CORRECTIONS IN THE SYSTEMATIC POSITION OF CERTAIN TAXA OF THE CHALCINOIDEA AND PROCTOTRUPOIDEA (s.l)*, WITH NOTES ON SYNONOMY

BY PAUL DESSART, BRUXELLES

Summary

The author describes the taxonomic confusion that has existed in the Proctotrupoidea and Chalcidoidea (Hymenoptera) and cites examples of species first described as Chalcidoidea and later transferred to Proctotrupoidea, and visa versa. The author makes the following dispositions and synonymies: (i) Agonophorus Dahlbohm 1858 is synonymised with Ismarus Haliday 1835 (Proctotrupoidea-Diapriidae-Belytinae). (ii) Pseudoceraphron pulex Dodd 1924 is transferred from Proctotrupoidea-Ceraphronidae-Megaspilinae to Chalcidoidea-Pteromalidae-Diparinae. (iii) the new specific name melantatocephalus is proposed for Ceraphron melanocephalus Ashnead 1886, non Boheman 1832.

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SUMMARY

The author describes the taxonomic confusion that has existed in the Proctotrupoidea and Chalcidoidea (Hymenoptera) and cites examples of species first described as Chalcidoidea and later transferred to Proctotrupoidea, and vice versa. The author makes the following new dispositions and synonymies: (i) Agonophorus Dahlbohm 1858 is synonymised with Ismarus Haliday 1835 (Proctotrupoidea-Diapriidae-Belytinae). (ii) Pseudoceraphron pulex Dodd 1924 is transferred from Proctotrupoidea-Ceraphronidae-Megaspilinae to Chalcidoidea-Pteromalidae-Diparinae. (iii) The new specific name melantatocephalus is proposed for Ceraphron melanocephalus Ashmead 1886, non Boheman 1832.

INTRODUCTION

In the past many species, and even genera, of Microhymenoptera have been shifted from the family or even superfamily in which they were originally described to another. Between the Chalcidoidea and Proctotrupoidea particularly there has been a considerable two way traffic.

The changes are especially common in the last century, or for species described in the last century. Then, or at least in the earlier half of the century, the systematics of the higher taxa of the Microhymenoptera was, to say the least, rudimentary and the superfamilies Ichneumonoidea, Cynipoidea, Chalcidoidea, and Proctotrupoidea not clearly defined, or even erected.

Some examples worth mentioning in order to further clarify the position are condensed in the following paragraphs.

Copidosoma melanocephalum Ashmead 1886 was described as a Pteromalid (Chalcidoidea). In 1893 Ashmead himself decided it was in fact a species of Ceraphron (Proctotrupoidea-Ceraphronidae).

^{*} In the present note the Ceraphronidae are still considered a family of Proctotrupoidea. After this paper was submitted for publication, Dr. Masner and myself (see Masner, Lubomir and Dessart, Paul) have come to the conclusion that the Ceraphronidae are not related to the Proctotrupoidea but worthy of full superfamily status.

However the name melanocephalum in Ceraphron is preoccupied by melanocephalus Boheman 1832. Accordingly I am proposing the new name Ceraphron melantatocephalus nom. nov. for Ceraphron melanocephalus (Ashmead 1886) non Boheman 1832.

Chirocerus floridanus Ashmead 1881, described as a Pteromalid also is a Ceraphronid and belongs to the genus Lygocerus (fide Cresson 1887).

Elaptus (laps. calami for Alaptus) aleurodis Forbes 1884 (or 1885?) and Anaphes mellicornis Ashmead 1887 are not Mymarids but are both junior synonyms of Amitus aleurodinis Haldeman 1850 (Platygasteridae) according to Ashmead 1893 and Gahan 1927.

Paphagus rugosus Provancher 1881 is not a Pteromalid but is a species of Stictoteleia (fide Burks in Krombein 1958) and similarly Sphalangia aenea Provancher 1887 is a species of Trimorus (fide Burks loc. cit.), both genera of Scelionidae.

The specimens apparently misidentified as Pteromalus ovulorum by Boyer de Fonscolombe (1832, p. 303) have been variously interpreted by subsequent authors. In the Addenda (p. 432) to his classic work on the Microhymenoptera Nees (1834) placed them into the new genus Myina which he had erected earlier (p. 189) in this same work. Dalle Torre (1898) in his Catalogus Hymenopterorum cited them in three different places under three different names:—On page 264 as a possible synonym of Encurtus tardus Ratzeburg 1844, on page 426 as a synonym of Polynema ovulorum Linné 1758, whilst on page 518 their reference by Nees as Myina ovulorum is erroneously transscribed Mymar ovulorum which is given as a synonym of Telenomus ovulorum Bouché 1834. Schmiedeknecht (1926) chose Polynema ovulorum from the three alternatives presented by Dalle Torre, however in the same year (1926) Kieffer cited "Mymar O. Nees, 1834, p. 432" (i.e., Myina or Pteromalus ovulorum Fonscolombe) as a possible synonym of Telenomus terebrans (Ratzeburg 1834) a blackish Scelionid (Fonscolombe actually described his species as "aeneus").

Diapria conica (Fabricius 1775) a Diapriid has been successively called *Ichneumon conicus* (Fabricius in 1775), *Cynips crassipes* (Fourcroy in 1785), *?Cynipsichneumon conicus* (Christ in 1791) and *Chalcis conica* (Fabricius in 1798).

Schulz (1910) redescribed what he took to be a *Litus cynipseus* Haliday 1833, a Mymarid, whereas he actually had the Scelionid *Tiphodytes gerriphagus* (Marchal 1900) before him (*fide* Debauche 1948).

In Ashmead's monograph of Chalcids (1904) he moved into the Proctotrupids the genera Agonophorus Dalman (actually Dahlbom 1858), Macrostigma Rondani 1877, and Trichacis Provancher 1887 (p. 207) (actually Provancher's genus was called Trichasius and the page reference is wrong, it is actually p. 209; Trichacis is a Förster genus of 1856). Ashmead placed Trichasius Provancher as a synonym of Baeus Haliday 1833 (Proctotrupoidea-Scelionidae). Brues four years later (1908, p. 25) on the contrary considered Trichasius to be a synonym of Gryon Haliday 1833, another Scelionid genus he knew through Ashmead's earlier monograph of 1898. But on the eve of publication he discovered that Kieffer only a few months before had demonstrated that Ashmead has misinterpreted Gryon and had therefore erected the new genus Paragryon for Gryon sensu Ashmead non Haliday 1833 nec Förster 1856. Brues mentioned this point in the Appendix to his 1908 work (p. 49). Subsequently (1910) Kieffer in turn published a set of Addenda et Corrigenda to Brues' work in which he moved Trichasius Provancher back into the synonymy of Baeus Haliday and reaffirmed his opinion in his posthumous 1926 monograph (where it is misspelt Tricharius). The further resolution of its status did not come until Muesebeck (1956) examined Provancher's type and found that it belongs to Kieffer's taxon Paragryon which becomes then the junior synonym of Trichasius Provancher 1887. Macrostigma Rondani 1877 was synonymized with Megastigmus Dalman (actually this is an error, which Ashmead corrected himself, for Megaspilus Westwood 1829). I re-examined one syntype and found that it belongs instead in the synonymy of Lygocerus Förster 1856 (Dessart 1966). Ashmead was not precise in placing Agonophorus Dahlbom 1858 in any particular position in the "Proctotrypoidea". Recently on a visit to the Entomologiska Institutionen of Lund University I was fortunate to find amongst the boxes of Dahlbom's unclassified material one specimen bearing the label Agonophorus and agreeing with the original brief description Dahlbom gave for the genus. My examination of this type showed clearly that Agonophorus Dahlbom 1858 is a straight junior synonym of Ismarus Haliday 1835 (Proctotrupoidea-Diapriidae-Belytinae) (syn. nov.).

As examples of transfers in the opposite direction, from the Proctotrupoidea to the Chalcidoidea, we may take the following cases.

Ceraphron destructor Say 1817 is not a Ceraphronidae, but a Chalcid and now placed in the genus Merisus Walker 1834 (Pteromalidae) (Peck 1963), though according to Gahan (1933) the original series (which has been lost) must have included also a few

specimens of Eupteromalus fulvipes Forbes 1885 (now E. subapterus Riley 1885, non fulvipes Walker 1836).

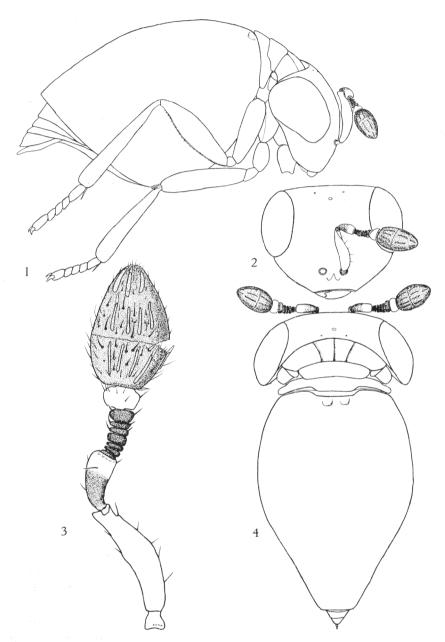
Psilus ciliatus Say 1828, successively placed in other genera of Diapriidae (Galesus, Diapria, Trichopria) is now considered a species of Polynema (Mymaridae).

Platygaster lecanii Fitch 1858 [1859] is not a Platygasteridae but a misidentification of Coccophagus lycimnia (Walker 1839) (Aphelinidae) (Peck 1963).

Serlion (!) terminalis Say 1828 (who meant Scelio) does not belong to the Scelionidae at all but to the genus Homalotylus Mayr 1875 (Encyrtidae).

Ceraphron syrphii Bouché 1834 was erroneously transferred by Nees (1834) to the genus Eupelmus Dalman 1820; it was later returned to the Ceraphronidae and passed through various genera: Megaspilus Westwood 1829, then Trichosteresis Förster 1856 (fide Kieffer 1914). Diapria cecidomyiarum Bouché 1834 is not a Diapriid but probably a species of Eulophus Geoffroy 1762 (fide Dalla Torre 1898) or of Tetrastichus Haliday 1843 (fide Schmiedeknecht 1909).

The genus Trimicrops Kieffer 1906, originally described as a Ceraphronid, was recognized later by Ferrière (in Beier 1930; see also Masner 1957, p. 83, Dessart 1962, p. 305) as a Chalcidoid (Pteromalidae-Diparinae). The drawing published by Ferrière (1930, p. 402, fig. 4a) leaves no doubt on the matter; the antenna is formed of a scape, the pedicel, three annuli, five funicular segments and a composite club in which from the two sutures one may deduce that it is formed of three segments, i.e., 13 segments in all (although in fig. 3 of the same note, there are only two annuli left and thus, 12 segments). crests" (sensu Debauche, 1948, pp. 25 et seg.) are present on all funicular and club segments. Kieffer (1906, 1907, and 1909) described the antenna as ten segmented, which prompted him to place the genus in the Ceraphroninae (in the present sense of the term), at least by implication and based on where he places it among the other genera [Kieffer in these three publications, did not accept the subdivision proposed by Ashmead (1893)]. His error in the count of the antennal segments came about for two reasons: he confused on the one hand the two first annuli, and on the other hand the three club segments, as is clearly shown in the drawing published in the three works cited above. But it is surprising that in his monograph of 1914, next to two drawings (fig. 63 and 67) showing respectively the appearance of the insect from above, and the head in profile (both with ten-segmented antennae), another figure (fig. 66) shows a whole, eleven-segmented antenna, with the first two annuli clearly distinct. This drawing was



Figs. 1-4. Pseudoceraphron pulex Dodd 1924, after the holotype. 1. Habitus, lateral view. 2. Head, frontal view. 3. Antenna; total length of the scape: 150μ , of the club: 138μ . 4. Habitus, dorsal view; maximum width of the metasoma: 430μ .

probably made by an usher or a pupil of the college of Bitche where Kieffer taught. Whenever he noticed an error of his own making Kieffer as a rule apparently discreetly corrected it (fide Dessart, 1963, p. 10). As he said nothing about this discrepancy before he died 11 years later (1925, Dec. 30th) we may deduce that Kieffer did not notice this important point. If he had he could not have done other than to transfer the genus to the Megasilinae, because from 1914 onwards he had at last accepted that the Ceraphronidae should be divided into two subfamilies.

The history of the preceding case has been developed on purpose, for I have just found a similar one. Thanks to the courtesy of Mr. G. F. Gross of the South Australian Museum, Adelaide, I have had the opportunity to examine the monotype of Pseudoceraphron pulex Dodd 1924. The slide-mounted antenna which I first received. convinced me immediately that the genus could by no means be a Ceraphronid but a Chalcoid, probably best placed in Pteromalidae-Diparinae, according to the original description. examination of the remainder of the type has confirmed my opinion. The antenna (fig. 3) is formed not of 11 joints but of a scape, pedicel, three annuli, five funicular segments, and a composite club, apparently of two segments (for only one transverse suture can be detected) but really of three segments if one accepts each of the three rows of sensorial crests as representing a segment. This would make the antennae 13 segmented. Although to all extents and purposes entirely correct, just reading the original description without at the same time seeing a specimen one tends not to realize the extreme oddness of this species (fig. 1, 2 and 4). It will be noticed, among other things, that the posterior margin of the eyes nearly reaches the level of the base of the metasoma; the pronotum is entirely hidden by the very concave posterior face of the head, the fore coxae are quite near the very small mouth parts; the hind coxae are completely flattened and articulated much higher than the middle and fore ones: the posterior part of the mesosoma is therefore very reduced; just behind the knees the tibiae bear two dorsal bifid, thickset spurs; the ventral surfaces of the hind femora are shortly spinulose; the fore legs, described as "somewhat swollen", with a "long, curved, simple apical spur" at the tibiae, are unfortunately lost; the median ocellus is quite flat and broader than the lateral ones which may not be functional.

Despite these very flat hind coxae, which are much larger than the fore ones (characters which are more characteristic of Elasmidae, Torymidae, or Ormyridae), this genus, with its wings apparently completely absent, its non-metallic pattern, and big first metasomatic tergite, seems to be an atypical but true Pteromalidae-Diparinae.

I am not so well acquainted with the literature on Chalcidoidea as to be sure that the genus has not been described as a synonym elsewhere and placed in a more correct taxonomic position by an author not interested in Proctotrupoids. In closing, one may well wonder why Dodd named the genus *Pseudoceraphron*, since its appearance does not in any way resemble the genus *Ceraphron* and moreover he did not even place it in the subfamily Ceraphroninae.

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RESUME

L'auteur présente une liste non exhaustive d'Hyménoptères décrits comme Chalcidoidea et transférés ensuite aux Proctotrupoidea, et vice versa. Comme nouveaux exemples, il précise le cas d'Agonophorus Dahlbom 1858, qu'il met en synonymie avec Ismarus Haliday 1835 (Proctotrupoidea, Diapriidae, Belytinae), syn. nov., et transfère Pseudoceraphron pulex Dodd 1924, des Proctotrupoidea-Ceraphronidae-Megaspilinae aux Chalcidoidea-Pteromalidae-Diparinae, stat. nov. En outre, il propose Ceraphron melantatocephalus nomen nov. pour Ceraphron melanocephalus (Ashmead 1886), non Boheman 1832.

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