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GENUS CAMPONOTUS MAYR.**

By WILLIAM MORTON WHEELER.

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The great cosmopolitan ant-genus *Camponotus*, now comprising fully 500 species and as many subspecies and varieties, has become so unwieldy that subdivision has become imperative. As long ago as 1896 Emery¹ made a serious attempt to render it more manageable by dividing it into three cohorts (*Arcuati*, *Capitati* and *Angulosi*) and numerous maniples based for the most part on geographical groups of species. Forel finally grasped the nettle in 1912² and established 16 subgenera in addition to *Colobopsis* Mayr, which had long been accorded subgeneric rank. Although he cited species under each subgenus he failed to designate any subgenotypes. I undertook to supply this omission in 1913.³ In 1914 he issued a more extensive account of his subgenera,⁴ increased their number to 24, and appended an extensive list of the known species. In this paper he cited a type for each subgenus but paid no attention to my designations. It happened, however, that in all but eight of the subgenera we had selected the same species. Now Emery⁵ has issued a most painstaking study of the genus and has increased the number of subgenera to 34, excluding the monotypic *Phasmomyrmex* Stitz, which he has elevated to generic rank. He has also established a new genus, *Notostigma*, for three Australian species (*carazzii*, *foreli* and *podenzanai*), two of which were formerly included by Forel in his subgenus *Myrmosphincta*. The outlines of the various subgenera have been more accurately defined, much use has been made of the geographical distribution of the species, and the characters of the male *Camponoti*, which

¹ Saggio di un Catalogo Sistematico dei Generi Camponotus, Polyrhachis e Affini. Mem. R. Accad. Sc. Ist. Bologna (5) 5, 1896, pp. 761-780.

² Formicides Néotropiques Part VI, Mém. Soc. Ent. Belg. 20, 1912, pp. 59-92.

³ Corrections and Additions to "List of Type Species of the Genera and Subgenera of Formicidae," Ann. N. Y. Acad. Sc. 23, 1913, pp. 77-83.

⁴ Le Genre Camponotus Mayr et les Genres Voisins. Rev. Suisse Zool. 22, 1914, pp. 257-276.

⁵ Le Genre "Camponotus" Mayr, Nouvel Essai de sa Subdivision en Sous-Genres. Rev. Zool. Africaine 8, 1920, pp. 229-260, 1 fig.

no one had seen fit to study heretofore, have been scrutinized. In Emery's classification only five of the subgenera are represented in both hemispheres, whereas 11 include only New World, and 19 only Old World species. Unfortunately, a certain amount of confusion has been introduced by Emery's overlooking my designations of the types of Forel's subgenera. It becomes necessary, therefore, to discuss very briefly the subgeneric names that are affected by this oversight. These are listed in the following paragraphs, together with the cases in which Forel's types are invalidated by my previous designations:

Subgenus *Camponotus* Mayr. When Mayr established the genus *Camponotus* in 1861, he designated no type but placed *Formica ligniperda* Latr., first on his list of species, just as he had placed it first in the genus *Formica* in his work on the Austrian ants (1855). Bingham, perhaps for that reason, selected *ligniperda* as the type of *Camponotus* in 1903, ignoring the fact that Forel and Emery had long regarded this ant as a mere sub-species of *herculeanus* L., which they therefore cite as the genotype. I am not aware that our codes make any provision for such cases.

Subgenus *Myrmothrix* Forel. I designated *Formica abdominalis* Fabr. as the type (1913), but Forel chose *F. rufipes* Fabr. (1914). Both are retained in the subgenus as accepted by Emery.

Subgenus *Myrmolophus* Emery. Emery has split this subgenus off of Forel's *Myrmepomis* and based it on the Neotropical *Formica sericeiventris* Guérin, leaving the remainder of the species, which are African and Malagasy, in *Myrmepomis*. I had designated *sericeiventris* as the type of *Myrmepomis* in 1913, and Forel had cited the Ethiopian *F. fulvopilosus* DeGeer as the type in 1914. As the latter designation is invalid, *Myrmolophus* becomes a synonym of *Myrmepomis*, and it is necessary to replace Emery's name for the Old World species. I propose the name **Myrmopioromis** nom. nov.

Subgenus *Myrmotarsus* Forel. I designated *Formica mistura* F. Smith as the type of this subgenus, whereas Forel selected *F. irritabilis* F. Smith. Both are included in the group as emended by Emery. He includes also *F. quadrisectus* F. Smith, which was cited by Forel as the type of *Myrmophyma*. Since I had previously designated *Camponotus capito* Mayr as the type of the latter genus,

and Forel's designation is invalid, there can be no objection to Emery's procedure.

Subgenus *Myrmosphincta* Forel. I designated the Neotropical *Formica sexguttata* Fabr. as the subgenotype, Forel the Malayan *F. cinerascens* Fabr. Emery has now transferred *sexguttata* to his subgenus *Myrmotemnus* and has retained the name *Myrmosphincta* for the Malayan, Australian and Malagasy species. It is clear that a new name is required for *Myrmosphincta* Emery (1920). I propose **Myrmosaulus** nom. nov.

Subgenus *Myrmophyma* Forel. As already stated, I designated *Camponotus capito* as the type, but Forel selected *quadrisectus*. Emery also designates *capito* as the type. Forel's *Myrmocamelus* becomes a synonym of *Myrmophyma*, because he selected as its type *Formica ephippium* F. Smith, which is merely one of a number of Australian species closely related to *capito*. Thus owing to my prior designation of the type of *Myrmophyma* it is unnecessary for Emery to violate the code of nomenclature (1912), according to which genotypes are stable and cannot be changed.

Subgenus *Myrmosaga* Forel. Here, too, there is a discrepancy in the types selected, as I had designated *Camponotus kelleri* Forel and Forel had selected *C. quadrimaculatus* Forel. Both are included in the subgenus as emended by Emery.

Subgenus *Myrmentoma* Forel. This subgenus, established by Forel in 1912, was in 1914 regarded by him as a synonym of Ashmead's *Orthonotomyrmex* (1906). I had designated *Formica lateralis* Olivier as the type of *Myrmentoma* in 1913, and Forel had designated the same type for *Orthonotomyrmex* in 1914, overlooking the fact that Ashmead had designated *Formica sericea* Fabr. Emery has resuscitated *Myrmentoma* and defined it and *Orthonotomyrmex* more precisely.

Subgenus *Myrmeponis* Forel. See *Myrmolophus*, above.

Subgenus *Myrmacantha* Emery. This is a synonym of *Myrmorhachis*, for in 1913 I designated as the sub-genotype of the latter the Ethiopian *Camponotus polyrhachiooides* Forel, which is closely related to *C. aberrans* Mayr designated as the type. Forel in 1914 selected the Neotropical *Camponotus latangulus* Roger as the type of *Myrmorhachis*. Since Emery restricts the latter name to the American forms it becomes necessary to replace it by a new term,

I propose **Myrmocladæcus** nom. nov., since all or nearly all the species live in hollow twigs.

Subgenus *Myrmamblys* Forel. Here, too, difficulties arise owing to the fact that Emery has restricted the name to American species, I designated an East Indian species, *Camponotus reticulatus* Roger as the type (1913), but Forel selected a Neotropical form, *C. fastigatus* Roger. As Emery has placed *reticulatus* in *Myrmotemnus*, the latter would seem to be a synonym of *Myrmamblys* Forel (1912 and 1913), and the selection of a new name for *Myrmamblys* Emery (1920) is made necessary. For this I propose **Neomyrmamblys** nom. nov. I have already explained why the small group of American species including *sexguttatus* must be retained as *Myrmosphincta* Forel (*vide supra*).

Subgenus *Myrmorhachis* Forel. Discussed above in connection with *Myrmacantha* Emery.

Subgenus *Myrmeurynota* Forel. I designated *Camponotus eurynotus* Forel as the type of this subgenus but Forel cites *C. gilviventris* Roger. Both are included in Emery's list of species.

Subgenus **Manniella** subgen. nov. I propose this name for the small group comprising the Cuban *sphaericus* Roger (subgenotype) and its subspecies *sphaeralis* Roger. Mann has recently discovered and described the maxima worker of these forms.⁶ Both Forel and Emery include them in *Myrmeurynota*, whereas Mann assigns them to *Colobopsis*. The structure of the head, pronotum, etc., of the large worker is so aberrant that they cannot be included in these subgenera, nor in Emery's *Hypercolobopsis*, *Pseudocolobopsis* nor *Paracolobopsis*.

The changes suggested above increase the number of subgenera of *Camponotus* to 36.

⁶ Additions to the Ant Fauna of the West Indies and Central America. Bull. Amer. Mus. Nat. Hist. 42, 1920, pp. 403-439, 10 figs.