On Diapria Latreille and allied genera (Hym., Diapriidae)

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The genera of *Diapriinae* can be divided into several groups, more or less well separated from each other. One of them, the *Diapria*-group, seems to have been confused with the *Basalys*-group, and its genera are not clearly defined, as is easily found in the literature. Ashmead (1893, 1903) and Kieffer (1916) have given keys to the whole subfamily, but especially in the groups of *Diapria* and *Basalys* the confusion is considerable. After them only Priesner (1953, p. 453), as far as I know, has tried to give a summary of the *Diapria*-group, but unfortunately he had not the opportunity to examine the genus type of *Ceratopria* Ashmead, which name he used as an assembling name for several genera. In fact, *Ceratopria* is a synonym of *Loxotropa* Förster, belonging to the *Basalys*-group (see below). Later on, Pschorn-Walcher (1957), p. 82) has discussed some species of *Trichopria*, *Ashmeadopria* and *Tetramopria*, but in defiency of material he had no possibility to draw any general conclusions. As I have now succeeded in finding some important genus types I think it is possible to bring the problem of the *Diapria*-group nearer its solution. Besides I have examined a great many specimens (about 3000 from the *Diapria*-group and 1000 from the *Basalys*-group), mainly from Sweden but also from Central and Southern Europe, a few from West and South Africa and a few from U. S. A.

I am much indebted to several persons, who have helped me in one way or another. First of all I want to mention Dr. C. F. W. Muesebeck, Washington D. C., who sent me the type of *Trichopria pentaplasta* Ashm. for examination and important information of *Phaenopria* and *Ceratopria*. Likewise I am much obliged to Dr. H. Pschorn-Walcher, Delémont, for the permission to investigate paratypes of *Tetramopria*. Thanks to Prof. C. H. Lindroth, Lund, and Prof. L. Brundin, Stockholm, I have had the opportunity of using the collections of Thomson and Boheman. Dr. A. Jansson as well has placed his valuable private collection at my disposal. Besides these persons especially Mr. B. O. Landin, Lund, and Mr. K.-J. Heqvist, Stockholm, have taken an interested part in the discussion of the nomenclatoric problems.

First I am going to separate the *Diapria*-group from the *Basalys*-group and after that a critical examination of the genera of the *Diapria*-group is made. A special dealing with *Trichopria*, to which the great majority of the species belong, follows, and finally there is a discussion of the variation of some features of the group.

The genera treated are: *Diapria* Latr., *Tropidopria* Ashm., *Trichopria* Ashm., *Planopria* Ashm., *Orthopria* Kff., *Ashmeadopria* Kff., *Phaenopria* Ashm., *Tetramopria* Wasm., *Ceratopria* Ashm., and *Viennopria* Janss. Furthermore some other genera are mentioned, which may belong to the *Diapria*-group.

In the description below some terms are introduced, which are, as far as I am aware, not used earlier in the taxonomy of the Diapriidae. They derive from the Hymenoptera part of the "Handbooks for the Identification of British Insects", by Richards (1956).

1. *Description of the Diapria-group*

Head more or less globular with an antennal prominence, which forms the foremost margin of the head. The lower face without any distinct facial furrows, but rarely indicated by rows of hairs. An occipital carina limits the vertex from the occiput and runs in a circle all round the foramen. Eyes usually with a few long hairs. Ocelli in a triangle, present in all species known to me. As far as I know only two species without ocelli are described, *Phaenopria ambulator* Perkins and *Ph. cursor* Kff., both with shortened wings. I have examined several species with very reduced wings, all of them having ocelli, though sometimes inconspicuous. The species mentioned therefore require a new examination. Surface of the head polished, sparsely provided with long hairs, only at the temples with a dense, usually woolly hairiness, proceeding from the occipital carina. The individual hairs usually directed towards the eyes or somewhat beneath them. The antennae in sockets at the almost horizontal level of the antennal prominence. In the female they are 12-jointed, in most cases with a distinct club. Antennae of the male 14-jointed with the 4th joint (the sex-segment) always emarginate or edged. Mandibles bidentate (seldom tridentate), the right one often with a tubercle inside. Max.-palps 4- or 5-jointed, lab.-palps 2-jointed.

Pronotum slightly visible from above, the collar and the front margin of the upper lateral parts with a dense pubescence, which proceeds downwards on to the pro-pleurae. The lower vertical parts sometimes provided with a short striation.

Mesoscutum without any trace of notaulices, its surface polished and without sculpture but for a single species of *Diapria* (see below). The setae very sparse, consisting of one hair (seldom two) on each side in front of the tegulae (cf. *Tetramopria* below) and two rows of hairs in the middle with 1, 2 or very seldom 3(—5) hairs in each row (rarely wholly absent). Mesopleurae without any distinct furrows, close to the coxae usually provided with some fine setae, otherwise almost wholly hairless. Only in *Tetramopria* a more extended hairiness is observed (see below). Scutellum with or without fovea, the shield with or without a median ridge. Metapleurae always with a dense pubescence. Wings mostly holopterous. Brachypterous forms observed only in some species of *Trichopria* (*Phaenopria*, see below). In the fore wing only subcostalis and marginalis present, together not reaching more than about one third of the wing length. Subcostalis parellel with the edge of the wing. Costal cell very narrow, often narrower than the breadth of the subcostalis, provided with a row of bristles of different number. Priesner (1953, p. 441) introduced the term "lineola" fort he slight basal infuscation of the fore wing, mentioned by Kieffer as "wenig deutliche gelbe Querlinie", supposing it should be the rudiment of the basal vein. But since the lineola always proceeds from the outermost point of the marginalis, and the basalis in the *Basalys*-group and many other Diapriidae seems to be a real vein, placed decidedly proximally to the marginalis, the two formations would, in my

opinion, not be confused. Hind wing with a short subcostalis at base and a short vein, forming the base of the three hamuli. Trochanter 2-jointed, tibial spurs 1,2,2, tarsi 5-jointed.

Propodeum, the first segment of the abdomen, with a median keel, sometimes obliterated apically. Gaster, the segments posterior to the propodeum, in both sexes consisting of 7 tergites, the second one always the incomparably longest one. Petiolus all round with a more or less dense hairiness, rarely also provided above with scales (*Viennopria* and some *Trichopria*). Second tergite usually with the anterior margin straight, sometimes with an inconspicuous impression on each side at base, in *Diapria* with an upturned, median, angular incision. Pairs of spiracles present on the propedium and on the tergites 6 and 7 of the gaster. The spiracles of the latter segment often unusually large and modified. Richards (1956, p. 39) mentions that the function of the spiracles in the Scelionidae requires further study. Surely this is also the case in the Diapriidae.

The *Basalys*-group differs from the *Diapria*-group principially by having a basal vein of the front wing. But as the wings in some species are shortened, so that the basalis may be obscure or not at all visible, there are other distinct features, which can be better used for separating the groups. Thus the lower face is always more or less sculptured, provided anteriorly with a longitudinal furrow or fovea, from which two facial furrows proceed towards the bases of the mandibles. Usually there is also a transverse distinct groove at different distance from the antennal prominence. The chaetotaxy of the mesoscutum is quite different. The lateral hairs are always placed inside the tegulae, apically or at most in a right line between their anterior margins. The number of hairs in the often somewhat irregular median rows is greater than in the *Diapria*-group, usually 6 or 7 in the female. In the male they are minute, still more irregular and often difficult to count. Max.-palps almost without exception 5-jointed (only very few species with 4 joints observed). Antennae of the female with distinct, abrupt 3- or 4-jointed club.

2. *The genera of the Diapria-group*

Diapria Latr. was described in 1796 without including any species. In 1810 Latreille made the genus valid by designating *Ichneumon conicus* Fabr. as its genus type. Under this name three female specimens are deposited in the Zoological Museum in Copenhagen. Though they are not in a very good condition I am sure they are conspecific, and one of them is designated as lectotype. *Diapria* is distinguished from all other genera by having a median angular incision at the upturned base of the second tergite. Priesner (1953, p. 454), has pointed out that the carina of the scutellum and the long conical tip of the abdomen, which is characteristic for *D. conica*, should not be considered of generic value, since he had described a species (*D. transiens*), which has only a short distal carina of the scutellum and a very shortly pointed apex of the abdomen. I am convinced he is quite right, as I have found in southern Sweden two or three species (to be described) that have the characteristic incision of the second tergite, but no carina at all and the apex of the abdomen not especially pointed. I am going to describe also these species as *Diapria*.

All species known to me have long antennae, the female with at least 5-

jointed, not sharply distinguished club, the male with long, filiform antennae. Max.-palps 5-jointed. The chaetotaxy of the mesoscutum seems to be more variable than in any other allied genus. An examination of *D. conica* shows that the lateral hairs in front of the tegulae in about half of the specimens are doubled on one or both sides (about 60 exx. examined).

In the vicinity of Stockholm recently a new species (6 ♂♂) was collected that has a very distinct punctuation of the mesoscutum and the scutellum. This feature is not observed in any other species of the *Diapria*-group. There is no doubt that the new species belongs to *Diapria*. Strangely enough the corresponding female (10 exx.), found at the same place and at the same time, has only a very inconspicuous punctuation.

Tropidopria Ashm. is founded upon *Ichneumon conicus* Fabr., the same species as is mentioned above, and therefore the name must be suppressed (Muesebeck, and others, 1951 p. 680).

Trichopria Ashm. 1893. The types of its genus type, *pentaplasta* Ashm. (holotype ♀ and allotype ♂) are deposited in the National Mus., Washington. Unfortunately the head of the holotype is lost and cannot be controlled. But the allotype has been put at my disposal by Dr. Muesebeck, and a redescription of it is already published (Sundholm, 1959, p. 246). Ashmead writes that the female antenna has a 5-jointed club and that the max.-palps are 5-jointed. In reality the max.-palps of the male are 4-jointed. The male antennae are filiform. Otherwise I refer to the mentioned redescription. In this genus I want to include *Phaenopria* Ashm., *Ashmeadopria* Kff., and *Planopria* Kff., for reasons mentioned under each name below.

Planopria Kieffer 1908 is established on the base of *Diapria* Ashm., nec Latr., and its genus type, *californica* Ashm., was designated by Muesebeck and Walkley in 1951. Kieffer has described *Planopria* as a genus with the male having verticillated antennae and the scutellum without a longitudinal ridge. Thanks to Dr. Muesebeck I have been able to examine paratypes of female and male of the genus type. It appeared that *californica* does not at all agree with the diagnosis of the genus. It is in fact a *Trichopria* with 4-jointed max.-palps, the male antennae filiform and without verticillated hairiness. This is also evident from Ashmead's description (1893, p. 422), but on Pl. XVIII, fig. 2 (not 3, which is an error) he shows a male specimen with verticillated antennae, according to the description of the genus. In his redescription Kieffer followed Ashmead's description of the genus and the figure, not the description of *D. californica*. In 1916 he made *Planopria* a subgenus of *Trichopria*, but according to the genus type it is actually a *Trichopria* s. str.

Orthopria Kff. 1911. The genus type, *Diapria californica* Ashm., was designated by Muesebeck and Walkley in 1951, thus the same species as the type of *Planopria*. Kieffer placed *Orthopria* already in 1916 in *Trichopria* (subg. *Planopria*). Referring to what is said above about *Planopria* the name must be suppressed.

Ashmeadopria Kff., 1911, should be distinguished from *Planopria* Kff. only by having a longitudinal keel of the scutellum. But it has been shown above that *Planopria* was described on the base of an error. Therefore it is necessary to go back to the genus type of *Ashmeadopria* and try to interpret this genus. The genus type, *Diapria verticillata* Latr., was designated by Mani in 1941, but I was not able to see it. In spite of this it is possible from

Latreille's description to get a good idea of the species group, to which it belongs. It runs as follows: "Noire, antennes plus longues que le corps, dont les articles sont en massue, plus obscurs et garnis de poils verticillés à leur extrémité" (1805, p. 231). Nothing is said about a longitudinal keel of the scutellum. The very common species, which is supposed to be the genus type, is very variable in this respect. Usually the keel is very faint and sometimes not at all present. But without doubt Latreille described one of those typical males, which have long verticillated antennae, easily recognized and distinguished from all other groups of species. I have examined a great many of these species in order to find some more distinguishing features. To mention is that the max.-palps always are 5- jointed and that the median part of the interior margin of the second sternite lacks the woolly hairiness, which is characteristic of typical *Phaenopria* (see below). These features seem sufficient for separating the males of *Ashmeadopria* from those of *Trichopria* and *Phaenopria*. The females are, however, very difficult to associate with corresponding males, and a few species are found, where the female character of 5-jointed max.-palps is combined with filiform or moniliform antennae in the male. For this reason it seems impossible to keep *Ashmeadopria* as a good genus. I prefer to hold it for a mere group of *Trichopria*.

Phaenopria Ashmead, 1893. Dr. Muesebeck has been so kind as to send me a female specimen of the genus type, *minutissima* Ashm., determined by him directly from the type (deposited in the U. S. Nat. Mus., Washington). The species agrees very well with Ashmead's description and shows no trace of a scutellar fovea, which should be the most striking character of the genus, distinguished it from all other genera of the *Diapria*-group. Ashmead has not investigated the mouthparts, but according to my examination all typical *Phaenopria* have 5-jointed max.-palps. Pschorn-Walcher (1956, p. 58) has given a very good picture of *Phaenopria* when he compares this genus with *Monelata* Förster, which, in spite of some superficial resemblances, belongs to quite another group of genera of the Diapriinae. Among other things he points out that the female antennae of *Phaenopria* have a relatively long apical joint of the club, and that the male antennae are more or less moniliform. Risbec (1950, p. 549) mentions a character, which should distinguish *Phaenopria* from *Ashmeadopria*, the presence of "une énorme touffe de soies au-dessus du pédoncule abdominal de la femelle". When comparing a great number of species I cannot find that this character should be of any considerable value. On the other hand it has appeared that the anterior margin of the second sternite is all over provided with a more or less dense woolly hairiness. This feature is observed in most *Phaenopria*, in males as well as in females, but it is also known in many species of *Trichopria* s. str.

The most important character of *Phaenopria*, the absence of the scutellar fovea, is, however, not a very good feature. Several species with a trace of fovea are described as *Phaenopria*-species. This is for instance the case in *revelata* Priesner and *subimpressa* Kff., also in *incrassata* Jansson, the female of which has a gradually broadened 4-jointed club of the antennae. The type specimen has no conspicuous scutellar fovea, but after a considerable number of additional specimens have been found, it appears that a shallow arched impression is often present.

On the other hand the scutellar fovea can be lacking in species belonging to *Trichopria* s. str. Thus I had the opportunity to examine a female spe-

cimen, collected by Jansson in Connecticut, U. S. A. It has much shortened wings, not reaching the distal end of the narrow thorax, and the last antennal joints gradually incrassated. There is no trace of a scutellar fovea, but the max.-palps are 4-jointed. No doubt this species belongs to *Trichopria* s. str. The short description above agrees very well with Ashmead's apterous species, *Phaenopria aptera* and *affinis*, without being conspecific with any of them. Though I had not the opportunity to examine Ashmead's species, it should be suggested that they belong to the same genus, probably also his species, based on males and placed in the same group. Perkins and Kieffer have described a few brachypterous species, which all require a new investigation.

To mention is also that Ghesquière has described a *Phaenopria Collarti* from Belgian Congo (1934, p. 3), which has 3-jointed max.-palps and white-coloured pronotum. These characters are so different from those known to me that it seems impossible to place the species in this genus.

The difficulty to fix the limits of *Phaenopria* induces me to hold it for a mere group of *Trichopria*.

Viennopria Jansson 1953. This is a very distinct genus and easily recognized by having the apical joints of the female and male antennae closely united. Thanks to the author I had the opportunity to examine the holotype ♀ of the single species, *Priesneri* Janss. Max.-palps 5-jointed. A very striking feature is the ovoide scales on the upper side of petiolus, not observed in any other species of the *Diapria*-group in northern Europe, but present in some species from Spain, South Africa and U. S. A., among them the genus type of *Trichopria* (vide above).

Tetramopria Wasmann 1899. The genus type, *aurocincta* Wasm., was designated by Ashmead in 1903. Thanks to Dr. Pschorn-Walcher, who has given new descriptions of the species (1957, p. 82). I had the opportunity to examine females paratypes of the two species, *aurocincta* Wasm. and *cincticollis* Wasm. Pschorn-Walcher writes that "Der grosse fünfeckige Kopf scheint aber zu wenig charakteristisch, um eine sichere Unterscheidung etwa von *Ashmeadopria* und *Trichopria*-Arten zu ermöglichen". Actually this feature is also present in some *Trichopria* and cannot be sufficient for distinguishing the genus, as it was suggested by earlier authors. There are, however, several more features which make it possible to keep *Tetramopria* as a good genus, at least concerning the genus type. Repeating some features of Pschorn-Walcher's description I am going to add some more characteristics, which are in my opinion valuable. Max.-palps 4-jointed. The club joints of the female antennae somewhat rounded, widest somewhat in front of the middle, not quadrate or rectangular as in other genera. The last joint distinctly narrower than the preceding ones and relatively small. This is also the case in the male according to Pschorn-Walcher's drawing (Abb. 2d, p. 77). The hairs of the temples are not at all woolly but quite straight and directed downwards, parallel with the occipital carina. The fovea of the scutellum is formed as an arched depression, stretching itself to the angles between the base area and the shield. Further the mesopleurae are provided with a hairiness on its lower half and along the front margin. This hairiness is very distinct in *aurocincta*, somewhat inconspicuous in *cincticollis*, since the paratype is not in a very good condition, but undoubtedly it is present also in this species. The difference tbeween the two species is clear from

Pschorn-Walcher's key. To add is that the keel of the scutellum of *aurocincta* is forked at its outermost apical point. Further the setae of the mesoscutum are different. In the paratype of *aurocincta* the median rows consist of each 3 hairs, but in other specimens (8 ♀♀ examined) they are often more, at most 5 in one row. The lateral hairs are placed as usual in the *Diapria*-group. In *cincticollis* there is an additional lateral hair on each side close to the front margin of the tegulae (almost as in the *Basalys*-group, but no other features point to this group).

Thus *Tetramopria* is characterized by the shape of the antennae and the hairiness of the temples, the mesoscutum and the mesopleurae. In spite of the differences between the two species I am inclined to keep them together in one, valid genus, at least for the present.

Pschorn-Walcher has also sent me a female paratype of *Trichopria inquilina* Kff. (= *Ashmeadopria formicina* Kff. sensu Pschorn-Walcher). In the redescription of this species (1957, p. 87) he is somewhat uncertain, in which genus it should be placed. Surely it has some affinity to *Tetramopria cincticollis*, but none, to *T. aurocincta*. The head is not pentangular but rounded behind the eyes. Max.-palps 4-jointed. The hairiness of the temples woolly and directed towards the eyes. The antennae somewhat similar to those of *cincticollis*, but the distal joint is not distinctly narrower than the preceding ones and the joints of the club more straight distally as usual in *Trichopria*. Though the setae of the mesoscutum are to some extent lost I think they are of the same type as in *T. cincticollis*. Especially the additional hairs close to the tegulae are distinct. Mesopleurae without any hairiness like that in *Tetramopria*. The fovea of the scutellum of a simple shape, common in *Trichopria*. The shield of the scutellum only with a very inconspiscuous ridge on the distal part. In my opinion the species belongs to *Trichopria*, though it is a very aberrant form account of the setae of the mesoscutum and the very sparse haired wings. To mention is that Pschorn-Walcher's picture (Abb. 6, p. 86), signed *Trichopria inquilina*, is no doubt *Tetramopria aurocincta*, which is easily seen from the description.

Ceratopria Ashmead 1893. This genus according to the description agrees almost entirely with *Loxotropa* Förster. The only difference would be that Asmead states the lack of a basal vein of the front wing. An inquiry to Dr. Muesebeck about the genus type, *longiceps* Ashm. (deposited in the U. S. Nat. Mus., Washington), made it clear that it is really a *Loxotropa*. In a letter to me Muesebeck declared that there is actually a feeble, but distinct basal vein. His drawings of the head, antenna and wing, as well as his observation that there are at least 12 hairs on the mesoscutum, show very distinctly the characters of a *Loxotropa*. For this reason *Ceratopria* Ashm. must be a synonym of *Loxotropa* Förster.

From what is discussed above it is not easy to divide the *Diapria*-group into distinct genera, and I am not sure that the last word is said about it. In my opinion only four genera would be left: *Diapria*, *Viennopria*, *Tetramopria*, and *Trichopria*. But it is quite possible that still more genera should be added, such as *Neodiapria* Kff. (mentioned by Priesner), *Abothropria* Kff., *Scapopria* Kff. and *Atomopria* Kff., when their types can be examined. Of special interest is *Rhopalopria* Kff. I have not been able to examine the genus type, *vulgaris* Kff., but thanks to Dr. Risbec I had the opportunity to

examine his *Rh. eristalensis* (1956, p. 98). This has the base of the scape much thinner than the distal part, but it is not *abruptly* broadened, as Kieffer states in his description of *Rhopalopria*. The same shape as in *eristalensis* is common in the *Ashmeadopria*-group of *Trichopria*. Up to now it is impossible to decide if *Rhopalopria* is a valid genus. Certainly *Rh. eristalensis* belongs to *Trichopria*.

3. *Key to the investigated genera of the Diapria-group:*

1. Anterior margin of the second tergite with an upturned angular incision. (Max.-palps 5-jointed, antennae unusually long, female without a distinguished club, male antennae filiform) ..... *Diapria* Lathr.
— Anterior margin of the second tergite straight 2
2. Apical joints of the female and male antennae closely united (Max.-palps 5-jointed, ovoide scales on the petiolus) ..... *Viennopria* Janss.
— Apical joints of the antennae never closely united 3
3. Last joint of the antennae distinctly narrower than the preceding ones. Hairiness of the temples straight and directed downwards. Mesopleurae with a distinct hairiness (Max.-palps 4-jointed) ..... *Tetramopria* Wasm...
— Last joint of the antennae never distinctly narrower than the preceding ones. Hairiness of the temples more or less woolly and directed towards the eyes. Mesopleurae with a faint hairiness only on the lowest margin. (Max.-palps 4- or 5-jointed. The incomparably most species belong to this genus) ..... *Trichopria* Ashm.

Using the well-known old names, genus *Trichopria* Ashm. may be divided into groups as follows:

1. Max.-palps 4-jointed. (Scutellum mostly with a basal fovea, without distinct carina, ♂ antennae filiform) ..... *Trichopria* s. str.
— Max.-palps 5-jointed 2
2. Scutellum without fovea. (Scutellum without distinct carina, ♂ antennae moniliform) *Phaenopria*-group.
— Scutellum with fovea. (Scutellum with or without carina, ♂ antennae verticillated) *Ashmeadopria*-group.

The above division of *Trichopria* into groups is not distinct. It is only intended to be a first attempt to divide the gnus, consisting of a great many very different species, into easily recognizable groups. A few species examined are very difficult to place. This is especially the case in *Trichopria* s. str. and *Phaenopria*.

Finally it should be observed that some characters given above are not quite constant. It happens that one or more of the setae of the mesoscutum can be missing or doubled, but in the latter case the hairs are always placed close to each other. For that reason it is often necessary to examine a series of specimens, when describing or determining a species. In some genera this doubling of hairs is more common than in others (see for instance *Diapria* above). Another feature that seems not to be constant is the relative length and width of the wings. Furthermore the penultimate segments of the abdomen are telescoped. Therefore the apical angle can only be used as a distinguishing feature between the species with very great caution. On the other hand the shape of the apical tergite is often of great importance for the classification.

REFERENCES

ASHMEAD, W. H. 1893. Monograph of the North American Proctotrypidae. Bull. of the U. S. Nat. Museum. Washington, D. C.

1903. Classification of the pointed-tailed wasps, or the super-family Proctotrypoidea. II. Journ. N. Y. Ent. Soc. 10, 11. 1902—1903. New York.

GHESQUIÈRE, J. 1934. Un Diapriide (Hym., Proct.) noveau du Congo Belge. Bull. Mus. Hist. Nat. Bruxelles.

JANSSON, A. 1953. Viennopria nov. gen. (Hymen., Diapriidae). Entomologisk Tidskrift 74: 3. Stockholm.

KIEFFER, J. J. 1916. Das Tierreich. 44. Lieferung. Diapriidae. Berlin.

LATREILLE, P. A. 1796. Précis des caractères génériques des insectes. Brive.

— 1805. Histoire naturelle générale et particulière des Crustacés et des Insectes. Vol. XIII. Paris.

— 1810. Considerations générales sur l'ordre naturel des Crustacés, des Arachnides et des Insectes. Paris.

MUESEBECK, KROMBEIN, TOWNES, and others. 1951. Hymenoptera of America North of Mexico. — Synoptic Catalog. Washington, D. C.

MUESEBECK and WALKLEY. 1956. Type Species of the Genera and Subgenera of parasitic Wasps comprising the Superfamily Proctotrupoidea (Order Hymenoptera). Washington, D. C.

PRIESNER, H. 1953. Further studies in Proctotrupoidea. Bull. Soc. Fouad 1 Entom., XXXVII. Cairo.

PSCHORN-WALCHER, H. 1956. Zur Kenntnis der Diapriidae (Hym. Proctotrupoidea). Mitteilungen der Schweizerischen Entomologischen Gesellschaft. Lausanne.

— 1957. Zur Kenntnis der Diapriinae (Proctotrupoidea) der Wasmann-Sammlung. Mitteilungen der Schweizerischen Entomologischen Gesellschaft. Lausanne.

RICHARDS, O. W. 1956. Hymenoptera. Introduction and Keys to Families. Handbooks for the Identification of British Insects. London.

RISBEC, J. 1950. I. La Faune Entomologique des Cultures au Sénégal et au Soudan Français. II. Contribution à l'Étude des Proctotrupidae. Paris.

— 1956. Hymenoptères parasites du Cameroun. Bull. Inst. Franç. Afr. noire. XVIII (A). Dakar.

SUNDHOLM, A. 1959. A redescription of Trichopria pentaplasia Ashm. Opuscula Entomologica XXIV: 3. Lund.

Correction

In the essay "Studier över svenska proctotrupider 11" in the issue 1—2, 1960, of this journal I happened to make a wrong quotation on p. 86 which I herewith regret and correct. In my article I quote from Dr T. Eidmann the statement in Ent. T. 1958 that in England *Thomsonina boops* Th. has been reared from *Scymnus nigrinus* Kug. However, Dr Eidmann's quotation (from an article by F. Wilson in Bull. Ent. Res. 1958) does not apply to *Thomsonina boops* but to *Homalotylus flaminius* Dalm.

Thus, in Sweden, according to the Dr Eidmann's paper in Ent. T. that I quoted, *Homalotylus flaminius* as well as *Thomsonina boops* have both been reared from *Scymnus nigrinus,* in England only the first-named species.

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