

Braconid types by Szépligeti deposited in Senckenberg Museum, Frankfurt a. M. (Hymenoptera: Braconidae)

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Abstract: The type specimens of six braconid species described by SZÉPLIGETI in 1915 are revised: four species remained valid: *Braunsia stellifera*, *Megagathis variabilis*, *Pseudocremnops atripennis*, *Plaxopsis schultzei* and three species names proved to be junior synonyms: *Cremnops africana* Szépligeti, 1905 jun. syn. and syn. n. as well as *Megagathis persimilis* Szépligeti, 1915 jun. syn. and syn. n. = *M. costata* (Brullé, 1846) sen. syn.; *Pseudobracon schubotzi* Szépligeti, 1915 jun. syn. and syn. n. = *Archibracon deliberator* Szépligeti, 1905 sen. syn. Lectotype designations, redescrptions and taxonomic notes are presented for the four valid species and for the two synonymous species. The type specimens of the six braconid species are deposited in Senckenberg Museum, Frankfurt a. M. The contribution contains 90 line-drawings.

Zusammenfassung: Die Typusexemplare der sechs von SZÉPLIGETI in 1915 beschriebenen Braconiden Arten wurden revidiert: vier Arten verbleiben als valid: *Braunsia stellifera*, *Megagathis variabilis*, *Pseudocremnops atripennis*, *Plaxopsis schultzei* und drei Artnamen erwiesen sich als jüngere Synonyme: *Cremnops africana* Szépligeti, 1905 jun. syn. und syn. n. ebenso *Megagathis persimilis* Szépligeti, 1915 jun. syn. und syn. n. = *M. costata* (Brullé, 1846) sen. syn.; *Pseudobracon schubotzi* Szépligeti, 1915 jun. syn. und syn. n. = *Archibracon deliberator* Szépligeti, 1905 sen. syn. Typusbezeichnungen, Wiederbeschreibungen und taxonomische Anmerkungen sind beigegeben sowohl für die vier validen wie für die zwei synonymen Arten. Die Typusexemplare werden im Senckenberg Museum, Frankfurt a. M. aufbewahrt. Mit 90 Strichzeichnungen

Key words: Agathidinae, Braconinae, type designation, depository, re-description, synonymy, affinity, identification key.

Introduction

Looking for the depositories of the type specimens of SZÉPLIGETI's braconid species I received the information from DR A. TAEGER (DEIM Müncheberg) that a few types are housed in the Senckenberg Museum, Frankfurt a. M. On my request DR. J.-P. KOPELKE, senior entomologist in the Frankfurt Museum, was kind enough to give me the possibility to study the types of six braconid species described by SZÉPLIGETI in 1915 specified as follows: Agathidinae: *Braunsia stellifera*, *Megagathis persimilis*, *M. variabilis*, *Pseudocremonops atripennis* and Braconinae: *Plaxopsis schultzei*, *Pseudobracon schubotzi*. The results of the examination of these types are that four species names remained valid and two names (*M. persimilis*, *P. schubotzi*) proved to be junior synonyms. The four valid species as well as the two synonymized species are redescribed, lectotype specimens designated, and completed with taxonomic and distributional notes.

Taxonomic Part

In the descriptions the following abbreviations are applied (after VAN ACHTERBERG 1993: 4–5):

Eye: OOL = ocellar – ocular line, i.e. shortest distance between hind ocellus and compound eye; POL = postocellar line, i.e. shortest distance between hind two ocelli.

Alar veins of forewing: *cu-a* = nervulus; *r* = first section of the radial vein; *r-m* = second transverse cubital vein; *1-R1* = first section of the metacarpal vein; *2-R1* = second section of the metacarpal vein; *1-M* = basal vein; *2-SR* = first transverse cubital vein; *3-SR* = second section of the radial vein; *1-SR-M* = first section of the cubital vein; *SR1* = third section of the radial vein.

Alar veins of hindwing: *1r-m* = basella; *2-SC-R* = subcostella.

Surface sculpture: terminologies are used after EADY (1968) and HARRIS (1979).

Museum acronyms: DEIM = Senckenberg Deutsches Entomologisches Institut, Müncheberg (Germany); MAT = Musée Royal de l'Afrique Centrale, Tervuren (Belgium); MHNP = Musée National d'Histoire Naturelle, Paris (France); MTMB = Magyar Természettudományi Múzeum (Hungarian Natural History Museum), Budapest (Hungary); NRS = Naturhistoriska Riksmuseet, Stockholm (Sweden); SMF = Senckenberg Museum, Frankfurt a. M. (Germany).

Subsequently four agathidine and two braconine species are re-described completed with type designations, distributional data and taxonomic notes. The original descriptions of the six species by SZÉPLIGETI are restricted mainly to colour differences and hardly to other morphological characters. The redescrptions herewith presented are extending to manifold features promoting the unambiguous recognition of the six species in question.

Agathidinae

***Braunsia stellifera* Szépligeti, 1915**

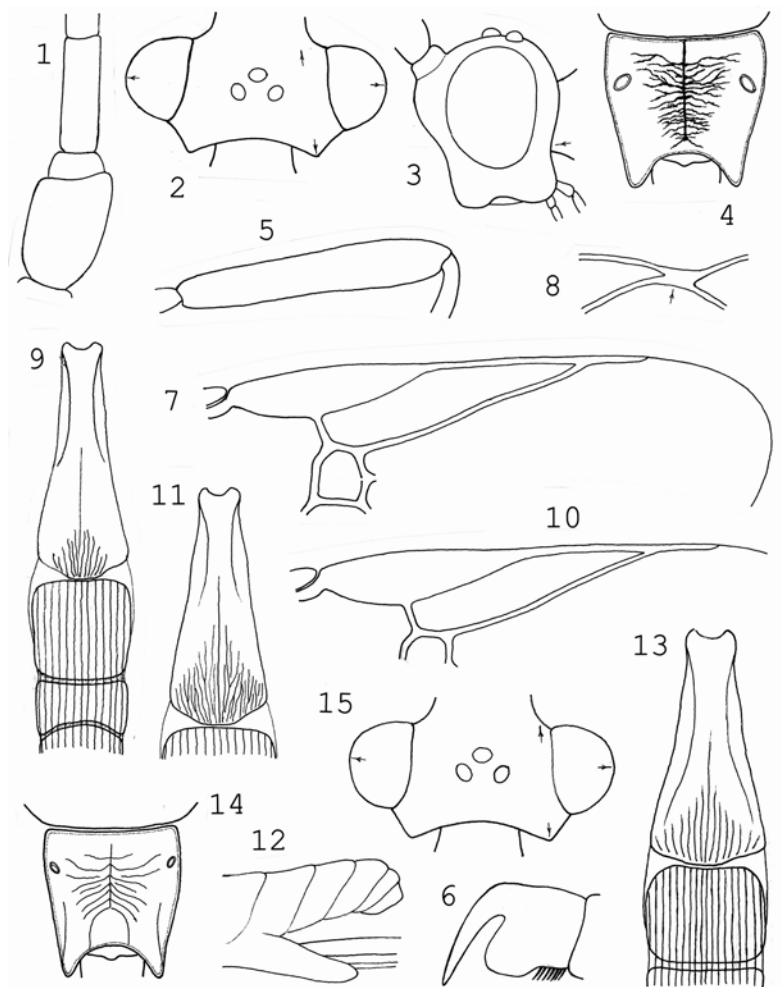
(Figs 1–12)

Braunsia stellifera Szépligeti, 1915: 153 (one female), type locality: "Belgisch-Kongo, Libenge, Ubangi-Distrikt" (Republic Congo), female lectotype (present designation) in SMF; examined. – SZÉPLIGETI 1914: 419, 1 ♀ only locality without description (i.e. nom. nud.), specimen in MAT. SHENEFELT 1970: 377 (literature on this species up to 1926).

Designation of the female lectotype: (first label, printed) "Belg. Kongo / Libenge, Ubangi-Distr. / Dr. H. Schubotz leg. / 25. X. 1910"; (second label, printed) "Inner-Afrika-Exped. / d. Hrzt. Adolf-Friedrich / zu Mecklenburg / 1910 – 1911."; (third label, manuscript by ?) "Braunsia / stellifera / Szépl."; fourth label is the lectotype card. — Lectotype is in good condition: (1) pinned by mesosoma (mesoscutum before prescutellar furrow / mesosternum close to prosternum); (2) left flagellum distally deficient; (3) metacarpal vein (1–2R1) of left forewing torn.

Taxonomic note: SZÉPLIGETI (1914b) reported this species one year earlier before its description (SZÉPLIGETI 1915). The female specimen, taken in the locality "Kibombo" (Republic Congo) and in MAT, is quite similar to the female lectotype, however, I disregard its designation as paralectotype viewing the respective disposal of the nomenclatural rule.

Description of the female lectotype: Body 12 mm long. Antenna about as long as body and with 51 antennomeres. Scape in outer lateral view (Fig. 1) dorsally slightly longer than ventrally and 1.5 times as long as broad apically, pedicel disc-form; first flagellomere three times longer than broad, further flagellomeres attenuating so that penultimate flagellomere twice as long as broad. – Head in dorsal view transverse, 2.4 times as broad as long, eye protruding and almost three times longer than



Figs 1–15. — Figs 1–12: *Braunsia stellifera* Szépligeti (female lectotype: 1–9, non-type female: 10–12): 1 = scape, pedicel and first flagellomere, 2 = head in dorsal view, 3 = head in lateral view, 4 = propodeum, 5 = hind femur, 6 = claw, 7 = distal part of right forewing, 8 = 2-SC-R of hindwing, 9 = tergites 1–3, 10 = distal part of right forewing, 11 = first tergite, 12 = posterior part of metasoma in lateral view. — Figs 13–15. *Braunsia occidentalis* Enderlein: 13 = tergites 1–2, 14 = propodeum, 15 = head in dorsal view.

temple (Fig. 2, see arrows), temple receded, occiput moderately excavated. Ocelli round, OOL twice as long as POL. Eye in lateral view 1.3 times as high as wide, gena one-fourth as wide as eye, gena beyond eye indented, malar sacc one-third height of eye (Fig. 3).

Mesosoma in lateral view 1.6 times as long as high, polished. Notaulix evenly deep, i.e. three lobes of mesoscutum domed. Propodeum with a weak medio-longitudinal carina, along it rather transversely strio-rugulose, otherwise polished and its hind corner pointed (Fig. 4). Hind femur 5.8 times as long as broad distally (Fig. 5). Inner spur of hind tibia somewhat shorter than hind half basitarsus. Claw perpendicularly down-curved, its basal lobe finely pectinate (Fig. 6).

Forewing as long as body. Pterostigma (Fig. 7) long, 4.2 times as long as wide, issuing *r* somewhat proximally from its middle, *r* 0.6 times as long as width of pterostigma. Second submarginal cell: *2-SR* and *r-m* twice longer than *3-SR*, *r-m* curved; *SR1* six times longer than *2-SR*. *1-R1* one-fifth shorter than length of pterostigma, *2-R1* ending far before tip of wing. – Hindwing: *2-SC-R* thick and short, *1r-m* long as in Fig. 8, see arrow.

First tergite (Fig. 9) long, 2.5 times longer than broad behind, evenly broadening posteriorly, pair of keels reaching middle of tergite, its hind quarter finely striated, otherwise polished, anteriorly between keels deepened. Tergites 2–4 entirely and tergite 5 anteriorly striated. Second tergite quadrate, just longer than broad medially; third tergite transverse, 2.5 times broader behind than long medially, its hind margin concave; fourth tergite similar to second tergite. Last tergites polished. Hypopygium elongated, ovipositor sheath nearly as long as body.

Scape and pedicel dark brown with faint rusty tint. Flagellum dark brown, apically lightening brown. Head tricoloured: face, clypeus and gena yellow, cheek whitish, frons and vertex black. Mesosoma bicolor: dorsally and metapleuron black, prosoma, mesopleuron and mesosternum yellow. Metasoma brownish black. Legs 1–2 yellow, leg 3 blackish brown. Wings dark brown fumous, forewing with a white macula. Pterostigma brown, veins proximo-distally black to brown.

Deviating features of the single female specimen (from "Kibombo"): Similar to the female lectotype. Body 10 mm long. Anterior half of propodeum rugulose. Forewing: pterostigma 3.8 times as long as wide, *1-R1* one-third shorter than length of pterostigma (Fig. 10). Hind quarter of first tergite striated (Fig. 11). Hypopygium elongated (Fig. 12). Dark colour of body black. Orbit above yellow.

Male and host unknown.

Distribution: Democratic Republic of Congo (=Republic Congo).

Affinity — *Braunsia stellifera* is near to *B. occidentalis* Enderlein (Eritrea, Republic of Congo, Tanzania, Togo, Republic Congo), they are distinguished as follows:

- 1 (2) Metasoma broad, first tergite more broadening posteriorly: twice longer than broad behind, pair of keels approaching hind end of tergite, its striation more extended; second tergite transverse, one-sixth broader than long (Fig. 13). Propodeum slightly less broad, its sculpture as in Fig. 14. Head in dorsal view a bit less transverse, 2.3 times as broad as long (Fig. 15, see arrows). Mesosoma nearly entirely to entirely reddish yellow. ♀: 10–12 mm
..... *B. occidentalis* Enderlein, 1904
- 2 (1) Metasoma less broad, first tergite less broadening posteriorly: 2.5 times as long as broad behind, pair of keels restricted to anterior half of tergite, its striation less extended; second tergite quadrate, just longer than broad (Figs 9, 11). Propodeum broad, its sculpture as in Fig. 4. Head in dorsal view a bit more transverse, 2.4 times as broad as long (Fig. 2, see arrows). Mesosoma black, prosoma, mesopleuron and mesosternum yellow. ♀: 10–12 mm
..... *B. stellifera* Szépligeti, 1915

Note: The species of the genus *Braunsia* Kriechbaumer, 1894 are distributed in the Old World, mainly in subtropical / tropical regions. The number of the known *Braunsia* species is 80 (YU et al. 2005), this number, however, will certainly increase by the taxonomic work in the future.

Agathidinae

***Megagathis costata* (Brullé, 1846)**

(Figs 16–24)

Agathis costata Brullé, 1846: 492 (one female), type locality: "Hab. l'île de France. C. M." [after GRANGER 1949: "La Réunion: type de Brullé], type in MHNP; not examined.

Megagathis costata Szépligeti 1914a: 212 (faunistics). GRANGER 1949: 281 (in key, synonyms, redescription). SHENEFELT 1970: 420 (synonyms, literature up to 1949).

Cremonops africana Szépligeti 1905a: 51 (two males), type locality: "Camerun", male lectotype (and one male paralectotype) in MTMB; examined, *syn. n.*

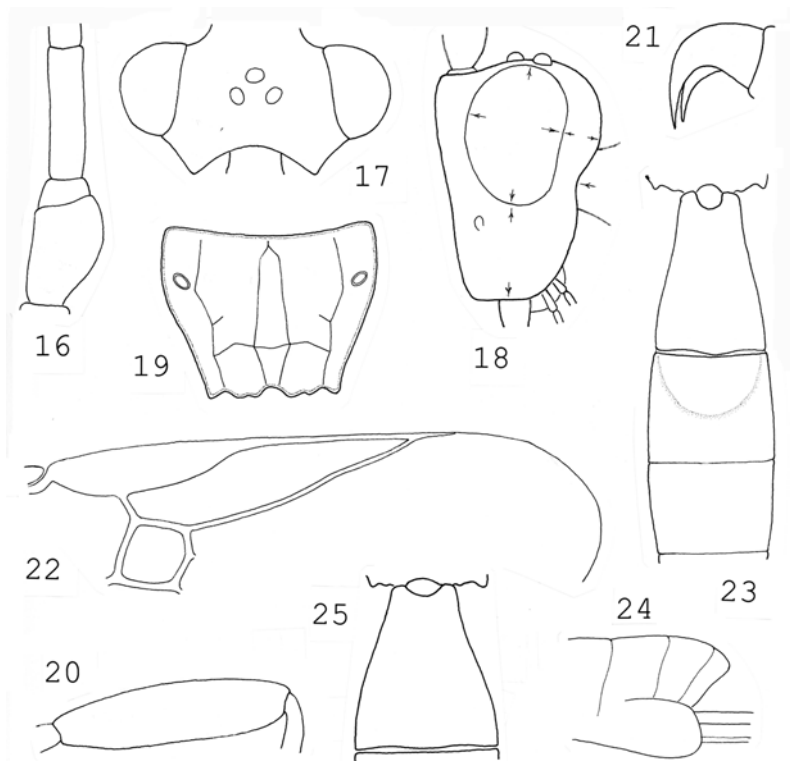
Megagathis africana Szépligeti 1914a: 212 (comb. n., localities)
Megagathis persimilis Szépligeti, 1915: 151 (one female), type locality:
"Belgisch-Kongo, Libenge" (Republic Congo), female lectotype
(present designation) in SMF; examined, **syn. n.** – SZÉPLIGETI
1914a: 212 (four ?female specimens merely with locality data (i.e.
nom. nud.) from Equatorial Guinea, Tanzania, Togo). SHENEFELT
1970: 421 (literature up to 1949).

Designation of the female lectotype and male paralectotype of *Cremnops africana*: (first label, printed) "Africa / Camerun"; second label is the lectotype as well as the paralectotype cards; third label is with the inventory numbers "733" (lectotype) and "734" (paralectotype); fourth label is with the name *Megagathis africana* det. Szépligeti 1914; fifth label is with the actual name *M. costata* (Brullé) det. J. Papp 2010; (labels 2–5 attached by me). – Lectotype is in good condition: (1) pinned by mesosoma (mesoscutum posteriorly / mesosternum anteriorly); (2) left forewing apically (i.e. at *l-Rl*) just torn; (3) left hindwing apically deficient. Paralectotype is also in good condition: (1) pinned by mesosoma (mesoscutum posteriorly / mesosternum anteriorly); (2) right flagellum apically deficient; (3) left hindwing apically deficient.

Designation of the female lectotype of *Megagathis persimilis*: (first label, printed) "Belg.-Kongo / Libenge, Ubangi-Dstr. / Dr. H. Schubotz leg. / 25. X. 1910."; (second label, printed) "Inner-Afrika-Exped. / d. Hrzt. Adolf-Friedrich / zu Mecklenburg / 1910 – 1911."; (third label, manuscript by ?) "Megagathis / persimilis / Szépl. ♀"; fourth label is the lectotype card (attached by me). – Lectotype is in good condition: (1) pinned by mesosoma (mesoscutum middle / prosternum); (2) both flagelli distally deficient; (3) right ovipositor sheath missing.

Material examined (4 ♀♀, in MTMB) — 1 ♀: Sierra Leone. 1 ♀: Mombo, Usambara Mts (Tanzania). 2 ♀♀: Equatorial Guinea, Uelleburg. — Taxonomic remarks of this material: The four female specimens identified by Szépligeti in 1914 – 1915 as *Megagathis costata* (2 ♀♀) and *M. persimilis* (2 ♀♀) originate from the localities detailed: Two females with the name *M. costata* are from two localities: 1 ♀ from Sierra Leone and 1 ♀ from Mombo, Usambara, this latter locality was reported in SZÉPLIGETI 1908: 38 under the name *Cremnops costata* Brullé. Two females with the name *M. persimilis* originate from

Spanisch-Guinea (= Equatorial Guinea), Uelleburg, this locality was reported in Szépligeti 1914a: 212. The comparative examination of these four females resulted their conspecificity, i.e. their valid name is *M. costata* (Brullé). The present redescription and deviations of this species is based on the female lectotype of *M. persimilis* and on the four females in question. The two male types (lecto- and paralectotype) of *Cremnops africana* proved also to represent the species *M. costata*.



Figs 16–25. — Figs 16–24: *Megagathis costata* (Brullé) (female): 16 = scape, pedicel and first flagellomere, 17 = head in dorsal view, 18 = head in lateral view, 19 = propodeum, 20 = hind femur, 21 = claw, 22 = distal part of right forewing, 23 = tergites 1–3, 24 = posterior part of metasoma in lateral view. — Fig. 25: *Megagathis variabilis* Szépligeti (male lectotype): first tergite.

Redescription of the female lectotype of *Megagathis per-similis* (conspecific with *M. costata*) — Body 9 mm long. Both antennae deficient: right antenna with 21 and left antenna with 18 antennomeres. Scape (Fig. 16) barrel-shaped, in outer lateral view dorsally somewhat longer than ventrally, twice as long as broad apically, broadest at its middle; pedicel disk-form, first flagellomere long, 2.2 times as long as broad. — Head in dorsal view transverse (Fig. 17), twice as broad as long, eye nearly three times longer than temple, temple receded, occiput excavated. Ocelli round, near to each other, OOL twice longer than POL. Eye in lateral view almost 1.4 times as high as wide, gena 0.4 times as wide as eye, gena beyond eye indented, malar space just two-thirds as long as height of eye (Fig. 18, see arrows). Head polished.

Mesosoma in lateral view nearly twice as long as high, polished. Notaulix indistinct. Precoxal suture faintly distinct, finely subcrenulate. Propodeum polished, anteriorly with four longitudinal carinae forming areolae, laterally uneven and here spiracle elliptic (Fig. 19). Hind femur four times as long as broad medially (Fig. 20). Inner spur of hind tibia somewhat longer than half basitarsus. Claw bifid, curved, its basal part fairly broad (Fig. 21).

Forewing somewhat shorter than body, i.e. 8 mm long. Pterostigma long (Fig. 22), 4.5 times as long as wide, issuing *r* clearly proximally from its middle, *r* 0.4 times as long as width of pterostigma. Second submarginal cell: 2-*SR* and 3-*SR* equal in length, *r-m* slightly shorter; *SR1* bent, about seven times longer than 3-*SR*; 1-*R1* half as long as length of pterostigma, 2-*R1* ending far before tip of wing. — Hindwing: 2-*SC-R* thick and short, 1-*r-m* long as cf. Fig. 8.

First tergite less long (Fig. 23), nearly 1.4 times as long as broad behind, evenly broadening posteriorly, pair of keels indistinct, basally foveo-shaped deepened, together with further tergites polished. Second tergite slightly transverse, 1.2 times as broad as long medially, antero-medially with a faint semicircular elevation; further tergites more transverse, suture between tergites 2-3 missing. Hypopygium rounded (Fig. 24), ovipositor sheath almost as long body.

Antenna dark brown, apically lightening brown. Body yellow. Fore and middle legs light yellow, hind leg yellow, hind tarsus brown to brownish. Wings brown fumous, pterostigma brown and basally yellow, veins proximo-distally yellow to brown.

Host unknown.

Deviating features of the four females: Body 10-12 mm long. Antenna (1 ♀) somewhat shorter than body and with 51 antenno-

meres. Forewing: pterostigma (2 ♀♀) wide, 3.6 times as long as wide, 3–*SR* (1 ♀) a bit longer than 2–*SR*. Hind femur conspicuously variable in size: 3.6 to 4.6 times as long as broad medially or distally. First tergite (2 ♀♀) 1.4–1.5 times as long as broad behind.

Deviating features of the two males (types of *Cremnops africana*): Body 9–10 mm long. Antenna somewhat longer than body and with 51 (1 ♂) and 57 (1 ♂) antennomeres. Head in dorsal view twice as broad as long. Prescutellar furrow wide and finely striate; hind margin of mesopleuron fairly strongly crenulated. Forewing: pterostigma wide, 3.3–3.6 times as long as wide. First tergite 1.3–1.4 times longer than broad behind. Head above black, body testaceous.

Distribution: Equatorial Guinea, La Réunion, Tanzania, Togo, Republic Congo.

Taxonomic notes: 1.) GRANGER (1949: 281) placed with question-mark in junior synonymy the name *M. persimilis* with *M. costata*. 2.) Three female specimens under the name *M. persimilis* from the localities (Szépliget 1915: 151) "Französisch-Kongo, Fort Possel – Fort Crampel," (1 ♀) and "Belgisch-Kongo, Libenge...und Angu" (2 ♀♀) remained unknown to me, they were not found neither in Tervuren Museum nor in Frankfurt Museum; the three females, in the case they turn up, are the paralectotypes of *M. persimilis*. 3.) The number of the known species of the genus *Megagathis* Kriechbaumer, 1894 is 15, the species are distributed in the Ethiopian Region (Yu et al. 2005).

Affinity: After GRANGER'S key and redescription (1949: 280–281) *M. costata* is near to *M. natalensis* Kriechbaumer (Madagascar), confining to the key and redescription of *M. natalensis* (by Granger l.c.) the following distinctive features may be established between the two species:

- 1 (2) Forewing yellowish fumous with two transverse brown streaks apically and at pterostigma. Ovipositor sheath short, somewhat longer than metasoma. First tergite medially with a transverse impression. Second tergite (?) less quadrate. Metasoma testaceous, apically brown. ♀: 9–12 mm *M. natalensis* Kriechbaumer, 1894
- 2 (1) Forewing evenly brown fumous. Ovipositor sheath long, almost as long as body. First tergite medially without transverse impression. Second tergite quadrate (Fig. 23). Metasoma entirely testaceous. ♀: 9–12 mm, ♂: 9–10 mm *M. costata* (Brullé, 1846)

Agathidinae

***Megagathis variabilis* Szépligeti, 1915 sp. rev.**

(Figs 25–35)

Megagathis variabilis Szépligeti, 1915: 150 (one male), type locality: "Französisch-Kongo, Fort Possel – Fort Crampel, ..." (var. 1.) (Republic Congo), male lectotype in SMF; examined. – SZÉPLIGETI 1914a: 212 (four localities without description, i.e. nom. nud., see „Distribution”). GRANGER 1949: 281 (synonymization with *M. costata* Brullé). SHENEFELT 1970: 420 (as synonym of *M. costata* after Granger l.c.).

Designation of the male lectotype of *Megagathis variabilis*: (first label, printed) "Franzö. Kongo / Ft. Possel – Ft. Crampel / Dr. H. Schubotz leg. / XI. 1910."; (second label, printed) "Inner-Afrika-Exped. / d. Hr. Adolf-Friedrich / zu Mecklenburg / 1910–1911"; (third label, manuscript by ?) "Megagathis / variabilis / Szépl. Var. 1."; fourth label is the lectotype card attached by me. – Lectotype is in good condition: (1) pinned by mesosoma (mesoscutum / mesosternum); (2) right flagellum proximally and left flagellum apically deficient; (3) missing: right middle tarsus, fifth tarsomere of right hind tarsus, left middle leg (except coxa and trochanter).

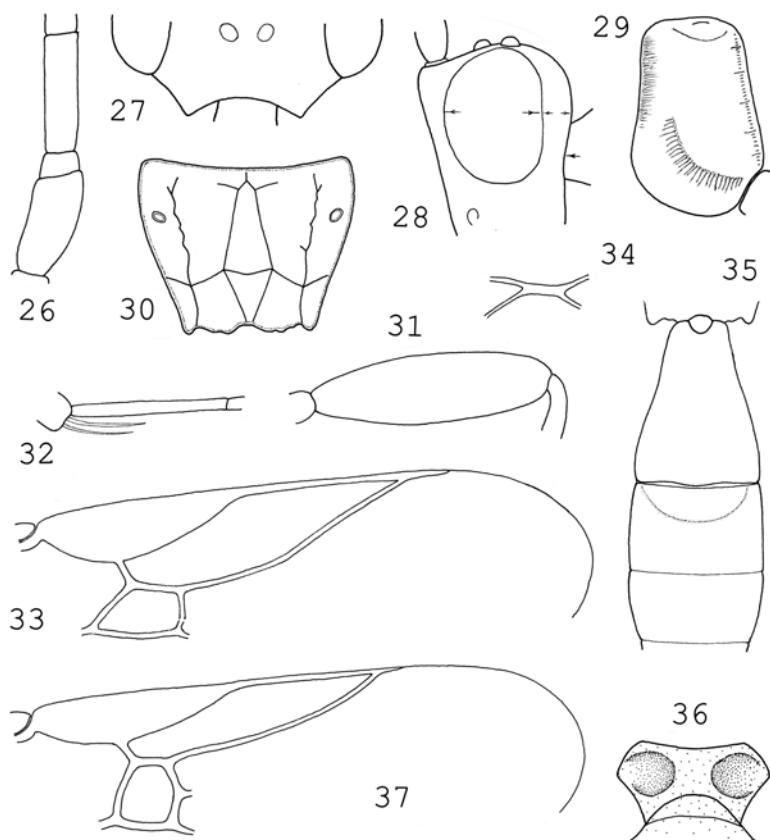
Taxonomic notes: 1.) *Megagathis variabilis* was described on the basis of three male specimens (Szépligeti 1915: 150). One male from "Französisch-Kongo..." served for the lectotype designation (see above). Two males from "Belgisch-Kongo, Libenge, Ubangi-Distrikt" (one male, nominate form) and "Belgisch-Kongo Duma" (one male, var. 1.) were not found neither in Tervuren nor in Frankfurt Museum, i.e. they were not examined by me. These two male specimens, turning up in the future, are the paralectotypes of *M. variabilis*.

2.) The species name *M. variabilis* was placed in synonymy with *M. costata* (Brullé, 1846) by GRANGER (1949: 281). Having examined the male lectotype of *M. variabilis* a few distinctive characters were detected separating the two species, see also the chapter „Affinity”.

Material examined: 2 ♂♂ (in MTMB): "Westafrika" (or Equatorial Guinea), "Uelleburg, VI–VIII 1908, leg. Teßmann.”

Redescription of the male lectotype: Body 9 mm long. Scape (Fig. 26) barrel-shaped, in outer-lateral view dorsally somewhat

longer than ventrally and 2.5 times as long as broad apically, pedicel disciform, first flagellomere 3.3 times as long as broad, further flagellomeres attenuating. Right antenna with 10 and left antenna with 46 antennomeres.



Figs 26–37. — Figs 26–35: *Megagathis variabilis* Szépligeti (male lectotype): 26 = scape, pedicel and first flagellomere, 27 = head in dorsal view, 28 = head in lateral view, 29 = mesopleuron with precoxal suture, 30 = propodeum, 31 = hind femur, 32 = pair of spurs and basitarsus of hind leg, 33 = distal part of right forewing, 34 = 2-SC-R of hindwing, 35 = tergites 1–3. — Fig. 36: *Pseudocremonops atripennis* Szépligeti (female lectotype): pronotum with pair of separated subpronopes. — Fig. 37: *Zacremnops cressoni* (Cameron): distal part of right forewing.

Head in dorsal view transverse, twice as broad as long, eye four times longer than temple, temple somewhat longer than that of *M. costata* and receded, occiput excavated (Fig. 27). Ocelli almost round, large, OOL twice as long as POL. Eye in lateral view 1.4 times as high as wide, gena 0.3 times as wide as eye, gena beyond eye relatively less indented (Fig. 28, see arrows), malar space nearly two-thirds as long as height of eye. Head polished.

Mesosoma in lateral view 1.6 times as long as high, polished. Notaulix indistinct. Precoxal suture distinct, crenulate (Fig. 29). Propodeum polished, with four longitudinal carinae and one transverse carina forming areolae, laterally uneven and spiracle elliptic (Fig. 30). Hind femur 3.3 times as long as broad medially (Fig. 31). Inner spur of hind tibia half as long as basitarsus (Fig. 32). Claw similar to that of *M. persimilis* (cf. Fig. 21).

Forewing somewhat shorter than body, i.e. 8 mm long. Pterostigma long (Fig. 33), 3.3 times as long as wide, issuing *r* clearly proximally from its middle, *r* one-third (or 0.3 times) width of pterostigma. Second submarginal cell (or areola) quadrate, 3-*SR* longer than *r-m* and 2-*SR* also somewhat longer than 3-*SR*; *SRI* faintly S-form bent and 5.5 times as long as 3-*SR*; 1-*RI* as long as length of pterostigma, 2-*RI* ending far before tip of wing. – Hindwing: 2-*SC-R* less thick and *r-m* as in Fig. 34.

First tergite (Fig. 35) slightly, i.e. 1.25 times, longer than broad behind, evenly broadening posteriorly, pair of basal keels very short, basally foveo-shaped deepened, together with further tergites polished. Second tergite transverse, 1.8 times as broad behind as long medially, antero-medially with a faint semicircular elevation. Third and further tergites more transverse.

Scape black, its inner side with feeble rusty tint; flagellum blackish brown to lightening brown. Face, cheek, oral organs and fore leg yellow; frons, vertex, occiput and gena black. Meso- and metasoma testaceous, metasoma apically brownish. Middle and hind legs testaceous, hind tibia and tarsus black, tibia ventrally rusty. Wings brown fumous, medially with a light "fenestra". Pterostigma blackish brown, basally yellow, veins more blackish.

The two male specimens (from Equatorial Guinea) are quite identical with the male lectotype, i.e. no deviating feature was recognized. One male with full antenna: number of its antennomeres 46.

Female and host unknown.

Distribution: Cameroon, Equatorial Guinea, Tanzania, Togo, Republic Congo (after SZÉPLIGETI 1914a: 212, 1915: 150).

Affinity: The distinction between *M. costata* and *M. variabilis* is based on the redescription of the first species by GRANGER (1949: 281) as well as on the basis of the examination of the specimens of *M. costata* (2 ♀♀), *M. persimilis* (3 ♀♀) named by SZÉPLIGETI and by J. PAPP (2010) and the male lectotype + two male specimens of *M. variabilis*:

- 1 (2) First tergite 1.4–1.6 times longer than broad behind, i.e. less broadening posteriorly; second tergite nearly quadrate ("subcarré"): slightly broader behind than long (Fig. 23). Forewing: pterostigma 3.6–4.1 times as long as wide, second submarginal cell (areola) quadrate in form, 3–SR somewhat shorter than *r-m* (Fig. 22). Head above yellow, frequently darkening brown to blackish. ♀: 9–12 mm (♂ unknown) *M. costata* (Brullé, 1846)
- 2 (1) First tergite slightly longer than than broad behind, i.e. more broadening posteriorly; second tergite transverse: 1.5 times as broad as long (Fig. 35). Forewing: pterostigma 3.3 times as long as wide, second submarginal cell rectangle in form, 3–SR longer than *r-m* (Fig. 33). Head above black. ♂: 9 mm (♀ unknown) *M. variabilis* Szépligeti, 1915

Taxonomic note: Between the two species, *M. costata* and *M. variabilis*, will be certainly established more good distinctive features if more specimens (females + males) of both *M. costata* and *M. variabilis* are at hand for comparative examination.

Agathidinae

***Pseudocremonops atripennis* Szépligeti, 1915**

(Figs 36, 38–50)

Pseudocremonops atripennis Szépligeti, 1915: 152 (three females), type locality: "Belgisch-Kongo, Angu, Uelle-Distrikt" (Republic Congo), female lectotype (and one female + one male paralectotypes, present designations) in SMF (lectotype) and MTMB (paralectotypes); examined. – SZÉPLIGETI 1914a: 212 and 1914b: 416 (five localities in Cameroon, Equatorial Guinea and Republic Congo without description, i.e. nom. nud.). SHENEFELT 1970: 424 (literature up to 1915). VAN ACHTERBERG 1993: 156 (14 figures).

Designation of the female lectotype of *Pseudocremonops atripennis* (in SMF): (first label, printed) "Belg. Kongo / Angu, Uelle-

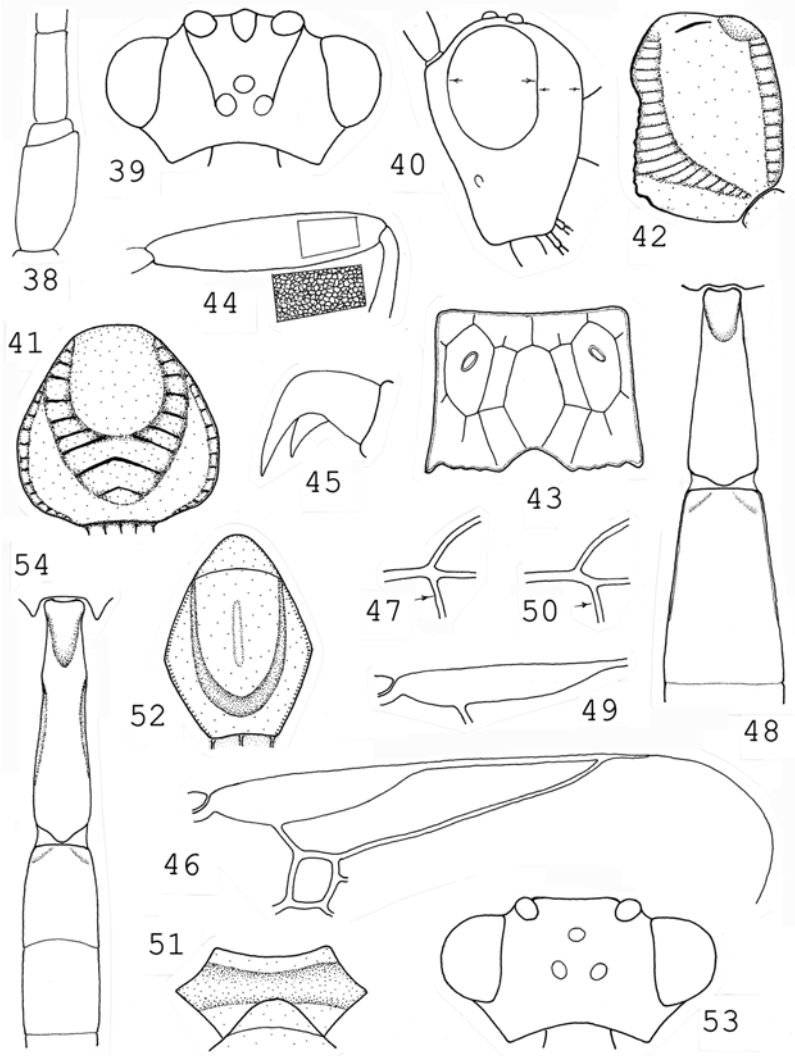
Distr. / Dr. H. Schubotz leg. / 31. V. 1911.” (and not ”Februar 1911”: slip of pen); (second label, printed) ”Inner-Afrika-Exped. / d. Hr. Adolf-Friedrich / zu Mecklenburg / 1910 – 1911.”; (third label, manuscript by ?) ”*Pseudocremonops atripennis* Szépl.”; fourth label is the lectotype card (attached by me). — Lectotype is in good condition: (1) pinned by mesosoma (left margin of scutellum / mesosternum); (2) left flagellum proximally deficient; (3) missing: tarsomeres 2–5 of left hind leg.

Designation of the female and male paralectotypes of *Pseudocremonops atripennis* (in MTMB): (first label, printed) ”Span. Guinea / Uelleburg Benitogebiet / 1–14” (one male paralectotype) and ”...15–28” (one female paralectotype) ”G. TEBMANN S. G.” – Remark: One male paralectotype was designated by VAN ACHTERBERG in 1981, the female paralectotype, however, was designated as the lectotype by VAN ACHTERBERG in 1981 (in litt.), this female paralectotype was reported by SZÉPLIGETI in 1914a: 212, i.e. one year earlier its original description, consequently this female specimen has at most paralectotype status and was labelled accordingly by me.

Two further female specimens served also for the original description of *P. atripennis*, they were reported by SZÉPLIGETI (1915: 152): one female (n nominate form) from ”Französisch-Kongo, Fort Possel – Fort Crampel, November 1910, leg. DR. H. SCHUBOTZ” and one female (”var.”) from ”Belgisch-Kongo, Angu, Juli 1911, leg. DR. H. SCHUBOTZ.” The two females remained latent, perhaps they are deposited in Tervuren Museum; if they turn up in the future the specimens receive paralectotype status.

Redescription of the female lectotype of *Pseudocremonops atripennis*: Body 11 mm long. Right antenna somewhat shorter than body and with 58 antennomeres, left antenna deficient: flagellum with 5 flagellomeres. Scape 2.1 times as long as broad apically, in lateral view parallel-sided and dorsally somewhat longer than ventrally; first flagellomere 2.8 times as long as broad (Fig. 38), flagellomeres 2–9–10 shortening so that further flagellomeres cubic, penultimate 15–16 flagellomeres attenuating and lengthening so that penultimate flagellomere 1.5 times as long as broad. – Head in dorsal view transverse (Fig. 39), 2.1 times as broad as long, eye three times longer than temple, temple receded, occiput excavated. Ocelli round and near to each other. Face punctate, medially punctures confluent. Vertex with a pair of oblique carinae between antennal socket and ocellar field and between antennal

socket with a spoon-like elevation (Fig. 39). Vertex with a few punctures. Eye in lateral view 1.4 times as high as wide, temple 0.45 times as wide as eye, malar space 0.65 times as long as height of eye (Fig. 40).



Mesosoma in lateral view 1.5 times as long as high. Pronotum smooth, shiny, its lateral margin crenulated and its pair of subpronopes separated (Fig. 36). Notaulix deep, fairly wide and with a few crenulae (Fig. 41). Epicnemial (= prepectal) carina strong, almost touching pronotum; precoxal suture widely crenulated, hind margin of mesopleuron crenulated, otherwise mesopleuron polished (Fig. 42). Scutellum polished, its hind half with deep foveola. Propodeum smooth and areolated, pair of spiracles elliptic (Fig. 43). – Hind femur long, 4.4 times as long as broad medially, its outer side rugulose (Fig. 44). Inner spur of hind tibia just longer than half basitarsus. Claw bifid, outer part longer than inner part (Fig. 45).

Forewing slightly longer than body. Pterostigma (Fig. 46) 4.1 times as long as wide, issuing *r* proximally from its middle, *r* short. Second submarginal cell quadrate, 3–*SR* somewhat shorter than 2–*SR* and *r*–*m*. *SR*1 almost straight. 1–*R*1 almost as long as length of pterostigma (Fig. 46). Vein *cu*–*a* interstitial (Fig. 47, see arrow).

First tergite long (Fig. 48), 2.9 times as long as broad behind, moderately broadening posteriorly, basally foveolate deepened, pair of basal keels short and weak, together with further tergites polished. Tergites 2–3 fused, long, 1.6 times longer than broad behind. Ovipositor sheath very short.

Scape black with brownish tint. Flagellum blackish. Head, oral organs and mesosoma ochre, propodeum and metasoma brown. Fore and middle legs ochre, hind leg brown. Wings brown fumous, pterostigma and veins brown.

Figs 38–54. — Figs 38–50: *Pseudocremonops atripennis* Szépligeti (female lectotype: 38–48, female paralectotype: 49–50): 38 = scape, pedicel and first flagellomere, 39 = head in dorsal view, 40 = head in lateral view, 41 = mesoscutum, 42 = mesopleuron with precoxal suture, 43 = propodeum, 44 = hind femur with indication of its rugulosity, 45 = claw, 46 = distal part of right forewing, 47 = vein *cu*–*a* of forewing, 48 = tergites 1–2, 49 = pterostigma of forewing, 50 = vein *cu*–*a* of forewing. – Figs 51–54. *Zacremnops cressoni* (Cameron) (female): 51 = pronotum with subpronope, 52 = mesoscutum, 53 = head in dorsal view, 54 = tergite 1–3.

Deviating features of the two female paralectotypes of *Pseudocremonops atripennis*: Similar to the female lectotype. Body 9–10 mm long. Antenna with 57 antennomeres (1 ♀). Pterostigma five times as long as wide and issuing *r* clearly proximally from its middle (Fig. 49). Vein *cu-a* postfurcal (Fig. 50, see arrow). First tergite 2.6 times (1 ♀) and 2.3 times (1 ♀) as long as broad behind. Head above (vertex, frons, occiput) and metasoma black. Prothorax, mesoscutum, scutellum with axille testaceous; prothorax anteriorly yellowish. Propodeum, metapleuron and mesopleuron (partly) blackish with weak brownish tint. Fore leg yellow, hind leg brownish black (middle leg missing).

Male and host unknown.

Distribution: Equatorial Guinea, Republic Congo.

Affinity: The Old World tropical genus *Pseudocremonops* Szépligeti stands nearest to the Neotropical genus *Zacremonops* Sharkey et Wharton viewing their common features: temple in dorsal view strongly receded (Figs 39, 53), notaulix distinct (Figs 41, 52), first tergite narrow and at least twice longer than broad behind (Figs 48, 54), wings dark fumous; the distinction between the two genera restricting to a few features keyed:

- 1 (2) Pair of subpronopes separated, i.e. forming two distinct grooves (Fig. 36). Notaulix deep, fairly wide and with a few crenulae (Fig. 41). Pair of carinae of antennal sockets extending to hind pair of ocelli, ocelli large and near to each other (Fig. 39). First tergite broadening posteriorly, twice broader behind than basally (Fig. 48). Forewing: *1-R1* almost as long as pterostigma, second submarginal cell evenly broad (Fig. 46). Ovipositor sheath very short. Ground colour of body ochre to brown *Pseudocremonops* Szépligeti, 1915
- 2 (1) Pair of subpronopes confluent, i.e. pronotum with a transverse groove (Fig. 51). Notaulix deep, narrow and (almost) smooth (Fig. 52). Pair of lateral carinae of frons absent, ocelli small and far from each other (Fig. 53). First tergite less broadening posteriorly, slightly broader behind than basally (Fig. 54). Forewing: *1-R1* shorter than pterostigma, second submarginal cell broadening posteriorly (Fig. 37). Ovipositor sheath long, about length of metasoma. Ground colour of body black with more or less yellow pattern *Zacremonops* Sharkey et Wharton, 1985

Taxonomic notes: 1.) The genus *Pseudocremonops* was erected for the species *atripennis*, type of the genus (SZÉPLIGETI 1915,

SHENEFELT 1970). Recently two species were added to this genus: *P. erythrocephalus* (Cameron, 1900) and *P. sculpturalis* (Smith, 1858), originally described in the genera *Disophrys* and *Agathis*, respectively. The three species are distributed in the Ethiopian Region (*P. atripennis*) and in the Indo-Australian Region (*P. erythrocephalus*, *P. sculpturalis*). The genus *Zacremnops* is known merely in the Neotropical Region by four species: *Z. chiriquensis* (Cameron, 1887), *Z. coatlicue* Sharkey, 1990, *Z. cressoni* (Cameron, 1887) and *Z. ekchuah* Sharkey, 1990 (YU et al. 2005).

2.) The distinction of *P. atripennis* from any of the two *Pseudocremnops* species meets an unavoidable difficulty owing to the short descriptions of the two species in question. Their descriptions are restricted to features which are mostly common for the three species (CAMERON 1900: 91; BHAT & GUPTA 1977: 240, 244: *erythrocephala*; 268: *sculpturalis*).

Braconinae

***Archibracon deliberator* (Szépligeti, 1905)**

(Figs 55–65)

Iphiaulax deliberator Szépligeti, 1905b: 7 (one female; page preference over *Iph. possessor* Szépligeti, 1905b: 8 ♀♂), type locality: "Kamerun", female holotype (designated by Quicke l.c., labelled by me) in NRS; examined.

Ipobracon deliberator (Szépligeti): Szépligeti 1906: 562 (comb. n., in key). SHENEFELT 1978: 1815 (literature up to 1929). FAHRINGER 1929: 241 (in key) and 267 (redescription).

Archibracon deliberator (Szépligeti): Quicke 1983: 148 (comb. n.), 1989: 37 (in key as "deliberator complex") and 46–47 (taxonomy, redescription).

Iphiaulax possessor Szépligeti, 1905b: 8 (two females + one male), type locality: "Kamerun", female lectotype (and one female + one male paralectotypes, designated by J. PAPP 1969 in SHENEFELT 1978 l.c.) in MTMB; examined, **syn. n.**

Ipobracon possessor (Szépligeti): Szépligeti 1906: 562 (in key, comb. n.). FAHRINGER 1929: 241 (♀), 254 (♂) (in key) and 286 (redescription) ♀♂.

Udamolx possessor (Szépligeti): ENDERLEIN 1920: 98. SHENEFELT 1978: 1733 (literature up to 1931).

- Ipobracon (Udamolx) possessor* (Szépligeti): FAHRINGER 1931: 308 (♀), 315 (♂) (in key, comb. n.).
- Archibracon possessor* (Szépligeti): QUICKE 1983: 148 (comb. n. as valid species), 1989: 48 (as valid species in "deliberator complex", type designations).
- Pseudobracon schubotzi* Szépligeti, 1915: 148 (six females), type locality: "Belgisch-Kongo, Libenge," female lectotype (present designation) in SMF (status of five females see in Taxonomic notes); examined, **syn. n.**
- Archibracon schubotzi* (Szépligeti): ENDERLEIN 1920: 222 (comb. n.). FAHRINGER 1931: 307 (in key) and 330 (redescription). SHENEFELT 1978: 1435 (literature up to 1931). QUICKE 1989: 62 (taxonomy).

Designation of the female holotype of *Iphiaulax deliberator* Szépligeti: (first label, printed) "Camerun"; (second label, printed) "Sjöstedt"; (third label, Szépligeti's handwriting) "Iphiaulax / deliberator / n. sp."; fourth label is the holotype card (designated by QUICKE 1989: 47), fifth label is with the actual name *Archibracon deliberator* (Szépligeti) (labels 4–5 were attached by J. PAPP 2010).

Designation of the female lectotype of *Iphiaulax possessor* Szépligeti: (first label, printed) "Africa / Camerun"; second label is the lectotype card, third label is with the inventory number "1053"; fourth label is with the actual name *Archibracon deliberator* (Szépligeti) (det. J. PAPP 2010) (labels 2–4 were attached by J. PAPP 2010). – Lectotype is in good condition: (1) pinned by mesosoma (prescutellar furrow / mesosternum); (2) right flagellum apically deficient; (3) right hind tarsomeres 4–5 missing; (4) right hindwing distal-longitudinally torn.

The single female and male paralectotypes of *Iphiaulax possessor* are with similar locality etc. labels and in good condition.

Designation of the female lectotype of *Pseudobracon schubotzi* Szépligeti: (first label, printed) "Belg.[isch] Kongo / Libenge, Ubangi-Dstr. / DR. H. SCHUBOTZ leg. / 25. X. 1910"; (second label, printed) "Inner-Afrika-Exped. / d. Hr. Adolf Friedrich / zu Mecklenburg / 1910–1911."; third label is with the original name det. SZÉPLIGETI (above), reverse on label: "teste PAPP J. 2010"; fourth label is the lectotype card and fifth label is with the actual name *Archibracon deliberator* (Szépligeti) det. J. PAPP 2010. – Lectotype is in good condition: (1) pinned by mesosoma (prescutellar furrow / mesosternum

anteriorly); (2) right flagellum apically deficient; (3) missing: left hind leg (except coxa) and fifth tarsomere of left middle leg; (4) left forewing apically deficient.

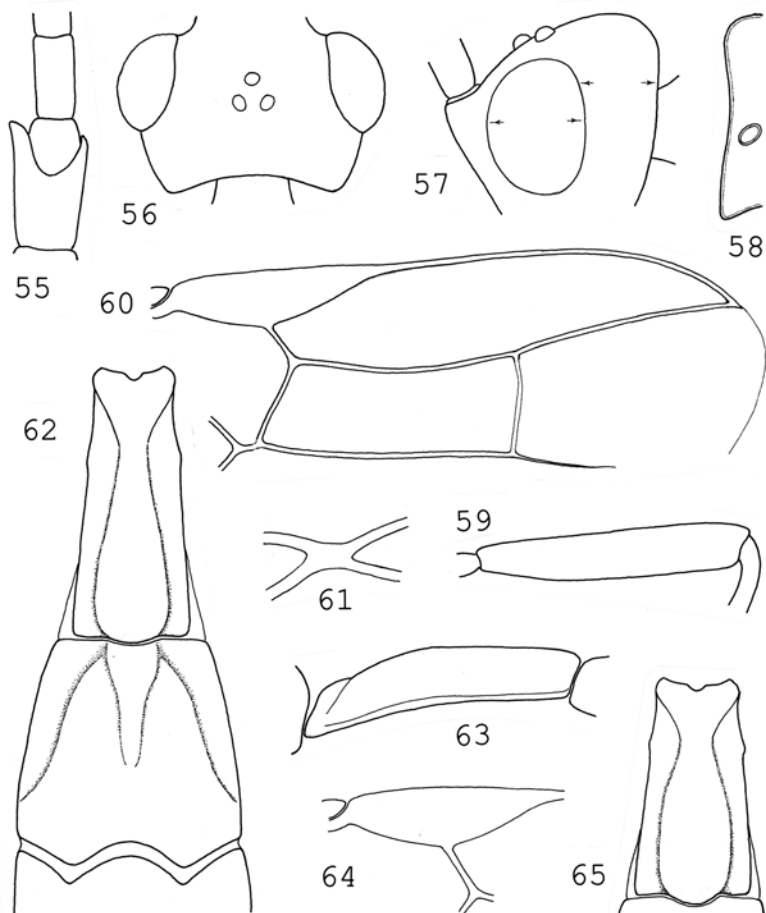
Taxonomic notes: 1.) The name *Pseudobracon schubotzi* was applied prior to its description 1915 one as well as two years earlier, respectively: SZÉPLIGETI 1913: 385, 1914a: 191 and 1914c: 114. In these three articles SZÉPLIGETI reported ten localities from four countries: Cameroon, Equatorial Guinea (= Spanisch Guinea), Togo and Zaire (= Belgian Congo, Republic Congo) at least for ten specimens. In his description 1915 Szépligeti did not make allusion in that respect that the specimens from these localities also served for the description, consequently they may not belong to the original type series, i.e. they may not be designated as paralectotypes.

2.) Besides the female lectotype, here designated and redescribed, at least further five specimens served for the original description of *Pseudobracon schubotzi*. These specimens remained unknown to me; perhaps they are housed in the Museum Berlin, Müncheberg, Tervuren or ? The localities of these specimens, i.e. latent paralectotypes of *Pseudobracon schubotzi*, are as follows (cited after SZÉPLIGETI 1915: 148): (a) "Kamerun (Mukonje-Farm), 20. Dezember 1905, leg. RHODE"; (b) "Süd-Kamerun, Molundu, Oktober 1910, leg. DR. A. SCHULTZE"; (c) "Belgisch-Kongo, Angu", (d) "Duma" and (e) "Kimuenza, 1. Oktober 1910, leg. DR. A. SCHULTZE".

Material examined (6 ♀♀): 1 ♀ (in DEIM): Cameroon, Duala, 1912, leg. ROTKIRCH. 2 ♀♀ (in DEIM): Cameroon, leg. CONRADT. 1 ♀ (in MTMB): Zimbabwe, Urwald Mawambi, 1910, leg. GRAUER. 1 ♀ (in MTMB): Gabun. 1 ♀ (in MTMB): Equatorial Guinea, Uelleburg, VI–VII 1908, leg. TEBMANN.

Additional features to the "Description" of *Archibracon deliberator* by QUICKE (1989: 47): Female holotype: Body 15 mm long. Both flagelli apically deficient, right flagellum with 34 and left flagellum with 49 flagellomeres. Scape in outer-lateral view 1.6 times as long as broad apically, above deeply excavated; first flagellomere twice longer than broad apically (Fig. 55). – Head in dorsal view transverse (Fig. 56), 1.7 times as broad as long, eye longer than temple, temple moderately receded, occiput excavated. Ocelli almost round and near to each other. Eye in lateral view nearly 1.4 times as high as wide and 1.25 times wider

than temple beyond eye, temple ventrally narrowing (Fig. 57, see arrows). Oral opening: its horizontal diameter slightly longer than shortest distance between opening and eye. Head polished.



Figs 55–65: *Archibracon deliberator* (Szépligeti) (female holotype: 55–63, male paralectotype of *A. possessor* Szépligeti: 64–65): 55 = scape, pedicel and first flagellomere, 56 = head in dorsal view, 57 = head in lateral view, 58 = lateral margin of propodeum, 59 = hind femur, 60 = distal part of right forewing, 61 = 2-SC-R of hindwing, 62 = tergites 1–2, 63 = first tergite in lateral view, 64 = pterostigma and *r*, 65 = first tergite of male.

Mesosoma in lateral view nearly 1.9 times as long as high. Pronotum medially with a transverse groove, its anterior lip not recurved posteriorly (cf. Fig. 29 in QUICKE 1989: 69). Scutellum in profile not arched. Propodeum entirely polished, pair of elliptic spiracles beyond middle of propodeum (Fig. 58). Hind femur 5.8 times as long as broad distally (Fig. 59). Hind basitarsus slightly shorter than tarsomeres 2–4 combined.

Forewing slightly longer than body, i.e. 16 mm long. Pterostigma (Fig. 60) 3.6 times as long as wide and issuing *r* somewhat proximally from its middle, *r* one-third (or 0.6 times) shorter than width of pterostigma. Second submarginal cell long, 3–*SR* bent and 2.8 times longer than 2–*SR*, *SRI* almost straight and as long as 3–*SR*. First discal cell: 1–*SR*–*M* somewhat longer than 1–*M*. – Hindwing: 2–*SC*–*R* thick and short (Fig. 61).

First tergite long (Fig. 62), 2.3 times as long as broad behind, weakly broadening posteriorly, pair of spiracles before middle of tergite, its scutum domed in lateral view (Fig. 63). Every tergite polished. Second tergite quadrate, slightly broader behind than long, pair of its oblique furrows delimiting lateral impressions, median field also delimited; suture between tergites 2–3 distinctly bisinuate (Fig. 62). Ovipositor sheath somewhat shorter than body.

Antenna blackish brown, apically lightening brown. Body and legs black; head, prothorax and fore leg yellow. Wings blackish brown fumous.

Variable features of the female (6 ♀♀): Body 15–23 mm long. Head in dorsal view 1.65–1.75 times as broad as long. Hind femur 5.7–6 times as long as broad distally. First tergite (1.9–)2–2.3 times as long as broad behind.

Deviating features of the female types of *Iphiaulax possessor* (2 ♀♀), *Pseudobracon schubotzi* (1 ♀) and 6 ♀♀. – Body 15–20 mm long. Antenna somewhat shorter than body and with 88–94 antennomeres (1 ♀: 88, 1 ♀: 91, 1 ♀: 94). Head in dorsal view 1.6–1.7 times as broad as long. Forewing: *r* almost as long as width of pterostigma (5 ♀♀). First tergite 1.7–2.3 times as long as broad behind (2 ♀♀: 1.7 times, 3 ♀♀: twice, 1 ♀: 2.1 times, 1 ♀: 2.2 times, 2 ♀♀: 2.3 times), first tergite more broadening posteriorly (1.7 times longer).

Redescription of the male (male paralectotype of *Iphiaulax possessor*) — Similar to the female. Body 18 mm long. Head in dorsal

view 1.6 times as broad as long. Hind femur 4.5 times as long as broad distally. Forewing: *r* one-fourth, or 0.8 times, shorter than width of pterostigma (Fig. 64). First tergite (Fig. 65) 1.9 times longer than broad behind, broadening posteriorly.

Distribution: Cameroon, Equatorial Guinea, Gabun, Tanzania, Togo, Zimbabwe.

Affinity: *Archibracon deliberator* is nearest to *A. xanthocephala* (Szépligeti, 1914) (tropical Africa) viewing their common features: yellow head, prothorax and fore legs; mesosoma, metasoma and legs black; head in dorsal view less transverse (Figs 56, 67; the two species are separated by the following features:

- 1 (2) First tergite narrow, (1.8–)2–2.3 times as long as broad behind; second tergite quadrate: slightly broader behind than long medially (Fig. 62). Temple in dorsal view somewhat more receded (Fig. 56). Second submarginal cell of forewing less wide, 3–*SR* and *SRI* equal in length (minute deviation feasible); *r* issuing from middle of pterostigma (Fig. 60). Scape not broadening apically (Fig. 55). ♀: 15–23 mm *A. deliberator* (Szépligeti, 1905)
- 2 (1) First tergite less narrow, 1.7–1.8 times as long as broad behind; second tergite transverse: 1.5 times as broad behind as long medially (Fig. 69). Temple in dorsal view somewhat less receded (Fig. 67). Second submarginal cell of forewing wide, 3–*SR* slightly longer than *SRI*; *r* issuing somewhat proximally from middle of pterostigma (Fig. 66). Scape broadening apically (Fig. 68). ♀: 16 mm *A. xanthocephala* (Szépligeti, 1914)

Note: One female specimen of *A. xanthocephala* was examined (specimen in MTMB): Togo, Bismarckburg, 1 November – 15 December 1890, R. BÜTTNER.

According to the most recent account (YU et al. 2005) 59 species of *Archibracon* are registered in the Ethiopian and Neotropical Regions.

Braconinae

***Plaxopsis schultzei* Szépligeti, 1915**

(Figs 70–76, 79–82)

Plaxopsis schultzei Szépligeti, 1915: 140 (one female), type locality: "Belgisch-Kongo, Kimuenza," female lectotype (present designa-

tion) in SMF; examined. – SZÉPLIGETI 1914a: 159 (two localities in Equatorial Guinea without description, i.e. nom. nud.).

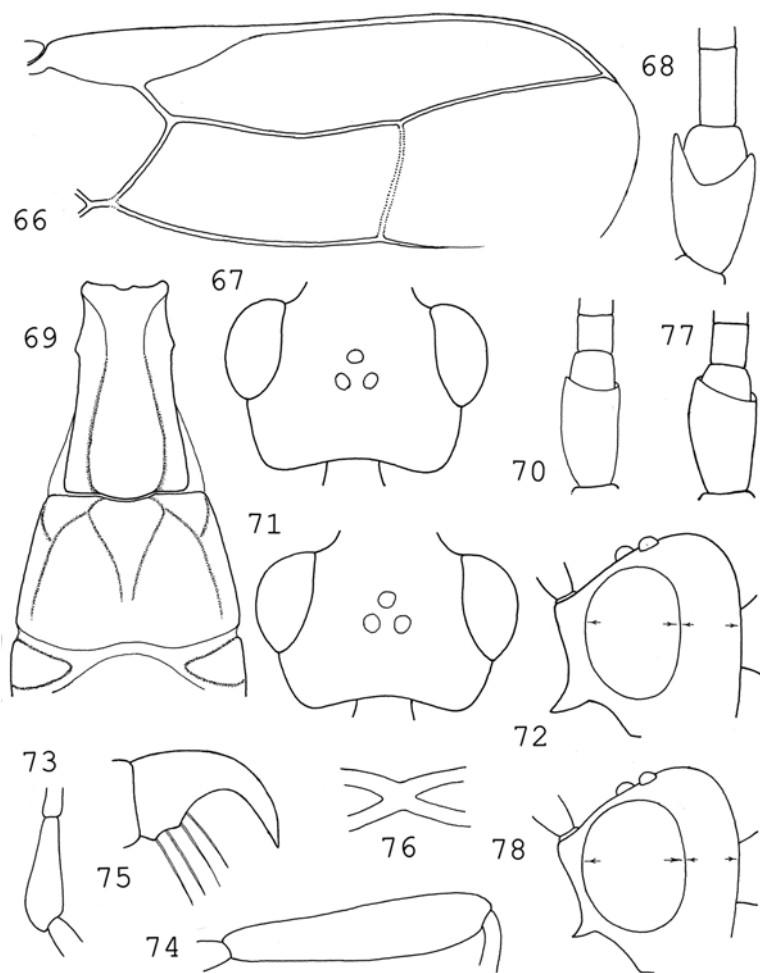
Lasiophorus schultzei (Szépligeti): FAHRINGER 1931: 340 (in key) and 360 (redescription) ♀. SHENEFELT 1978: 1694 (literature up to 1931).

Designation of the female lectotype of *Plaxopsis schultzei* Szépligeti: (first label, printed) "Belg. Kongo / Kimuenza / DR. ARNOLD SCHULTZE / leg. 13–15. IX. 1910."; (second label, printed) "Inner-Afrika-Exped. / d. Hrzt. Adolf-Friedrich zu Mecklenburg / 1910–1911."; third label is with the original name det. Szépligeti (above on label), "teste PAPP J. 2010" (reverse on label); fourth label is the lectotype card (labels 3–4 attached by J. PAPP). — Lectotype is in good condition: (1) pinned by mesosoma (mesoscutum posteriorly / mesosternum anteriorly); (2) right flagellum missing; (3) left middle tarsus glued on a separate small card; (4) right forewing apico-anteriorly deficient.

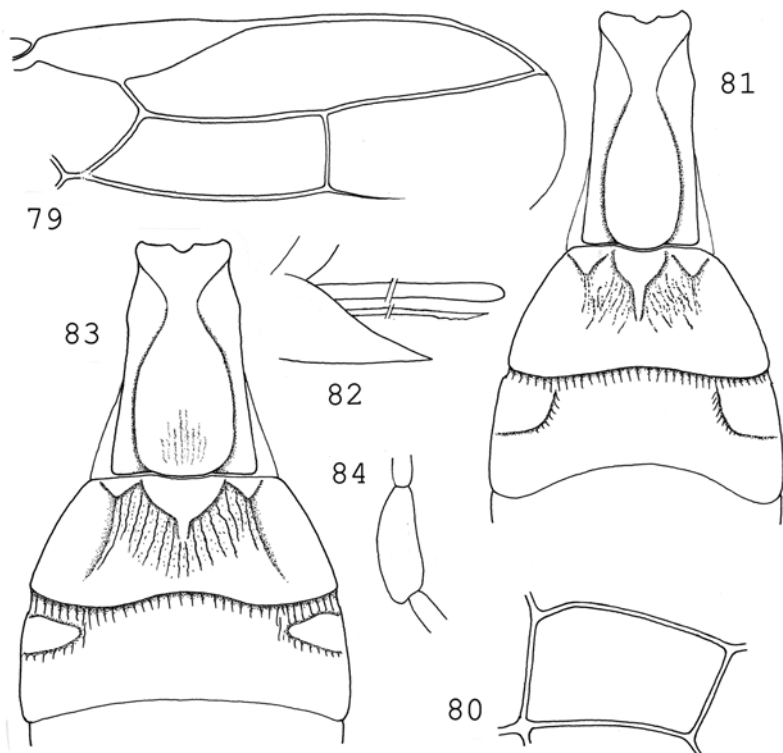
Redescription of the female lectotype of *Plaxopsis schultzei* Szépligeti: Body 13 mm long. Antenna as long as body and with 72 antennomeres. Scape in outer-lateral view 1.9 times as long as broad apically, dorsally longer than ventrally, apically not emarginated (Fig. 70). – Head in dorsal view less transverse (Fig. 71), 1.6 times as broad as long, eye twice longer than temple, temple moderately receded, occiput excavated. Ocelli small, weakly elliptic, near to each other, OOL six times longer than POL. Eye in lateral view 1.3 times as high as wide and 1.6 times wider than width of gena, gena ventrally broadening (Fig. 72, see arrows). Face above clypeus with a lamelliform protuberance (Fig. 72). Third segment of maxillar palp somewhat flattened (Fig. 73). Head polished.

Mesosoma in lateral view 1.6 times as long as high, polished. Notaulix distinct, shallow, smooth. Precoxal suture absent. Hind femur 4.5 times as long as broad distally (Fig. 74). Hind basitarsus just longer than tarsomeres 2–3 combined; inner spur of hind tibia shorter than half basitarsus. Claw curved and its basal lobe with a few long setae as in Fig. 75.

Forewing somewhat longer (i.e. 15 mm) than body. Pterostigma (Fig. 79) 3.7 times as long as wide and issuing *r* proximally from its middle, *r* 0.7 times as long as width of pterostigma. Second submarginal cell long: 3–*SR* bent and 2.3 times longer than 2–*SR*, *SRI* faintly bent, 1.2 times longer than 3–*SR* and reaching tip of wing. First discal cell long, *I–M* slightly longer than *m–cu*, *I–SR–M* curved proximally and twice longer than *I–M* (Fig. 80). – Hindwing: 2–*SC–R* short and thick as in Fig. 76.



Figs 66–78. — Figs 66–69: *Archibracon xanthocephala* (Szépligeti) (female): 66 = distal part of right forewing, 67 = head in dorsal view, 68 = scape, pedicel and first flagellomere, 69 = tergites 1–2. – Figs 70–76. *Plaxopsis schultzei* Szépligeti (female lectotype): 70 = scape, pedicel and first flagellomere, 71 = head in dorsal view, 72 = head in lateral view, 73 = third segment of maxillar palp, 74 = hind femur, 75 = claw, 76 = 2–SC–R of hind wing. – Figs 77–78: *Plaxopsis bifasciatus* (Szépligeti) (female lectotype): 77 = scape, pedicel and first flagellomere, 78 = head in lateral view.



Figs 79–84. — Figs 79–82: *Plaxopsis schultzei* Szépligeti (female lectotype): 79 = distal part of right forewing, 80 = first discal cell, 81 = tergites 1–3, 82 = hypopygium and ovipositor apparatus. – Figs 83–84: *Plaxopsis bifasciatus* (Szépligeti) (female lectotype): 83 = tergites 1–3, 84 = third segment of maxillar palp.

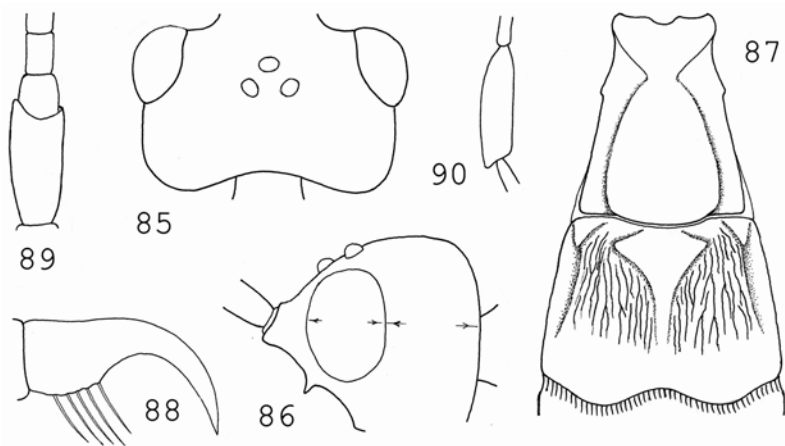
First tergite (Fig. 81) twice longer than broad behind, indistinctly broadening posteriorly, pair of spiracles before middle of tergite, polished. Second tergite transverse, 2.3 times as broad behind as long laterally, basally with three polished fields, otherwise anteriorly with rugulo-striate elements. Third tergite more transverse, three times as broad behind as long laterally, its hind margin concave, antero-laterally with a pair of fields, polished. Suture between tergites 2–3 crenulate (Fig. 81). Hypopygium pointed, ovipositor sheath somewhat shorter than body, hind end of sheath and ovipositor itself as in Fig. 82.

Body tricoloured. Antenna black. Head lemon yellow, palpi yellow with brownish tint. Mesosoma black with much rusty tint. Tegula rusty with blackish pattern. Metasoma reddish. Fore leg reddish yellow, outer side of tibia and tarsus entirely brownish, middle and hind legs black. Wings blackish brown, below pterostigma with a transverse-narrow hyaline "window". Pterostigma black, veins black to blackish.

Male and host unknown.

Distribution: Equatorial Guinea, Republic Congo.

Affinity: *Plaxopsis schultzei* is near to *P. bifasciatus* (Szépligeti) (Cameroon, Sierra Leone) and *P. pulchricaudis* Szépligeti (Cameroon) viewing their common features: head in dorsal view 1.6 times as broad as long (Figs 71, 85), second tergite antero-medially with a polished field (Figs 81, 83, 87); the three species differ from each other by a few characters:



Figs 85–90: *Plaxopsis pulchricaudis* Szépligeti (female lectotype): 85 = head in dorsal view, 86 = head in lateral view, 87 = tergites 1–2, 88 = claw, 89 = scape, pedicel and first flagellomere, 90 = third segment of maxillar palp.

- 1 (2) Eye in dorsal view somewhat shorter than temple (Fig. 85). Gena in lateral view somewhat wider than eye (Fig. 86, see arrows). First tergite broad, 1.25 times as long as broad behind; second tergite less transverse, 1.5 times as broad as long (Fig. 87). Claw some-

- what less downcurved (Fig. 88). Scape 2.3 times as long as broad apically (Fig. 89). Third segment of maxillar palp flattened as in Fig. 90. ♀: 14 mm *P. pulchricaudis* Szépligeti, 1913
- 2 (1) Eye in dorsal view clearly longer than temple (Fig. 71). Gena in lateral view clearly less wide than eye (Figs 72, 77, see arrows). First tergite less broad, 1.5–2 times as long as broad behind; second tergite transverse, about 2.3 times as broad behind as long (Figs 81, 83). Claw somewhat more downcurved (Fig. 75). Scape 1.9–2 times as long as broad apically (Figs 70, 78). Third segment of maxillar palp flattened as in Figs 73, 84.
- 3 (4) Scape in outer-lateral view long, 1.9 times as long dorsally as broad apically (Fig. 70). Gena in lateral view broadening ventrally (Fig. 72, see arrows). First tergite slightly broadening posteriorly, twice longer than broad behind (Fig. 81). Head yellow, mesosoma and legs blackish, metasoma reddish. Wings and pterostigma evenly dark brown. ♀: 13 mm *P. schultzei* Szépligeti, 1915
- 4 (3) Scape in outer-lateral view less long, 1.6 times as long dorsally as broad apically (Fig. 77). Gena in lateral view not broadening ventrally (Fig. 78, see arrows). First tergite slightly more broadening posteriorly, 1.6 times longer than broad behind (Fig. 83). Body and legs ochre to light brownish yellow. Wings yellow with three transverse brown streaks, pterostigma yellow its distal third to fourth blackish. ♀: 10–13 mm *P. bifasciatus* (Szépligeti, 1905)

Taxonomic note: In the MTMB there is a female paralectotype of *P. schroederi* Szépligeti, 1914 (taken in Cameroon, Longi, April 1904, paralectotype no. 11169), the female is identical with *P. bifasciatus*.

Acknowledgement

My sincere thank should go to DR. J.–P. KOPELKE who kindly made available for me the type material of the braconid species by SZÉPLIGETI deposited in the Senckenberg Museum, Frankfurt a. M.. DR. A. TAEGER (Müncheberg) was kind enough to inform me of the depositories of SZÉPLIGETI's braconid types. DR. CL. VILLEMANT (Paris) promoted my taxonomic work by authentic braconid material.

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Jahr/Year: 2011

Band/Volume: [36 2011](#)

Autor(en)/Author(s): Papp Jenő

Artikel/Article: [Braconid types by Szépligeti deposited in Senckenberg Museum, Frankfurt a. M. \(Hymenoptera: Braconidae\) 51-81](#)