

**First synopsis of the species  
of obscurator species-group, genus *Bracon*, subgenus  
*Glabrobracon* (Hymenoptera: Braconidae, Braconinae)**

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PAPP, J. (2000): First synopsis of the species of obscurator species-group, genus *Bracon*, subgenus *Glabrobracon* (Hymenoptera: Braconidae, Braconinae). – *Annls hist.-nat. Mus. natn. hung.* **92**: 229–264.

**Abstract** – Short review of the subgeneric classification of the genus *Bracon* and the species-groups of the subgenus *Glabrobracon*. Within the subgenus *Glabrobracon* TOBIAS (1958) separated thirteen species-groups which he, nearly thirty years later, refused to adopt in his monograph (TOBIAS 1986). PAPP (1966) selected eight species-groups, BEYARSLAN & FISCHER (1990) retained seven species-groups for the *Glabrobracon* species. With their black to blackish, dark brown corporal colour the species ranged in the *obscurator*-group are forming a well separable species assemblage. The *obscurator*-group comprises fifteen species, their specification see in the introductory chapter. From among the fifteen species two are new to science: *Bracon (Glabrobracon) admotus* sp. n. and *Bracon (Glabrobracon) kopelkei* sp. n. A key was constructed to the fifteen species of the *obscurator*-group and four further species were also included in it which are the melanic forms of the respective nominate species, i.e. these forms deceptively representing the *obscurator*-group. Descriptions of the two new species as well as redescrptions of the thirteen species are presented completed with the lists of the hosts of ten species, while hosts of five species are unknown. With 98 figures.

## INTRODUCTION

In 1927 FAHRINGER set up four sections in the subgenus *Bracon* FABRICIUS, 1804, the sections were as follows: *Glabrobracon*, *Lucobracon*, *Orthobracon* and *Striobracon*. TOBIAS (1957, 1958, 1961a, 1961b) was the first who emended the subgenus *Bracon* sensu FAHRINGER to generic as well as the sections by FAHRINGER to subgeneric ranks. According to TOBIAS's system (1986: 114–149) the genus *Bracon* is composed of ten subgenera in the Palearctic Region, they are

as follows: *Asiabracon* TOBIAS, *Bracon* FABRICIUS s. str. (= *Striobracon* FAHRINGER), *Cyanopteroobracon* TOBIAS, *Foveobracon* TOBIAS, *Glabrobracon* (FAHRINGER) TOBIAS, *Lucobracon* (FAHRINGER) TOBIAS, *Orthobracon* (FAHRINGER) TOBIAS, *Pilibracon* TOBIAS, *Rostrobracon* TOBIAS and *Sculptobracon* TOBIAS.

The subgenus *Glabrobracon* (FAHRINGER, 1927) TOBIAS, 1957 was first divided in species-groups by TOBIAS (1958), who separated thirteen groups comprising the species distributed in the former USSR: *ahngerii*, *angustiventris*, *anthracinus*, *colpophorus*, *discoideus*, *fumipennis*, *jaroshevskii*, *larvicida*, *nigripilosus*, *picticornis*, *planinotus*, *tekkensis* and *variator* species-groups. In the key to the *Bracon* species of the European part of the former USSR TOBIAS (1986: 114–149) has not separated his species-groups within the subgenera. To the *Glabrobracon* species of the Carpathian Basin (or historical Hungary) PAPP (1966) selected the following eight species-groups: *anthracinus*, *discoideus*, *dolichurus*, *obscurator*, *piger*, *terebella*, *tshitsherini* and *variator* species-groups. The ninth group, i.e. *urinator*-group, was raised to subgeneric rank under the name *Cyanopteroobracon* by TOBIAS back in 1957. Recently BEYARSLAN & FISCHER (1990) retained seven species-groups to the Palearctic species of the subgenus *Glabrobracon*: *abscissor*, *anthracinus*, *caudatus*, *conjugellae*, *jaroshevskii*, *osculator* and *piger* species-groups.

Motivated by taxonomic practice and applicability it seems necessary to sustain the *obscurator* species-group within the subgenus *Glabrobracon*. Fifteen *Bracon* species are ranged in this group: *B. admotus* sp. n., *B. arcuatus* THOMSON, *B. claripennis* THOMSON, *B. colpophorus* WESMAEL, *B. instabilis* MARSHALL, *B. kopelkei* sp. n., *B. longulus* THOMSON, *B. marshalli* SZÉPLIGETI, *B. momphae* PAPP, *B. obscurator* NEES, *B. pachyceri* QUINTARET, *B. pallicarpus* THOMSON, *B. parvicornis* THOMSON, *B. parvulus* WESMAEL and *B. pauris* BEYARSLAN. Five of these species were included in BEYARSLAN & FISCHER's species-groups, they are as follows (the respective species-groups are given in parenthesis): *B. claripennis* THOMSON (*abscissor*-group), *B. longulus* THOMSON and *B. obscurator* NEES (*conjugellae*-group), *B. pachyceri* QUINTARET and *B. parvicornis* THOMSON (*piger*-group).

The species of the *obscurator*-group are characterized by the following features: 1.) Ground colour of body is black or brownish black, legs are usually dark coloured; less usually with more or less light (brownish, brownish yellow, yellow) colour; body exceptionally with light colour pattern. 2.) Number of antennomeres 15–28–30(–33), flagellomeres longer than broad. 3.) Ovipositor sheath usually about as long as hind tibia or hind tibia + basitarsus combined, sometimes shorter, exceptionally (distinctly) longer.

## ABBREVIATIONS

In the identification key and descriptions the following abbreviations are applied (ACHTERBERG 1993: 4–5):

Eyes – OOL = ocellar-ocular line (i.e. shortest distance between hind ocellus and compound eye), POL = postocellar line (i.e. shortest distance between hind ocelli).

Alar veins – *cu-a* = transverse cubito-anal vein, *m-cu* = transverse medio-cubital vein, *r* = transverse radial vein, *1-CU1* and *2-CU1* = first and second sections of the discal vein, *1-R* = first section of the marginal vein, *1-SR-M* = first section of the cubital vein, *1-M* = basal vein, *2-SR* = first transverse cubital vein, *3-SR* and *4-SR* = second and third sections of the radial vein.

Measurement – The breadth and length of head are measured in dorsal view, the breadth transversely across the longest distance between compound eyes and the length across the longest distance between compound eye and temple, see also arrows in Fig. 1.

In the "Distribution" chapter those countries are marked with an asterisk, e.g. \*Bulgaria, which represent new distributional data.

KEY TO THE SPECIES OF THE OBSCURATOR-GROUP OF THE  
GENUS *BRACON*, SUBGENUS *GLABROBRACON*

- 1 (48) Face above between antennal sockets (or toruli) entirely smooth, i. e. without a V-form pair of short keels.
- 2 (3) Body black with variable yellow or reddish yellow pattern on face, prothorax and tergites 1–2, in extreme form face, prothorax and tergites 1–2 entirely yellow. Head in dorsal view 1.75–1.8 times as broad as long, temple rather receded (Fig. 87). Antenna with 18–22 antennomeres, flagellomeres 1.8–2 times (♀) and 2.4 times (♂) as long as broad. Marginal cell (or veins *1-R* and *4-SR*) not reaching tip of wing, relative length of veins *2-SR* and *3-SR* variable: *3-SR* as long as to one-third longer than *2-SR*, i.e. length of second submarginal cell variable but always narrow (Figs 90–91, 93). ♀: 2.1–2.4 mm, ♂: 1.9 mm (albinic form). – Melanic form see at couplets 25 (24) and 40 (39) *B. (Gl.) paucis* BEYARSLAN
- 3 (2) Body lacking light colour pattern, exceptionally at most orbital margin, along notaulix and lateral margin of tergites 2–3(–4) more or less with rusty or reddish yellow colour.
- 4 (5) Maxillary palp unusually long, clearly longer than height of head. Body black, at least cheek and clypeus + labrum partly to (almost) fully yellow, fumous yellow. Two species of *atrator*-group: *B. (Gl.) atrator* NEES, 1834



- and *B. (Gl.) delibator* HALIDAY, 1833 (= *B. [Gl.] anthracinus* NEES, 1834, jun. syn.).
- 5 (4) Maxillary palp of usual length, shorter than or at most as long as height of head.
- 6 (19) Second tergite usually nearly entirely or at least medially rugose to rugulose (Figs 13, 35, 59).
- 7 (10) Marginal cell somewhat shortening, i.e. vein 4-SR approaching (i.e. not reaching) tip of wing (Figs 12, 53).
- 8 (9) Head in dorsal view (Fig. 52) less transverse, 1.6–1.7 times as broad as long, temple rounded. Second tergite usually smooth and exceptionally rugo-rugulose medially. First tergite 1.2–1.3 times as long as broad behind, beyond pair of spiracles sides of tergite parallel (Fig. 54) to subparallel. Antenna with 16–21 (♀) and 19–24 (♂) antennomeres. ♀♂: 1.8–2.2 mm. – See also couplet 26 (23) *B. (Gl.) marshalli* SZÉPLIGETI
- 9 (8) Head in dorsal view (Fig. 9) transverse, 1.8–1.9 times as broad as long, temple receded. Second tergite always and more or less entirely to medially rugose to rugulose. First tergite quadrate in form, i.e. as long as broad behind, at most slightly longer, beyond pair of spiracles sides of tergite either parallel (Fig. 13) or more or less diverging posteriorly. Antenna with 22–27 (♀) and 24–28 (♂) antennomeres. ♀♂: (2–)2.5–3 mm *B. (Gl.) arcuatus* THOMSON
- 10 (7) Marginal cell long, i.e. vein 4-SR reaching tip of wing (Figs 32, 41, 58, 65, 83).
- 11 (14) First tergite quadrate, i.e. as long as broad behind (Figs 44, 59) or slightly longer, beyond pair of spiracles sides of tergite more or less diverging posteriorly; second tergite more or less longer than third tergite (Figs 44, 59).
- 12 (13) Temple in dorsal view (Fig. 56) receded, eye twice as long as temple. Hind femur 3.3–3.7 times as long as broad, hardly broadening distally (Fig. 57).

- Penultimate flagellomere 1.5–1.6 times as long as broad. Fore femur yellow, middle and hind femora black; tegula brown. ♀♂: 3.1–3.8 mm  
*B. (Gl.) momphae* PAPP
- 13 (12) Temple in dorsal view (Fig. 38) less receded, eye 1.35–1.5 times as long as temple. Hind femur 4.1–4.5 times as long as broad distally (Fig. 39). Penultimate flagellomere twice as long as broad. Femora 1–3 yellow, tegula also yellow. ♀: 3–3.5 mm **B. (Gl.) kopelkei** sp. n.
- 14 (11) First tergite 1.2–1.4 times as long as broad behind, beyond pair of spiracles sides of tergite parallel to subparallel; second tergite as long as third tergite (minute deviations feasible, Figs 35, 67, 85).
- 15 (16) Temple in dorsal view fairly receded, eye clearly one-third longer than temple (Fig. 29). Antenna with 27–30 antennomeres. Second tergite always sculptured. ♀♂: 2.2–3.5 mm *B. (Gl.) instabilis* MARSHALL
- 16 (15) Temple in dorsal view rounded, eye only somewhat longer than temple (Figs 61, 82). Antenna with (18–)20–25 antennomeres. Second tergite exceptionally rugo-rugulose.
- 17 (18) Temple in dorsal view relatively less rounded (Fig. 82). First tergite 1.2–1.4 times as long as broad behind, beyond spiracles with somewhat converging sides, its rim laterally from scutum narrow (Fig. 85). Ovipositor sheath as long as body (minute variation feasible). ♀♂: (2–)2.5–3.5 mm *B. (Gl.) parvulus* WESMAEL
- 18 (17) Temple in dorsal view more rounded (Fig. 61). First tergite (1.2–)1.4–1.8 times as long as broad behind, beyond spiracles with parallel or faintly diverging sides, its rim laterally from scutum less narrow (Fig. 67). Ovipositor sheath about as long as metasoma or metasoma + half mesosoma combined. ♀♂: 2–4(–5) mm *B. (Gl.) obscurator* NEES
- 19 (6) Second tergite smooth and shiny.
- 20 (27) Marginal cell of fore wing shortening, i.e. vein 4–SR only approaching tip of wing (Figs 53, 80).

- 21 (22) Second tergite antero-laterally, further tergite transversely and partly desclerotized. In dorsal view temple somewhat receded to strongly rounded. Species of *osculator*-group: *B. (Gl.) osculator* NEES, 1812; *B. (Gl.) cingulator* SZÉPLIGETI, 1901).
- 22 (21) Tergites entirely sclerotized.
- 23 (26) Head in dorsal view (Figs 78, 87) transverse. 1.75–1.9 times as broad as long, temple rather receded. Second submarginal cell relatively narrow (Figs. 80, 90, 91, 93).
- 24 (25) Second submarginal cell small and somewhat narrow: 3–SR hardly longer than 2–SR (minute variation feasible, Fig. 80). Temple in dorsal view rounded (Fig. 78). Claw relatively more curved (Fig. 79). ♀♂: (2.2–)2.6–2.9 mm *B. (Gl.) parvicornis* THOMSON
- 25 (24) Second submarginal cell usual in size and narrow: 3–SR longer than 2–SR (Figs 90, 93). Temple in dorsal view rather rounded (Fig. 87). Claw relatively less curved (Fig. 89). Body black, first tergite brownish yellowish (melanic form). ♀♂: 2–3 mm – See also couplets 2(3) and 40 (39) *B. (Gl.) paucis* BEYARSLAN
- 26 (23) Head in dorsal view (Fig. 52) less transverse, 1.6–1.7 times as broad as long, temple rounded. Second submarginal cell usual in its width, i. e. not narrow (Fig. 53). Tergites 2–3 equal in length (Fig. 54). Wings subhyaline to weakly fumous. ♀♂: 1.8–2.2 mm – See also couplet 8(9) *B. (Gl.) marshalli* SZÉPLIGETI
- 27 (20) Marginal cell of fore wing not shortening, i.e. 4–SR reaching tip of wing (Figs 4, 23, 49, 65, 76, 80, 83).
- 28 (37) Head in dorsal view less transverse, 1.6–1.7 times as broad as long (Figs 14, 45, 71, 74)
- 29 (32) First tergite long, 1.4–1.6 times as long as broad behind, rim laterally from scutum usually narrow (Figs 50, 51). Ovipositor sheath long, at least as long as meta- and mesosoma combined. Antenna with 17–26 antennomers.

- 30 (31) Mesosoma in lateral view elongate, 1.8–2 times as long as high; dorsally, i.e. mesoscutum and scutellum, somewhat flattened and propodeum moderately declined (Fig. 46); metasoma also elongate, legs relatively long. Ovipositor sheath very long, as long as body or somewhat longer. Hind tarsus long, basitarsus just longer than tarsomeres 2–3 combined. Legs fully black; pterostigma brown to blackish. ♀♂: (2–)2.3–3.5 mm  
*B. (Gl.) longulus* THOMSON
- 31 (30) Mesosoma in lateral view less elongate, 1.4–1.5 times as long as high; dorsally, i.e. mesoscutum and scutellum, not flattened and propodeum declined as usually (Fig. 75); metasoma not elongate, legs of usual length. Ovipositor sheath less long, as long as meta- and mesosoma combined. Hind tarsus less long, basitarsus as long as tarsomeres 2–4 combined. Legs yellow or light brownish, pterostigma opaque yellow or brownish yellow. ♀♂: 1.8–2.6 mm  
*B. (Gl.) pallicarpus* THOMSON
- 32 (29) First tergite less long, as long as to 1.2(–1.3) times longer than broad behind, rim laterally from scutum usually less narrow (Figs 18, 72, 73). Ovipositor sheath less long, at most as long as hind tibia to hind tibia + basitarsus combined.
- 33 (34) Ovipositor sheath short, as long as half hind tibia. First tergite quadrate, as long as broad behind (minute deviations feasible). Tergites 2–5(–6) laterally usually yellow or reddish yellow (n nominate form) and exceptionally tergites entirely black (melanic form). Legs varying blackish to nearly fully reddish yellow, yellow, coxae and trochanter usually dark brown to black(ish) (*terebella* species-group). ♀♂: 3–4 mm  
*B. (Gl.) terebella* WESMAEL
- 34 (33) Ovipositor sheath long, at least as long as hind tibia. First tergite quadrate to 1.2(–1.3) times as long as broad behind.
- 35 (36) Third tergite slightly longer than second tergite (Fig. 18). Antenna with 18–23(–25) antennomeres. Body brown to dark brown or blackish brown; legs, at least tibiae-tarsi, yellow to brownish yellow. Tegula yellow or brown. Body rather gracile. ♀♂: 1.8–2.4 mm  
*B. (Gl.) claripennis* THOMSON



- 36 (35) Second and third tergites equal in length (Fig. 72). Antenna with (22–)25–28(–32) antennomeres. Ground colour of body black. Legs blackish to black, at least tibiae basally yellow or yellowish. Tegula black. Body not gracile. ♀♂: 2–3.2 mm *B. (Gl.) pachyceri* QUINTARET
- 37 (28) Head in dorsal view transverse, 1.8–2 times as broad as long (Figs 1, 20, 61, 78, 82, 87).
- 38 (41) Marginal cell of fore wing just shortening, i.e. 4–SR approaching to nearly reaching tip of wing (Figs 80, 90, 91, 93). Third tergite longer than second tergite (Figs 81, 92). Hind femur thick, 2.5–3.5 times as long as broad medially (Fig. 88). Basal lobe of claw less large (Figs 79, 89). Wings hyaline.
- 39 (40) Second submarginal cell small: 3–SR as long as 2–SR (minute variation feasible) or, less usually, 3–SR somewhat shorter than 2–SR (Fig. 80). Temple in dorsal view more rounded (Fig. 78). Claw as in Fig. 79. ♀♂: (2.2–)2.6–2.9 mm *B. (Gl.) parvicornis* THOMSON
- 40 (39) Second submarginal cell not small: 3–SR usually longer than 2–SR (Figs 90, 93), rarely 3–SR shorter than 2–SR (Fig. 91). Temple in dorsal view rounded (Fig. 87). Claw as in Fig. 89. Body black, first tergite brownish to yellowish (melanic form). ♀♂: 2–3 mm. – See also couplets 2(3) and 25(24) *B. (Gl.) pauris* BEYARSLAN
- 41 (38) Marginal cell of fore wing not shortening, i.e. 4–SR reaching tip of wing (Figs 4, 23, 65, 83). Second and third tergites equal in length (minute deviations feasible). Hind femur thin, 3.8–4.5(–5) times as long as broad (Figs 2, 21–22, 62–63). Basal lobe of claw large (Figs 3, 64). Wings subhyaline to (weakly) fumous, rarely hyaline.
- 42 (47) Suture between tergites 2–3 distinctly bisinuate and deep (Figs 7, 26).
- 43 (46) First tergite 1.4–1.7 times as long as broad behind (Figs 7, 26).
- 44 (45) Temple in dorsal view more rounded, eye (nearly) twice as long as temple (Fig. 1). Vein *cu-a* of hind wing straight (Fig. 6, see arrow). Tergites 2–3 less transverse, second tergite 2.8–3 times as broad basally as long medially (Fig. 7). Hind femur 3.6–3.8 times as long as broad somewhat



distally (Fig. 2). Ovipositor sheath as long as hind femur + tarsus combined. Legs yellow, coxae dark brown to blackish, tegula yellow to brownish yellow. ♀: 2.8–3.6 mm, ♂: 2.3 mm     **B. (Gl.) admotus** sp. n.

- 45 (44) Temple in dorsal view rounded, eye somewhat longer than temple (Fig. 20). Vein *cu-a* of hind wing sinuate (Figs 24–25, see arrows). Tergites 2–3 more transverse, second tergite 3.2–3.3 times as broad behind as long medially (Fig. 26). Hind femur 4.1–4.3 times as long as broad distally (Figs 21–22). Ovipositor sheath as long as hind tibia + half basitarsus combined. Legs brownish black to black, fore femur + tibia yellow. ♀: 2.8–3 mm

*B. (Gl.) colpophorus* WESMAEL

- 46 (43) First tergite 1.2–1.3 times as long as broad behind. Body exceptionally fully black (melanic form), usually head and mesosoma black, metasoma reddish yellow and medially with black streak of variable extend (nominant form). ♀♂: 2–4.5 mm (*variator* species-group)

*B. (Gl.) variator* NEES var. *nigerrimus* FAHRINGER

- 47 (42) Suture between tergites 2–3 straight (Fig. 85), exceptionally just bisinuate (Fig. 67) and shallow. Two species: *B. (Gl.) obscurator* NEES and *B. (Gl.) parvulus* WESMAEL, their distinction see at couplets 16 (15) – 18 (17).

- 48 (1) Face above between antennal sockets (or toruli) with a more or less V-form pair of short keels. Body dark brown to blackish brown, first tergite usually brownish yellow or yellowish, exceptionally entire body black. ♀♂: 3–5 mm

*B. (Ceratobracon) stshegolevi* TELENGA

### **Bracon (Glabrobracon) admotus** sp. n. ♀♂

(Figs 1–8)

*Material examined* (13 ♀ + 1 ♂) – Female **holotype** and ten female **paratypes**: Hungary, Farnos, 4 June 1974 (collecting time of the host), ex larva *Byctiscus betulae* LINNAEUS 13 May 1975, host's food-plant *Populus tremula* LINNAEUS, leg. et educ. L. ZOMBORI. – One female **paratype**: Hungary, Bátorliget, 15 May 1988, leg. J. PAPP. – One female **paratype**: Bulgaria, Mts Rhodopes, Popsko, 14 July 1976, leg. A. ZAYKOV. – One male **paratype**: Hungary, Tapolcafő, Kalapácsér, 4 May 1966, leg. J. PAPP

*Depository* – Holotype and twelve paratypes are deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. Nos 7926 (holotype) and 7927–7939 (paratypes).

*Etymology* – The species name “*admotus*” refers to its taxonomic position approaching *obscurator* species-group with its black body, legs are, however, yellow (and not dark coloured).

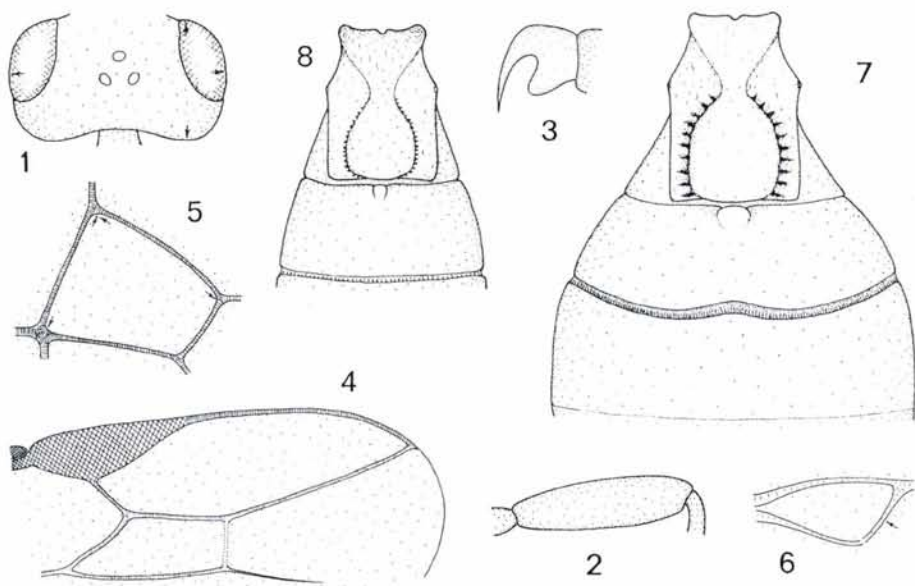
*Description of the female holotype* – Body 3.1 mm long. Antenna about as long as body and with 27 antennomeres. First flagellomere 1.7 times as long as broad, further flagellomeres indistinctly attenuating so that penultimate flagellomere 1.8 times as long as broad. – Head in dorsal view (Fig. 1) transverse, 1.8 times as broad as long, eye twice as long as temple, temple strongly rounded, occiput moderately excavated. Oral opening relatively large, its horizontal diameter just less than twice as long as shortest distance between opening and eye. Head polished.

Mesosoma in lateral view 1.4 times as long as high. Notaulix fairly evenly distinct, just not meeting and ending at prescutellar furrow. Prescutellar furrow narrow, shallow and finely crenulate. Mesosoma polished. – Hind femur 3.8 times as long as broad somewhat distally (Fig. 2). Basal lobe of claw large (Fig. 3).

Fore wing somewhat longer than body. Pterostigma (Fig. 4) 2.8 times as long as wide, issuing *r* proximally from its middle, *r* 0.8 times as long as width of pterostigma, 3-*SR* one-fifth longer than 2-*SR*, 4-*SR* clearly twice as long as 3-*SR*. First discal cell less high, 1-*M* 1.7 times as long as *m-cu* and 1-*SR-M* 1.2 times as long as 1-*M* (Fig. 5, see arrows). – Hind wing: *cu-a* straight (Fig. 6, see arrow).

First tergite (Fig. 7) 1.4 times as long as broad behind, pair of spiracles somewhat protruding, beyond spiracles sides of tergite parallel, margin of scutum crenulate. Tergites 2–3 equal in length, second tergite three times as broad behind as long laterally; suture between them distinctly bisinuate and finely crenulate (Fig. 7). Every tergite polished. Ovipositor sheath as long as hind tibia + tarsus combined.

Body black, tergites 2–3 laterally faintly brownish, sternites 1–2 yellow, further sternites dark brown. Antenna black. Oral opening, mandible yellow, palpi pale yellow. Legs yellow, first coxa



**Figs 1–8.** *Bracon (Glabrobracon) admotus* sp. n.: 1 = head in dorsal view, 2 = hind femur, 3 = claw of leg, 4 = distal part of right fore wing, 5 = first discal cell, 6 = subbasal cell of right hind wing, 7 = tergites 1–3 of female, 8 = tergites 1–2 of male

light brownish, second and third coxae blackish brown. Tegula yellow or brownish yellow. Hind tibia apically and entire hind tarsus brownish fumous. Wings faintly fumous (or subfumous), pterostigma and veins opaque brownish.

*Description of the female paratypes* (11 ♀) – Similar to the female holotype. Body 2.8–3.6 mm long (2.8: 1 ♀, 3: 1 ♀, 3.1: 1 ♀, 3.2: 2 ♀, 3.3: 2 ♀, 3.4: 2 ♀, 3.6: 1 ♀). Antenna with 25–29 antennomeres (25: 1 ♀, 27: 1 ♀, 28: 4 ♀, 29: 4 ♀; 1 ♀ with damaged antenna). Head in dorsal view 1.8–1.9 times as broad as long. Hind femur 3.6–3.8 times as long as broad somewhat distally. *l–M* 1.7–1.9 times as long as *m–cu*, *l–SR–M* 1.2–1.3 times as long as *l–M*. First tergite 1.3–1.6 times as long as broad behind (1.3: 2 ♀, 1.4: 5 ♀, 1.5: 3 ♀, 1.6: 1 ♀), beyond pair of spiracles sides of tergite parallel or just subparallel. Ovipositor sheath usually as long as hind tibia + tarsus (9 ♀), exceptionally somewhat longer (2 ♀). Tergites fully black (2 ♀).

*Description of the male paratype* (1 ♂) – Similar to the female. Body 2.5 mm long. Antenna somewhat longer than body and with 26 antennomeres. First flagellomere 2.1 times and penultimate flagellomere twice as long as broad. Head in dorsal view 1.8 times as broad as long. Notaulix less distinct. Hind femur 3.6 times as long as broad somewhat distally. First tergite (Fig. 8) 1.35 times as long as broad behind. Tergites less transverse, second tergite 2.2 times as broad behind as long laterally. Suture between tergites 2–3 straight (an exception?). Second tergite antero-medially longitudinally rugulose. Second tergite yellow, medially blackish brown.

*Host* – *Byctiscus betulae* LINNAEUS (Col. Attelabidae), braconid emerged from the leaf-roll of *Populus tremula* LINNAEUS made by the attelabid beetle.

*Distribution* – Hungary and Bulgaria.

The new species, *Bracon (Glabrobracon) admotus*, is nearest to *B. (Gl.) colophorus* WESMAEL, their distinction is presented in the key couplets 43 (46)–45(44), p. 236. Also near to the new species *B. (Gl.) kopelkei* considering their common features as black body, yellow legs and tegula, strongly rounded temple, distinctly bisinuate suture between tergites 2–3 (♀), long second submarginal cell and long ovipositor sheath; the two species are distinguished by the features keyed:

- 1 (2) Second tergite polished (♀) or antero-medially rugulose (♂). First tergite 1.3–1.6 times, usually 1.4 times, as long as broad behind, beyond pair of spiracles sides of tergite parallel to just subparallel; tergites 2–3 equal in length (Fig. 7). Trochantellus yellow. ♀: 2.8–3.6 mm, ♂: 2.5 mm

***B. (Gl.) admotus* sp. n.**

- 2 (1) Second tergite antero-medially rugose to rugulose, first tergite 1.1–1.2 times as long as broad behind, beyond pair of spiracles sides of tergite more or less diverging; second tergite slightly longer than third tergite (Fig. 44). Trochantellus brown to blackish. ♀: 3.3–3.5 mm

***B. (Gl.) kopelkei* sp. n.**



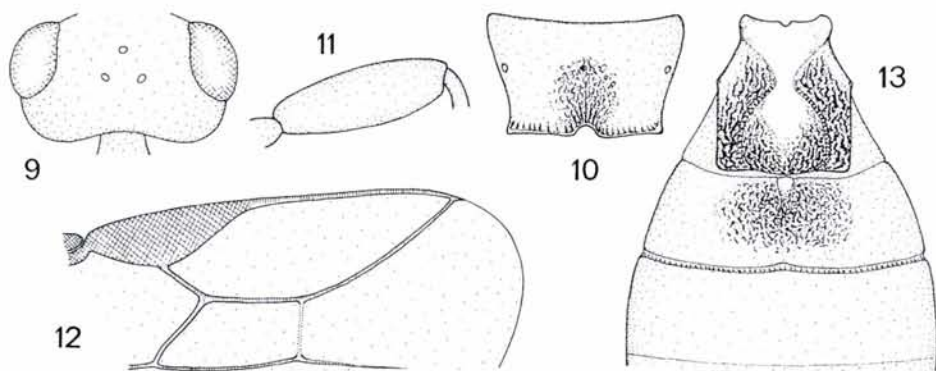
*Bracon (Glabrobracon) arcuatus* THOMSON, ♀♂  
(Figs 9–13)

*Bracon arcuatus* THOMSON, 1894: 1827 ♀, type locality: Öland Sweden, female lectotype in Zoological Museum of University, Lund; examined.

*Bracon (Orthobracon) arcuatus*: PAPP 1969: 189 ♀ (designation of the lectotype, redescription).  
– SHENEFELT 1978: 1628 (literature up to 1974).

*Specific features of the females* (11 ♀) – Body (2–)2.5–3 mm long. Antenna somewhat shorter than body and with 22–27, usually 23–24, antennomeres. Penultimate flagellomere 1.3–1.4 times as long as broad. Head in dorsal view (Fig. 9) 1.8–1.9 times as broad as long, eye twice as long as temple, latter receded. Horizontal diameter of oral opening somewhat longer than shortest distance between opening and eye. Head polished, face laterally finely granulate. – Propodeum either (almost) entirely polished or more or less rugo-rugulose posteriorly above lunule or lunule issuing a carina of variable length and along carina narrowly rugulose (Fig. 10). Hind femur 3–3.5 times as long as broad medially (Fig. 11). – Pterostigma (Fig. 12) 2.8–3 times as long as wide and issuing *r* either from its middle or just distally from its middle. Second submarginal cell short, 3–*SR* somewhat longer than (less frequently as long as) 2–*SR*, 4–*SR* approaching tip of wing. – First tergite (Fig. 13) quadrate in form, i.e. as long as broad or at least slightly longer than broad behind, beyond pair of spiracles sides of tergite either parallel or more or less diverging posteriorly; scutum posteriorly and lateral rim of tergite as well as second tergite antero-medially rugo-rugulose; further tergites polished. Tergites 2–3 equal in length (rarely second tergite just longer); suture between tergites 2–3 straight, subcrenulate and medially frequently somewhat pointed anteriorly. Ovipositor sheath as long as hind femur + basitarsus combined. – Body black or brownish black. Mandible and palpi brownish yellow. Orbit above rusty. Tegula dark brown (rarely brownish yellow). Hind rim of tergites 3–4 frequently brownish. Legs dark brown to black(ish), fore tibia entirely, tibiae 2–3 basally brownish yellow, tarsi brownish. Wings hyaline to subhyaline. Pterostigma brownish, veins opaque brown.

*Specific features of the males* (2 ♂) – Similar to the female. Body 2 mm long. Antenna about one-fourth longer than body and with 23–24 antennomeres. Lunule of propodeum issuing a short



**Figs 9–13.** *Bracon (Glabrobracon) arcuatus* THOMSON: 9 = head in dorsal view, 10 = propodeum, 11 = hind femur, 12 = distal part of right fore wing, 13 = tergites 1–3

carina, close around carina rugulose (Fig. 10). Pterostigma 2.7–2.9 times as long as wide. Second tergite mostly longer than third tergite. Metasoma dark to blackish brown, legs dark coloured, fore femur apically yellow(ish).

Host unknown.

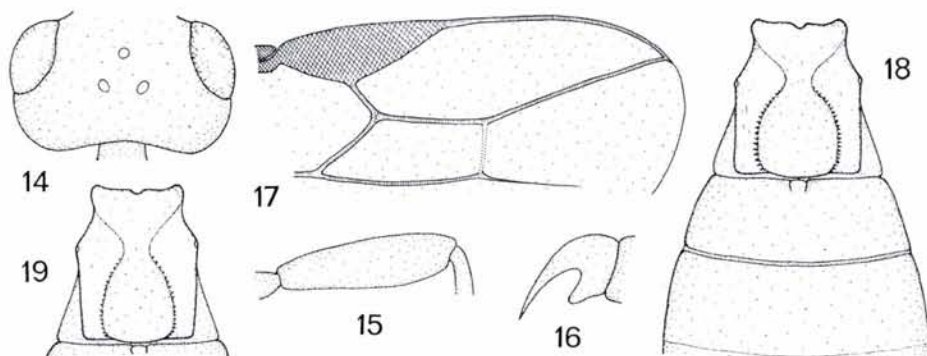
*Distribution* – Sweden, \*Scotland, \*England, \*Czech Republic, \*Hungary, \*Bulgaria. Supposedly a European species.

*Taxonomic position* – Within the subgenus *Glabrobracon* the species *Bracon arcuatus* is nearest to *B. marshalli* SZÉPLIGETI, their distinction see in the key-couplets 7 (10) – 9 (8), p. 232.

*Bracon (Glabrobracon) claripennis* THOMSON, ♀♂ and sp. rev.  
(Figs 14–19)

*Bracon claripennis* THOMSON, 1818 ♀♂, type locality: Ringsjön (Skåne, Sweden), male lectotype in Zoological Museum of University, Lund; examined. – PAPP 1969: 203 (as jun. syn. of *B. obscurator* NEES, designation of the male lectotype). SHENEFELT 1978: 1575 (as synonym of *B. obscurator* after PAPP l.c., literature up to 1969). BEYARSLAN & FISCHER 1990: 142 (in key).

*Specific features of the females* (13 ♀) – Body 1.9–2.4 mm, usually 2.2–2.4 mm, long. Antenna as long as body and with 18–25, usually 22–23, antennomeres. Penultimate flagellomere 2–2.2 times as long as broad. Head in dorsal view (Fig. 14) less transverse, 1.7(–1.75) times as broad as long, eye 1.4–1.6 times as long as temple, temple rounded. Horizontal diameter of oral opening and shortest distance between opening and eye equal in length. Head polished, face almost entirely to just laterally finely granulate. – Propodeum polished, at most around lunule with short rugae-rugulae. Hind femur 3.5–3.8 times as long as broad proximally (Fig. 15). Claw as in Fig. 16. – Pterostigma (Fig. 17) 2.6–2.8 times as long as wide and issuing *r* proximally from its middle. Second submarginal cell long, 3–SR 1.3–1.4 times as long as 2–SR, 4–SR reaching tip of wing. – First tergite quadrate to 1.3



**Figs 14–19.** *Bracon (Glabrobracon) claripennis* THOMSON: 14 = head in dorsal view, 15 = hind femur, 16 = claw of leg, 17 = distal part of right fore wing, 18 = tergites 1–3, 19 = first tergite

times as long as broad behind, beyond pair of spiracles parallel sided (Fig. 18) or slightly with converging sides (Fig. 19). Margin of scutum crenulate, otherwise together with further tergites polished. Third tergite slightly longer than second tergite, suture between them straight, shallow and smooth (Fig. 18). Ovipositor sheath as long as hind tibia or somewhat shorter. – Body usually brown to dark brown, less usually blackish brown; tegula yellow or brown. Legs either brown or yellow, coxae usually brown to dark brown. Wings subhyaline to faintly brownish fumous, pterostigma and veins opaque brownish.

*Specific features of the males* (4 ♂) – Similar to the female. Body 1.8–2.2 mm long. Antenna with 21–25 antennomeres. Head in dorsal view 1.7 times as broad as long. First tergite quadrate-subquadrate to 1.2(–1.3) times as long as broad behind. Tergites 2–3(–4) brownish yellowish; legs usually yellow, coxa dark.

*Hosts* – *Coleophora serratae* LINNAEUS (Lep. Coleophoridae) and *Cydia nigricana* FABRICIUS (Lep. Tortricidae). Both hosts new to the science.

*Distribution* – Sweden, \*England, \*Denmark, \*Finland, \*Hungary, \*Greece, \*Cyprus.

*Taxonomic position* – Within the subgenus *Glabrobracon* the species *Bracon claripennis* stands nearest to *B. pallicarpus* THOMSON, their distinction is presented as follows:

- 1 (2) First tergite less long, quadrate-subquadrate to 1.2(–1.3) times as long as broad behind, its sides either parallel (Fig. 18) or slightly converging posteriorly (Fig. 19). Temple in dorsal view relatively more rounded (Fig. 14). Ovipositor sheath less long, as long as hind tibia or somewhat shorter. Third tergite slightly longer than second tergite (Fig. 18). ♀: 1.8–2.4 mm, ♂: 1.8–2.2 mm  
*B. (Gl.) claripennis* THOMSON
- 2 (1) First tergite long, 1.4–1.5 times as long as broad behind (Fig. 77). Temple in dorsal view relatively less rounded (Fig. 74). Ovipositor sheath long, as long as metasoma and mesosoma combined or slightly shorter than hind tibia + tarsus combined. Tergites 2–3 equal in length. ♀♂: 1.8–2.2 mm  
*B. (Gl.) pallicarpus* THOMSON

*Bracon (Glabrobracon) colpophorus* WESMAEL, ♀♂  
(Figs 20–28)

*Braco (!) colpophorus* WESMAEL, 1838: Nouv. Mém. Acad. Bruxelles 11: 46 ♀, type locality: “pres de Bruxelles” (Belgium), female holotype in Institute Royal des Sciences Naturelle de Belgique, Bruxelles; examined.

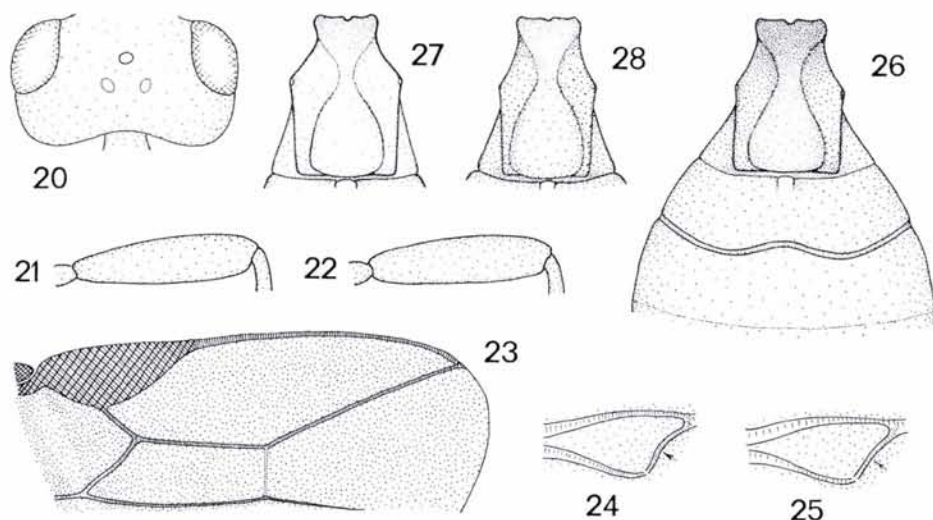
*Bracon (Glabrobracon) colpophorus*: SHENEFELT 1978: 1563 (literature up to 1972). PAPP 1997: 115 (designation of female holotype, redescription, new hosts).



*Bracon mokrzeckii* NIEZABITOWSKI, 1927: Polskie Pismo Ent. 6: 166 ♀♂. SHENEFELT 1978: 1514 (as valid species, literature up to 1953). Synonymized by PAPP (1997: 115).

*Specific features of the females* (9 ♀) – Body 2.8–3.2 mm long. Antenna as long as body or somewhat shorter and with 24–25 antennomeres. Penultimate flagellomere 1.6 times as long as broad. Head in dorsal view (Fig. 20) transverse, 1.7–1.9 times as broad as long, eye slightly longer than temple, temple rounded. Oral opening large, its horizontal diameter about twice as long as shortest distance between opening and eye. Head polished, face laterally hair-punctured. – Propodeum polished. Hind femur 4.1–4.3 times as long as broad distally, proximally more or less narrowing (Figs 21–22). – Pterostigma (Fig. 23) 2.3–2.8 times as long as wide and issuing *r* proximally from its middle. Second submarginal cell long, 3–SR 1.7–1.9 times as long as 2–SR, 4–SR reaching tip of wing. Hind wing: *cu-a* sinuate (Figs 24–25, see arrows). – First tergite 1.4–1.7 (–1.85) times as long as broad behind, beyond pair of spiracles parallel-sided or, frequently, with somewhat converging sides (Figs 26–27). Tergites 2–3 equal in length, second tergite 3.2–3.3 times as broad behind as long medially; suture between tergites 2–3 distinctly bisinuate, uneven (Fig. 26). Ovipositor sheath as long as hind tibia + half basitarsus combined. – Body black. Palpi yellow. Sternites pale or brownish yellow. Tergites 3–7 less frequently brownish. Legs brownish black to black, fore femur distally and fore tibia entirely yellow, femora 2–3 apically and tibiae 2–3 basally yellow, tarsi brownish fumous. Wings brownish fumous, pterostigma and veins opaque brownish to brown.

*Specific features of the males* (3 ♂) – Similar to the female. Body 2–2.5 mm long. Head in dorsal view 1.8–1.85 times as broad as long. Hind femur 4.2–4.4 times as long as broad distally. 3–SR of fore wing 1.6–1.7 times as long as 2–SR. First tergite beyond spiracles with faintly converging sides (Fig. 28).



**Figs 20–28.** *Bracon* (*Glabrobracon*) *colpophorus* WESMAEL: 20 = head in dorsal view, 21–22 = hind femur, 23 = distal part of right fore wing, 24–25 = subbasal cell of right hind wing, 26 = tergites 1–3, 27 = first tergite of female, 28 = first tergite of male

*Hosts* – *Hoplocampa minuta* (CHRIST) (Hym. Tenthredinidae); *Coleophora* sp. (Lep. Coleophoridae); *Bruchidius villosus* FABRICIUS, *Bruchus pubescens* GERMAR, *B. spartii* ERICHSON (Col. Bruchidae); *Apion genistae* KIRBY, *Exapion difficile* (HERBST) (Col. Brentidae, Apioninae); *Oxystoma craccae* LINNAEUS (Col. Curculionidae). – Remark: The bruchid, apionine and curculionid hosts are in need of confirmation.

*Distribution* – England, Belgium, The Netherlands, France, Germany, Poland, Austria, Hungary, Romania, Italy and former Yugoslavia.

*Taxonomic position* – Within the subgenus *Glabrobracon* the species *Bracon colpophorus* is nearest to *B. admotus* sp. n., their distinction is presented in the key-couplets 43 (46) – 45 (44), p. 236.

*Bracon (Glabrobracon) instabilis* MARSHALL, ♀♂  
(Figs 29–37)

*Bracon instabilis* MARSHALL, 1897: in E. ANDRÉ (ed.): Spec. Hym. Eur. Alg. 5: 70 ♀♂.

*Habrobracon instabilis* (MARSHALL): SHENEFELT 1978: 1607 (literature up to 1953).

*Bracon (Glabrobracon) instabilis*: PAPP 1997: 126 (new taxonomic position, designation of female lectotype, redescription).

*Specific features of the females* (5 ♀) – Body 2.2–3.5 mm long. Antenna somewhat shorter than to as long as body and with (23–)28–30 antennomeres. Penultimate flagellomere 1.4–1.6(–2) times as long as broad. Head in dorsal view (Fig. 29) 1.8–1.9 times as broad as long, eye clearly one-third to twice as long as temple, temple fairly receded. Horizontal diameter of oral opening one-fifth longer than shortest distance between opening and eye. Head polished, face more or less finely granulate. – Propodeum polished. Hind femur (3–)3.5–4 times as long as broad medially and nearly evenly broad (Fig. 30). Basal lobe of claw somewhat pointed (Fig. 31). – Pterostigma (Figs 32–33) (2.2–)2.8–3.3 times as long as wide and issuing *r* slightly proximally from its middle. Second submarginal cell short, 3–SR somewhat longer than 2–SR, 4–SR reaching tip of wing. First discal cell relatively long, 1–2CU1 clearly longer than 1–M (Fig. 34, see arrows). – First tergite (Fig. 35) 1.2–1.4 times as long as broad behind, beyond pair of spiracles with parallel to somewhat diverging sides. Margin of scutum finely crenulate and hind end of first tergite rugose-rugulose. Tergites 2–3 equal in length, second tergite 2.8–3.4 times as broad behind as long and anteriorly almost entirely and rather longitudinally rugose-rugulose; further tergites polished. Suture between tergites 2–3 bisinuate (Fig. 35) to almost straight, subcrenulate. Ovipositor sheath as long as hind tibia or somewhat shorter. – Body black, metasoma frequently brownish black. Palpi yellow or brownish yellow. Legs dark brown to black(ish) and either femora apically and tibiae basally yellow, brownish yellow or fore femur + tibia and tibiae 2–3 basally yellow with variable extent.

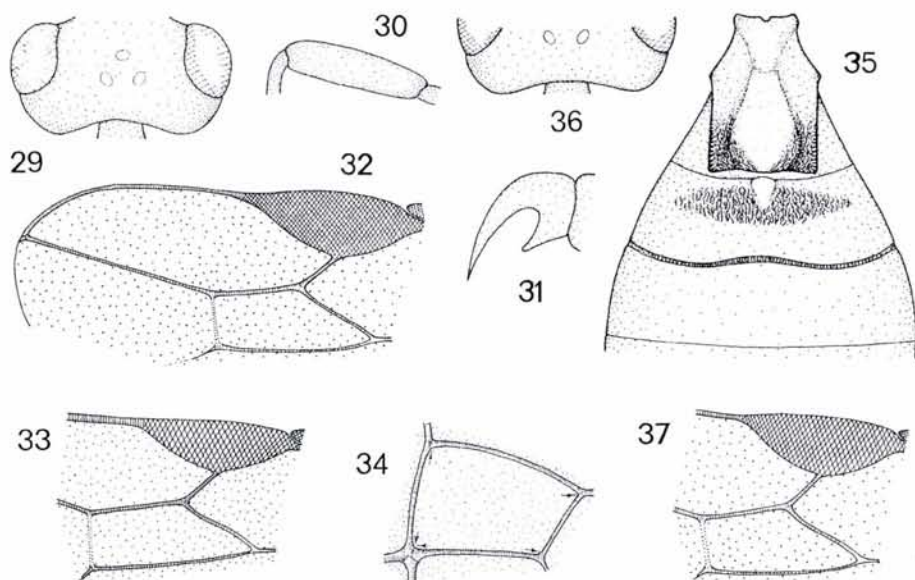
*Specific features of the males* (3 ♂) – Similar to the female. Body 2.2–3 mm long. Antenna as long as body and with 26–27 antennomeres. Temple in dorsal view a bit less receded (Fig. 36). Penultimate flagellomere 1.8 times as long as broad. Pterostigma (Fig. 37) 2.4 times as long as wide. Second tergite sometimes smooth to almost smooth.

*Hosts* – *Blastophagus minor* HARTIG and *Myelophilus piniperda* LINNAEUS (Col. Scolytidae) (after SHENEFELT 1978: 1607). – Both scolytid beetle hosts are in need of confirmation.

*Distribution* – England, Germany, Czech Republic, \*Hungary, Bulgaria.

*Taxonomic position* – Within the subgenus *Glabrobracon* the species *Bracon instabilis* stands nearest to *B. momphae* PAPP considering their receded temple, sculptured second tergite and black corporal colour; the specific distinction between them is presented in the subsequent key:

- 1 (2) Second submarginal cell short, 4-SR more than twice as long as 3-SR (Fig. 32). First tergite 1.2–1.4 times as long as broad behind, beyond spiracles with parallel to somewhat diverging sides, tergites 2–3 equal in length (Fig. 35). First discal cell long, 1-2CU1 clearly longer than 1-M (Fig. 34, see pair of arrows), junction of *m-cu* and 1-SR-M pointed (Fig. 34, see right upper horizontal arrow). Ovipositor sheath as long as to somewhat shorter than hind tibia. ♀♂: 2.2–3.5 mm *B. (Gl.) instabilis* MARSHALL



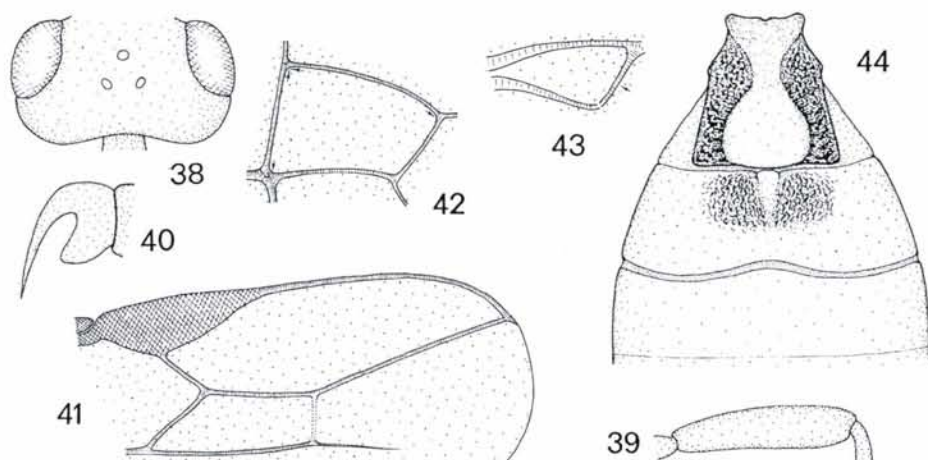
**Figs 29–37.** *Bracon (Glabrobracon) instabilis* MARSHALL: 29 = head of female in dorsal view, 30 = hind femur, 31 = claw of leg, 32 = distal part of left fore wing of female, 33 = pterostigma and second submarginal cell of left fore wing of female, 34 = first discal cell of right fore wing, 35 = tergites 1–3, 36 = temple of male in dorsal view, 37 = pterostigma and second submarginal cell of left fore wing of male



- 2 (1) Second submarginal cell long, 4-SR less than twice as long as 3-SR (Fig. 58). First tergite quadrate, i.e. as long as broad behind (or slightly longer), beyond spiracles with just diverging sides, second tergite slightly longer than third tergite (Fig. 59). First discal cell less long, 1-2CU1 slightly longer than 1-M (Fig. 60, see pair of arrows), junction of *m-cu* and 1-SR-M less pointed (Fig. 60, see right upper horizontal arrow). Ovipositor sheath as long as hind tibia + tarsomeres 1-2 combined. ♀♂: 3.1-3.8 mm *B. (Gl.) momphae* PAPP

**Bracon (Glabrobracon) kopelkei** sp. n. ♀  
(Figs 38-44)

*Material examined* (9 ♀) – Female **holotype** + one female **paratype** (latter in Budapest): Norway, Nordland, Korgfjellet, 17 August 1997, ex larva *Pontania glaucae* KOPELKE 8 May 1998 (host's foodplant: *Salix glauca*), leg. et educ. J.-P. KOPELKE (rearing no. 32 P/1997). – Three female **paratypes**: Norway, Nordland, Polarkreis II, 16 August 1997, ex larva *Pontania herbaceae* CAMERON 30 April 1998 (1 ♀) and 4 May 1998 (2 ♀) (host's foodplant: *Salix herbacea*), leg. et educ. J.-P. KOPELKE (rearing no. 28 T/1997). – Three female **paratypes** (1 ♀ in Budapest): Norway, Finnmark, N.-Varanger, 5 August 1997, ex larva *Pontania herbaceae* CAMERON 4 May 1998 (1 ♀) 12 May 1998 (1 ♀) 15 May 1998 (1 ♀) (host's foodplant: *Salix herbacea*), leg. et educ. J.-P. KOPELKE (rearing nos 6A S1/1997 and 6J/1997). – One female **paratype**: Austria, Ötztaler Alpen,



Figs 38-44. *Bracon (Glabrobracon) kopelkei* sp. n.: 38 = head in dorsal view, 39 = hind femur, 40 = claw of leg, 41 = distal part of right fore wing, 42 = first discal cell of right fore wing, 43 = subbasal cell of right hind wing, 44 = tergites 1-3

Obergurgl, 2600 m, 16 August 1983, ex larva *Pontania reticulatae* MALAISE 28 May 1984 (host's foodplant: *Salix* sp.), leg. et educ. J.-P. KOPELKE (rearing no. 41 D/1983).

**Depositories** – The female holotype and six female paratypes are deposited in the Senckenberg Museum, Frankfurt a. M., two female paratypes in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. Nos 7896–7897.

**Etymology** – The new species is dedicated to Dr. JENS-PETER KOPELKE (Frankfurt a. M.), the persistent and keen explorer of the gall-making sawflies on *Salix* species and the collector of the series of the new species.

**Description of the female holotype** – Body 2.8 mm long. Antenna about one-fifth longer than body and with 27 antennomeres. First flagellomere 2.6 times as long as broad, further flagellomeres gradually attenuating and shortening so that penultimate flagellomere twice as long as broad. – Head in dorsal view (Fig. 38) transverse, 1.8 times as broad as long, eye 1.5 times as long as temple, temple less receded or strongly rounded, occiput weakly excavated. OOL twice as long as POL. Horizontal diameter of oral opening one-fourth longer than shortest distance between opening and eye. Head polished, face laterally and frons finely granulate.

Mesosoma in lateral view 1.5 times as long as high. Notaulix faintly distinct, its run indicated by a row of pili. Prescutellar furrow narrow, very shallow and finely crenulate. Mesosoma polished. Lunule of propodeum issuing a short carina. – Hind femur 4.1 times as long as broad distally (Fig. 39). Basal lobe of claw large (Fig. 40).

Fore wing somewhat longer than body. Pterostigma (Fig. 41) 3.3 times as long as wide and issuing *r* proximally from its middle, *r* as long as width of pterostigma, 3–SR 1.35 times as long as 2–SR, 4–SR 2.2 times as long as 3–SR, just curved and reaching tip of wing. First discal cell less high, *l*–M 1.6 times as long as *m*–cu and *l*–SR–M arched and 1.4 times as long as *l*–M (Fig. 42, see arrows). – Hind wing: *cu*–a straight (Fig. 43, see arrow).

First tergite (Fig. 44) 1.25 times as long as broad behind, pair of spiracles somewhat before its middle, beyond spiracles sides of tergite subparallel, i.e. just broadening posteriorly; scutum polished, otherwise tergite rugose. Second tergite 2.6 times as broad behind as long laterally and one-third longer than third tergite, suture between tergites 2–3 bisinuate and smooth. Second tergite antero-medially longitudinally rugulose, otherwise together with further tergites polished. Ovipositor sheath as long as hind tibia + tarsomeres 1–3 combined.

Body black. Antenna blackish. Palpi blackish brown, mandible brownish yellow. Tegula blackish with yellowish suffusion. Legs yellow, coxae-trochanters 1–2 blackish brown, third coxa-trochanter black, femora basally, tibiae 2–3 distally and tarsi 1–3 entirely darkening. Wings hyaline, pterostigma and veins brown to dark brown.

**Description of the female paratypes** (8 ♀) – Similar to the female holotype. Body 2.8–4 mm long (2.8: 1 ♀, 3: 4 ♀, 3.2: 2 ♀, 4: 1 ♀). Antenna with 27–34 antennomeres (27: 1 ♀, 28: 1 ♀, 29: 1 ♀, 30: 2 ♀, 32: 2 ♀, 34: 1 ♀). Hind femur 4.1–4.5 times as long as broad distally. Pterostigma 2.6–3.6 times as long as wide (2.6: 1 ♀, 2.8: 2 ♀, 3.3: 3E, 3.6: 2 ♀); 3–SR 1.3–1.4(–1.5) times as long as 2–SR. First tergite just longer to 1.2 times longer than broad behind. Second tergite antero-medially sometimes weakly rugulose.

Male unknown.

**Hosts** – *Pontania glaucae* KOPELKE, *P. herbaceae* CAMERON, *P. reticulatae* MALAISE (Hym. Tenthredinidae).

The new species, *Bracon (Glabrobracon) kopelkei*, is nearest to *B. admotus* sp. n. and *B. momphae* PAPP, its distinction from the first species is presented under that species, p. 232; from the second species see in the key-couplets 11 (14) – 13 (12), p. 233.

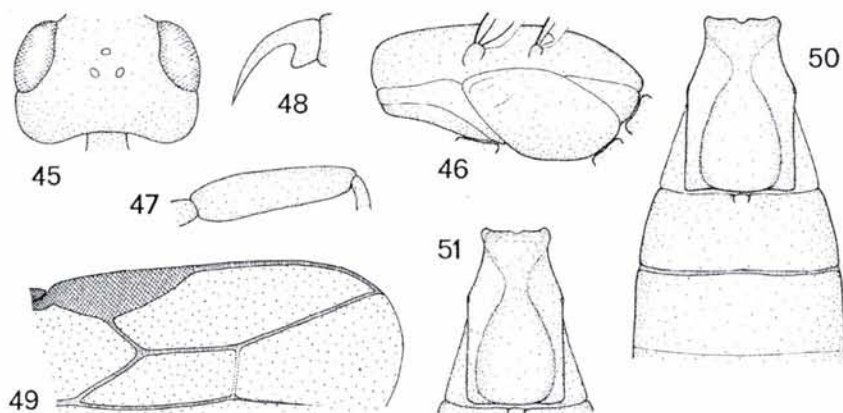
*Bracon (Glabrobracon) longulus* THOMSON, ♀♂  
(Figs 45–51)

*Bracon longulus* THOMSON, 1894: Opusc. Ent. 17 (1892): 1808 ♀♂, type locality: Palsjö, Sweden, female lectotype in Zoological Museum of University Lund; examined.

*Bracon (Glabrobracon) longulus*: PAPP 1969 Opusc. Ent. 34 (3): 181 ♀♂, (designation of female lectotype, redescription). SHENEFELT 1978: 1571 (literature up to 1974). BEYARSLAN & FISCHER 1990: 143 (in key).

*Bracon (Lucobracon) longulus*: TOBIAS 1986: 137 (in key).

*Specific features of the females* (5 ♀) – Body 2.3–3.5 mm long. Antenna about one-fourth to one-third shorter than body and with (17–)20–22 antennomeres. Penultimate flagellomere 1.4–1.5 times as long as broad. Head in dorsal view (Fig. 45) less transverse, 1.6–1.7 times as broad as long, eye somewhat longer than temple, temple fairly well rounded. Horizontal diameter of oral opening one-sixth longer than shortest distance between opening and eye. Head polished. – Mesosoma in lateral view elongate (Fig. 46), 1.8–2 times as long as high, mesoscutum and scutellum flattened, propodeum moderately declined. Propodeum polished. Hind femur 3.8–4.1 times as long as broad proximally (Fig. 47). Hind tarsus long, basitarsus just longer than tarsomeres 2–3 combined. Claw as in Fig. 48. – Pterostigma (Fig. 49) 2.7–2.8 times as long as wide and issuing *r* proximally from its



**Figs 45–51.** *Bracon (Glabrobracon) longulus* THOMSON: 45 = head in dorsal view, 46 = mesosoma in lateral view, 47 = hind femur, 48 = claw of leg, 49 = distal part of right fore wing, 50 = tergites 1–3 of female, 51 = first tergite of male



middle. Second submarginal cell long, 3–SR one-fifth longer than 2–SR, 4–SR reaching tip of wing. – Metasoma elongate, about as long as mesosoma + head combined. First tergite (Fig. 50) 1.4–1.6 times as long as broad behind, rim laterally from scutum narrow, beyond pair of spiracles parallel sided. Tergites 2–3 equal in length and less transverse, second tergite 2.5 times as broad behind as long, suture between tergites 2–3 just bisinuate or almost straight, shallow, smooth. Tergites polished. Ovipositor sheath long, as long as body or somewhat longer. – Body and legs black. Mandible brown to brownish yellow, palpi brown. Legs sometimes blackish brown. Sternites 1–2 yellow(ish). Wings subhyaline to weakly brownish fumous, pterostigma and veins brown, dark brown.

*Specific features of the males* (6 ♂) – Similar to the females. Body (2–)2.3–2.8 mm long. Antenna almost as long as body and with (18–)22–26 antennomeres. Head in dorsal view 1.6–1.65 times as broad as long, eye twice as long as temple. First tergite 1.6–1.8 times as long as broad behind (Fig. 51).

Host unknown.

*Distribution* – Sweden, \*Norway, Finland, \*Denmark, \*France, \*Germany, \*Czech Republic, \*Hungary, \*Bulgaria, Greece, \*Italy, \*Spain, \*Turkey.

*Taxonomic position* – Within the subgenus *Glabrobracon* the species *Bracon longulus* stands nearest to *B. pallicarpus* THOMSON considering their long ovipositor sheath, less transverse head and dark coloured body; their distinction is given in the key-couplets 29 (32) – 31 (30), p. 234.

*Bracon (Glabrobracon) marshalli* SZÉPLIGETI, ♀♂ et sp. rev.  
(Figs 52–55)

*Bracon obscurator* NEES sensu MARSHALL, 1885 (nec NEES, 1834): Trans ent. Soc. London p.16 (in key) and p. 45 (No. 35, description) ♀♂ (syntype series existing?), type locality: England. –SHENEFELT 1978: not included.

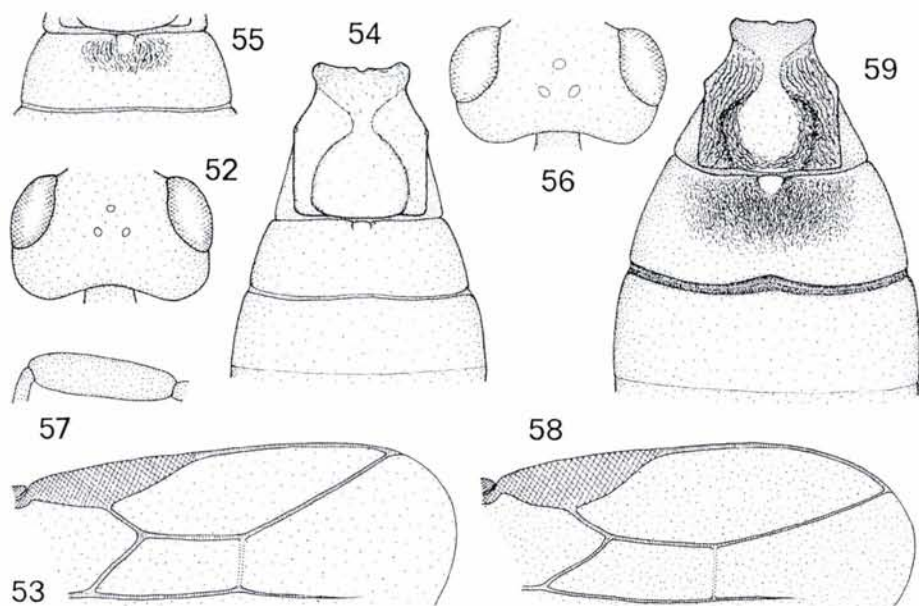
*Bracon marshalli* SZÉPLIGETI, 1901 new name for *B. obscurator* NEES sensu MARSHALL: Állatt. Közlem. Pótfüz. Term.tud. Közl. 64: 270 (in key, in Hungarian) and Math. naturw. Ber. Ung. 1904 19 (1901): 191 (in key, in German) ♀♂, type locality: Budapest, Óbuda (Hungary). –PAPP 1996: 387 (as synonym of *B. obscurator* NEES). SHENEFELT 1978: 1575 (as synonym of *B. obscurator* NEES after PAPP l.c., literature up to 1969). TOBIAS 1986: 133 (in key, as synonym of *B. obscurator* NEES).

*The type series of Bracon marshalli* – SZÉPLIGETI (1901: 270) described this species on the basis of female and male specimens, the precise number of the syntype specimens and the type locality were not indicated by him, i.e. the species was described within the key and was not presented its detailed description in the traditional way.

At present two male specimens of *B. marshalli* are housed in the braconid collection of the Hungarian Natural History Museum, these two male syntypes belong unambiguously to the original type series, female is not represented. The two males were collected by SZÉPLIGETI at the locality "Budapest Óbuda" which is considered as the type locality of this species. One male was designated by me as the lectotype and one male as the paralectotype, Hym. Typ. Nos. 1340–1341.

The two male type specimens are in bad condition. Lectotype: 1.) left antenna damaged and with 12 antennomeres, 2.) metasoma missing. – Paralectotype: head, left fore wing, left fore leg and metasoma missing.

*Specific features of the females* (14 ♀) – Body 1.8–2.2 mm long. Antenna as long as body or somewhat longer and with 16–21 antennomeres. Penultimate flagellomere 1.7–2 times as long as broad. Head in dorsal view (Fig. 52) less transverse, 1.6–1.7 times as broad as long, eye somewhat longer than temple, temple rounded. Horizontal diameter of oral opening one-fifth longer than shortest distance between opening and eye. Head polished. – Propodeum polished. Hind femur 3.5–4 times as long as broad distally. Claw as in cf. Fig. 16. – Pterostigma (Fig. 53) 3–3.5 times as long as wide and issuing *r* from its middle, sometimes proximally from its middle; second submarginal cell long, 3–SR 1.3–1.4 times as long as 2–SR, 4–SR approaching tip of wing. – First tergite (Fig. 54) quadrate, as long as or a bit longer than broad behind, beyond pair of spiracles parallel sided. Tergites 2–3 equal in length, suture between them straight to just bisinuate, shallow to moderately deep, smooth (Fig. 54). Second tergite antero-medially rarely rugulo-subrugulose (Fig. 55). Ovipositor sheath variable in length: as long as hind tibia to hind tibia + tarsomeres 1–2 combined. – Body black. Palpi brown to yellow. Tergites sometimes dark brown. Legs black or (dark) brown, at most fore femur apically, fore tibia more or less, base of tibiae 2–3 brownish to brownish yellow. Wings subhyaline to weakly fumous, pterostigma and veins opaque brownish.



**Figs 52–59.** *Bracon (Glabrobracon) marshalli* SZÉPLIGETI: 52 = head in dorsal view, 53 = distal part of right fore wing, 54 = tergites 1–3 of female, 55 = second tergite of female and male. – *Bracon (Glabrobracon) momphae* PAPP: 56 = head in dorsal view, 57 = hind femur, 58 = distal part of right fore wing, 59 = tergites 1–3

*Specific features of the males* (54 ♂) – Similar to the females. Body 1.8–2 mm long. Antenna as long as body and with (16–)21–24(–29) antennomeres. Penultimate flagellomere 1.9–2.2 times as long as broad. First tergite usually slightly longer than broad behind. Second tergite antero-medially sometimes rugulo-subrugulose (Fig. 55). Tergites more or less brown to dark brown, blackish.

Host unknown.

*Distribution* – \*Scotland, England, \*Norway, \*Denmark, \*Sweden, Hungary, \*Slovenia, \*Greece, \*Portugal.

*Taxonomic position* – Within the subgenus *Glabrobracon* the species *Bracon marshalli* stands nearest to *B. pallicarpus* THOMSON considering their less transverse head, long ovipositor sheath and dark coloured body; their specific distinction is summarized in the subsequent key:

- 1 (2) Marginal cell somewhat less long, i.e. 4-SR approaching tip of wing (Fig. 53). First tergite quadrate, i.e. as long as or at least a bit longer than broad behind (Fig. 54). Legs black with some yellow(ish) or brown(ish) pattern; pterostigma brownish. ♀♂: 1.8–2.2 mm *B. (Gl.) marshalli* SZÉPLIGETI
- 2 (1) Marginal cell long, i.e. 4-SR reaching tip of wing (Fig. 76). First tergite long, 1.4–1.6 times as long as broad behind (Fig. 77). Legs yellow, pterostigma opaque yellow or brownish yellow. ♀♂: 1.8–2.2 mm  
*B. (Gl.) pallicarpus* THOMSON

*Bracon (Glabrobracon) momphae* PAPP, ♀♂  
(Figs 56–60)

*Bracon (Glabrobracon) momphae* PAPP, 1999: Ent. m. Mag. 135: 149 ♀, type locality: "England, Surrey, Box Hill", female holotype (+ two female paratypes) in the The Natural History Museum London; examined.

*Specific features of the females* (7 ♀) – Body 3.1–3.8 mm long. Antenna as long as or somewhat longer than body and with (25–)28–34 antennomeres. Penultimate flagellomere 1.5–1.6 times as long as broad. Head in dorsal view (Fig. 56) transverse, 1.8–2 times as broad as long, eye twice to almost twice as long as temple, temple fairly receded. Horizontal diameter of oral opening as long as or somewhat longer than shortest distance between opening and eye. Head polished. – Propodeum polished. Hind femur 3.3–3.7 times as long as broad medially (Fig. 57). – Pterostigma (Fig. 58) 2.8–3 times as long as wide and issuing *r* proximally from its middle. Second submarginal cell somewhat less long to long, 3-SR as long as to 1.3(–1.4) times as long as 2-SR, 4-SR reaching tip of wing. First discal cell less long, 1-2CU1 slightly longer than 1-M (Fig. 60, see two pairs of arrows), junction of 1-SR-M and *m-cu* less pointed (Fig. 60, see right upper horizontal arrow). – First tergite (Fig. 59) quadrate, as long as broad behind or a bit longer, beyond pair of spiracles with somewhat diverging sides. First tergite laterally and posteriorly rugose, second tergite more or less



longer than third tergite, second tergite medially (Fig. 59) or nearly entirely and rather longitudinally rugulose, further tergites polished. Suture between tergites 2–3 bisinuate (Fig. 59). Ovipositor sheath as long as hind tibia + tarsomeres 1–2 combined. – Body black. Mandible yellow, palpi brownish. Tegula brownish yellow to yellow. Hind narrow rim of second tergite and sternites 1–2 entirely yellowish. Legs yellow, coxae-trochanters dark brown to black, femora proximally more or less brown to blackish, tarsi faintly brownish.

*Specific features of the male* (1 ♂, male new) – Similar to the female. Body 3.3 mm long. Antenna somewhat longer than body and with 31 antennomeres. Penultimate flagellomere 1.45 times as long as broad. Head 1.8 times as broad as long. Oral opening somewhat larger, its horizontal diameter 1.4 times as long as shortest distance between opening and eye. Hind femur 3.6 times as long as broad medially. First tergite 1.3 times as long as broad behind and with diverging sides. Second tergite one-fifth longer than third tergite. Tergites dark brown. Dark pattern of legs more extended.

*Host* – *Mompha nodicolella* FUCHS (Lep. Momphidae).

*Distribution* – England, Scotland, Denmark.

*Taxonomic position* – Within the subgenus *Glabrobracon* the species *Bracon momphae* stands nearest to *B. kopelkei* sp. n., their distinction see in the key-couplets 11 (14) – 13 (12), p. 232. The species *B. instabilis* MARSHALL is also allied to *B. momphae*, the two species are distinguished under the former species, p. 233.

*Bracon (Glabrobracon) obscurator* NEES, ♀♂  
(Figs 61–70)

*Bracon obscurator* NEES, 1834: Hym. Ichn. aff. Mon. Eur. 1: 83 ♀♂, syntype series destroyed.

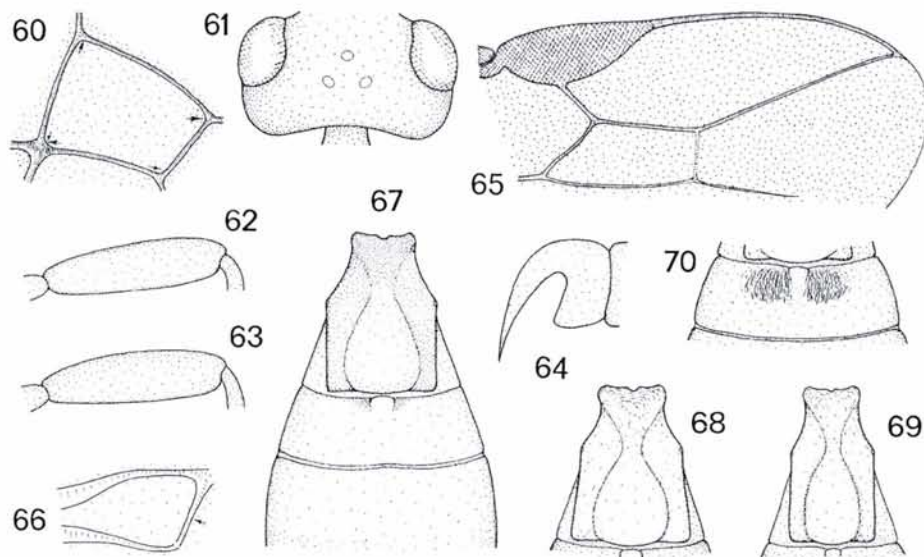
*Bracon (Glabrobracon) obscurator*: SHENEFELT 1978: 1574 (literature up to 1974). TOBIAS 1986: 133 (in key). BEYARSLAN & FISCHER 1990: 144 (in key).

*Specific features of the females* (187 ♀) – Body 2–5 mm, usually 2.5–3.5 mm, long. Antenna somewhat shorter to about as long as body and with (17–)21–24(–28) antennomeres (remark: number of flagellomeres usually diminishing and lengthening in correlation to the increasing length of the antenna itself). Flagellomeres variable in length, penultimate flagellomere 1.3–1.6(–2) times as long as broad. Head in dorsal view (Fig. 61) transverse, (1.7–)1.8–2(–2.2) times as broad as long, eye 1.3–1.5(–1.6) times as long as temple, temple rounded. Horizontal diameter of oral opening one-fourth longer than shortest distance between opening and eye (minute deviations feasible). Head polished, face laterally with fine to very fine granulation of variable extent. – Propodeum polished, at most around lunule with short striae-striolae. Hind femur (3.3–)3.5–3.8(–4) times as long as broad medially (Figs 62–63). Claw with a large lobe as in Fig. 64. – Pterostigma (Fig. 65) (2.2–)2.5–3(–3.3) times as long as wide and issuing *r* either proximally from or (just) from its middle. Second submarginal cell moderately long, 3–SR (1.2–)1.3–1.4(–1.7) times as long as 2–SR, 4–SR 1.7–1.9(–2.1) times as long as 3–SR and reaching (rarely rather approaching) tip of wing. Hind wing: *cu-a* straight (Fig. 66, see arrow). – First tergite (Fig. 67) (1.2–)1.4–1.8 times as long as broad behind, beyond pair of spiracles with parallel to subparallel (i.e. faintly diverging) sides (Fig. 68), rim laterally from scutum less narrow. Tergites 2–3 equal in length, rarely second tergite or third tergite,

respectively, a bit longer, suture between them faintly bisinuate, less frequently either bisinuate or (almost) straight, usually less deep and smooth to just subcrenulate. Tergites usually polished, less usually rim of first tergite and second tergite antero-medially (Fig. 70) to medially subrugulose to rugulose-rugose. Second tergite 2.5–3 times as broad behind as long (minute deviations feasible). Ovipositor sheath about as long as hind tibia + basitarsus and, less usually, at most as long as hind tibia + tarsus combined. – Body black. Legs usually black to blackish, base of hind tibia frequently yellow(ish); less usually fore femur apically and fore tibia proximally yellow to yellowish. Exceptionally inner orbit of eye more or less and tergites 2(–3) laterally rusty to reddish. Wings subhyaline to brownish fumous, pterostigma and veins brown to blackish.

*Specific features of the males* (226 ♂). – Similar to the female. Body 1.8–4.5 mm, usually 2.2–3.3 mm, long. Antenna usually more or less longer than body, less usually equally long or (exceptionally) somewhat shorter and with (17–)18–25(–34) antennomeres. Penultimate flagellomere 1.5–2(–2.3) times as long as broad. Hind femur usually 3.5–4 times as long as broad medially. First tergite usually 1.6–1.9(–2.2) times as long as broad behind and with parallel sides beyond pair of spiracles (Fig. 69). Second tergite usually 2.3–2.7 times as broad behind as long.

*Hosts* – Lepidoptera. Coleophoridae: *Coleophora caespitiella* ZELLER. Epermeniidae: *Epermenia fulviguttella* ZELLER. Tortricidae: *Dichrorampha sedata* BUSCK. Phycitidae: *Homoesa sinuella* FABRICIUS, *Phycitodes maritima*. Noctuidae: *Hadena* sp. – Coleoptera. Buprestidae: *Trachys pumila* ILLIGER, *T. troglodytes* GYLLENHAL. Brentidae (Apioninae): *Apion* sp. Curculionidae (Scolytinae): *Ips typographus* LINNAEUS, *Leperisinus varius* FABRICIUS, *Orthotomicus suturalis* GYLLENHAL. – Diptera. Tephritidae: *Chaetorellia jaceae* ROBINEAU-



**Figs 60–70.** *Bracon (Glabrobracon) momphae* PAPP: 60 = first discal cell. – *Bracon (Glabrobracon) obscurator* NEES: 61 = head in dorsal view, 62–63 = hind femur, 64 = claw of leg, 65 = distal part of right fore wing, 66 = subbasal cell of right hind wing, 67 = tergites 1–3 of female, 68 = first tergite of female, 69 = first tergite of male, 70 = second tergite of female and male

DESVOIDY, *Sitarea lurida* LOEW, *Tephritis pulchra* LOEW, *Trypeta cylindrica* ROBINEAU-DESVOIDY. Syrphidae: *Cheilosia alpipila* MEIGEN. – Hymenoptera. Cephidae: *Hartigia xanthostoma* EVERSMANN (from stem of *Filipendula ulmaria*). Eurytomidae: *Bruchophagus roddi* GUSSAKOVSKY. – The species printed in italics are authenticated as host. On the other hand, the species printed in Roman type are in need of confirmation as host.

*Distribution* – Frequent to common in the Palaearctic Region.

*Taxonomic position* – Within the subgenus *Glabrobracon* the species *Bracon obscurator* is the type species of the *obscurator* species-group and stands nearest to *B. parvulus* WESMAEL, their distinction is disclosed in the key-couplets 16 (15) – 18 (17), p. 233.

*Bracon (Glabrobracon) pachyceri* QUINTARET, ♀♂  
(Figs 71–73)

*Bracon pachyceri* QUINTARET, 1912: Bull. Soc. linn. Provence (Marseille) 4: 219 ♀♂, type locality: France (Provence?), depository of syntype series unknown.

*Bracon (Glabrobracon) pachyceri*: SHENEFELT 1978: 1578 (literature up to 1936). BEYARSLAN & FISCHER 1990: 142 (in key).

*Specific features of the females* (2 ♀) – Body 2–3.2 mm long. Antenna as long as body and with 22–29 antennomeres. Penultimate flagellomere as long as broad. Head in dorsal view (Fig. 71) less transverse, 1.6–1.7 times as broad as long, eye 1.3–1.5 times as long as temple, temple rounded. Horizontal diameter of oral opening one-third to one-fourth longer than shortest distance between opening and eye. Head polished, face laterally subgranulate. – Propodeum polished. Hind femur 3.5–3.6 times as long as broad medially (cf. Fig. 62–63). Claw as in Fig. 64. – Pterostigma (cf. Fig. 41) 2.6–3 times as long as wide and issuing *r* proximally from its middle. Second submarginal cell long, 3–SR 1.3–1.6 times as long as 2–SR, 4–SR reaching tip of wing. – First tergite (Fig. 72) quadrate, as long as broad behind or slightly longer, beyond pair of spiracles with diverging sides. Tergites 2–3 equal in length, second tergite 2.8–3 times as long behind as long. Suture between tergites 2–3 straight, weak and smooth. Ovipositor sheath as long as hind tibia. – Body black. Palpi dark brown. Tegula and legs blackish. Wings more or less fumous, pterostigma and veins dark brown to brown.

*Specific features of the males* (9 ♂) – Similar to the female. Body (2–)2.3–3 mm long. Antenna with (20–)28–32 antennomeres. First tergite 1.2–1.3 times as long as broad behind, its lateral rim usually smooth (Fig. 73).

*Host* – *Pachycerus varius* HERBST (Col. Curculionidae).

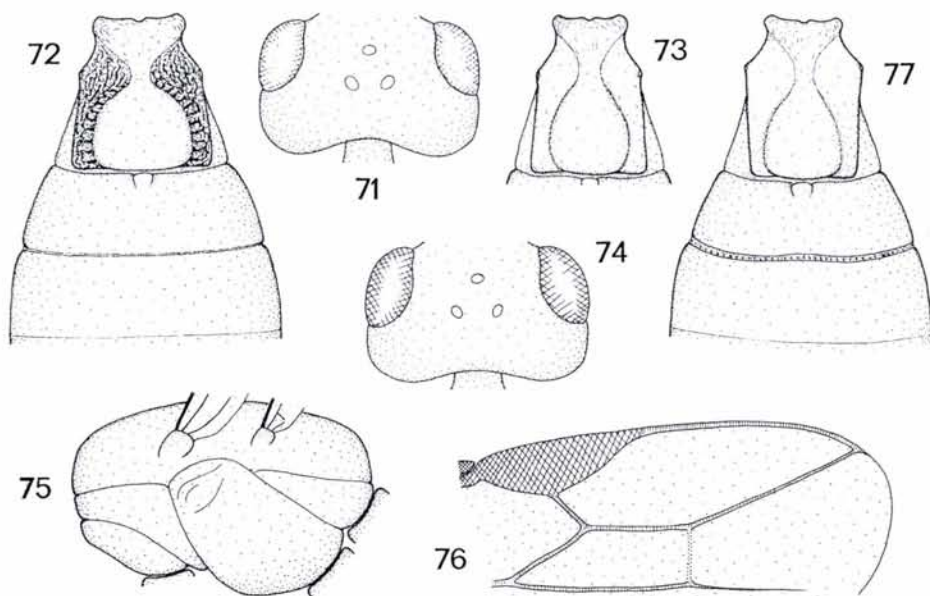
*Distribution* – France, \*Sweden, \*Czech Republic, \*Hungary, \*Bulgaria, \*Turkey.

*Taxonomic position* – 1) Within the subgenus *Glabrobracon* the species *Bracon pachyceri* is nearest to *B. obscurator* NEES, their distinction is given in the following key:



- 1 (2) Head in dorsal view (Fig. 61) transverse, 1.8–2 times as broad as long. First tergite 1.4–1.8 times as long as broad behind (Figs 67–69). Ovipositor sheath usually as long as hind tibia + basitarsus combined. ♀: 2–5 mm, ♂: 1.8–4.5 mm *B. (Gl.) obscurator* NEES
- 2 (1) Head in dorsal view (Fig 71) less transverse, 1.6–1.7 times as broad as long. First tergite quadrate to subquadrate, i.e. as long as to slightly longer than broad behind (Figs 72, 73). Ovipositor sheath usually as long as hind tibia. ♀: 2–3.2 mm, ♂: 2.3–3 mm *B. (Gl.) pachyceri* QUINTARET

2) The two forms considered here as two species, *B. pachyceri* and *B. terebella* (see also key couplets 32 [29] – 36 [35] p. 235), are very similar to each other; their specific distinction, on the basis of their original descriptions and of the few specimens of *B. pachyceri* at hand (*B. terebella* is a frequent species and, consequently, represented by a long series of specimens), are subtle and disputable. Besides the eidonomic-taxonomic study an extensive bionomical-ecological observations are needed to solve this problem.



**Figs 71–77.** *Bracon (Glabrobracon) pachyceri* QUINTARET: 71 = head in dorsal view, 72 = tergites 1–3 of female, 73 = first tergite of male. – *Bracon (Glabrobracon) pallicarpus* THOMSON: 74 = head in dorsal view, 75 = mesosoma in lateral view, 76 = distal part of right fore wing, 77 = tergites 1–3 of female

*Bracon (Glabrobracon) pallicarpus* THOMSON, ♀♂ and sp. rev.  
(Figs 74–77)

*Bracon pallicarpus* THOMSON, 1894: Opusc. Ent. 17 (1892): 1809 ♀♂, type locality: Lapland (Sweden), male lectotype in Zoological Museum of University Lund; examined. –PAPP 1966: 378 (as *B. obscurator* ab. "*pallidicarpus*"). PAPP 1969: 203 (as junior synonym of *B. obscurator*, designation of female lectotype). SHENEFELT 1978: 1576 (as *B. obscurator* ab. *pallicarpus* after PAPP 1966, literature up to 1974).

*Condition of the syntype specimens and designations of the paralectotypes* (1 ♀ + 2 ♂). – In THOMSON's Collection (deposited in the Zoological Museum Lund) there are four syntype specimens: three (1 ♀ + 2 ♂) on a single pin mounted on a small pointed cards each, the fourth specimen is a male and mounted on a small pointed card attached to a separate pin. From among the three specimens on the thin and flexible common pin the uppermost specimen is a female, below it are two males. The female is in a bad condition: both flagelli and four wings missing, legs somewhat glueish. The first male (below the female) is in good condition and earlier this syntype specimen was designated as the lectotype by me (PAPP 1969). The second male (below the first male) is somewhat damaged: right flagellum missing, left flagellum with ten flagellomeres, left tarsomeres 2–5 missing, legs more or less under the body owing to the mounting. The single male (on the separate pin) is mounted on its right side, therefore its right legs are hardly visible, its right flagellum with 15 flagellomeres, left flagellum missing. The upper female and lower male (common on the pin) as well as the third male (separate on the pin) specimens are here designated as the paralectotypes. – Every type specimen has been collected in "Lapland" Sweden.

*Specific features of the females* (10 ♀) – Body 1.9–2.6 mm long. Antenna somewhat shorter than body and with 19–20 antennomeres. Penultimate flagellomere distinctly twice as long as broad. Head in dorsal view (Fig. 74) less transverse, 1.6 times as broad as long, eye about twice as long as temple, temple rounded. Horizontal diameter of oral opening slightly longer than shortest distance between opening and eye. Head polished, face laterally finely granulate. – Mesosoma in lateral view stout, 1.4–1.5 times as long as high (Fig. 75). Propodeum polished. Hind femur 3.7–4 times as long as broad. – Pterostigma (Fig. 76) 2.5–2.6 times as long as wide and issuing *r* more or less proximally from its middle. Second submarginal cell long, 3–SR 1.2 times as long as 2–SR, 4–SR just reaching tip of wing. – First tergite (Fig. 77) 1.4–1.5(–1.6) times as long as broad behind, beyond pair of spiracles subparallel sided. Second tergite three times as broad behind as long, tergites 2–3 equal in length, suture between them deep, just bisinuate and finely subcrenulate. Tergites smooth and shiny. Ovipositor sheath as long as metasoma and mesosoma combined or hind tibia + tarsus combined. – Body black with dark brown tint. Palpi pale. Tegula light brownish. Legs pale yellow or light brownish. Wings subhyaline, pterostigma and veins opaque yellow or brownish yellow.

*Specific features of the males* (8 ♂) – Similar to the female. Body 1.8–2.3 mm long. Antenna with 21–22 antennomeres. First tergite 1.4–1.6 times as long as broad behind.

Host unknown.

*Distribution* – Sweden, Finland, \*England, \*Spain, Germany, \*Hungary, Italy, \*Serbia.

*Taxonomic position* – Within the subgenus *Glabrobracon* the species *Bracon pallicarpus* is nearest to *B. claripennis* THOMSON, their distinction is presented at the latter species, p. 235.

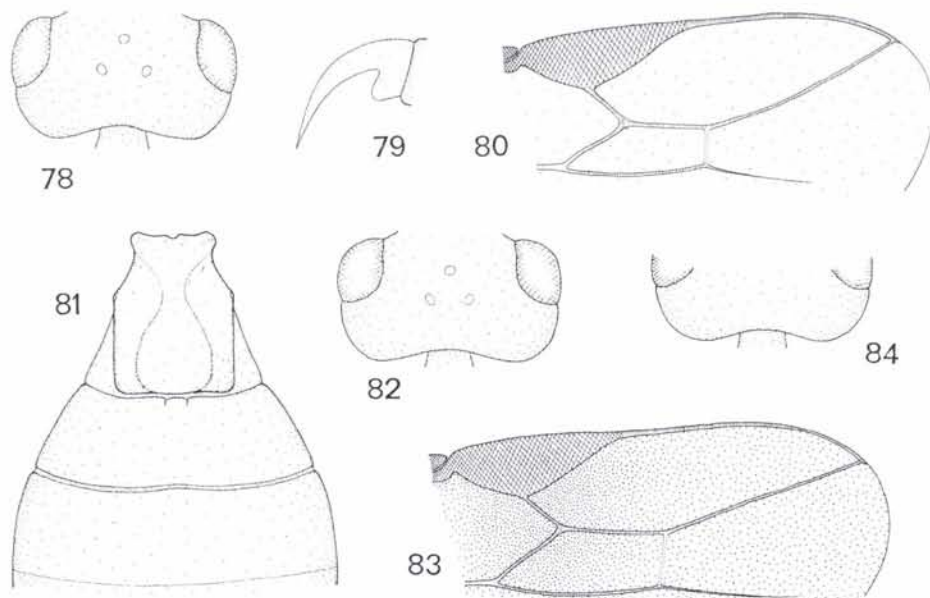
*Bracon (Glabrobracon) parvicornis* THOMSON, ♀♂  
(Figs 78–81)

*Bracon parvicornis* THOMSON, 1894: Opusc. Ent. 17 (1892): 1809 ♀, type locality: Degeberga, Skåne, Sweden, female lectotype in Zoological Museum of University Lund; examined.

*Bracon (Glabrobracon) parvicornis*: PAPP 1969: 183 (designation of female lectotype and one male paralectotype, redescription). SHENEFELT 1978: 1579 (literature up to 1971). TOBIAS 1986: 133 (in key). BEYARSLAN & FISCHER 1990: 142 (in key).

*Bracon carbonarius* SZÉPLIGETI, 1901: Állatt. Közlem. Pótfüz. Term.tud. Közl. 64: 270 (in key) and 283 (description ♀♂) (in Hungarian) and Math. naturw. Ber. Ung. 1904 19 (1901): 191 (in key) and 196 (description ♀♂) (in German). – Synonymized by PAPP l.c. SHENEFELT 1978: 1560 (as valid species, literature up to 1966).

*Specific features of the females* (5 ♀) – Body (2–)2.2–2.9 mm long. Antenna short, about as long as head, mesosoma and first tergite combined, with 16–18(–22) antennomeres. Penultimate flagellomere just twice as long as broad. Head in dorsal view (Fig. 78) transverse, 1.9–2 times as broad as long, eye almost twice as long as temple, temple rather receded. Horizontal diameter of oral opening slightly longer than shortest distance between opening and eye. Head polished. – Mesosoma in lateral view elongate, 1.6–1.7 times as long as high. Propodeum polished. Hind femur 2.6–3.2 times as long as broad medially. Claw with rather small lobe and claw itself curved as in Fig. 79. –



**Figs 78–84.** *Bracon (Glabrobracon) parvicornis* THOMSON: 78 = head in dorsal view, 79 = claw of leg, 80 = distal part of right fore wing, 81 = tergites 1–3. – *Bracon (Glabrobracon) parvulus* WESMAEL: 82 = head of female in dorsal view, 83 = distal part of right fore wing, 84 = temple in dorsal view of male



Pterostigma (Fig. 80) 2.5–3 times, usually 2.6 times, as long as wide and issuing *r* proximally from its middle. Second submarginal cell short, somewhat narrow and small: 3–SR as long as to somewhat longer than 2–SR, both veins minutely either longer or shorter each, 4–SR about three times as long as 3–SR and either approaching to (almost) reaching tip of wing. – First tergite (Fig. 81) 1.2–1.4 times as long as broad behind, beyond pair of spiracles parallel sided. Second tergite 3.3–3.4 times as broad behind as long, third tergite slightly longer than second tergite, suture between them almost straight, smooth. Tergites polished. Ovipositor sheath as long as hind tibia or somewhat shorter. – Body black, sometimes with brownish tint. Palpi blackish to dark brown. Legs also black(ish) to brownish black, at most hind tibia basally yellowish. Wings hyaline, pterostigma and veins brown.

*Specific features of the males* (5 ♂) – Similar to the female. Body 1.9–2.2 mm long. Antenna clearly as long as three-fourths of body and with 16–18 antennomeres. Penultimate flagellomere twice as long as broad. Head in dorsal view 1.8–1.9 times as broad as long, temple rather rounded.

Host unknown.

*Distribution* – Sweden, \*Czech Republic, \*Slovakia, Hungary, Kazakhstan.

*Taxonomic position* – Within the subgenus *Glabrobracon* the species *Bracon parvicornis* is nearest to *B. marshalli* SZÉPLIGETI, the two species are distinguished by the features presented in the key-couplets 23 (26)–26 (23), p. 234. *B. paucis* BEYARSLAN is also very near to *B. parvicornis*, their distinction see in the key-couplets 38 (41)–40 (39), p. 236.

*Bracon (Glabrobracon) parvulus* WESMAEL, ♀♂  
(Figs 82–86)

*Braco* (sic) *parvulus* WESMAEL, 1838: Nouv. Mém. Acad. Bruxelles 11: 55 ♀♂ (syntype series: 1 ♀ + 3 ♂), type locality: “environs de Bruxelles” (Belgium), female lectotype (and two male paralectotypes, present designations, one male syntype missing?, examined) in Institut Royal des Sciences Naturelles de Belgique, Bruxelles.

*Bracon (Glabrobracon) parvulus*: SHENEFELT 1978: 1558 (as synonym of *B. atrator* NEES, literature up to 1962).

*Bracon fumipennis* THOMSON, 1894: Opusc. Ent. 17 (1892): 1808 (“fuscipennis”: junior homonym of WESMAEL’s 1838 *Bracon fuscipennis*) and 1859 (“fumipennis” new name for *fuscipennis* THOMSON) ♀♂ (syntype series seen: 2 ♀ + 1 ♂), type locality: “Lpl.” (on label) = Lappland Sweden, types in Zoological Museum of University Lund. –PAPP 1966: 378 (as *B. obscurator* ab. *fumipennis*). PAPP 1969: 203 (designation of female lectotype and one female + one male paralectotypes, synonymization). SHENEFELT 1978: 1575 (as *B. obscurator* ab. *fumipennis* after PAPP 1966: 378, literature up to 1974). TOBIAS 1986: 131 (as valid species in key).

*Bracon thomsoni* MARSHALL, 1897: 51 (new name for *B. fuscipennis* THOMSON nec WESMAEL).

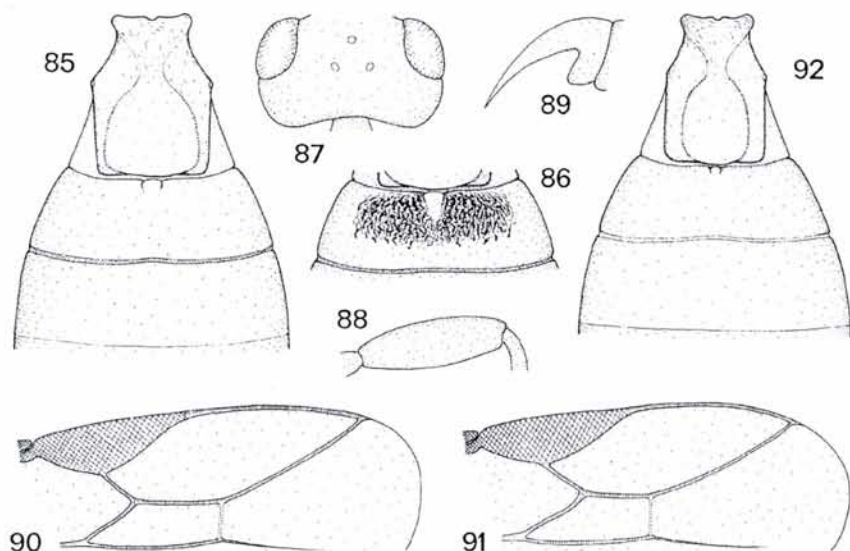
*Specific features of the females* (72 ♀) – Body (2–)2.5–3.5 mm long. Antenna somewhat shorter than to about as long as body and with 18–25 antennomeres. Penultimate flagellomere (1.4–)1.8–2 times as long as broad. Head in dorsal view (Fig. 82) transverse, 1.8–1.9(–2) times as broad as long, eye more or less longer than temple, temple less rounded. Horizontal diameter of oral opening somewhat longer than shortest distance between opening and eye. Head polished, face

laterally sometimes finely granulate – Propodeum polished. Hind femur 3.3–3.6 times as long as broad medially. – Pterostigma (Fig. 83) 2.3–2.5(–2.6) times as long as wide and issuing *r* proximally from its middle or, exceptionally, just from its middle. Second submarginal cell moderately long, 3–SR 1.2–1.35 times as long as 2–SR, 4–SR 1.8–2(–2.3) times as long as 3–SR and reaching tip of wing. – First tergite (Fig. 85) 1.3–1.4(–1.5) times as long as broad behind, beyond pair of spiracles posteriorly somewhat with converging sides, rim laterally from scutum narrow. Tergites 2–3 either equal in length or third tergite slightly longer, second tergite 3.1–3.3 times as broad behind as long; suture between them either just straight or weakly bisinuate (Fig. 85), distinct and smooth. Tergites polished, exceptionally second tergite more or less (and rather anteriorly) rugose to rugulose (Fig. 86). Ovipositor sheath as long as body or, less usually, somewhat shorter or longer. – Body black, sometimes with more or less brownish tint. Legs also black, at most hind tibia basally yellow, rarely fore femur apically and fore tibia basally yellow(ish). Wings subhyaline to fumous, pterostigma and veins brown (to brownish).

*Specific features of the males* (17 ♂) – Similar to the female. Body 3–3.2 mm long. Antenna almost as long as body and with 26–29 antennomeres. Penultimate flagellomere twice as long as broad. Temple somewhat receded (Fig. 84). Tibiae with more yellow(ish) pattern basally.

*Hosts* – *Orellia ruficauda* FABRICIUS, *Sitarea lurida* (LOEW), *S. scorzonerae* ROBINEAU-DESVOIDY, *Tephritis bardanae* SCHRANK, *T. pulchra* LOEW (Dipt. Tephritidae). – *Gastrophysa polygoni* LINNAEUS, *G. viridula* DEGEER (Col. Chrysomelidae). – Remark: *T. bardanae* is the only authenticated host, the rest of the host species is in need of confirmation.

*Distribution* – Frequent in the Palaearctic Region.



**Figs 85–92.** *Bracon* (*Glabrobracon*) *parvulus* WESMAEL: 85 = tergites 1–3, 86 = second tergite. – *Bracon* (*Glabrobracon*) *pauris* BEYARSLAN: 87 = head in dorsal view, 88 = hind femur, 89 = claw of leg, 90 = distal part of right fore wing of paratype, 91 = distal part of right fore wing of melanic form, 92 = tergites 1–3 of paratype and melanic form

*Taxonomic position* – Within the subgenus *Glabrobracon* the species *Bracon parvulus* is resembling, besides *B. obscurator* NEES (their distinction see in the key couplets 16 [17] – 17 [16], p. 233.), the species *B. longulus* THOMSON with its long ovipositor sheath, the two species are distinguished by the features keyed:

- 1 (2) Mesosoma in lateral view elongate, 1.8–2 times as long as high; mesoscutum and scutellum flattened, propodeum moderately declined (Fig. 46). Head in dorsal view less transverse, 1.6–1.7 times as broad as long (Fig. 45). First tergite long, 1.4–1.6 times (♀) and 1.6–1.8 times (♂) as long as broad behind, beyond spiracles with parallel sides (Figs 50–51). ♀♂: (2–)2.3–3.5 mm *B. (Gl.) longulus* THOMSON
- 2 (1) Mesosoma in lateral view stout as usually, 1.3–1.5 times as long as high; mesoscutum and scutellum not flattened, propodeum declined (cf. Fig. 75). Head in dorsal view transverse, 1.8–1.9(–2) times as broad as long (Fig. 82). First tergite less long, 1.3–1.4(–1.5) times (♀♂) as long as broad behind, beyond spiracles with converging sides (Fig. 85). ♀♂: (2–)2.5–3.5 mm *B. (Gl.) parvulus* WESMAEL

*Bracon (Glabrobracon) pauris* BEYARSLAN, ♀♂  
(Figs 97–98)

*Bracon (Glabrobracon) pauris* BEYARSLAN, 1996: Entomofauna 17 (21): 346 ♀♂, type locality: Turkey, Edirne, female holotype (and five female + six male paratypes) in University of Trakya, Edirne, one female + one male paratypes in Hungarian Natural History Museum Budapest (latter two paratypes examined).

*Specific features of the females* (13 ♀) – Body 2–2.4 mm long. Antenna somewhat shorter than to as long as body and with 17–22 antennomeres. Penultimate flagellomere 1.8–2 times as long as broad. Head in dorsal view (Fig. 87) transverse, (1.7–)1.75–1.8 times as broad as long, eye 1.5–2 times as long as temple, temple rounded to rather receded. Horizontal diameter of oral opening a bit longer than shortest distance between opening and eye. Head polished. – Propodeum polished. Hind femur 3–3.5 times as long as broad medially (Fig. 88). Claw relatively less curved (Fig. 89). – Pterostigma (Figs 90–91, 93) (2.5–)2.6–2.8(–3) times as long as wide and issuing *r* variably: usually proximally from its middle to (just) before from its middle or rarely distally from its middle. Second submarginal cell narrow and varying in length: 3–SR as long as to one-third longer than 2–SR or, rarely, 3–SR somewhat shorter than 2–SR, 4–SR 1.5–2 times as long as 3–SR and ending clearly before tip of wing. First discal cell varying in length: 1–SR–M 1.3 times (melanic form, Fig. 94 see two pairs of arrows) to 1.5 times (albinic form, Fig. 95 see two pairs of arrows) as long as 1–M. Hind wing: Subbasal cell somewhat elongate and *cu-a* straight (Fig. 96 see arrow). – First tergite (Figs 92,



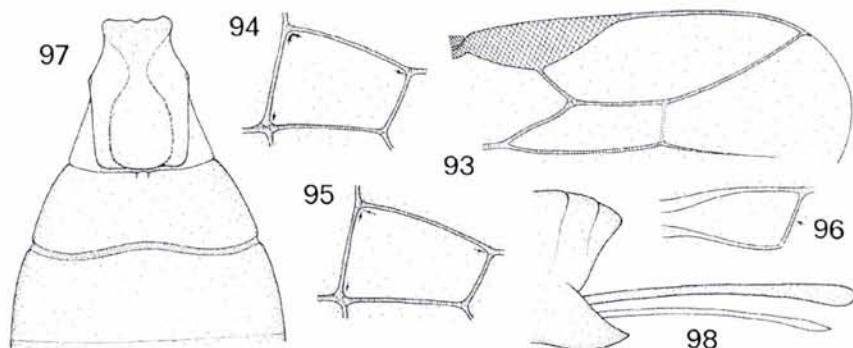
97) 1.2–1.4 times as long as broad behind\*, beyond spiracles either parallel-sided or with somewhat converging sides, rim laterally from scutum usually wide. Second tergite 3.2–3.4 times as broad behind as long, third tergite one-fourth to one-third longer than second tergite; suture between tergites 2–3 variable: (almost) straight and shallow to somewhat bisinuate and moderately deep. Hypopygium pointed, ovipositor sheath as long as hind tibia to hind tibia + (half) basitarsus (Fig. 98). – Colour of body conspicuously variable. *Melanic form*: Body black. Either only mandible brownish to yellow or besides mandible cheek, clypeus and labrum yellow, palpi brown to brownish. First tergite brownish to brownish yellow. *Albinic form*: Ground colour of body black with much yellow (or reddish yellow) pattern. Oral part, face and frequently frons yellow. Tegula either brown(ish) or yellow. Legs brown to brownish. Mesosoma partly: prosoma, line of notaulix, mesopleuron above and propodeum latero-posteriorly yellow to brownish yellow, first tergite entirely and second tergite either also entirely or only medially yellow to brownish yellow. Legs usually yellow, hind tibia and tarsus more or less brownish. Wings always hyaline, pterostigma and veins brownish to light brownish.

*Specific features of the male* (1 ♂) – According to the describer (BEYARSLAN 1996: 346) similar to the female. I have one male taken in Greece (Etolia-Akar) which is identical with the melanic form of the female.

*Remark* – One male paratype (presented to the Hungarian Natural History Museum by Dr. A. BEYARSLAN) was described as belonging to this species, however, after its re-identification it proved to represent the species *B. (Gl.) anthracinus* NEES (or *B. delibator* HALIDAY), its maxillar palp is clearly longer than height of head.

Host unknown.

*Distribution* – Turkey, \*Greece, \*Spain, \*Hungary, \*Bulgaria.



**Figs 93–98.** *Bracon (Glabrobracon) pauris* BEYARSLAN: 93 = distal part of right fore wing of albinic form, 94 = first discal cell of right fore wing of female paratype and melanic form, 95 = first discal cell of right fore wing of albinic form, 96 = subbasal cell of right hind wing, 97 = tergites 1–3 of albinic form, 98 = posterior end of metasoma with ovipositor apparatus

\* According to the original description (BEYARSLAN 1996) first tergite “kürzer als die Hinterrandbreite (11:14).” I deem that this characterization is but a slip of the pen.

*Taxonomic remark* – Within the subgenus *Glabrobracon* the species *Bracon pauris* stands nearest to *B. parvicornis* THOMSON, the distinction of its melanic form is given in the key-couplets 38(41)–40(39), p. 236; the albinic form is keyed in the couplet 2 (3), p. 231.

In the characterization of the specific features a special emphasis was laid on the high variability of the alar veins (length of second submarginal cell) and the colour of the body. Several series of the melanic and albinic forms would likely confirm whether the two forms represent in nature one species (as it is the stand-point in the present paper) or they should be separated in two different species.

#### CHECKLIST OF THE EUROPEAN SPECIES OF THE OBSCURATOR-GROUP, GENUS BRACON AND SUBGENUS GLABROBRACON

*admotus* sp. n.

*arcuatus* THOMSON, 1894

(*carbonarius* SZÉPLIGETI, 1901) = *parvicornis* THOMSON, 1894

*claripennis* THOMSON, 1894

*colpophorus* WESMAEL, 1838

(*fumipennis* THOMSON, 1894) = *parvulus* WESMAEL, 1838

*instabilis* MARSHALL, 1897

*kopelkei* sp. n.

*longulus* THOMSON, 1894

*marshalli* SZÉPLIGETI, 1901

(*mokrzeckii* NIEZABITOWSKI, 1927) = *colpophorus* WESMAEL, 1838

*momphae* PAPP, 1999

*obscurator* NEES, 1834

*pachyceri* QUINTARET, 1912

*pallicarpus* THOMSON, 1894

*parvicornis* THOMSON, 1894

*parvulus* WESMAEL, 1838

*pauris* BEYARSLAN, 1996

\* \* \*

*Acknowledgements* – My sincere gratitude is expressed to the curators as well as to the fellow braconid specialists who were always ready to promote my present taxonomic synopsis, they are as follows: Dr. D. DANIELSSON (Zoological Museum, Lund), Dr. P. DESSART (Institut Royal des Sciences Naturelles de Belgique, Bruxelles), Dr. M. FISCHER and Dr. S. SCHÖDL (Naturhistorisches Museum, Wien), †Dr. T. HUDDLESTON and Mrs S. LEWIS (The Natural History Museum, London),

Mrs A. KLEINE-MÖLLHOFF and Dr. F. KOCH (Museum für Naturkunde, Berlin), Dr. W. KORN (Naturkunde-Museum, Coburg), Dr. A. TAEGER (Deutsches Entomologisches Institut, Eberswalde), Dr. V. I. TOBIAS and Dr. S. A. BELOKOBYLSKIY (Zoological Institute, Sankt Petersburg) and Dr. C. VILLEMANT (Muséum National d'Histoire Naturelle, Paris). – The present study was supported by the Hungarian Scientific Research Fund (OTKA), Grant No. T-17467.

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