

Notes on some species of Braconidae (Hymenoptera) described by Hedwig from Iran and Afghanistan

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ABSTRACT. — The types of *Bracon breviseta* Hedwig, *B. rotundiventris* (Hedwig) comb. nov., *B. stenostigma* Hedwig, *Microplitis intermedius* Hedwig (= *M. tadzhicus* Telenga, syn. nov.), *Protomicroplitis iranensis* (Hedwig) comb. nov. (= *P. mayae* (Shestakov) syn. nov.), *Pseudcardiochilus abnormipes* Hedwig, *Pseudobiosteres* (= *Popoviella* Tobias, syn. nov.) *dorsomaculatus* Hedwig (= *pilosa* Tobias, syn. nov.), *Blacus pallens* Hedwig (= *Ecclitura primoris* Kokujev, syn. nov.), *Pseudovipio schaeuffelei* Hedwig, comb. et stat. nov., and *P. castrator* (Fabricius), are examined. Lectotypes are selected for *Pseudovipio castrator* (Fabricius), *Blacus pallens* Hedwig, *Pseudcardiochilus abnormipes* Hedwig and *Protomicroplitis iranensis* (Hedwig).

INTRODUCTION

In two papers (1957, 1961) Hedwig described several new taxa of Braconidae from Iran and Afghanistan. I was primarily interested in the two genera, *Pseudcardiochilus* and *Pseudobiosteres* described in these papers but I was able also to examine types of several other Hedwig species. Their examination proved very useful and produced several synonymies. Because Hedwig did not publish any designation of a holotype if more than one type-specimen was available, the occasion is used to designate lectotypes for the species examined. For the loans of the types I am much indebted to Mr. G. Ebert (Landessammlungen für Naturkunde, Karlsruhe), Dr. T. Osten (Zweigstelle Staatliches Museum in Stuttgart, Ludwigsburg), Dr. B. Petersen (Universitetets Zoologiske Museum, København) and Dr. V. I. Tobias (Zoological Institute, Leningrad). Dr. K. Horstmann (Zoologisches Institut, Würzburg) provided useful information about the location of the types, and Mr. T. Huddleston (London) provided useful corrections of the English text. For the terminology used, see Van Achterberg (in press).

Bracon breviseta Hedwig (figs. 1-4)

Hedwig, 1961: 297; Shenefelt, 1978: 1559.

Holotype in the Landessammlungen für Naturkunde, Karlsruhe: ♀, "Afghanistan, Herat, 970 m, 15.4.1956, S. Wilke leg", "Minden, det. K. Hedwig", "29", "Typus". The ovipositor is broken off, and without additional material available from North Afghanistan it is difficult to identify the species. Nevertheless the description of *Bracon xanthogaster* Nees, 1834 agrees fairly well with the holotype of *breviseta*. Only the legs and palpi are darker and the mesosoma is more brownish red in *breviseta* than in *xanthogaster*, but these differences are insufficient to keep both species separate.

The holotype of *breviseta* has the propodeum and metasoma smooth and the 2nd suture of the metasoma almost straight and deep; length of 1st tergite 0.8 times its apical width, and tergite without dorso-lateral carinae; length of 2nd and 3rd tergites subequal; wing membrane infurcate; length of veins r: 3-SR: SR1 = 15:31:50 and 2-SR: 3-SR: r-m = 21:31:10 (fig. 1); length of mesosoma 1.2 times its height; length of maxillary palp 0.6 times height of head; width of head equal to width of mesoscutum; width of head 1.8 times its medial length dorsally; length of fore wing 3.5 mm, of body 3.1 mm; three apical segments of maxillary palp subequal; labo-maxillary complex not protruding; width of hypoclypeal depression somewhat more than its distance to the eyes; hind tarsus rather stout (fig. 4); claws with well developed subbasal lobe; inner hind tibial spur 0.5 times its basitarsus; POL: Ø ocellus: OOL = 7:3:8; dorsal length of eye 1.3 times temple.

Bracon rotundiventris (Hedwig) comb. nov. (figs. 8-13)*Macrobracon rotundiventris* Hedwig, 1961: 298*Habrobracon rotundiventris*; Shenefelt, 1978: 1611

Holotype in the Landessammlungen für Naturkunde, Karlsruhe: ♀, "N.-Afghanistan, Polichomri, 700 m, 28.5.1956, H. G. Amsel leg.", "Minden, det. K. Hedwig", "29f", "*Habrobracon rotundiventris* Hedwig, 1961". This species is not easy to identify with the existing keys. It is close to *B. ahngeri* Telenga, 1936 (but *ahngeri* has ca. 20 antennal segments, 2nd and 3rd tergite of equal length and a shorter ovipositor) and to *B. brevicaratus* Tobias, 1957 (but *brevicaratus* has much shorter hind spurs and a longer ovipositor).

Whole metasoma and propodeum smooth; 2nd suture of metasoma almost straight; length of mesosoma 1.3 times its length; length of maxillary palp 0.7 times height of head; antennal segments 27, without apical spine; both penultimate segments of antenna 1.8 and 2.0 times their width; length of 3rd antennal segment 1.1 times 4th segment, both segments 1.9 and 1.7 times their width, respectively; apices of 3rd and 4th tergites of metasoma rather membranous; malar suture present; claws large and distinctly bent towards tarsus (fig. 10), without lobe; marginal cell of fore wing rather short, not reaching wing apex (fig. 12); length of fore wing 2.8 mm, of body 2.4 mm; length of ovipositor sheath 0.13 times fore wing; dorsal length of eye 2.4 times temple; POL: Ø ocellus: OOL = 5:3:8; inner hind tibial spur slender, its length 0.4 times basitarsus; labo-maxillary complex much shorter than height of face; 1st tergite flat, without latero-dorsal carinae; three apical segments of maxillary palp subequal; length of 1st tergite subequal to its apical width (fig. 9); length of malar space 0.9 times basal width of mandible; wing membrane subhyaline.

Bracon stenostigma Hedwig (figs. 5-7)

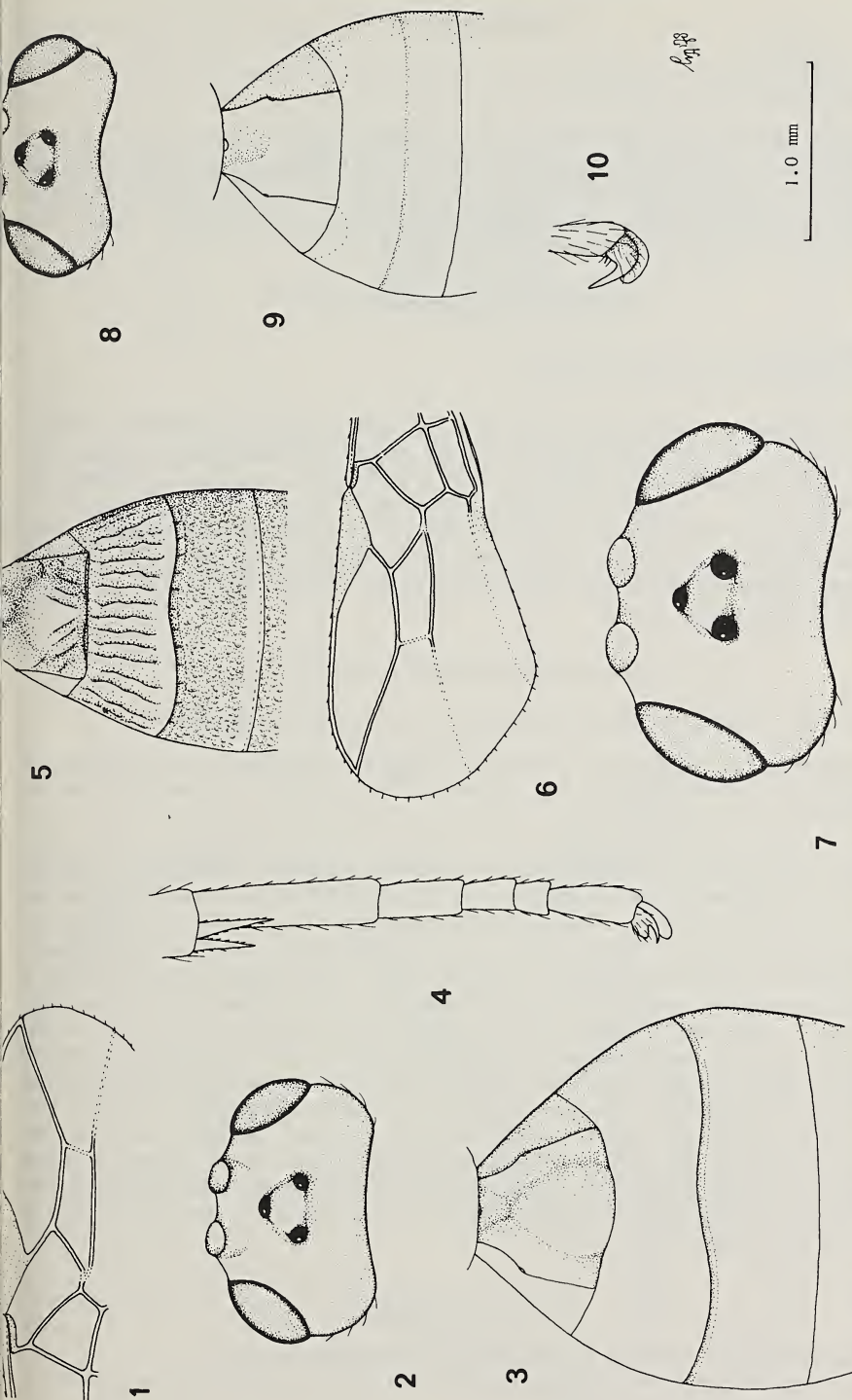
Hedwig, 1961: 297-298; Shenefelt, 1978: 1542.

Holotype in the Landessammlungen für Naturkunde, Karlsruhe: ♀, "Afghanistan, Herat, 970 m, 15.4.1956, S. Wilke leg.", "Minden, det. K. Hedwig", "29e", "*Bracon (Striobracon) stenostigma* Hdg.", "Typus".

Close to *B. crocatus* Schmiedeknecht, 1896, but marginal cell of fore wing slightly more slender. First tergite deeply concave medio-anteriorly, spaced rugose laterally and apically, dorso-lateral carinae present, length of 1st tergite 0.8 times its apical width; 2nd tergite spaced rugose; 3rd and following tergites shiny and coriaceous-rugulose, but posterior margins of 3rd-5th tergites thin, membranous and smooth, without subapical transverse groove; propodeum smooth, except for a small chevron-shaped carina posteriorly; palpi dark brown; length of ovipositor 0.40 times fore wing and 0.8 times metasoma; length of fore wing 3.2 mm, of body 3.3 mm; length of mesosoma 1.4 times its height; notauli scarcely impressed; hind tarsus missing; wing membrane subhyaline; 3rd tergite of metasoma longer than 2nd tergite; 2nd suture of metasoma deep and weakly sinuate; veins r: 3-SR: SR1 = 6:13:25 and 2-SR: 3-SR: r-m = 10:13:6; POL: Ø ocellus: OOL = 7:5:11; dorsal length of eye 1.7 times temple; fore claws with a small, slender subbasal lobe (smaller and more slender than in *breviset*a (fig. 4)); inner hind spur slender, medium-sized, longer than apical width of hind tibia.

Microplitis tadhicis Telenga (figs. 14-15)*Microplitis tadhica* Telenga, 1949: 386; Telenga, 1955: 161.*Microplitis tadhicis*; Shenefelt, 1973: 764.*Microplitis intermedius* Hedwig, 1961: 296; Shenefelt, 1973: 747. Syn. nov.

Holotype in the Landessammlungen für Naturkunde, Karlsruhe: ♀, "Minden det. K.



Figs. 1-10. 1-4, *Bracon breviseta* Hedwig, holotype, antero-apical part of fore wing; 2, head, dorsal aspect; 3, 1st-3rd tergites, dorsal aspect; 4, hind tarsus, inner aspect. 5-7, *Bracon stenostigma* Hedwig, holotype. 5, 1st-3rd tergites, dorsal aspect; 6, apical half of fore wing; 7, head, dorsal aspect. 8-10, *Habrobracon rotundiventris* Hedwig, holotype. 8, head, dorsal aspect; 9, 1st-3rd tergites, dorsal aspect; 10, inner hind claw. 1, 6: scale-line, 1 $\times$; 2, 3, 8, 9: 1.8 $\times$; 4, 7: 2.5 $\times$; 5: 1.5 $\times$; 10: 4.0 $\times$.

Pseudobiosteres Hedwig

Hedwig, 1961: 297.

Popoviella Tobias, 1962: 1192. Syn. nov.

Pseudobiosteres was referred to the Opiinae by Hedwig (1961: 297), and according to him it should be related to the genus *Biosteres* and also resemble the genus *Blacus*. Actually it has nothing to do with these genera, nor with the Opiinae. It belongs to the Hormiini (Rogadinae), is a senior synonym of *Popoviella* Tobias and is characterized by the flattened 1st tergite. The redescription of the genus will be published in my generic revision.

Pseudobiosteres dorsomaculatus Hedwig

Hedwig, 1961: 297.

Popoviella pilosa Tobias, 1962: 1193. Syn. nov.

Pseudobiosteres is a small genus with one valid species, occurring in the arid areas of Middle Asia. The holotype in the Landessammlungen für Naturkunde, Karlsruhe is a ♀ from East Afghanistan: "O.-Afghanistan, Gulbahar, 1700 m, 25.6.1956, H. G. Amsel leg.", "Minden, det. K. Hedwig", "29 C", "*Pseudobiosteres dorsomaculatus* Hdg.", "Typus".

The holotype of *dorsomaculatus* is conspecific with the specimen of *pilosa* I examined from the Zoological Institute, Leningrad, but is somewhat more sculptured (especially the face) and has the medial part of the 4th and 5th tergites less sclerotized. Both characters are too variable to retain *pilosa* as a separate species.

Pseudovipio schaeuffelei Hedwig, comb. et stat. nov.

Bracon laetus Wesmael var. *schäuffelei* Hedwig, 1957: 113; Shenefelt, 1978: 1499.

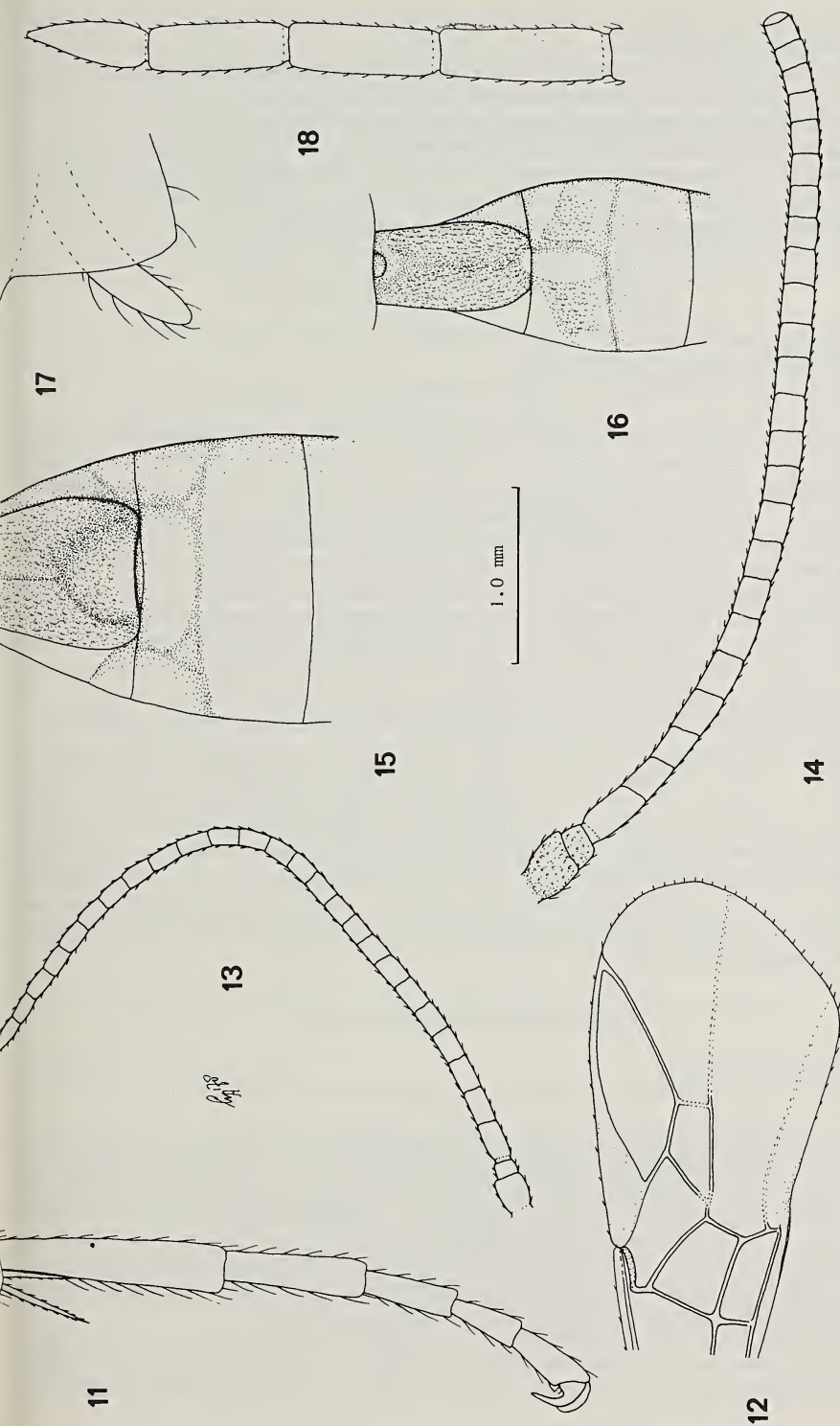
Holotype (♀) in the Staatliches Museum in Stuttgart, Ludwigsburg: "Iran (Chorassan), Birdjand, 1300 m, 1951 (Wüste), F. Schaeuffele leg.", "det. Hedwig", "*Bracon laetus* Wsm. ab. *schäuffelei* Hedwig, Holotyp.", "Typus".

The holotype of *schaeuffelei* was incorrectly referred to *Bracon* by Hedwig. Actually it is a species of *Pseudovipio* Szépligeti close to *P. castrator* (Fabricius, 1798). In the Fabricius Collection (Copenhagen) are two specimens under *castrator*. One is an ichneumonid, but the other is a braconid. The latter (with the old handwritten label "*castrator*", probably by Fabricius) is here selected, and designated as lectotype of *castrator*. The lectotype of *castrator* agrees with the general interpretation of *castrator* auct. *Ichneumon cuniculator* Rossi, 1792 is probably a synonym of *castrator* but has to be treated as a nomen oblitum; it has not been used since 1812. *Pseudovipio schaeuffelei* Hedwig differs from *castrator* mainly by the almost completely yellowish body (only lateral lobes of mesoscutum medially, stemmaticum, antenna mainly, ovipositor sheath, and apices of femur, tibia and tarsal segments of hind leg, black) and the shorter ovipositor sheath. The length of the ovipositor sheath of *castrator* is 0.5-0.6 times fore wing and subequal to the length of the metasoma. In the holotype of *schaeuffelei* the length of the ovipositor sheath is 0.36 times fore wing and distinctly shorter than metasoma. Antennal segments of holotype of *schaeuffelei* 37 (and not 26 as stated by Hedwig), its penultimate segment 1.8 times but the 35th segment 1.4 times its width, scapus protrudes ventro-apically and length of fore wing is 4.0 mm and of body 4.4 mm.

Ecclitura primoris Kokujev

Ecclitura primoris Kokujev, 1902: 5; Shenefelt, 1969: 33; Haeselbarth, 1973: 1.

Blacus pallens Hedwig, 1957: 117; Shenefelt, 1969: 23; Haeselbarth, 1973: 1-2; Van Achterberg, 1976: 322. Syn. nov.



Figs. 11-18. 11-13, *Habrobracon rotundiventris* Hedwig, holotype. 11, hind tarsus, inner aspect; 12, apical half of fore wing; 13, antenna. 14-15, *Microplitis intermedius* Hedwig, holotype. 14, antenna; 15, 1st-3rd tergites, dorsal aspect, *Microgaster iranensis* Hedwig, lectotype. 16, 1st-3rd tergites, dorsal aspect; 17, ovipositor sheath, lateral aspect; 18, apex of antenna. 14, 15: scale-line, 1 ×; 11: 3.8 ×; 12: 1.5 ×; 13, 16: 1.8 ×; 17, 18: 4.5 ×.

Hedwig", "O.-Afghanistan, Gulbahar, 1700 m, 15.6.1956, H. G. Amsel leg.", "26", "*Microplitis intermedius* Hedwig", "Typus".

Runs in Telenga's Key (1955: 148-151) to *M. tadzhicus* Telenga, 1949 from Tadzhikistan and agrees very well with its description; except that the pedicellus of *intermedius* is yellowish ventrally, the basal third of wings is subhyaline and the coxae are black.

Resembles *M. spinolae* (Nees, 1834) but *intermedius* has the frontal depressions distinctly microsculptured, base of metasoma more extensively reddish and sides of 1st tergite parallel.

Length of 1st tergite 1.4 times its apical width; 2nd tergite much shorter than 3rd tergite; 2nd suture shallow and connected by shallow sutures to 1st tergite (fig. 15).

Protomicroplitis mayae (Shestakov) (figs. 16-18)

Microgaster mayae Shestakov, 1932: 260; Telenga, 1955: 183-184; Shenefelt, 1973: 716.

Protomicroplitis mayae; Tobias, 1976: 164.

Microgaster iranensis Hedwig, 1957: 112-113; Shenefelt, 1973: 715. Syn. nov.

The type-series of *iranensis* consists of 5 females, of which 3 were examined. One is here selected and designated as lectotype, housed in the Staatliches Museum in Stuttgart, Ludwigsburg: "Iran, Belutschistan, Jranshar, 800 m, 1-10. III. 1954, Richter u. Schäuffele", "det. Hedwig", "*Microgaster iranensis* Hedwig, ♀, Holotyp.", "Typus".

The lectotype has large ocelli, which are comparatively close to the eyes; this is typical of *mayae* and the specimen agrees well with redescription of *mayae* by Telenga (1955: 183-184). Only the propodeum is mainly smooth (instead of punctate), the whole mesosoma is blackish (but in paralectotypes partly reddish), and the hind coxae are less distinctly sculptured. The differences are too slight to retain *iranensis* as a species separate from *mayae*, described from Uzbekistan. A specimen identified by Dr. V. I. Tobias (♀, Bajram-ali, Turkmenia) as *Protomicroplitis mayae* (Shestakov) is conspecific with *M. iranensis* Hedwig and shares the smooth propodeum. Telenga (1955: 184) reported already the occurrence of *mayae* in Iran.

Additional description of lectotype: length of fore wing 3.4 mm, of body 3.3 mm; length of ovipositor sheath 0.04 times fore wing, rather slender (fig. 17); both penultimate segments of antenna 3.1 and 3.3 times their width (fig. 18); 1st tergite of metasoma flat (but medially somewhat impressed), roundly narrowed posteriorly, largely rugulose, with small smooth area medio-posteriorly, its length ca. thrice the apical width (fig. 16); 2nd tergite rugulose, but medially and near sides of tergite smooth; 3rd tergite punctulate and somewhat longer than 2nd tergite; 2nd suture shallow, smooth and somewhat curved (fig. 16). The paralectotypes are topotypical and similar to the lectotype but mesosoma and antenna vary from mainly yellowish brown to mainly dark brown.

Pseudcardiochilus abnormipes Hedwig

Hedwig, 1957: 116, fig. 5.

Pseudcardiochilus abnormipes; Shenefelt, 1973: 804 (unintentional emendation).

In the Staatliches Museum in Stuttgart, Ludwigsburg there are 2 females and 1 male (not 3 females as stated by Hedwig). One of the topotypic females is here selected and designated as lectotype: "Iran, Belutschistan, Südwest Iranshar, Bampurufur, 31.III.1954, leg. Richter u. Schäuffele", "det. Hedwig", "42", "Holotypus", "*Pseudcardiochilus abnormipes* Hedwig, Holotyp., ♀", "Typus". Both paralectotypes are topotypical and similar to the lectotype.

Pseudcardiochilus is a valid genus belonging to the tribus Cardiochilini (Microgastrinae) and well characterized by the wide and dorsally glabrous apex of the hind tibia. The redescription of the genus will be published in my generic revision of the Braconidae.

There are two specimens under *Blacus pallens* Hedwig in the Staatliches Museum in Stuttgart, Ludwigsburg; belonging to two species and two different subfamilies. Haeselbarth (1973: 1)

examined the type-series, however without selecting a lectotype. The male ("Iran, Belutschistan, Iranshar, 800 m., 11-21.V.1954, Richter u. Schäuffele", "det. Hedwig", "Holotypus", "*Blacus pallens* Hedwig, ♂, Holotyp.", "Typus") belongs to *Avga europaeica* Tobias, 1971 (Rogadinae). The specimen is heavily damaged; the metasoma is missing, while the antenna and legs are incomplete. The female ("Iran, Belutschistan, Iranshar, 800 m., 11-18.III.1954, Richter u. Schäuffele", "Allotypus", "*Blacus pallens* Hedwig, ♀, Allotyp.") is in a good condition and belongs to *Ecclitura primoris* Kokujev, 1902 (Euphorinae), as already pointed out by Haeselbarth (1973: 1).

Because the male is heavily damaged, and its label data are not fully according to the original description, I here designate the female as lectotype of *pallens*; which I labelled accordingly. By this action *Blacus pallens* becomes a junior synonym of *Ecclitura primoris* Kokujev.

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Na lang stilgestaan te hebben, is de Encyclopédie entomologique weer met een nieuw deel verrijkt, en met een bijzonder aantrekkelijk deel bovendien. Het boek van Villiers behandelt kort de voornaamste aspecten van de biologie en de bestudering van de boktorren en geeft uitvoerige tabellen en beschrijvingen, vanaf het niveau van de subfamilies tot dat van de soorten, van alle in Frankrijk voorkomende soorten. Vormen worden wel, maar met vrij grote terughoudendheid, besproken.