



The ant genus *Pseudaphomomyrmex* Wheeler, 1920 a junior synonym of *Tapinoma* Foerster, 1850

Ashmead (1905) described a solitary alate queen ant, collected in the Philippines, as *Aphomyrmex emeryi*. The generic combination, obviously a misspelling of *Aphomomyrmex* Emery, 1899 (see Bolton, 1995) placed the name in the subfamily Formicinae. Wheeler (1920) disagreed with the generic combination and removed *emeryi* to its own monotypic genus, *Pseudaphomomyrmex*. He did not characterise the genus at that time but later (Wheeler, 1922: 695) included it in a key to Formicinae, thereby indicating which characters he considered diagnostic and apparently confirming its position in that subfamily. A short time later Emery (1925: 44) dismissed *Pseudaphomomyrmex* as a junior synonym of *Aphomyrmex* but the name was later revived from synonymy, probably accidentally, by Chapman & Capco (1951: 214). From its description to the present *Pseudaphomomyrmex* has been placed in a number of different tribes, summarised in Bolton (2003), but always retained in subfamily Formicinae.

The situation rested there until very recently. The name *Pseudaphomomyrmex* was not considered by Shattuck (1992) in his revisionary study of the genera of subfamily Dolichoderinae as no-one had ever suggested that it may belong in that subfamily. It was omitted from Bolton's (1994) worker-based keys to ant genera as it was known only from a queen. *Pseudaphomomyrmex* was therefore in a kind of taxonomic limbo, ignored and mostly forgotten.

While working on some aspects of Formicinae phylogeny, LaPolla & Longino (2006) had occasion to examine the holotype of *Pseudaphomomyrmex emeryi*, on the grounds that it was possibly a member of the group in which they were interested. This was apparently the first critical examination of the specimen since its original description. They found that, contrary to long-held assumptions, the species was a dolichoderine ant, not a formicine. They transferred the genus into subfamily Dolichoderinae but left the genus as valid. The present authors, having re-examined the holotype, relegate *Pseudaphomomyrmex* to the synonymy of *Tapinoma* and refer the species *emeryi* to that genus, for the reasons discussed below.

Preliminary examination of the specimen supported the conclusion of LaPolla and Longino (2006: 305) that this ant is correctly placed in subfamily Dolichoderinae. The characters they list are supported by the morphological and phylogenetic works of Shattuck (1992, 1995) and the synopsis by Bolton (2003).

Within the Dolichoderinae two genera, *Tapinoma* and *Technomyrmex*, are isolated in their female castes by the synapomorphic extreme reduction of the petiole and its accommodation in a longitudinal groove or impression in the ventral surface of the first gastral tergite, which overhangs and conceals the petiole in dorsal view when the mesosoma and gaster are aligned. The petiole is so reduced in these two genera that in profile there is no trace of a node or scale; at most there is a very short raised surface immediately behind the peduncle. The function of this raised surface is to provide an insertion-site for the exterior levator muscle of the petiole. *Pseudaphomomyrmex* exhibits these structures.

Technomyrmex and *Tapinoma* are separated in the female castes by the contrasting morphologies of their gastral apices. In *Technomyrmex* the sclerites of the gastral apex are unspecialised, except that the pygidium is small. Gastral tergite 5 is therefore in line with tergites 1–4 and as a result all five tergites are visible in dorsal view. In contrast the pygidium in *Tapinoma* is reflexed, the fifth tergite being folded back and down, below the fourth tergite, and is clearly visible in ventral view. Also in that view the fourth tergite frequently forms a distinct projecting rim above the reflexed fifth. In consequence only gastral tergites 1–4 are visible in dorsal view. *Pseudaphomomyrmex* exhibits the latter morphology, which is uniquely characteristic of *Tapinoma*, and thus the former name is relegated to the synonymy of the latter.

As a result of the above analysis the taxonomic synopses of genus *Tapinoma*, and of the two names in the species-group that are affected by the genus-group modifications, are amended as follows.

TAPINOMA Foerster

Tapinoma Foerster, 1850: 43. Type-species: *Tapinoma collina* Foerster, 1850: 43 [junior synonym of *Formica erratica* Latreille, 1798: 44], by monotypy.

Micromyrma Dufour, 1857: 60. Type-species: *Micromyrma pygmaea* Dufour, 1857: 61, by monotypy. [Synonymy by Mayr, 1863: 455, confirmed by Shattuck, 1992: 146.]

Semonius Forel, 1910b: 21. Type-species: *Semonius schultzei* Forel, 1910b: 21, by monotypy. [Synonymy by Shattuck, 1992: 146.]
Pseudaphomomyrmex Wheeler, 1920: 53. Type-species: *Aphomyrmex emeryi* Ashmead, 1905: 111, by original designation. **Syn. n.**
Zatapinoma Wheeler, 1928: 20. Type-species: *Zatapinoma annandalei* Wheeler, 1928: 20, by original designation. [Synonymy by Shattuck, 1992: 146.]
Neoclystopenella Kurian, 1955: 133. Type-species: *Neoclystopenella luffae* Kurian, 1955: 133, by monotypy. [Synonym by Brown, 1988: 337.]

Comments

1 At various times in its history *Micromyrma* has been regarded as a genus, a subgenus of *Tapinoma* and a junior synonym of *Tapinoma*. A short synopsis of the authors responsible for these opinions through time is presented in Bolton (2003). The two authors of synonymy given above are emphatically supported here.

2 Note that *Tapinoptera* Santschi (1925: 348), formerly regarded as a junior synonym of *Tapinoma* (e.g. Shattuck 1992: 146; Bolton 2003: 91) is now known to be a junior synonym of *Technomyrmex* Mayr, 1872, and will be dealt with in a forthcoming taxonomic revision of *Technomyrmex* by Bolton (in preparation). It has therefore been deleted from the taxonomic synopsis of *Tapinoma*.

Tapinoma emeryi (Ashmead) comb. n.

Fig. 1A–E

Aphomyrmex emeryi Ashmead, 1905: 111. Holotype queen (alate), PHILIPPINES: Manila (*R. Brown*) (USNM) [examined].
Pseudaphomomyrmex emeryi (Ashmead), Wheeler, 1920: 53 [combination in *Pseudaphomomyrmex*].

QUEEN (holotype): Measurements in mm. TL (total length: length of head excluding mandibles + length of mesosoma + length of petiole + length of gaster) ca 3.7, HL (maximum head length) 0.62, HW (maximum head width behind eyes) 0.52, CI (cephalic index: HW/HL × 100) 84, SL (scape length) 0.37, SI (scape index: SL/HW × 100) 71, WL (Weber's length: in lateral view of the mesosoma, diagonal length from posteroventral corner of mesosoma to the farthest point on anterior face of pronotum, excluding the neck.) 0.98, OI (ocular index: EL / HW X 100) 35; maximum width of mesoscutum 0.54, forewing length 2.7. Head in full-face view roughly rectangular, the sides only very feebly convex and the occipital margin almost transverse. Median portion of anterior clypeal margin is broadly but very shallowly concave; on each side of the concave section there is a low, blunt prominence. Anterior clypeal margin with two pairs of long setae but clypeal dorsum and entire cephalic dorsum lacks setae. Palp formula (*in situ*) apparently 6,4. Masticatory margin of mandible with larger apical and preapical teeth, followed by two smaller teeth and a series of denticles that decrease in size basally and continue around the basal curve. Eyes far in front of midlength of sides of head; maximum diameter of left eye 0.18 (right eye collapsed inward). Head capsule between ocelli strongly pigmented. Scape short (SI, above), left antenna missing. Dorsum of head in front of ocelli damaged, crushed inward. Dorsum of mesoscutum is crushed inward and left wings are missing. Dorsum of mesosoma entirely lacks setae. Propodeal spiracle located just behind midlength of sclerite and just above its midheight. All femora are collapsed and deformed. Gaster is detached and mounted upside-down on a separate pin below the head + mesosoma + petiole. No setae visible on the first gastral tergite, but may be abraded; one pair of short erect setae visible on gastral tergite 2, two pairs on tergite 3, two pairs on tergite 4 and 1 – 2 on tergite 5; short setae visible on all sternites with greatest density on posterior margin of sternite 5. All gastral segments with fine appressed pubescence. Colour a uniform dull yellow everywhere.

Comment. The holotype queen, although damaged, retains all the characters that should allow its identification.

Tapinoma luteum emeryi (Forel)

Technomyrmex luteus subsp. *emeryi* Forel, 1910a: 447.
Tapinoma luteum emeryi (Forel); Emery, 1913: 42 [combination in *Tapinoma*].
[Junior secondary homonym of *Tapinoma emeryi* (Ashmead), above.]

Comment. The homonymy is left unresolved here because the name in question is infraspecific and very likely to prove to be a junior synonym of *Tapinoma luteum* (Emery, 1895). However, if on revision of the genus, *emeryi* (Forel) is considered distinct from *luteum* (Emery) at species-rank, the reviser can nominate a suitable replacement name for the former.

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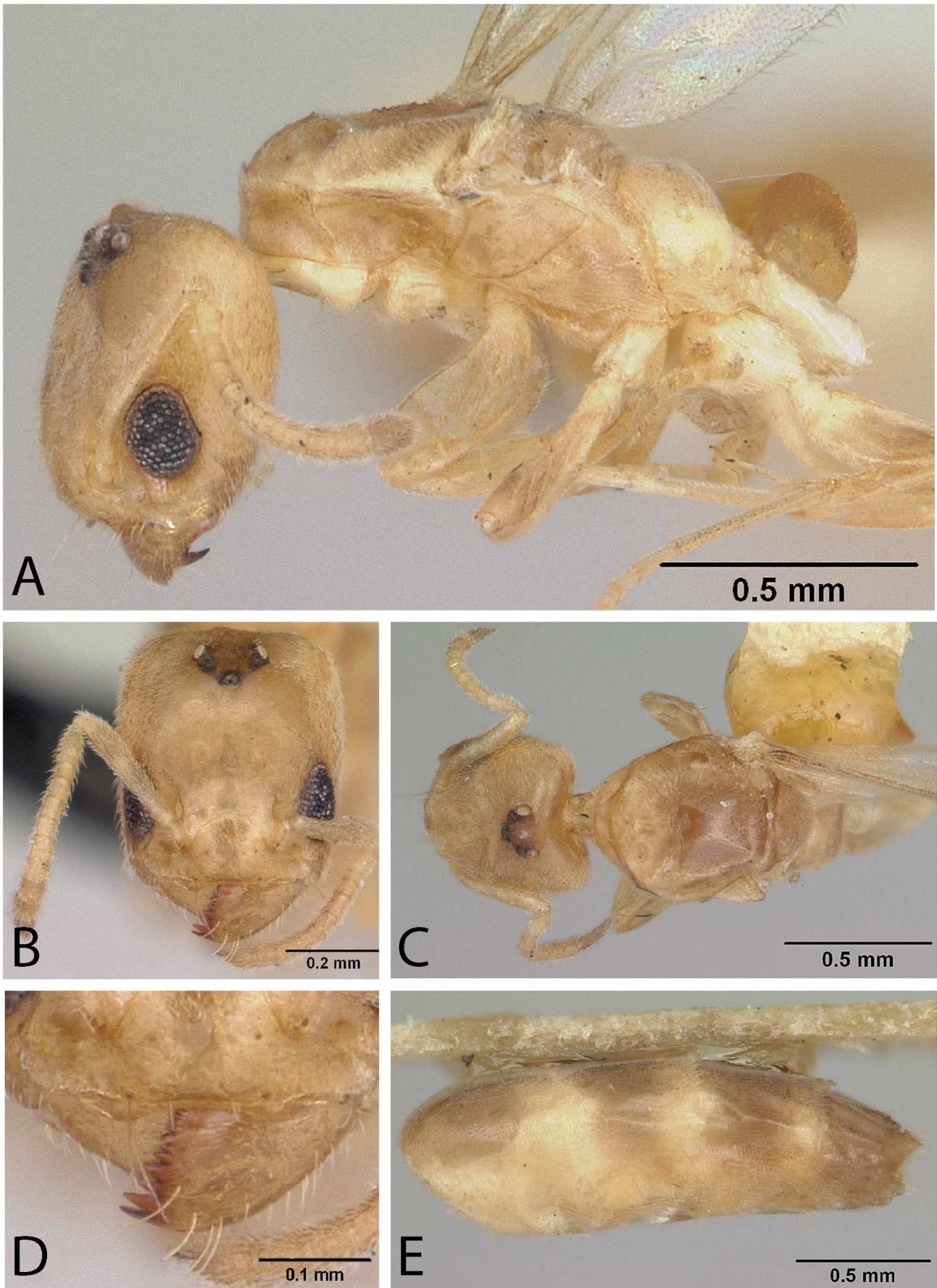


Figure 1A–E. Holotype of *Tapinoma emeryi* comb. n.. Note in Figure 1E, dorsum of gaster is glued to point. (Antweb number: CASENT0103347; see additional images at <http://www.antweb.org/specimen.do?name=CASENT0103347>).

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