.

Pubescence reduced, dense on antennae, very scattered on frons, extremely scattered on first gastric tergite. Color very dark reddish-brown, mandibles, antennae, legs and tip of gaster more yellowish.

*Remarks.* *C. tetragathus* is easily distinguished from most other members of its genus by many characters, including the head shape, the peculiar mandibular dentition referred to in the specific name, the structure of the propodeal teeth and infradental lamellae, the

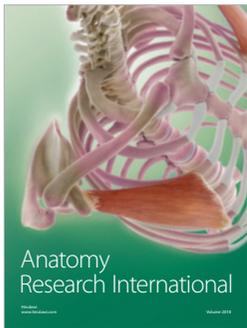
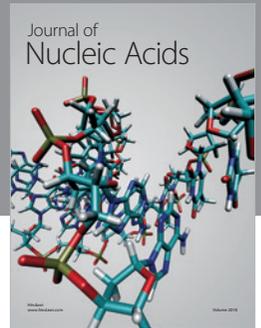
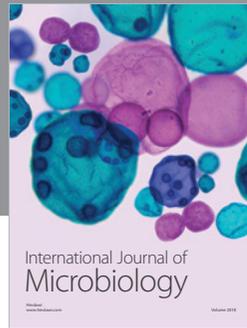
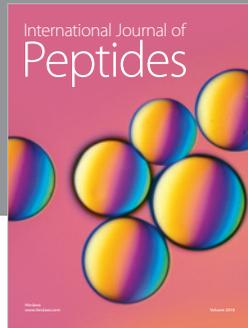
lack of an anteroventral gastric fungiform mass, the coloration and the extremely reduced pilosity. In the latter character this species belies its generic name even more than does *C. flagellatus*.

The only other known African species, *C. loveridgei*, is close to *tetragnathus*. It is smaller, with a straight transverse occipital border, a much more heavily sculptured head, and more dense pilosity. The three apical mandibular teeth are reduced in size and fused basally, much as in *tetragnathus*, and the anteroventral mass of spongiform material on the first gastric sternite is reduced to a diffuse vestige. It is difficult to decide whether the dental heterogeneity of these species is homologous with that seen in the related genus *Smithistruma*, or whether it represents a convergently developed specialization.

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