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# Nomenclatural Changes in Trachymyrmex (Hym.: Formicidae, Attini)

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*Trachymyrmex,* one of the largest genera of fungus-growing ants, has been difficult to characterize because of its similarity to some *Acromyrmex* and *Sericomyrmex* and because of the diversity of its species. From *Acromyrmex* it differs principally in its feeble or no polymorphism and generally greater spinosity and pilosity; *Sericomyrmex* has a cordate head with rounded occipital lobes and long, abundant, silky hairs. The species of *Trachymyrmex* vary in size from 2 mm. to about 5 mm. and normal infraspecific variability was seldom realized when descriptions were first published. Examinations of the three chief European collections of fungus-growing ants [1, 2] and field work and laboratory studies of living colonies have made possible the following nomenclatural changes in the genus.

**Trachymyrmex cornetzi** Forel

1912. *Atta* (*Trachymyrmex*) *cornetzi* Forel, Mem. Soc. Ent. Belg. 19: 183.
1912. *Trachymyrmex cornetzi* var. *naranjo* Forel, Mem. Soc. Ent. Belg. 19: 184. New Synonymy.
1922. *Trachymyrmex cornetzi* var. *bivittatus* Wheeler, Am. Mus. Novitates, No. 45, p. 13. New Synonymy.
1931. *Trachymyrmex uncifer* Santschi, Rev. de Ent. 1: 281. New Synonymy.
1936. *Trachymyrmex annulatus* Santschi, Rev. de Ent. 6: 201. New Synonymy.
1940. *Trachymyrmex cornetzi* ssp. *gatun* Weber, Rev. de Ent. 11: 420. New Synonymy.
1945. *Trachymyrmex cornetzi* ssp. *brevispinosa* Weber, Rev. de Ent. 16: 55. New Synonymy.

[1] Supported by a grant from the National Science Foundation.

[2] Those of Forel in the Muséum d'Histoire Naturelle in Geneva, Switzerland, in charge of Dr. Ch. Ferrière; of Santschi in the Naturhistorisches Museum, Basel, Switzerland, in charge of Dr. Fred Keiser; and of Emery in the Museo Civico Di Storia Naturale, Genoa, Italy, in charge of Dr. Delfa Guiglia. Types in the U. S. National Museum have also recently been examined.

Three pins in the Forel collection are marked "Typus," one with three workers being labelled: "Tr. Cornetzi ♀ type, Forel, Sta. Martha, Colombie (Forel)." The thorax length of these including neck is 1.27–1.30 mm. A pin of three worker cotypes from the reserve collection given to me in an exchange with Dr. Ferrière has thorax lengths of 1.25–1.38 mm. The one type of the var. *naranjo* is somewhat spinier in places but is considered to be the same form.

The *annulatus* type in the Santschi collection is labelled: "Panama, San Francisco, Bierig, 8.vi.30." It has the usual brown frons spot of *cornetzi* but so concealed by the general dark color as to be difficult to see. The thorax length, excluding the neck, is 1.14 mm. or 1.2 mm. with neck. The *uncifer* type (labelled: "France Fld") in this collection is dirty and also very dark but faintly showing the same spot on the frons; the total extended length as mounted is 3.67 mm. including porrect mandibles and the thorax length with neck is 1.33 mm.

British Guiana and Surinam specimens (Weber, 1946, Rev. de Ent. 17: 145) belong to the typical form as do the Trinidad representatives described as the var. *bivittatus,* the Barro Colorado Island, Canal Zone ants described as *gatun* (although with a feeble post-occipital tubercle lacking in the six above Forel cotypes), and the Rio Porce (Lat. 6°40′ N., Long. 75°10′ W), Colombia ants called *brevispinosa* which are dark brown.

This species is much more common and variable in spinosity and color than formerly realized. The color is frequently pale ferruginous.

**Trachymyrmex cucumis** (Mann) comb. nov.

1922. *Myrmicocrypta cucumis* Mann, Proc. U. S. Nat. Mus. 61: 45.

Two worker cotypes in the U. S. National Museum-Mann collection are typical small *Trachymyrmex* with the large postpetiole characteristic of the smallest species of the genus. This, from above, is as broad as long although being narrowed anteriorly it looks longer than broad. Compared with the holotype of *schomburgki,* the habitus is similar. The thorax length is

the same (0.9 mm.) and has similar spinosity except that the lateral pronotal spines of the latter are longer. When more specimens of both species are available *schomburgki* may be considered to be the same or a subspecies. The holotype of *carib* is bigger and coarser and *tucuché* is more sharply rugulose on the frons, the anterior lateral pronotal tubercles are coarser and the postpetiole is distinctly broader than long.

**Trachymyrmex farinosus** Emery

1894. *Atta* (*Trachymyrmex*) *farinosus* Emery, Bull. Soc. Ent. Ital. 26: 221.
1938. *Trachymyrmex trifurcatus* Weber, Rev. de Ent. 9: 199. New Synonymy.

The Emery collection has a single pin labelled: "124. Para; n. sp. Para, Schutz; *Atta farinosa* Em." which has doubtless the type. The thorax, including a short neck, is 1.77 mm. long. It agreed very well with a paratype of *trifurcatus* (King Frederick William IV Falls, Courantyne R., Surinam, 16.vii.36, N. A. Weber 577) and, despite minor differences, is conspecific. These two ants and the holotype of *trifurcatus* have a peculiar and massive lateral gastric swelling on each side that absorbs the usual gastric carina posteriorly. The *farinosa* hairs are fine and simple; some of the *trifurcatus* hairs are narrow-squamose but this is believed to be a variable character.

**Trachymyrmex opulenta** (Mann) comb. nov.

1922. *Sericomyrmex opulenta* Mann, Proc. U. S. Nat. Mus. 61: 48.

Six worker cotypes in the U. S. National Museum-Mann collection are typical *Trachymyrmex* with the same habitus as *wheeleri,* which was also described as a *Sericomyrmex* because of the unusually long and abundant silky pilosity. The well developed occipital tubercles, however, and the head in general are not those of *Sericomyrmex* as now considered (and as characterized by Mayr originally). The *opulenta* cotypes have shorter occipital tubercles and higher basal carinae on the epinotum anteriorly than *wheeleri* cotypes.

**Trachymyrmex saussurei** Forel

1884. *Atta tardigrada* st. *saussurei* Forel, Bull. Soc. Vaud. Sc. Nat. 20: 361.

The Forel collection now was found to have only *Sericomyrmex saussurei* Emery (and under *Sericomyrmex*), an entirely different ant, but the Santschi collection has one specimen under *Trachymyrmex* labelled: "A. acrom. Saussurei For. (Pergande); Samlung Dr. F. Santschi Kairouan." It is in the space labelled *Trachymyrmex saussurei* Forel.

The extended length of the ant (a worker) is 4.30 mm., the thorax 1.90 mm. It is bigger and coarser than *septentrionalis* but with the same general arrangement of spines and head contours. The postpetiolar node from above is 0.4 mm. long × 0.46 mm. wide. A pin of three workers from the duplicate Forel collection given to me by Dr. Ferrière in exchange appears to be type material. It bears the labels: "41; Mexiq. Orizaba; A. Saussurei, ☿ Forel; cn de Saussure." A pin of one worker given to me by W. M. Wheeler in the 1930's bears the label "Tepic, Mexico" and the label written by his secretary at the time "Cyphomyrmex (Trachymyrmex) saussurei Forel." The three workers may be type material. In the Biologia Centrali-Americana Tepic and Orizaba are the localities listed for the species.

This species may be close to the parental stock from which the far-ranging *septentrionalis* was derived and the ants may have spread along the northern Gulf of Mexico coast to and along the Atlantic coast. The resemblance between the two species is so close that one could still be considered a subspecies of the other. Since *septentrionalis* was described earlier, this would be the species name although perhaps inappropriate from the point of view of origin.

**Trachymyrmex septentrionalis** McCook

1880. *Atta septentrionalis* McCook, Proc. Acad. Nat. Sc. Philadelphia, pp. 359–363.

1907. *Atta* (*Trachymyrmex*) *septentrionalis* var. *obscurior* Wheeler, Bull. Amer. Mus. Nat. Hist., 23: 709. New Synonymy. ✓

1911. *A.* (*T.*) *septentrionalis* var. *vertebrata* Wheeler, Jour. N. Y. Ent. Soc. 19: 246.
1911. *A.* (*T.*) *septentrionalis obscurior* var. *irrorata* Wheeler, Jour. N. Y. Ent. Soc. 19: 247.
1911. *A.* (*T.*) *septentrionalis obscurior* var. *crystallina* Wheeler, Jour. N. Y. Ent. Soc. 19: 247.
1911. *A.* (*T.*) *septentrionalis obscurior* var. *seminole* Wheeler, Jour. N. Y. Ent. Soc. 19: 247. New Synonymy.
1950. *Trachymyrmex septentrionalis* Creighton, Bull. Mus. Comp. Zool. 104: 323.

In his original description, McCook called attention to the variability of the worker caste from 3 to 4 mm., referring to them as "workers major and minor." As Creighton has shown (and as Wheeler intimated for *irrorata* and *crystallina*), *vertebrata, irrorata* and *crystallina* are variants of no taxonomic significance and the present author believes that *obscurior* and *seminole* have the same value. Numerous colonies of New Jersey and Florida origins kept in the laboratory have shown the variation in size that McCook was the first to realize. Color varies greatly and appears of no consequence in this species. Biological studies of these two populations (Weber, 1956, Ecology 37: 150–161, 197–199) have proven their fundamental similarity.

The geographical range of this species, while considerable, is not unusual for a fungus-grower and the ecology appears quite uniform, with temperature the chief variant.

**Trachymyrmex urichi** Forel

1893. *Atta* (*Trachymyrmex*) *urichi* Forel, Ann. Soc. Ent. Belg. 37: 601.
1894. *Atta* (*Trachymyrmex*) *urichi* subsp. *fusca* Emery, Bull. Soc. Ent. Ital. 26: 222. New Synonymy.
1912. *Atta* (*Trachymyrmex*) *urichi* subsp. *marthae* Forel, Mem. Soc. Ent. Belg. 19: 183. New Synonymy.
1925. *Trachymyrmex urichi* subsp. *panamensis* Wheeler, Arkiv. För Zool. 17: 38. New Synonymy.
1938. *Trachymyrmex urichi* ssp. *radicis* Weber, Rev. de Ent. 9: 197. New Synonymy.

The Emery collection contains the two types of *fusca* mounted on one pin and carrying on the upper label: Coxipò; lx.900

(Matto Grosso). The upper ant has a thorax length of 1.77 mm., the lower ant 1.57 mm. They are no darker than some Panama and Colombian specimens and in other characters appear to be within the normal range of infraspecific variability.

The Forel collection contains a large series of the types of *marthae* and a pin of three workers was secured by exchange with Dr. Ferrière. It bears the label: Tr. Urichi Forel; ☿ r. Marthae Forel; Sta. Martha, Colombie (Forel). They are a dark brown but otherwise like *urichi,* which has been collected numerous times by the author in the type locality, Trinidad (see Rev. de Ent. 1945, 16: 44–54). The subspecies *panamensis* was based largely on color and these ants have since been found to be common on the Pacific slopes of Panama. While often of the color described by Wheeler, specimens from the same localities, but taken in March, 1957, during the height of an unusually severe dry season, were as dark as those named *marthae* by Forel. The subspecies *radicis* was based on small specimens, probably of a young colony. The species also occurs in Venezuela. Throughout its range it is an ant of the savannah or grass-woodland rather than of closed forests.

**Trachymyrmex wheeleri** (Weber) comb. nov.

1937. *Sericomyrmex wheeleri* Weber, Rev. de Ent. 7: 396.
1937. *Sericomyrmex wheeleri* subsp. *pakeelai* Weber, Rev. de Ent. 7: 398. New Synonymy.

In pilosity and high mesonotal spines these ants resemble *Seriomyrmex.* However, the head is typical *Trachymyrmex.* They have the same habitus as *opulenta* but six cotypes in the U. S. National Museum have distinctly shorter occipital spines and higher basal carinae on the epinotum anteriorly. The type series of *pakeelai* consistently show lower and more rounded occipital spines, lower mesonotal spines and much more marked tubercles on the declivous surface of the mesonotum. These are believed now to fall within the normal infraspecific range of variability. Additional collecting and study may show *wheeleri* to be no more than a subspecies of *opulenta.*

Specimens taken by the author at Rio Porce (Lat. 6°40′ N., Long. 75°10′ W.), Colombia in 1938 are of this species. Males and females came to lights about 3–4 A.M., August 1 and a nest containing males was excavated July 21. The workers are dark brown. This species does not appear to have been taken in Colombia by Forel and is not his *gaigei.*

**Trachymyrmex zeteki** Weber

1940. *Trachymyrmex zeteki* Weber, Rev. Ent. 11 : 422.
1940. *Trachymyrmex balboai* Weber, Rev. Ent. 11 : 424. New Synonymy.

Additional collecting and study since 1938 in the type locality, Barro Colorado Island, Canal Zone, show that the differences noted in the two species cannot be sustained and that they are best considered to be the same species, *zeteki* having page priority. A colony kept for over two years in the laboratory shows a variation in worker morphology that was unknown in 1940. A conspicuous feature is the spatulate pilosity but this is of variable extent.