

Notes on some aberrant Indonesian Ants
of the subfamily Formicinae

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In 1919 I described as *Camponotus megalonyx* an aberrant ant found by Dr. William Beebe „running on bushes” at Sarawak, Borneo. The specimens comprised two media and two minor workers and were assigned provisionally to the subgenus *Myrmosphincta*, which has since been restricted to certain Neotropical species (*C. sexguttatus* Fabricius and its allies). A decade later (1929) Menozzi redescribed this ant as *Camponotus (Orthonotomyrmex) chalconotus* from a single defective specimen belonging to the late Col. Bingham’s collection now in the British Museum. The specimen bore no locality label, but Menozzi believes that it came „most probably from India (or Burma)”.

Dr. August Stärcke (1934) recently described and figured all the castes of *megalonyx* from specimens collected by F. G. Nainggolan at Peureula, in the province of Atjeh, northern Sumatra, from the hollow ochreae of a creeping ratan palm (*Korthalsia* sp.), and made the interesting discovery that its maxillary palpi and in some individuals also the labial palpi, instead of being 6- and 4-jointed respectively, as in other species of *Camponotus*, show a reduction in the number of their joints. He recognizes five different subcastes of workers, maxima (9.8—11 mm.), major (8—8.3 mm.), media (7—7.5 mm.), minor (5—6 mm.) and minima (4—4.5 mm.). The female measures 15.5—16 mm. and is, therefore, for a *Camponotus*, unusually large compared with the worker maxima. The male small (5.6 mm.) and much like a *Camponotus* male though the genitalia seem to be peculiar. The palpi are very short in all the castes, the maxillary being 5-jointed and the labial pair 4-jointed in the male, female, maxima, major, media and minor, but the labial palpi of the minima have only 3 joints. Dr. Stärcke has therefore made *megalonyx* the type of a new subgenus of *Camponotus*, *Myrmopalpella*. An examination of all the castes, which he very generously sent me, has suggested the following remarks.

When we consider the foregoing and numerous other peculiarities of *megalonyx*, which are emphasized in Dr. Stärcke's careful figures and descriptions, we are inclined to inquire whether *Myrmopalpella* may not deserve to rank as an independent genus. There is some difficulty in answering this question, however, because two other groups, the genus *Bregmatomyrma*, which I established in 1929, and especially the subgenus *Myrmoplatys* Forel (1916) of *Camponotus*, show unmistakable resemblances to *Myrmopalpella*.

Bregmatomyrma was based on a single dealated female specimen (*B. carnosa* Wheeler) taken by Dr. E. Mjöberg at Pajan, in Dutch East Borneo. At first sight its head, with the very convex vertex, depressed, lobular posterior corners, large ocelli, short-jointed antennal funiculi and node-like petiole is strongly reminiscent of the head of the female *megalonyx*, but the very short frontal carinae, anteriorly inserted antennal scapes, basally narrowed mandibles, very short, subglobose gaster, with its acute anterior corners, and the very different pilosity show that we are dealing with a distinct genus. The palpi, however, are very short as in *Myrmopalpella*, the labial pair certainly only 3-jointed. The maxillary palpi, too, seem to have the same number of joints, but are concealed under the anterior borders of the gula and closed mandibles so that they cannot be investigated without risk of damaging the type specimen. I erected a special tribe of Formicinae for *Bregmatomyrma* and was inclined to place it near *Pseudolasius*, but we shall have to await the discovery of the worker and male before its true taxonomic position can be determined.

Myrmoplatys, which is more interesting in connection with *megalonyx*, comprises four described species: *beccarii* Emery (1887) from Sumatra, *contractus* Mayr (1872) from Borneo and Mentawai Island, with two varieties, *buttesi* Forel (1902) and *scortechinii* Emery (1887), both from Malacca, *hospes* Emery (1884) from Sumatra, with the subspecies *adulta* Viehmeyer (1916) from Singapore, and *korthalsiae* Emery (1887) from Sumatra and Mentawai Island, with the subspecies *concilians* Forel (1915) from Simalur Island. These forms are all inadequately known from worker specimens only, except *concilians*, of which Forel described what he took to be a female. Unfortunately, I have not seen specimens of any of them, but possess three winged females of an undescribed form allied to *korthalsiae* taken at lights by Karny near Wai Lima in southern Sumatra. The workers of *Myrmoplatys* resemble those of *Myrmopalpella* in the deeply excised head, structure of the mandibles, flattened clypeus, short antennal scapes and short-jointed funiculi, rather medially placed eyes, insertion of the scapes near the middle of the frontal carinae and, in three of the species, in the

mesoëpinal impression, but differ in the much smaller and shallower clypeal foveae, more slender, small-clawed tarsi, higher and more squamiform petiole and in sculpture and pilosity. The females are much more similar, but the head in *Myrmoplatys* is flattened throughout and not conspicuously convex at the vertex. I find in my females of *Myrmoplatys* that the gizzard is precisely as in the typical *Camponotus* (e.g. *herculeanus* L.), but that both the maxillary and labial palpi are very short and consist of only 3 joints! I have not yet been able to undertake a comparative study of the palpi in representative species of other aberrant subgenera of *Camponotus*, but probably *Myrmopalpella* and *Myrmoplatys* are not the only ones with a reduced number of palpal joints.

It would seem, therefore, that if *Myrmopalpella* is to be raised to generic rank, we must also accord *Myrmoplatys* the same status. The plethora of subgenera, species, subspecies and varieties in the genus *Camponotus* as defined by Forel and Emery is so excessive that even so moderate a detachment from it as two subgenera, five species, two subspecies and two varieties seems to be worth one's while. I therefore propose regard both *Myrmopalpella* and *Myrmoplatys* as independent genera though I am willing to admit that future students of these ants find reasons for including *Myrmopalpella* as a subgenus in *Myrmoplatys*. This procedure, indeed, seems to be indicated not only by the structural affinities of the species of the two groups but also by their similar, very circumscribed geographical distribution, if we ignore the British Museum specimen of *megalonyx*, which quite possibly was received by Col. Bingham from some locality in Borneo or Sumatra.

Myrmoplatys and *Myrmopalpella*, furthermore, are closely related oecologically, since the species of both groups inhabit the papery ochreae, or inflated leaf-sheath appendages, of *Korthalsia*, a genus of myrmecophytic palms comprising about 20 Oriental species. Beccari (1884—1886), while studying the myrmecophytes of Malaya and Papua, was the first to discover the relations of *Myrmoplatys* to these palms and it was from his specimens that Emery described three of the species. *Myrmoplatys hospes* was taken by Beccari from the ochreae of *Korthalsia scaphigera* Martius (the „rotan semut” of the natives), *M. contractus* from those of *K. echinometra* Beccari (the „rotan udang”) and *M. korthalsiae* probably also *beccarii* from those of *K. augustifolia* Blume. The varieties *buttesi* and *scortechinii* also are known to inhabit the ochreae of palms of the same genus. In order to reach the cavities beneath the ochreae, the ants make perforations which serve as their nest-entrances. When disturbed the workers, probably by striking the walls of their habitations

with their heads, produce a sound, which the natives are said to attribute to the plant.¹⁾

The species of *Myrmoplatys* and *Myrmopalpella* are, therefore closely related to and very probably derived from *Camponotus*, and peculiarly adapted to living in the flattened cavities of a single genus of myrmecophytes. The adaptation seems to be manifested structurally in the conspicuous flattening of the head in both the female and worker *Myrmoplatys* and the female of *Myrmopalpella*. Since these ants belong to a biocoenose which centers about a well-known genus of jungle-palms, it should not be difficult for collectors in Sumatra and Malacca to obtain fresh material of all the castes of the species of *Myrmoplatys*. When this material is forthcoming myrmecologists will be able to give a much more satisfactory diagnosis of the genus and of its very interesting species.

Literature Cited.

- Beccari, O. 1884—1886. Piante ospitatrici ossia piante formicarie della Malesia e della Papuasias. Malesia II, 340 pp., 65 pls.
- Beccari, O. 1904. Wanderings in the Great Forests of Borneo. Trans. by E. H. Giglioli and F. H. H. Guillemard. London.
- Emery, C. 1887. Catalogo delle formiche esistenti nelle collezioni del Museo Civico di Genova. III. Formiche della regione Indo-Malese e dell'Australia. Ann. Mus. Civ. Stor. Nat. Genova (2) 4, pp. 209—258, 2 pls.
- Emery, C. 1925. Fam. Formicidae, subfam. Formicinae in Wytsman's Genera Insectorum, 302 pp. 4 pls.
- Forel, A. 1902. Fourmis d'Algérie. Ann. Soc. Ent. Belg. 46, pp. 462—463.
- Forel, A. 1915. Fauna Simalurensis. Fam. Formicidae. Tijdschr. Entom. 58, pp. 22—43.
- Forel, A. 1916. Fourmis du Congo et d'autres provenances, récoltées par MM. Hermann Kohl, Luja, Mayné, etc. Rev. Suisse Zool. 24, pp. 398—460, 7 figs.

¹⁾ The following note on this sound is from Beccari's „Wanderings in the Great Forest of Borneo” (1904, p. 407): „Amongst the *Korthalsias* one species surprised me when I first met with it near my house on Mat-tang (Borneo), because I could not at first account for a peculiar noise which I made out to be coming from one of these plants. It was a sonorous rustling sound, which I afterwards found was produced by the passage of a colony of ants inhabiting the vesicular organs and inflations of the *Korthalsia*, which, being by nature rigid and dry, produced in a certain measure the effects of the resonators of a stringed musical instrument.”

- Mayr, G. 1872. Formicidae Borneenses collectae a J. Doria et O. Beccari in territorio Sarawak annis 1865—1867. Ann. Mus. Civ. Stor. Nat. Genova 2, pp. 133—155.
- Menozzi, C. 1929. A new species of Camponotus belonging to the subgenus Orthonotomyrmex Ash. Ann. Mag. Nat. Hist. (10) 4, 430—433, 2 figs.
- Stärcke, A. 1934. Un nouveau sous-genre de Camponotus de la Malaisie avec description de Formes Nouvelles, récoltées par M. F. G. Nainggolan. Zool. Mededeel. 17, pp. 20—30, 14 figs.
- Wheeler, W. M. 1919. The Ants of Borneo. Bull. Mus. Comp. Zool. 63, pp. 43—147.
- Wheeler, W. M. 1929. Three New Genera of Ants from the Dutch East Indies. Amer. Mus. Novitates No. 349, pp. 1—8.
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