

6613

WILLIAM L. BROWN

# B R E V I O R A

Museum of Comparative Zoology

CAMBRIDGE, MASS.

MARCH 20, 1953

NUMBER 11

47

## CHARACTERS AND SYNONYMIES AMONG THE GENERA OF ANTS

### Part I

By WILLIAM L. BROWN, JR.

Museum of Comparative Zoology  
Harvard University

Work now under way is aimed at a revision of the basic classification of the Formicidae down to generic and subgeneric levels. The present classifications are considered both unnatural and impractical, concealing as they do large numbers of generic and specific synonyms. I propose to differentiate genera only on the basis of discontinuities of a largely morphological kind, and it is hoped that by this method a useful and accurate key to the genera will become possible. Synonymies given here require discussion that is best set forth separately, so as not to clutter more nearly final, synoptic classifications and keys now being prepared.

### MYRMECIA Fabricius

*Myrmecia* Fabricius, 1804, Syst. Piez.: 423. Genotype: *Myrmecia gulosa* Fabricius, by designation of Emery, 1911.

*Myrmecia* (*Promyrmecia*) Emery, 1911, Gen. Ins., Fasc. 118: 18-19. Sub-genotype: *Myrmecia aberrans* Forel, by original designation. NEW SYNONYMY.

*Myrmecia* Clark, 1952, Formic. Australia, Melbourne, 1: 21.

*Promyrmecia* Clark, 1952, *Ibid.*, p. 119.

The references of Clark should be consulted for further synonymy. Clark has stoutly defended the separation of *Myrmecia* and *Promyrmecia* as distinct genera, first on the basis of ability or inability to jump of the species concerned, and later, when saltation proved to have numerous exceptions in both directions, on morphological grounds.

B

Years of study of the myrmeciines by this author have produced in the 1952 reference (p. 20) a couplet summarizing the characters supposed to separate *Myrmecia* and *Promyrmecia*. The three characters contrasted are: (1) fraction of length by which the antennal scape surpasses the occipital border, (2) distinctness of metanotum, and (3) size, as mirrored in total length. In the first character, it may be observed from the descriptions of species of *Myrmecia* given by Clark himself in the pages following the couplet, that no less than one-third of the 59 forms recognized disagree with the couplet, and disagree in the direction of *Promyrmecia*. In at least some cases, the scape proportions are exactly as stated in the couplet for the upper limit of *Promyrmecia*. The distinctness of the metanotum is subject to varying interpretation, but from any reasonable point of view, the generality of the indistinctness of the metanotum in *Promyrmecia* cannot be defended. In fact, Clark's figures (*op. cit.*) in rapid survey are the best contradiction of his couplet that I can offer anyone without a large representation of material at hand for direct study. The "size" figures, even as cited in the couplet, are broadly overlapping and useless for the purpose to which they are put. Study of a good representative series of the species is convincing proof for me that size, as based on any measurable dimension or proportion of the worker or female so far utilized, is graded from the largest *Myrmecia* to the smallest *Promyrmecia* without a break.

It is entirely possible that study of the male genitalia, when a sufficient number of males becomes available, will demonstrate a set of cleavages that along with other characters will serve as discontinuities for the proper splitting of *Myrmecia*. Clark's and other divisions are here rejected for lack of evidence. It should be pointed out, in order to save possible future confusion, that Clark has synonymized *Halmamyrmecia* Wheeler with *Promyrmecia*, although he wrongly maintains *Myrmecia nigrocincta* Fr. Smith, its type, in the genus *Myrmecia* as he has defined it.

#### RHYTIDOPONERA Mayr

*Ectatomma* (*Rhytidoponera*) Mayr, 1862, Verh. zool.-bot. Ges. Wien **12**: 731.

Genotype: *Ponera araneoides* Le Guillou, by designation of Emery, 1911.

*Rhytidoponera* (*Chalcoponera*) Emery, 1897, Ann. Mus. Stor. Nat. Genova

**38**: 548. [Sub] genotype: *Ponera metallica* Fr. Smith, by designation of Emery, 1911. NEW SYNONYMY.

*Rhytidoponera* and *Chalcoponera* treated as distinct genera, Wheeler, 1922,

Bull. Amer. Mus. Nat. Hist. 45: 643-644. Clark, 1936, Mem. Nat. Mus., Melbourne, 9: 14-15.

The large genus *Rhytidoponera* in the present broad sense includes species of typical ectatommine characteristics, distinguished in having the inferior pronotal margins just in front of the fore coxae armed on each side with an acute tooth; the hind coxae are completely unarmed above. Distribution is primarily Australian and Papuanian, with outliers in the "Wallacia" region and in the southern Philippines to the west, and in New Caledonia in the east.

The separation of *Rhytidoponera* from *Chalcoponera*, either generic or subgeneric, has been accepted from the time of Emery's first division of the few species then known. Rapid accretion of species in both groups has frequently led to puzzlement of authors trying to place new species in one group or the other, and this puzzlement has resulted in several published expressions of doubt accompanying specific descriptions.

The separation has been based on (a) proportions of certain antennal segments in worker and male, (b) development and pectination of the spurs of the middle and hind tibiae in the worker, (c) development of notaulices in the male, and (d) presence or absence of a normal winged female caste (Wheeler, *loc. cit.* 1922). If one applies these Emery-Wheeler key characters rigorously to a wide variety of species in *Rhytidoponera* and *Chalcoponera*, discrepancies are not long in appearing.

The tibial spurs of the middle pair of legs are reduced and narrow (rarely absent) in all species of both genera examined for this work, and may be safely disregarded. The extremes of development of breadth and pectination of the posterior spurs are largely in accord with the conventional separation of the two groups, but exceptions are glaring, and gradual transition from one type to the other is evident among a restricted selection of eastern Australian species. In the species *tenuis* Forel, which has *Chalcoponera* antennal funiculi and which has been placed in *Chalcoponera* by all authors, the posterior tibial spurs are minute and show the strongly reduced pectination supposed to be characteristic of *Rhytidoponera s. str.* Conversely, certain *Rhytidoponera s. str.* species, such as *R. malandensis* Forel, have the posterior spurs large, broad, and strongly pectinate; in fact, *R. malandensis* has the spurs considerably more broadly pectinate than in any *Chalcoponera* species I have seen, including the genotype.

In the worker funiculi, the proportions of the "critical" segments

are intergradient and fully ambiguous in a number of species, among them *R. reticulata* Forel, *C. lamellinodis* Santschi (paratypes), *C. dubia* Crawley, and all the species of the *C. impressa* Mayr complex. More ambiguous examples or outright contradictory species could be cited, but the above cases should serve to prove the point so far as the worker is concerned.

Concerning the male characters, a case similar to that for the workers can be drawn, but it will serve merely to focus on the New Caledonian fauna, consisting of a handful of forms in which the workers have been placed in *Chalcoponera* on the usual characters. The males of these species are, unfortunately for the generic division, endowed with the characters of *Rhytidoponera* s. str. Emery (1914, in Sarasin and Roux: Nova Caledonia, Zool. 1: 397) covers this situation adequately when he states: "The males of the New Caledonian species of *Chalcoponera* (*Rhytid. fulgens*, *numeensis*, *atropurpurea* and *acupuncta*) make an exception to the character that I have attributed to the subgenus concerning the structure of the antennae (Genera Insectorum, fasc. 118, p. 39). For the present, I am incapable of distinguishing the males of the two subgenera of *Rhytidoponera*." Apparently Wheeler overlooked this paragraph when he raised *Chalcoponera* to generic rank in 1922, citing in his key the same discredited male characters. I have dissected the male genitalia of several species representing *Chalcoponera* and *Rhytidoponera* s. str., and the preparations fail to show differences except minor ones among the various species, without regard to the old division. The volsellae are uniformly much like those of *Myrmica* and the Dacetini in the subfamily Myrmicinae, and the other parts are on the usual formicid pattern.

It seems fairly obvious that most describers have pretty consistently ignored the formal characters in assigning new species to one group or the other; rather, assignment seems to have been made chiefly on the basis of size and habitus. On such a basis, I can make out not two, but several, species-groups of fairly distinctive relationships, but broadly intergradient one to the next. Of these, the *impressa* complex seems to have a combination of characters approaching nearest the hypothetical generalized *Rhytidoponera*. Disregarding certain aberrant species and complexes, such as the *turneri* group and the New Caledonian stock, the development of the majority of species seems to have followed two lines: one toward large species of the type of *mayri* Emery, *araneoides* Le Guillou, and *punctata* Fr. Smith, and one toward the type of *metallica* Fr. Smith and *victoriae* André. In the farflung

regions penetrated by *Rhytidoponera s. lat.* on the Australian continent, these two broad adaptive types have met with relative success, while the more generalized connecting types have been restricted to favorable forested areas, largely in the mountains of eastern Australia. Thus, while the *Rhytidoponera* species inhabiting the deserts, scrubs, heaths and eucalypt woodlands of the great, arid, open regions of Australia may seem to be amenable to assortment into two distinct groups, it must be borne in mind that the more generalized forest-loving species, while less familiar to the observer, form an effective bridge joining these two groups.

Before leaving *Rhytidoponera*, a word is required on the females. It has been assumed that *Chalcoponera* species always produce normal winged females, and that *Rhytidoponera s. str.* species do not. In 1950, Clark (*in litt.*) indicated to me that he had found females of some sort, presumably differentiable from the workers, in the latter group. To date, he has published nothing concerning this find, so that it is fitting that the old assumption be continued until definite information appears in print. My own field investigations in Australia (1950-51) indicate that the *R. impressa* group (*impressa*, *chalybaea*, *splendida*) normally produces a regular yearly crop of males and females in most mature nests during the first part of the dry season in each of the regions inhabited. Both sexes are winged before the nuptial flight, and fertilization and nest-founding are presumed to follow conditions more or less normal among the Ponerinae, as isolated females have been found dealated and inhabiting small cells in various situations in normal habitats. Outside the season for production of winged forms, only dealate females have been found in established nests in addition to the workers and such brood as occurs. When winged forms are found in a nest, these are always of both sexes so far as my observations go.

In species of the *metallica* group, a situation of a quite different sort is apparent. Among the common and widespread members of this group, such as *metallica*, *tasmaniensis*, and their very close allies, winged or obviously dealate females are very rare or unknown. The *victoriae* group is similar in this respect, although I have found a dealate female in a mature nest of the species common at Kuranda, in North Queensland, and have also found a lone winged female of *victoriae* floundering in the damp sand at the surf edge at Seaford, on Port Phillip Bay, in Victoria. Of several thousand nests of *victoriae*, *metallica*, *tasmaniensis* and very close allies of these species that I have opened, not one (with the single noted exception above) has yielded

a female of the normal type, either alate or dealate. Yet there are a few isolated specimens of normal females in these groups in the Museum of Comparative Zoology collection, most of which seem to have been taken singly on the wing or otherwise.

While it is conceivable that the rarity of females in the nests of such species may reflect the methods of investigation, and not true absence of this caste, another circumstance makes this seem unlikely. I refer to the very widespread occurrence of winged males in nests of the same species at all seasons of the year, a phenomenon that stands out among my Australian observations even though I failed to take quantitative notes that would have made it much more convincing. These males are usually present in small numbers, and may be found in the upper as well as the lower chambers of a given nest. They are very active, and either run to hide quickly or else take to ready flight. A more limited number of observations on the large deserticolous members of *Rhytidoponera s. str.* indicates that males are to be found in their nests on a somewhat similar basis, though observations through several seasons will be needed to confirm this.

Among some other, more rare and distributionally restricted species, *R. croesus* Emery appears to have normal females most or all of the time, while *R. aspera* (Roger) is recorded as having this caste at least some of the time. For most of the species of the "inter-subgeneric" and aberrant groups, workers only are known at present, but these forms are so rare and so little-investigated that presence or absence of winged females cannot be assumed on any reasonable grounds. Under the circumstances as outlined, utilization of the presence or absence of a true female caste as a taxonomic character would seem entirely premature.

The situation in the female-less or female-rare species that have been fairly extensively investigated is, however, of considerable interest apart from taxonomic considerations. In two such species, I have seen a male seeking to enter an alien nest, apparently of the same form. In the spring, in southeastern Australia and the dry Northern Flinders Ranges of South Australia, at least, males of these forms are often seen hawking in rapid flight low over the ground in the manner of certain mutillid and thynnine males during the sexual search. Observations in 1951:

On the 12th of September, in a strip of open eucalypt woodland at Burwood, near Melbourne, Victoria, I noticed such a male in flight on a cool, sunny afternoon. While following him, I suddenly saw him

alight and disappear without hesitation into a small hole in the ground. This hole, when attacked with a trowel, proved to be the entrance to a nest of *R. tasmaniensis*, a nest containing, so far as I could dig on this occasion, workers and two males, the latter indistinguishable from males taken in nests of this species on other occasions. One of these males, found just below the entrance, must have been the male I saw entering just before I started to dig.

At Wilpena Pound, a sort of natural oasis in the arid Flinders Ranges of South Australia, the evening of November 25 brought an abundant flight of a large brown *Rhytidoponera* species, entirely males, to our camp pressure lanterns. Later that night, some rain fell and there were electrical storms on the adjacent peaks. On the next day, in an area of *Triodia* grass within the Pound, I found a low, gravel-studded mound with wide, slit-like entrance, of the type made by certain arid-land species of *Rhytidoponera* and *Camponotus*. The nest was seen in the path taken on the way out, and was not excavated until returning toward camp, late in the afternoon when the sun had fallen very low. While I was bending over to deal the hard clay mound a first blow, a large male of *Rhytidoponera* came, flying in low over the ground from a distance, and landed directly on the lip of the entrance slit, which it immediately entered. This was surprising, as no sign of life had been detected around the mound at either time of inspection (the species concerned, probably *R. mayri* Emery, is, with its close relatives, a primarily crepuscular and nocturnal forager). The nest was immediately attacked, and the male recovered quickly several inches down along the main entrance passage. Further digging secured only a few workers of *R. mayri* Emery.<sup>1</sup>

While these two incidents, observed by chance, are scarcely to be considered definite proof of an established behavior pattern, the observations made to date on various *Rhytidoponera* species suggest the following hypothesis, now being tested by Haskins (*in litt.*).

*Rhytidoponera* (*s. lat.*) varies by species and species-groups in presence, absence or rarity of a normal female caste, and varies correspondingly in behavior of and toward the males. In the species in which normal females are rare or absent, it may be assumed that deposition of fertile eggs is wholly or largely taken over by workers

<sup>1</sup> The species described by Clark as *R. stridulator* and *R. dixonii*, along with some other forms\* are supposedly distinguished from *R. mayri* by details of petiolar structure and body sculpture. Single nests of what I take to be *mayri*, however, show a wide range of variation in these same characters, and Clark has not made the differences sufficiently clear to convince me that his species are really distinct.

or highly modified ergatoids. It is possible that apparatus for the retention of sperm is strongly impaired in such hypothetical individuals; if so, then the need for constant refertilization would seem to call for the constant presence of consort males in the nest. Meager observations seem to indicate that males sometimes, perhaps normally, leave the parent nest and enter another nest of the same species, where they may remain as guests for long periods. If observation and controlled experiment corroborates the above hypothesis, a new and extremely interesting kind of behavior will be added to the multiplicity of patterns known among the ants, and the origin of certain similar male habits among the Dorylinae may be easier to understand.

#### CENTROMYRMEX Mayr

*Centromyrmex* Mayr, 1866, Verh. Zool.-bot. Ges. Wien **16**: 894. Genotype:

*Centromyrmex bohemani* Mayr, monobasic.

*Typhloteras* Karawajew, 1925, Konowia **4**: 128. Genotype: *Typhloteras hamulatum* Karawajew, monobasic. NEW SYNONYMY.

Karawajew based his genus on a specimen with only a single, large pectinate spur on the posterior tibiae, and thereby carried it out to Emery's Group III of the tribe Ponerini. This placement is only another example of the great faith formerly held by many authors in the constancy and taxonomic importance of the number and condition of the spurs of the middle and hind tibiae. In fact, the character in question is a very poor one upon which to base a classification, especially in the Ponerini. If one reviews the situation in various *Centromyrmex* species, including *Centromyrmex hamulatus* NEW COMBINATION, it is at once apparent that the number and condition of the spurs in question differ by species, and possibly even within species. Thus, either the middle, or the posterior, or even both pairs of tibiae may possess the extra lateral spur in a more or less rudimentary condition, while the degree of development of the medial spurs and their pectination is also variable from one species to the next.

In other characters, including the striking general habitus and the probably general termite-eating proclivities, the species here included in *Centromyrmex* form a very homogeneous and natural-seeming group. To break up this combination on the basis of spur characters, one must, as did Karawajew, go to extraordinary lengths in invoking "convergence" as a possible explanation of the common resemblances; to be thorough in applying the same logic, one would have to distribute the few species involved among three or four genera. In any case, the



tibial apices of several of the species bear such a dense growth of heavy, spine-like setae that the identification of a spur rudiment of similar size becomes an academic exercise. In addition to the synonymy of *Typhloteras* with *Centromyrmex*, it becomes necessary to point out that the subtribe Centromyrmicini of Emery is a NEW SYNONYM of tribe Ponerini if the spur characters will not hold.

#### PRISTOMYRMEX Mayr

*Pristomyrmex* Mayr, 1866, Verh. Zool.-bot. Ges. Wien **16**: 903. Genotype:

*Pristomyrmex pungens* Mayr, monobasic.

*Odontomyrmex* André, 1905, Rev. Ent. Caen **24**: 207.

*Hylidris* Weber, 1941, Ann. Ent. Soc. Amer. **34**: 184, 190. Genotype: *Hylidris myersi* Weber, monobasic. NEW SYNONYMY.

*Hylidris* defended, Weber, 1952, Amer. Mus. Novit. **1584**: 15-22.

When, in 1941, Weber first described *Hylidris*, he did so without realizing that it might be closely related to another genus like *Pristomyrmex*. By 1952, he has realized this relationship and is at some pains to mark out its boundaries. His new approach to the situation lies in segregating the African species of *Pristomyrmex* from the Indo-Australian ones; the former group, rallied about *H. myersi* as genotype, is given the name *Hylidris*. He is vague about what genus the Indo-Australian species are to belong to, but these are presumably to remain in *Pristomyrmex*. The characters of *Hylidris* are cited briefly, but are not contrasted with those of *Pristomyrmex s. str.* in any direct statement. Instead, Weber gives briefly his views on generic limits, which he feels should be arbitrarily drawn in some cases. (For my contrasting opinion, see the introduction to this paper.)

Summing up, it may be said that Weber's division of *Pristomyrmex* is based upon characterization of only one of the resultant groups, and no assurance is given that the characters are exclusive to that group. In point of fact, these characters are *not* exclusive to the African group. Since Weber claims to have examined the Indo-Australian species, at least in part, it may be wondered that he did not note this fact for himself; perhaps he did note it, and offered the generic-limit discussion as a defense against protests he felt would be lodged against *Hylidris*.

I cannot follow Weber's generic split, which I regard as wholly arbitrary. Significantly, Weber fails to mention the old synonym *Odontomyrmex*, a name put forward by André for a species that appears to have the chief definitive characters of *Hylidris*. Mann (1919, Bull. Mus. Comp. Zool. **63**: 341) delivered the coup de grâce to *Odonto-*

*myrmex* when he noted two specimens of his *Pristomyrmex obesus melanoticus* having a prominent tooth on one side of the pronotum, but none on the other side. We do not need to appeal to abnormal specimens in this case, however, as the known, normal specimens of the Indo-Australian and African regions form a tightly intergradient series with respect to the development of the posterior propodeal and anterior alitruncal pairs of teeth and the smooth to foveate-reticulate sculpture. This series, in my opinion, does not even split into respectable species-groups on the basis of the known characters, let alone genera or subgenera. Series of several undescribed species in the Museum of Comparative Zoology and J. W. Chapman collections serve only to fortify this opinion.

#### GAUROMYRMEX Menozzi

*Gauromyrmex* Menozzi, 1933, *Natuurhist. Maandblad* **22**: 146. Genotype:

*Gauromyrmex bengkalisi* Menozzi, monobasic.

*Solenomyrma* Karawajew, 1935, *Treubia* **15**: 103. Genotype: *Solenomyrma acanthina* Karawajew, monobasic. NEW SYNONYMY.

*Acalama* M. R. Smith, 1948, *Jour. N. Y. Ent. Soc.* **56**: 205-207. Genotype:

*Acalama donisthorpei* M. R. Smith, monobasic. NEW SYNONYMY.

This genus is very doubtfully distinct from *Vollenhovia* Mayr, from which it may at present be distinguished by means of the 11-segmented antennae and the bidentate propodeum, *vs.* 12-segmented antennae and unarmed propodeum in *Vollenhovia*. The characters are very weak ones, and may be compromised in species in this complex that are presently not available to me. *Vollenhovia emeryi* Wheeler, with 12-segmented antennae, has minute propodeal teeth, and the median funicular segments are so reduced in length as to be virtually obsolete; the step to *Gauromyrmex* from this species is a very short one. The amber species *Vollenhovia beyrichi* (Mayr), if properly placed by Wheeler, would be intermediate in the critical characters.

Types of *Gauromyrmex bengkalisi* and *Acalama donisthorpei* were examined, and are considered specifically distinct, but not generically so. Specific synonymy is formalized as follows:

#### GAUROMYRMEX ACANTHINUS (Karawajew) new combination

*Solenomyrma acanthina* Karawajew, 1935, *Treubia* **15**: 103-104, fig. 23, worker.

*Acalama donisthorpei* M. R. Smith, 1948, *Journ. N. Y. Ent. Soc.* **56**: 207-208, figs. 1, 2, worker. NEW SYNONYMY.

Types of Smith's species and *Gauromyrmex bengkalisi* have been examined through the kindness of Dr. Smith. The former species has

been compared with Karawajew's description and figure, and also with the West Chinese series taken by myself, and mentioned by Smith (*loc. cit.*, p. 206). The comparison gives the distinct impression that one is dealing with a single variable species. Variation is chiefly in size (slight), distinctness and acuteness of propodeal teeth, and depth of pigmentation, but the present evidence does not warrant subspecific distinction in my opinion. This ant appears to be rather common in India and China, and I believe that I have seen it on several occasions in Bengal Province nesting under loose bark, though the actual specimens were lost in a wartime shipment. In life, the distinctive point of recognition lies in the extremely depressed appearance of the ant, even when moving about. It appears to the naked eye somewhat like a flattened *Leptothorax*, and its attachment to tree trunks and plant cavities may be correlated with the habitus.

At the time of Dr. Smith's investigation of this insect, he sent specimens to me, and I failed to recognize it as any described species. The published descriptions of Menozzi and Karawajew came to light later. The entire case of these synonymous genera should prove my frequently-held point that the classification of the Myrmicinae is long overdue for complete revision.

#### Tribe AMBLYOPONINI

Onychomyrmicini Ashmead, 1905, *Canad. Ent.* **37**: 382.

Examblyoponini Donisthorpe, 1949, *Ann. Mag. Nat. Hist.* (11) **15**: 401.

Reneini Donisthorpe, 1947, *Ann. Mag. Nat. Hist.* (11) **14**: 183. NEW SYNONYMY.

#### PRIONOPELTA Mayr

*Prionopelta* Mayr, 1866, *Sitzb. Akad. Wiss. Wien* **53**: 503. Genotype: *Prionopelta punctulata* Mayr, monobasic.

*Ponera* Fr. Smith (*partim*), 1860, *Journ. Proc. Linn. Soc. London, Zool.* **4** (suppl.): 105, *nec* Latreille.

*Examblyopone* Donisthorpe, 1949, *Ann. Mag. Nat. Hist.* (11) **15**: 401. Genotype: *Examblyopone churchilli* Donisthorpe, monobasic: *vide infra*.

*Renea* Donisthorpe, 1947, *Ann. Mag. Nat. Hist.* (11) **14**: 183. Genotype: *Renea testacea* Donisthorpe, monobasic. (*Nec Renea* Nevill, 1880, in *Mollusca*.) NEW SYNONYMY. *Vide infra*.

Incredible as it may seem, Donisthorpe based his two new genera and two new tribes on two new species, both of which are synonymous with *Prionopelta majuscula* Emery. The same author had already proposed a new name for a synonym of the same species, so he has

achieved the unequalled feat of proposing for the same species three new specific, two new generic and two new tribal names. The synonymy of *Prionopelta majuscula* follows:

PRIONOPELTA MAJUSCULA Emery

*Ponera simillima* Fr. Smith, 1860, Journ. Proc. Linn. Soc. London, Zool. 4 (suppl.): 105, "worker," ♀, nec Fr. Smith, 1860, *op. cit.*, p. 104. NEW SYNONYMY.

?*Rhopalopone simillima*, Emery, 1900, Term. Füzetek 23: 311. 1911, Gen. Ins. 118: 35.

*Prionopelta majuscula* Emery, 1897, Term. Füzetek 20: 595-596, worker, ♀. Brown, 1951, Bull. Brooklyn Ent. Soc. 46: 102, *Examblyopone churchilli* synonymized.

*Prionopelta poultoni* Donisthorpe, 1932, Ann. Mag. Nat. Hist. (10) 10: 462, nom. pro *Ponera simillima* Fr. Smith, II. NEW SYNONYMY.

*Examblyopone churchilli* Donisthorpe, 1949, Ann. Mag. Nat. Hist. (11) 15: 401-402, ♀.

*Renea testacea* Donisthorpe, 1947, Ann. Mag. Nat. Hist. (11) 14: 183-186, fig., worker, ♂; pp. 590-591, ♀. NEW SYNONYMY.

In his original description of *Ponera simillima* II, Frederick Smith describes a "worker" and also gives characters purporting to be those of a winged female. In his treatment of 1932, Donisthorpe mentions as Smith's type "1 dealated ♀" from "Dor." [Dory, A. R. Wallace]. It is by now fairly well known that some of the Dory insect material, at least among the coleopterous collections in the British Museum, is suspected to be from other East Indian localities. Smith's description fits *Prionopelta majuscula* better than it does either of the other two *Prionopelta* species known from the Indo-Papuasian area (*P. kraepelini* Forel and *P. opaca* Emery), so there is no reason to question this particular record for a widespread New Guinea species. The assumption must be made, of course, that Donisthorpe's 1932 assignment to *Prionopelta* was correct; there is every reason to believe that it was so.

In 1951, I determined that a paratype female of *Examblyopone churchilli* was synonymous with *P. majuscula* and returned the type to Dr. E. S. Ross at the California Academy of Sciences. Dr. Ross was the original collector (at Maffin Bay, Dutch New Guinea) of both *E. churchilli* and *Renea testacea*, and he has recently sent me workers and males from the type series of the latter species. The workers fit Emery's diagnosis of *P. majuscula* very neatly, except for the usual small size difference resulting from Emery's habitual under-

measurement. This being the case, I asked Dr. Ross to compare the female specimens assigned by Donisthorpe to *R. testacea* with the female holotype (defective) of *E. churchilli*. He has replied (*in litt.*) that the correspondence of form, etc. is as good as can be expected, allowing for the missing parts of the *E. churchilli* type. The *R. testacea* workers differ as expected from authentic workers of *Prionopelta opaca* and *P. kraepelini* in the Museum of Comparative Zoology and match the differences from *P. opaca* listed by Emery in the original description of *P. majuscula*.

*P. majuscula* is larger than the other two Indo-Papuan species, and its worker has the dorsum of the head and alitrunk very definitely shining, with minute, spaced punctulation. The female is considerably larger and darker than the worker, and has stronger punctulation; the head is darker than the rest of the body. Both *P. kraepelini* and *P. opaca* are not only smaller, but also there is only a slight difference between the worker and female stature in these species; the dorsum of the head is densely and more coarsely punctulate and opaque, especially in *opaca*. The worker and female of *kraepelini* and the worker of *majuscula* are pale to bright yellow in color, while the females of *majuscula* and *opaca* and the worker of *opaca* are darker, ranging from ferruginous brown to blackish-brown. *P. opaca* and *P. majuscula* appear to be widespread on New Guinea and neighboring islands, while *P. kraepelini* is a more westerly, Indomalayan species that has spread into the Pacific as a tramp and has reached the Philippines in the north at Dumaguete, Negros Oriental: several series (J. W. Chapman and D. Empeso).