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Beitr. Ent. · Bd. 18 · 1968 · H 5/6 · S. 569–603 · Berlin

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A Survey of the *Phaenocarpa* FÖRSTER species of the Carpathian Basin, Central Europe

(Hymenoptera, Braconidae: Alysiinae)

With 55 textfigures

Introduction

Among the Braconid subfamilies, the subfamily Alysiinae HANDLIERSCH, is probably the least known from the taxonomical point of view. In 1894, MARSHALL summarized the European (and North African) species, characterizing them in detail within a key of identification. This was the last monograph (apart from J. FAHRINGER's manuscript) which revised the subfamily Alysiinae of the Western Palaearctic Region. Since then revisions according to the modern concept and for the same faunal region were made of the following genera: *Aphaereta* FÖRSTER, (NIXON, 1939), *Dapsilarthra* FÖRSTER, *Idiasta* FÖRSTER, *Mesocrina* FÖRSTER, (KÖNIGSMANN, 1959, 1959, 1960), *Synaldis* FÖRSTER, (FISCHER, 1962). For my part, I recapitulated, in the course of my taxonomic survey of the subfamily Alysiinae, first the species of the genus *Aphaereta* FÖRSTER (PAPP, 1965). In the present paper I submit a survey, from taxonomical and zoogeographical points of view, of the species of the genus *Phaenocarpa* known from the Carpathian Basin (i. e. the countries situated in this faunal district, namely Czechoslovakia, Hungary, Roumania, and Yugoslavia). I prepared my essay on the basis of the collection of the Hungarian Museum of Natural History, and my own (a total of 139 specimens).

It can be said in general of the *Phaenocarpa* FÖRSTER species of the Carpathian Basin that they require painstaking and thorough investigation if one wants to give a taxonomically exact identification and characterization. A number of the species involved (*Phaenocarpa nitida* THOMSON, *Phaenocarpa picinervis* HALIDAY, *Phaenocarpa ruficeps* NEES, *Phaenocarpa conspurcator* HALIDAY, etc.) are hard to define by clear-cut mutually excluding and antithetical features. We need therefore an exhaustive and deliberately constructed key of identification leading unambiguously to the species in question. A relatively great morphological knowledge and experience is needed for safe orientation concerning the true state of any of the features serving as specific descriptions (e. g. proportions of measurements, rugulosity, convex and concave surfaces, the depth of the parapsidal furrow etc.).

DOI: 10.21248/contrib.entomol.18.5-6.569-603

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The identification key and taxonomical description of the species is followed by a list of the localities in the Carpathian Basin (the localities now outside Hungary are qualified by the indications "Czechoslovakia", "Roumania", and "Yugoslavia"). I have grouped the localities in accordance with the zoogeographical subdivisions (MÓCZÁR, 1948): the numbers given in the list (e. g. I/1, II/1) designate the zoogeographical districts of the Carpathian Basin. This method facilitates the general assessment of the specific ranges.

Valuable help was rendered by Dr. M. FISCHER, Vienna, H. ANDERSSON, Lund, and S. K. WIACKOWSKI, Skierniewice. Dr. M. FISCHER has very kindly sent me J. FAHRINGER's manuscript on the Palaearctic species of the subfamily Alysiinae; with his permission, I have copied it and used its data in the working out of the *Phaenocarpa* species of the Carpathian Basin. H. ANDERSSON was good enough to lend me for my investigation some THOMSON types (*Phaenocarpa nitida*, *Phaenocarpa arctica*, *Alysia brachycera*). S. K. WIACKOWSKI also was kind to loan 4 type specimens of *Phaenocarpa tatrica* NIEZABIETOWSKI to me to clarify the taxonomical position of this species. I wish to express my sincere gratitude for their generous help.

Phaenocarpa FÖRSTER

Phaenocarpa FÖRSTER, Verh. naturhist. Ver. preuß. Rheinl. Westph., 1862, **19**, p. 267.
Asynaphes PROVANCHER, Addit. Corr. Faune Entom. Canada, Hym., 1886, p. 150.

FÖRSTER had established a number of genera (*Aclisis*, *Asobara*, *Homophyla*, *Idiolexis*, *Mesothesis*, *Misophtora*, *Sathra*, *Spanista*), which have been reduced to subgeneric level by later authors (MARSHALL, 1894; SZÉPLIGETI, 1904; FAHRINGER, MS; GRANGER, 1949) MUESEBECK (MUESEBECK-KROMBEIN-TOWNES, 1951) accepts one, the genus *Asobara*, as a distinct generic taxon. In my opinion, though FÖRSTER's catagories are at present still assessed as subgenera, they will prove to be generally accepted genera in the future. The number of known *Phaenocarpa* species namely will rapidly increase all over the world and then, for the sake of homogeneity, the splitting of the genus *Phaenocarpa* as it now stands will be absolutely necessary. The *Phaenocarpa* species, known hitherto from the Carpathian Basin, belong to three subgenera, namely *Asobara* FÖRSTER, *Homophyla* FÖRSTER, and *Phaenocarpa* FÖRSTER (see the key of identification).

The genus *Phaenocarpa* FÖRSTER is characterized by the following features:

Length of body relatively (with regard to the family Braconidae) medium: 2.5—4 mm; shortest body 1.5 mm, longest body 4.5 mm. Head transverse, generally twice as wide as it is long, smooth and shining. Face, clypeus, mandibles pubescent, other cephalic surfaces generally with sporadic, minute hairs only. Between clypeus and face, a deep, groove-like impression, occasionally roughly rugose. Maxillary palpi 6-segmented, labial palpi 4-segmented. Eyes never conspicuously protuberant from outline of head (when viewed from above). Cephalic width, measured between eye and tempora, hardly varying. Eye of normal size, always slightly larger in females than in males. Occiput immargined medially. Ocelli not on a common protuberance. Antennae generally longer than body, number of joints varying between 25 and 45; genus best characterized by flagellar joint 2 being invariably longer than joint 1. Mandible 3-dentate; shape and position of teeth in relation to each other are specific features. Thorax characteristic of subfamily Alysiinae. Thoracic parts generally smooth and shiny, except for propodeum being always sculptured to a certain degree. Mesonotum limited to width of pronotum (from tegula to tegula), and also slightly projecting at point of origin of parapsida. In the middle of the distal third of

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the mesonotum (anterior to the prescutellar groove), there is invariably a linear (rarely punctiform) dimple present, into which leads parapsida (even if in traces). Parapsida formed and developed in various degrees, characteristic to species. Sternauli deep, crenulate. Mesopleura below alar base invariably rugose and pubescent to a certain degree. Wing usually as long as body, not fumose, venation complete. Proximal half of basal veins (n. *media*, n. *brachialis*), meeting point of cubital vein (*cu*), cross cubital vein *1* ($cuqu_1$) and recurrent vein, as well as $cuqu_2$ indistinct to a certain and varying degree. First section of radial vein (r_1) originating almost always slightly distally of the middle of the stigma. Arrangement of venation and cells is specific features. Stigma normal (narrow, elongately triangular), of a light colour together with venation (brown, yellowish brown, yellow). Legs normal. Abdomen never longer than combined length of head and thorax; shape (when viewed from above) elongately elliptical. Shape of tergite 1, ratios of its measurements, location of spiracle, its sculpture and decurrence of its two margins are specific characters. Except for tergite 1, abdomen smooth and shining, pubescence sparse and minute. Ovipositor apparatus seldom longer than body, generally not longer than abdomen. Colour of body varying between black and brown; legs, mandibles, and first two joints (scape and pedicel) of antennae always light-coloured.

The hosts are practically unknown. The scanty available breeding data imply that the species parasitise on vinegar flies (Drosophilidae), root and stem maggots (Anthomyiidae), cheese maggots (Piophilidae), and leaf roller moths (Tortricidae).

The type-species is *Phaenocarpa picinervis* (HALIDAY, 1838).

At present the exact number of the described *Phaenocarpa* species cannot be established, since it is uncertain whether the various authors had not relegated some species to genera other than that in question. This statement holds primarily for "*Phaenocarpa*" species outside the Holarctic region. The descriptions included 7 species (together with 2 *Asobara* species) from the Nearctic Region (MUESEBECK, 1951: 152) and 45 from the Palaearctic Region. To date, we know the following species from the Palaearctic Region (distribution in brackets):

Phaenocarpa angustiptera sp. n. (Czechoslovakia)
Phaenocarpa anomala THOMSON, 1895 (Sweden)
Phaenocarpa brevipalpis THOMSON, 1895 (Sweden)
Phaenocarpa canaliculata STELFOX, 1941 (Ireland, England)
Phaenocarpa caucasica TELENGA, 1935 (Soviet Union: Azerbaijan)
Phaenocarpa collaris sp. n. (Hungary)
Phaenocarpa conspurcator (HALIDAY, 1838) (Europe: Iceland, Ireland, England, Sweden, Finland, Belgium, Switzerland, Germany, Denmark, Spain, Italy, Poland, Hungary, Roumania, Soviet Union)
Phaenocarpa curvula THOMSON, 1895 (Sweden)
Phaenocarpa eugenia (HALIDAY, 1838) (Ireland, England, Sweden, Finland, Hungary)
Phaenocarpa eunice (HALIDAY, 1838) (Ireland, England, Roumania)
Phaenocarpa flavipes (HALIDAY, 1838) (England, Holland, Poland, Czechoslovakia, Hungary, Roumania)
Phaenocarpa galatea (HALIDAY, 1838) (England)
Phaenocarpa gracilicornis (NEES, 1812) (Germany, Sweden, Finland)
Phaenocarpa ingressor MARSHALL, 1895 (France)
Phaenocarpa intermedia TOBIAS, 1962 (Soviet Union: around Leningrad)
Phaenocarpa laticellula sp. n. (Hungary)
Phaenocarpa lichasherstovi TELENGA, 1935 (Soviet Union)
Phaenocarpa livida (HALIDAY, 1838) (England, Sweden, Hungary, Soviet Union)

DOI: 10.21248/contrib.entomol.18.5-6.569-603

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Phaenocarpa longicauda Thomson, 1895 (Sweden)
Phaenocarpa luteipes Stelfox, 1950 (Ireland)
Phaenocarpa maria (Haliday, 1838) (England, Sweden)
Phaenocarpa multiarticulata Marshall, 1898 (Germany)
Phaenocarpa nina (Haliday, 1838) (Ireland, England)
Phaenocarpa nitida Thomson, 1895 (Sweden, Hungary)
Phaenocarpa notabilis Stelfox, 1944 (Ireland, England)
Phaenocarpa pallida (Curtis, 1826) (England, Sweden, Finland)
Phaenocarpa pegomyiae Marshall, 1898 (France)
Phaenocarpa picinervis (Haliday, 1838) (Ireland, England, Sweden, Hungary)
Phaenocarpa pratellae (Curtis, 1826) (England, Sweden, Finland, Switzerland, Roumania, Soviet Union, Japan)
Phaenocarpa psalliotae Telenga, 1935 (Germany, Soviet Union)
Phaenocarpa pullata (Haliday, 1838) (Ireland, England, Finland, Czechoslovakia, Hungary, Roumania)
Phaenocarpa punctigera (Haliday, 1838) (England)
Phaenocarpa ruficeps (Nees, 1812) (Europe: England, Sweden, Germany, Switzerland, Poland, Hungary, Roumania, Soviet Union)
Phaenocarpa sculptifrons Tobias, 1962 (Soviet Union: around Leningrad)
Phaenocarpa seitneri Fahringer, 1929 (Austria)
Phaenocarpa tabida (Nees, 1834) (England, Sweden, Switzerland, Hungary, Soviet Union)
Phaenocarpa tabidula Tobias, 1962 (Soviet Union: around Leningrad)
Phaenocarpa tacita Stelfox, 1941 (Ireland)
Phaenocarpa tenuistigma Tobias, 1962 (Soviet Union: around Leningrad)
Phaenocarpa theodori Vollenhoven, 1878 (Holland)
Phaenocarpa trisulcata Stelfox, 1950 (Ireland)
Phaenocarpa ungularis Thomson, 1895 (Sweden)
Phaenocarpa venusta Marshall, 1897 (Italy)

Of the 43 species, 14 had been collected in the Carpathian Basin; 3 species are new, and 7 are new for the fauna of the Carpathian Basin. These numbers will yet increase in the course of future investigations.

Remarks

1. The species *Phaenocarpa theodori* Vollenhoven, and *Phaenocarpa picticornis* Ruthe (Szépligeti, 1896: 320) are to be deleted provisionally from the list of species known from the Carpathian Basin, since these occurences are due to erroneous identifications;

2. Szépligeti's (1898: 393—394, 1898: 406) *Phaenocarpa ochrogaster* is a junior synonym of *Dapsilarthra rufiventris* Nees, as I have been able to establish by Königsmann's (1959) monography on the Palearctic species of the genus *Dapsilarthra* Förster. — *Phaenocarpa arctica* Thomson and *Phaenocarpa tatrica* Nieza-bietowski are synonymous as shown by the examination of the type-specimens with *Ph. conspurcator* (Haliday) (cf. remark at *Ph. conspurcator* (Haliday));

3. The Hungarian Museum of Natural History has a male type-specimen of the species *Phaenocarpa ingressor* Marshall, and one of *Phaenocarpa multiarcticulata* Marshall, described by T. A. Marshall in 1895 and 1898 from France and Germany respectively. Both specimens originate from the "terra typica", their labels had been written by Marshall, having halved the label by a red longi-

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tudinal line. Although MARSHALL never indicated any one of the specimens by the designation "Type", the specimens can still be identified as types on the grounds mentioned above.

4. The designations of the alar veins and cells are abbreviated according to FISCHER (1958: 52).

Identifications key to the species

Females and Males

1 (4) Cell *R* not extending to alar apex; distal end of *R* nearer to half distance between stigma and apex than to apex (Figs. 17, 44). Ovipositor apparatus very short, projecting hardly beyond end of abdomen in profile (Fig. 43) . . . . . (Subgenus: *Homophyla* FÖRSTER)

2 (3) Body stout (Fig. 44): ratio of thoracic length to width 15:7.7, that of abdominal length to width 20:12. Abdomen not necklike. Upper edge (toward face) of middle tooth of mandible (Fig. 50) slightly projecting, imaginary line connecting outer margins of two outside teeth perpendicular to longitudinal axis of mandible. Ratio of first 4 flagellar joints 7:8.5:7:6 (Fig. 39). Body black. Head (face, vertex, tempora), thorax (pro- and mesonotum), and abdomen (tergites 1—3) rufous to a varying extent. Length 3.4 mm (3.3—3.6 mm). — Range: Ireland, England, Finland, Hungary, Roumania . . . . . *Phaenocarpa pullata* (HALIDAY, 1838)

3 (2) Body not stout (Fig. 17): ratio of thoracic length to width 12:5, that of abdominal length to width 11:5. Pronotum slightly neck-like (Fig. 17). Both bases of middle tooth of mandible excised (Fig. 4), upper edge not projecting but sinuous. Ratio of first 4 flagellar joints 5:6:5:4.5 (Fig. 8). Body brownish yellow, metanotum and propodeum dark brown, mesopleura and sternal region blackish brown. Length 2.7—2.9 mm. — Range: Hungary . . . . . ***Phaenocarpa collaris* sp. n.**

4 (1) Cell *R* extending to alar apex. Ovipositor apparatus not short at least half as long as abdomen . . . . . .

5 (6) Cell *B* absent (Fig. 52): *n. brachialis* joining *d*. Vein r_1 almost as long as width of stigma (Fig. 52) (Subgenus *Asobara* FÖRSTER). Body short. Thorax stout, ratio of length to width 6:3.2. Parapsida present in traces, if at all. Edges of propodeum fairly projecting. Tergite 1 almost entirely smooth. Body brown or dark brown; pronotum, propodeum, and tergite 1 light. Length 1.5—1.6 mm. — Range: England, Sweden, Switzerland, Hungary, Soviet Union . . . . . *Phaenocarpa tabida* (NEES, 1834)

6 (5) Cell *B* present (in accordance with normal venation): *n. brachialis* joining *d* through nervulus. Vein r_1 short, no longer than half of stigmal width . . . . . Subgenus *Phaenocarpa* FÖRSTER

7 (10) Wing narrow, ratio of length to greatest width 13:4 (Figs. 9, 26) . . . . . .

8 (9) Face with a groove-like and transversely rugose impression near inner margin of eye (Fig. 6). Parapsida evenly deep, hardly arcuate. Eye hardly protuberant. Cephalic width, measured between tempora, smaller than between eyes. Number of flagellar joints 25, ratio of first 4 joints 8:12:10:9 (Fig. 2). Both bases of median tooth of mandible incised (Fig. 5). *N. par.* not interstitial (Fig. 9). End of *n. brachialis* not swollen in male. Body black. Mandible, clypeus, base of antennae, sternites and legs light. Length 2.2 mm. — Range: Czechoslovakia . . . . . ***Phaenocarpa angustiptera* sp. n.**

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9 (8) No groove-like impression along inner margin of eye. Parapsida present in traces, if at all. Both eye and tempora protuberant to convex; cephalic width measured between tempora greater than between eyes. Number of flagellar joints 31, ratio of first 4 joints 12:13:11:9 (Fig. 25). Only lower base (toward palpi) of middle tooth of mandible incised (Fig. 22). End of *n. brachialis* swollen in male (Fig. 26). Body brownish black. Tergites 2—4 dark brown. Mandible, tegulae, and legs yellow. Length 3.5 mm — Range: Ireland, England, Roumania . . . . . *Phaenocarpa eunice* (HALIDAY, 1838)

10 (7) Wing not narrow, ratio of length to greatest width 11:4 at most . . . . . .

11 (16) Distal two thirds of parapsida present only in traces (proximal third may be of normal depth) . . . . . .

12 (13) Length of body at least 3 mm. Thorax wide (in proportion to cephalic width), ratio of length to width 10:5.5 (ratio of cephalic to thoracic width 14:9). All three teeth of mandible pointed (Fig. 23), middle tooth slightly longer than half the length of the other parts of the mandible. Ratio of first 4 antennal joints 8:10.5:8.5:8 (Fig. 18). Prescutellar groove shallow, finely rugulose. Tergite 1 relatively narrow, one and a half times as long as the width of the distal base. Vein r_1 originating near middle of stigma. Body black, brownish black or brown. Mandible, tegulae, and legs yellow or brownish yellow. Length 3—3.5 mm. — Range: England, Sweden, Hungary, Soviet Union . . . . . *Phaenocarpa livida* (HALIDAY, 1838)

13 (12) Length of body not exceeding 2.5 mm . . . . . .

14 (15) Cell Cu_2 strikingly wide (Fig. 36), ratio of length to greatest width 1.3:1. Thorax slightly stout, ratio of length to greatest width 9:4.4. Abdomen broad, ratio of length to greatest width 9:5.6. Tergite 1 wide, ratio of length to width of distal base 9:7. Median portion (bordered by edges) of tergite 1 strikingly convex, spiracle situated considerably in front of transversal median axis. Upper and lower teeth of mandible (Fig. 21) "projecting", lower margin arched. Antennae nearly one and a half times as long as the body, number of joints 26. Body dark brown. First 2 antennal joints, mandible and legs yellow. Length 2.1—2.3 mm. — Range: Hungary . . . . ***Phaenocarpa laticellula* sp. n.**

15 (14) Cell Cu_2 long, three times as long as it is wide (Fig. 28). Thorax not stout but relatively long, ratio of length to width 8:3.7. Abdomen narrow, ratio of length to width 9:3. Tergite 1 narrow, ratio of length to width of distal base 9:3. Median part of tergite 1 only normally convex; spiracle situated immediately in front of transversal median axis. Three mandibular teeth (Fig. 20) pointed, imaginary line connecting upper and lower base of median tooth not perpendicular to longitudinal axis. Antenna almost twice as long as the body, number of joints 30—33. Body brownish black or dark brown. Legs yellow. Length 2.1—2.4 mm. — Range: England, Holland, Poland, Czechoslovakia, Hungary, Roumania . . . . . *Phaenocarpa flavipes* (HALIDAY, 1838)

16 (11) Parapsida evenly deep in its entire length . . . . . .

17 (18) Median, triangular portion of face (Fig. 7) as well as inner margin of eye finely punctate (-rugose). Upper tooth of mandible projecting, „more behind" in relation to lower tooth (Fig. 13). Two longitudinal veins of Cu_2 (r_2 and cu_2) nearly parallel (Fig. 3). *N. par.* not interstitial. Antenna almost one and a half times as long as the body, number of flagellar joints 42—44, ratio of first 4 joints 10:12:9:9 (Fig. 14). Ovipositor apparatus shorter than body (0.7:1). Body yellow, vertex and thorax (except prothorax) black, legs yellow. Length 4.4—4.5 mm. — Range: Ireland, England, Sweden, Finland, Hungary . . . . . *Phaenocarpa eugenia* (HALIDAY, 1838)

— Body mainly reddish yellow. Only male known . . . . . ***Phaenocarpa eugenia* var. *rufoflava* var. n.**

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18 (17) Face smooth; may be finely rugulose between face and clypeus and between inner margin of eye and scape. Two longitudinal veins of Cu_2 (r_2 and cu_2) not parallel . . . . . .

19 (20) Both sides of $cuqu_2$ punctately fumose (Fig. 35). Upper and lower teeth of mandible (Fig. 30) obtuse, upper edge of median tooth broken. Antenna almost one and a half times as long as the body, ratio of first 4 flagellar joints 8:13:9:7.5 (Fig. 37). Legs slightly thinner than normal. Tergite 1 rugose along median axis, its distal third expanding into lineately rugose area (Fig. 32). Ovipositor apparatus longer than half the length of the abdomen (but never longer than abdomen). Body brownish black or black. Legs dark yellow. Length 3—5 mm. — Range: Ireland, England, Sweden, Hungary, Roumania . . . . . *Phaenocarpa picinervis* (HALIDAY, 1838)

20 (19) Both sides of $cuqu_2$ not punctately fumose. Upper edge of median tooth of mandible arched (and not broken) . . . . . .

21 (22) Edge of upper tooth of mandible (Fig. 29) continuing almost without constriction on median tooth. Antenna slightly more than one and a half times as long as the body, number of flagellar joints 40—41. Ratio of first 4 flagellar joints 7.5:11:9:8 (Fig. 38). Thorax relatively long, ratio of length to width 12:5.5. Parapsida evenly deep and smooth. Spiracle situated in transversal median axis of tergite 1, protuberant. Ovipositor apparatus as long as the body or longer. Body yellowish brown. Length 4—4.2 mm. — Range: England, Sweden, Finland, Switzerland, Hungary, Roumania, Soviet Union, Japan . . . . . *Phaenocarpa pratellae* (CURTIS, 1826)

22 (21) Edge of upper tooth of mandible continuing without constriction on median tooth. Ovipositor apparatus shorter than body . . . . . .

23 (24) Both bases of median tooth of mandible (Fig. 31) obtusely emarginate. Parapsida evenly deep and very finely crenulated. Thorax relatively narrow (Fig. 33), ratio of cephalic to thoracic width 14:8. Ratio of first 4 flagellar joints 7:11:8:7.5 (Fig. 34). Sternauli generally tapering distally. Spiracle situated on transversal median axis. Protuberant median portion of tergite 1 lineately rugose, otherwise smooth and shiny. Body piceous black, abdomen brownish black, legs brownish yellow. Head and thorax strikingly shiny. Length 3.6—3.8 mm. — Range: Sweden, Hungary . . . . . *Phaenocarpa nitida* (THOMSON, 1895)

24 (23) Neither base of median tooth of mandible emarginate. Parapsida generally not crenulate. Thorax not narrow. Spiracle situated in front of transversal median axis . . . . . .

25 (26) Proximal half of stigma of approximately even width throughout, but wider (and elevated) in male than in female (Figs. 45, 48). Head twice as wide as it is long (14:7) (Fig. 49). Ratio of first 4 flagellar joints 7:11:8:7 (Fig. 47), number of antennal joints 25—29. Parapsida in general gradually shallower distally (♀♀), or absent (♂♂). Dimple at least one and a half times as long as the width of the prescutellar groove (Fig. 55). Body generally piceous black, head rufous (colour of body varying). Length 2.8—3.2 mm. — Range: Europe . . . . . *Phaenocarpa ruficeps* (NEES, 1812)

26 (25) Proximal half of stigma tapering (narrowing) as normal (Fig. 16). Head more than twice as wide as it is long, ratio 15:7 (Fig. 12). Ratio of first 4 flagellar joints 9:12:8:7.5 (Fig. 15), number of antennal joints 30—35. Parapsida generally present in its entire length, evenly deep. Dimple as wide as prescutellar groove. Body piceous black (colour of body not as varying as in *Ph. ruficeps*). Length 3.4—4.1 mm. — Range: Europe . . . . . *Phaenocarpa conspurcator* (HALIDAY, 1838)

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Phaenocarpa angustiptera sp. n.

(Figs. 2, 5, 6, 9)

♀. — Head slightly more than twice as wide as it is long (10:4.5), (Fig. 9). Head shining and smooth. Face with lineately and transversely rugose, wide, groove-like impression along inner margin of eye (Fig. 6). Hairs of clypeus, mandible, lower margin of face and groove-like impression long, otherwise only small and sparse hairs present on head (primarily on face). Median tooth of mandible (Fig. 5) short in comparison with a number of species, upper tooth blunt. Ocelli forming an isosceles triangle: sides of triangle shorter than its base (2:3). Two distal ocelli situated in front of axis connecting distal points of eyes. Eye nearly circular, hardly protruding from outline of head (in relation to tempora), not haired. Tempora as wide as diameter of eye. Antenna longer than body (1.3:1), number of antennal joints 25. Ratio of first 4 flagellar joints 8:12:10:9 (Fig. 2). From flagellar joint 3, joints gradually shortening, only last 4 joints of equal length. Hairs of scape and pedicel long, flagellum pubescent. — Head black. Mandible rufous yellow, upper margin dark. Clypeus and base (toward mandible) of tempora reddish yellow, transparent. Scape and pedicel rufous yellow, first 3 flagellar joints fumosely rufous yellow, other joints brownish black.

Ratio of thoracic to cephalic width 4:10 (Fig. 9). Pronotum almost entirely and finely rugulose. Mesonotum shining and smooth. Parapsida deep, hardly arcuate ("obliquely decurrent"), very finely crenulate. Dimple and prescutellar groove not connected. Prescutellar groove wide and short, with 3 crenulae. Scutellum rounded, 3-sided, smooth and shiny. Propodeum rugose, rugosity not too rough toward metanotum. Median edge distally indistinct. Sternauli wide, roughly crenulate. Proximal margin of mesonotum, corner of mesopleura (below tegula), and propodeum sparsely haired. — Thorax black.

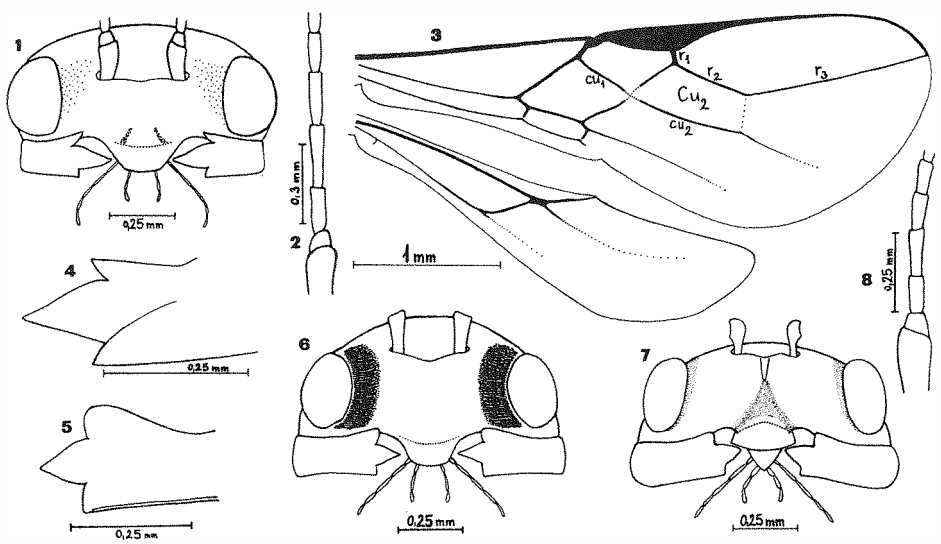

Fig. 1—8:

Fig. 1. *Phaenocarpa collaris* sp. n.: head, front view. — Fig. 2. *Phaenocarpa angustiptera* sp. n.: first 4 antennal joints. — Fig. 3. *Phaenocarpa eugenia* (HALIDAY): right pair of wings. — Fig. 4. *Phaenocarpa collaris* sp. n.: mandible. — Fig. 5. *Phaenocarpa angustiptera* sp. n.: mandible. — Fig. 6. *Phaenocarpa angustiptera* sp. n.: head, front view. — Fig. 7. *Phaenocarpa eugenia* (HALIDAY): head, front view. — Fig. 8. *Phaenocarpa collaris* sp. n.: first 4 antennal joints

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Wing narrow ("angustiptera"), ratio of length to greatest width 13:4, as long as body (Fig. 9). Wing (slightly) fumose. Cell *R* nearly extending to alar apex, its end slightly bent. Vein r_1 short, r_2 not much more than one third the length of r_3 (2:5), Cu_2 twice as long as it is wide. *N. par.* not interstitial. Venation and stigma yellowish brown, tegula yellow.

Legs normal. Ratio of femur 3, tibia, and tarsus 1:1.2:1.05. Legs rufous yellow.

Abdomen as long as thorax, ratio of length to width 2.5:1. Tergite 1 considerably longer than width of distal base (17:10); ratio of proximal base, two spiracles, width and length of distal base 5:8:10:17. Rugulosity of tergite 1 longitudinal and linear, only (distal-) lateral margin smooth. Two edges arising from side of proximal base indistinct. Spiracle in front of transversal median axis, hardly protruding. Tergite 1 nearly glabrous, with some long hairs on distal end. Short hairs in rows on distal margin of other tergites. Ovipositor apparatus as long as half the length of the abdomen. — Tergite 1 black, other tergites brownish black, sternites yellowish brown. Ovipositor yellow, sheath black.

Length of body 2.2 mm, alar expanse 4.9 mm.

Male and host unknown.

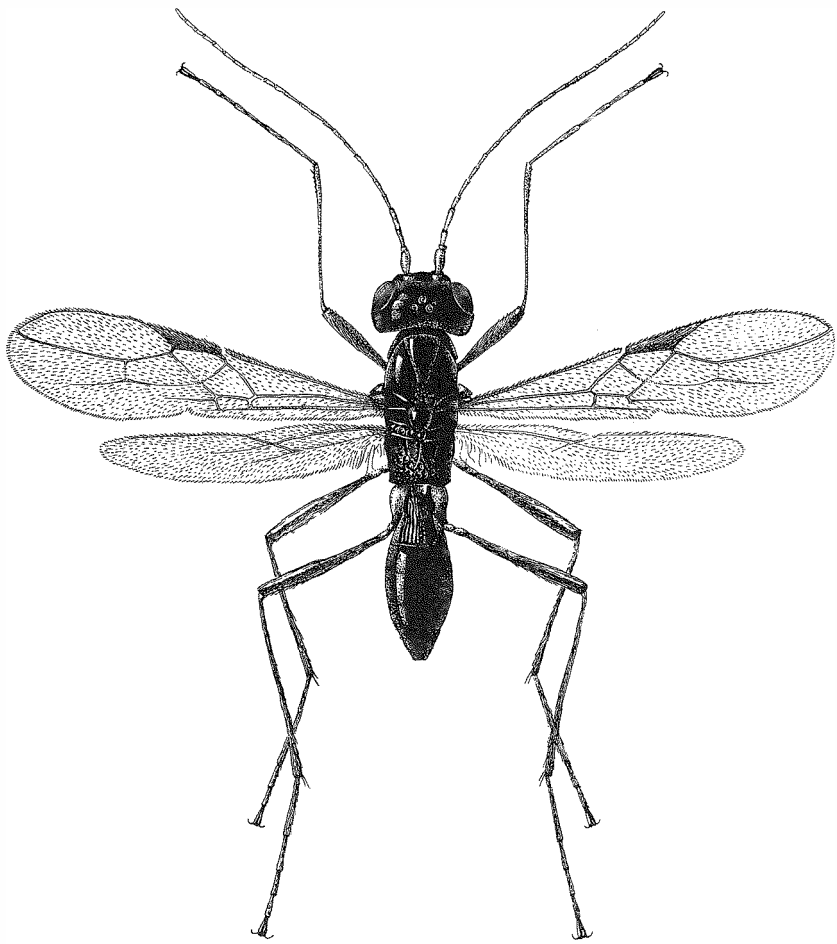

Fig. 9. *Phaenocarpa angustiptera* sp. n.

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Locality: III/1: Barlangliget, near Spisska Belá (= Szepesbéla), Czechoslovakia; 1300 m a. s. l., 22, August, 1900, 1 ♀, leg. BIRÓ (Holotype).

The new species is most nearly related to *Phaenocarpa ingressor* MARSHALL, but differs by the evenly deep parapsida, the wide, grovelike and rugose impression of the face, the ratio of the head to the thorax, and the colour of the body.

Distinguishing features

1. The narrow and slightly fumose wing (Fig. 9). — 2. the sculpture of tergite 1, and the ratio of its length to its width (17: 10). — 3. the ratio of the cephalic to the thoracic length (1: 1). — 4. the hardly arcuate and evenly deep parapsida. — 5. the wide, groove-like, and rugose impression on the side of the face (Fig. 6). — 6. the colour of the body.

***Phaenocarpa collaris* sp. n.**

(Figs. 1, 4, 8, 17)

♀. — Head cuboidal, one and a half times as wide as it is long (14:8). Eye not protuberant at all from outline of head (Fig. 17). Triangular area between inner margin of eye and scape impressed, very finely and sparsely punctate (Fig. 1). From linear furrow between clypeus and face, a short and punctate impression toward centre of face (Fig. 1). Head shiny and smooth. Face (and primarily the lateral impression), margin of clypeus, mandible, and occiput pubescent or with sparse, long hairs. Ocelli oval, forming an isosceles triangle: base of triangle somewhat longer than its sides. All three teeth of mandible pointed (Fig. 4), both bases of middle tooth excised, upper edge (toward face) slightly sinuous. Antennae fragmentary on both type-specimens: Holotype with first 13 joints of left antenna, and first 10 joints of right antenna left; Paratype with first 20 joints remaining on both antennae. Neither antenna longer than body. Ratio of first 4 flagellar joints 5:6:5:4.5 (Fig. 8). Antennal joints, compared with the majority of species, short, stout, and pubescent. — Head brownish yellow, vertex fumous. Mandible yellow, margins dark. Border between face and clypeus dark brown. Palpi pale yellow. Scape and pedicel light brownish yellow, first 5—6 flagellar joints darkening brownish yellow, other joints dark brown.

Thorax hardly two thirds as wide as the head (9.5:14), hence, in comparison with the majority of species, thorax wide, ratio of thoracic length to width 12:5. Thorax smooth and shiny. Pronotum slightly neck-like ("collaris", Fig. 17), sides impressed. Parapsida distally and gradually deepening and expanding, finely rugulose, arcuately decurrent into dimple deeper than parapsida. Prescutellar groove wide, crenulated. Edges of area submedia decidedly projecting on propodeum, almost entire area rugose. Sternauli present in complete width of mesopleura, median section expanding, crenulate. Parapsida, margin of scutellum, upper margins of propodeum and mesopleura hairy, otherwise thorax sporadically pubescent. — Pronotum and mesonotum, similar to head, brownish yellow, scutellum fumous brownish yellow. Metanotum and propodeum deep brown, other thoracic parts (mesopleura and sternum) blackish brown.

Wing (Fig. 17) almost as long as body: 2.5—2.6 mm (1:0.8—0.9), hyaline. Cell *R* not reaching alar apex, end of r_3 nearer to apex than to stigma. Ratio of r_2 to r_3 1:1.4, thus vein r_3 one and a half times as long as r_2. Otherwise venation of wings and configuration of cells without any conspicuous specific characters. Stigma and venation brownish yellow.

Legs, in comparison with other species, short and slightly incrassate (especially femur and tibia). All legs pubescent. Ratio of femur 3, tibia, and tarsus 1:1.4:1.35, therefore tarsus 3 almost as long as tibia 3. Legs brownish yellow, tarsi yellow, claws dark.

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Abdomen nearly as long (and wide) as thorax: 11:5. Ratio of length of tergite 1 to its distal width 18:11; ratio of proximal base, two spiracles, width and length of distal base 5:9:11:18. Spiracle in front of transversal median axis. Two ridges arising from proximal corner arcuately convergent to transversal median axis. Almost entire tergite lineately rugose. Other segments of abdomen smooth and shiny, sparsely pubescent, hairs in rows along distal margin of tergites. Ovipositor apparatus short, covered from above by abdomen. — Abdomen brownish yellow, gradually darkening distally. Ovipositor yellow, sheath dark brown.
Length of body 2.7—2.9 mm, alar expanse 5.6—5.8 mm.
Male and host unknown.
Locality: II/1: Svábhegy, Budapest, 9 May, 1895, 1 ♀, leg. SZÉPLIGETI (Holotype); Gellérthegy, Budapest, 3 May, 1895, 1 ♀, leg. SZÉPLIGETI (Paratype).

The new species is closely related to *Phaenocarpa pullata* (HALIDAY), differing by the slightly neck-shaped, pronotum, the slender body, the sculpture of the head, the ratio of the first 4 flagellar segments, and the colour of the body.

Distinguishing features

1. The neck-like pronotum (Fig. 17). — 2. the squat antennal joints (Fig. 8). — 3. the decurrence of the parapsida (Fig. 17). — 4. the cuboidal head. — 5. the pointed teeth of the mandible (Fig. 4). — 6. the ratio of the cephalic to the thoracic width (14:9.5). — 7. the colour of the body.

Remark

The collector of the new species, GY. SZÉPLIGETI, indicated its state on the label by "Ph. sp. n."

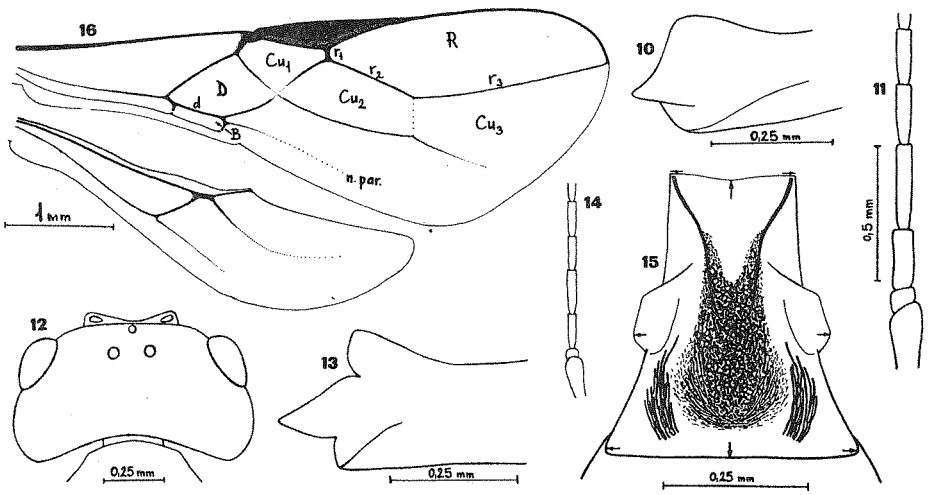

Fig. 10—16:

Fig. 10: *Phaenocarpa conspurcator* (HALIDAY): mandible. — Fig. 11. *Phaenocarpa conspurcator* (HALIDAY): first 4 antennal joints. — Fig. 12. *Phaenocarpa conspurcator* (HALIDAY): head from above. — Fig. 13. *Phaenocarpa eugenia* (HALIDAY): mandible. — Fig. 14. *Phaenocarpa eugenia* (HALIDAY): first 4 antennal joints. — Fig. 15. *Phaenocarpa conspurcator* (HALIDAY): tergite 1 (arrows indicating points of measurements. — Fig. 16. *Phaenocarpa conspurcator* (HALIDAY): right pair of wings

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Phaenocarpa conspurcator (HALIDAY)

(Figs. 10, 11, 12, 15, 16)

Alysia conspurcator HALIDAY, Entom. Mag., 1838, **5**, p. 236, nr. 38, ♀♂.
Phaenocarpa conspurcator (HALIDAY): MARSHALL, Cat. Brit. Hym., 1872, p. 128, nr. 8.
Phaenocarpa arctica THOMSON, Opusc. Entom., 1895, P. **20**, p. 2281, ♀♂.
Phaenocarpa tatrica NIEZABIETOWSKI, Spraw. Kom. fizyogr. Krakow, 1909, **44**, p. 60—61, ♀♂.

♀♂. — Head (Fig. 12) slightly more than twice as wide as it is long (15:7). Area between eye and scape rugose, otherwise head smooth and shiny. Face obtusely projecting in median line, below scape. Eye glabrous, only slightly protuberant from outline of head (viewed from above; Fig. 12). Proximal ocellus smaller than two posterior ocelli, forming an equilateral triangle, distance between them equalling double diameter of single ocellus. Proximal ocellus near antennal hollow. The two distal ocelli in, or slightly distally from, median line of eye. Facial pubescence long and dense, but hairs of occiput, and tempora short and sparse. Median tooth of mandible (Fig. 10) invariably pointed, two outside teeth generally blunt. Antenna longer than body (1.1—1.3:1), number of antennal joints (irrespective of sex) 30—35, joints thick, in comparison with *Phaenocarpa ruficeps*. Ratio of first 4 flagellar joints 9:12:8:7.5 (Fig. 11). — Head piceous black. Antennal hollow indistinctly rufous brown around scape. Vertex (around ocelli) occasionally indistinctly dark brown, or almost entire head (together with thorax and abdomen) brown. Mandible rusty red, margins black. Palpi pale yellow.

Thorax narrower than head (11:15). Triangularly expanding side (except wide margin) of pronotum always rugose to a certain extent. Mesonotum, scutellum, mesopleura, and sternum smooth and shiny. Rather narrow parapside present in its entire length and of uniform depth, not crenulate. Dimple never reaching prescutellar groove, no longer than width of groove. Sternauli wide, roughly crenulate. Proximal third (area superior) of propodeum almost smooth, shiny, other parts lineately and roughly rugose. Median and transverse ridges well defining areal superiores, while edges delimiting area submedia indistinct. — Entire thorax piceous black. Margin toward tegula of pronotal side reddish yellow, mesonotum indistinctly brown to a varying extent, tegula pale yellow.

Wing (Fig. 16) longer than body, 4.8—5.2 mm (1.3:1), hyaline. Cell *R* extending to alar apex. Vein r_1 short, ratio of length of r_2 to r_3 1:2.2. Cell Cu_2 strikingly long, ratio of length to width 3:1. *N. par.* not interstitial (arising from middle of *B*). Stigma narrow, yellowish brown, lower edge light. Venation yellowish brown.

Legs normal, brownish yellow. Coxae conspicuously long. Ratio of femur 3, tibia, and tarsus 1:1.4:1.25.

Abdomen slightly shorter than head and thorax combined (1:1.2), ratio of length to width 2.5:1, slightly compressed laterally (20:18) (Fig. 15). Ratio of proximal base, two spiracles, width and length of distal base 9:11:18:20. Spiracle protruding in middle of tergite or slightly proximally of transversal median axis. Tergite 1 sculptured: two ridges originating from proximal corner arcuately convergent, medially nearing one another in proportion to their distance measured from spiracle; median area rugose, latero-distally lineately or roughly lineately rugose. Other tergites and all sternites smooth and shiny. Ovipositor apparatus longer than abdomen (1.4:1). — Abdomen piceous black, tergites 2—3 indistinctly brown or rufous (♂♂), occasionally nearly entire abdomen brown (together with head and thorax). Ovipositor brownish yellow, sheath brown.
Length of body: 3.8—4 mm (♀♀), 3.4—4.1 mm (♂♂); alar expanse 7.4—8.8 mm.
Host unknown. PETERSEN (1956: 33) says about its biology: " . . . The typical biotope is the meadow, where it is often caught in or on horse-, sheep-, and cow-dung, apparently searching for dipterous larvae . . . taken on sheep-dung together with numerous specimens of the borborid *Crumomyia nigra* MEIGEN . . ."

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Range: Europe (Iceland, Ireland, England, Sweden, Belgium, Switzerland, Germany, Denmark, Spain, Poland, Hungary, Roumania, Soviet Union); a species collected sporadically in the Carpathian Basin.

Localities: I/1: Rákos, Budapest, 7 May, and 25 August, 1895, 2 ♂♂, leg. Szépligeti; Deliblát (= Deliblato), Yugoslavia, 12 July, 1892, 1 ♀, leg. Szépligeti; Szigetszentmiklós, Oct., 1911, 1 ♂, 7 May, 1912, 7 ♂♂, leg. Bíró; — II/1: Budapest, 4 July, 1895, 1 ♀, leg. Szépligeti; Velence, Lake Velence, 18 May, 1951, 1 ♀, leg. Soós; — II/2: in Salicetum, Vác, 5 August, 1923, 1 ♀, leg. Bíró; — III/3: Priszlop, Kudsir Alps (= Prislop, Mții Şebeşului), Roumania, 1109 m. a. s. l., 9 August, 1913, 1 ♂, leg. Bíró; — III/4: Biharfüred (Stina de Vale), Roumania, 1907, 2 ♀♀, leg. Bíró; — III/5: Nagyenyed (= Aiud), Roumania, 1917, 3 ♀♀ and 1 ♂, leg. Bíró.

Distinguishing features

1. The shape of the head (Fig. 12). — 2. the ratio of the cephalic to the thoracic width (15:11). — 3. the shape of the mandible (Fig. 10). — 4. the venation of the wing (Fig. 16). — 5. the relative measurements and the sculpture of tergite 1 (Fig. 15). — 6. the length of the ovipositor. — 7. the colour of the body.

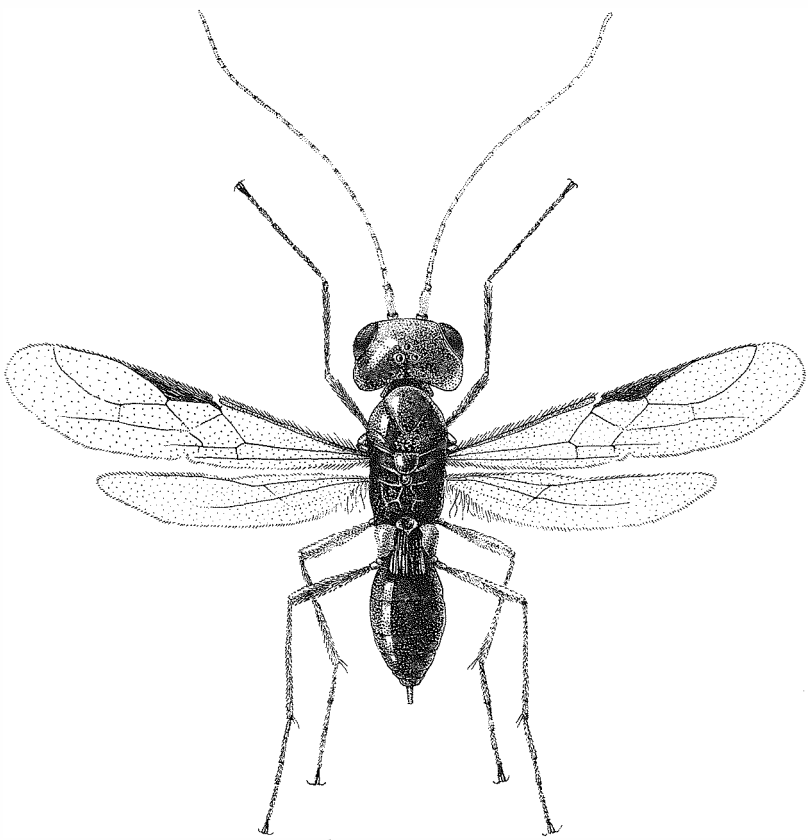

Fig. 17. *Phaenocarpa collaris* sp. n.

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Remark

1. I have examined both the female and the male (Holo- and Para-)types of *Phaenocarpa arctica* THOMSON. I can state that the 2 type-specimens of *Phaenocarpa arctica* THOMSON do not differ to such a degree that its further specificity could be upheld. Thus I include in *Phaenocarpa arctica* THOMSON as a junior synonym of *Phaenocarpa conspurcator* HALIDAY.

2. *Phaenocarpa tatrica* NIEZABIETOWSKI is also synonym with *Ph. conspurcator* HALIDAY. I might see two female and two male types compared and reidentified by ST. WIACKOWSKI. It did not seem any structural, sculptural, or colour difference from *Phaenocarpa conspurcator* HALIDAY, therefore I synonymized it with *Phaenocarpa conspurcator* HALIDAY.

Phaenocarpa eugenia (HALIDAY)

(Figs. 3, 7, 13, 14)

Alysia eugenia HALIDAY, Ent. Mag., 1838, **5**, p. 234, nr. 33, ♀♂.

Phaenocarpa eugenia (HALIDAY): MARSHALL, Cat. Brit. Hym., 1872, p. 127.

♀. — Head nearly twice as wide as it is long (15:8). Median, triangular portion of face and area along inner margin of eye finely punctate (-rugulose), (Fig. 17). Eye only slightly protruding. Ocelli forming an isosceles triangle: proximal ocellus separated from two distal ocelli by a distance equalling one and a half diameter of ocelli; two distal ocelli at a distance of twice their diameter. Pubescence of face and clypeus long and dense, but vertex, occiput and tempora almost glabrous, smooth and shiny. Upper and median teeth of mandible (Fig. 13) pointed, lower tooth blunt. Imaginary line connecting the two points where middle tooth joins upper and lower teeth not perpendicular to longitudinal axis of mandible: upper tooth projecting, being "more backward" than lower tooth. Antenna almost one and a half times as long as the body (1.4—1.5:1), number of antennal joints 42—44. Also last joint of antenna longer than wide. Ratio of first 4 flagellar joints as 10:12:9:9 (Fig. 14). — Head and mandible yellow. Median punctate portion of face indistinctly brown-spotted, vertex, and occiput brownish black, only laterally yellow. Scape and pedicel yellow, flagellum fumosely yellow. All antennal joints apically with a thin dark ring. Apex of median mandibular tooth brown, margin of entire mandible brownish yellow.

Thorax two thirds the width of the head (10:15). Pro-, mesonotum, and scutellum smooth and shiny. Parapsida evenly deep in its entire length, median section almost parallel, distally arcuately convergent into dimple. The latter looks as if ending in prescutellar groove. Mesopleura rugose to a greater extent than normal: rugosity of upper corner (below tegula) extending along proximal margin to sternauli. Sternauli present in entire length of mesopleura, its distal third attenuating, crenulate. Propodeum rugose, distally gradually rougher. — Thorax black. Pronotum, prosternum, and tegula slightly fumous yellow.

Wing (Fig. 3) hyaline, as long as body (4.5 mm). Cell *R* reaching alar apex. Vein r_1 not as long as usual, ratio of length of vein v_2 to r_3 1:2.3; vein r_3 hardly curved. Ratio of length to width of Cu_2 5:2, its two longitudinal veins (r_2 and cu_2) almost parallel. *N. par.* not interstitial. Stigma yellow, venation brownish yellow.

Legs normal, yellow. Ratio of femur 3, tibia and tarsus 1:1.6:1.6, therefore tibia and tarsus conspicuously long.

Abdomen shorter than head and thorax combined (1:1.3), ratio of its length to width 2.4:1, in general laterally flattened. Tergite 1 almost completely lineately rugose, proximal fourth and distal corners smooth. Tergite 1 longer than its distal length (22:17). Ratio of proximal base, two spiracles, length and width of distal base 7:11:17:22. Spiracle situated in front of transversal median axis. Two ridges originating from proximal corner slightly

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broken near spiracle, otherwise arcuately convergent (but not fused). Two ridges nearer to one another at point of fraction than to spiracle. Otherwise abdomen smooth and shiny. Segments apparently fused (segmental borders discernible only by magnifications 60—70). On margins of sternites (and tergites) long and not densely spaced hairs in rows. Ovipositor apparatus shorter than body (0.7:1). — Tergite 1 black, otherwise abdomen (similar to head) yellow. Ovipositor rusty red, sheath black.

Length of body 4.4—4.5 mm; alar expanse 9.5—9.7 mm.

Host unknown. MORLEY (1933:160) says about its ecology: „. . . is usually found sitting upon bracken upon dry heaths, in such a situation several have been taken by me . . . I suspect it of emerging from fungivorous Diptera upon the adjacent pine trees".

Range: Ireland, England, Sweden, Finland, Hungary. — It was collected in two localities in the Carpathian Basin: I/1: netted on meadow, Fót, 1 August, 1960, 1 ♂, leg. F. MIHÁLYI; — VI/2: shores of the river Zala, Vörs, Kisbalaton, 10 May, 1 ♀, leg. KASZAB et SZÉKESSY. New for the Carpathian Basin (Hungary).

Distinguishing features

1. The shape of the head (15:8) the ratio of the cephalic to the thoracic length (15:10). — 2. the shape of the mandible and the relative position of the teeth (Fig. 13). — 3. the ratio of the first 4 flagellar joints (10:12:9:9). — 4. the sculpture of the face (Fig. 7). — 5. the venation of the wing (Fig. 3). — 6. the ratio of the abdominal length to that of the ovipositor (1:0.7).

***Phaenocarpa eugenia* var. *rufoflava* ♂ var. nov.**

Difference from the nominate form: 1. two longitudinal veins (r_2 and r_3) of Cu_2 parallel, ratio of its length to width 5:2.5; 2. head, thorax, and abdomen reddish yellow ("rufoflava"); 3. mesonotum, scutellum, metanotum, propodeum, meso- and metapleurae slightly fumose; 4. end of abdomen (bordered indistinctly) black; 5. first 3 antennal joints reddish yellow, joints 4—6 fumose, other joints brownish black.

Locality: Vizesfás, Com. Békés, 2 August, 1957, 2 ♂♂, leg. F. MIHÁLYI.

Phaenocarpa eunice (HALIDAY)

(Figs. 22, 25, 26)

Alysia eunice HALIDAY, Entom. Mag., 1838, 5, p. 235, ♀.

Phaenocarpa eunice (HALIDAY): MARSHALL, Cat. Brit. Hym., 1872, p. 128.

Phaenocarpa nimia STELFOX, Proc. Roy. Irish Acad., 1941, 47 (B 1), p. 6—8, ♂.

Phaenocarpa nimia STELFOX, Ent. mon. Mag., 1944, 80, p. 69.

The detailed description of the species is given after STELFOX (1941: 6—8):

♂. — Ratio of cephalic width to length 13:7, hence nearly twice as wide as it is long. Eye protruding, glabrous, oval. Head smooth and shiny. Face, clypeus, mandible, and lower portion (toward mandible) of tempora pubescent. Tempora hardly narrower than diameter of eye. Two distal ocelli larger than proximal third, forming an equilateral triangle, base of triangle almost twice as long as its sides. Upper tooth (Fig. 22) of mandible rounded, middle tooth pointed, lower tooth slightly obtuse; only lower base (toward palpi) of middle tooth incised. Antenna 31-jointed, one and a half times as long as the body. Flagellar joints long and thin, ratio of first 4 joints 12:13:11:9 (Fig. 25). Beyond joint 3 flagellar joints gradually shortening, last 7—8 joints of equal length. — Head brownish black. Clypeus brown, mandible yellow (base tending to brown), palpi pale yellow. First 3 antennal joints reddish yellow, joints 4—5 (—6) darkening, other joints dark brown.

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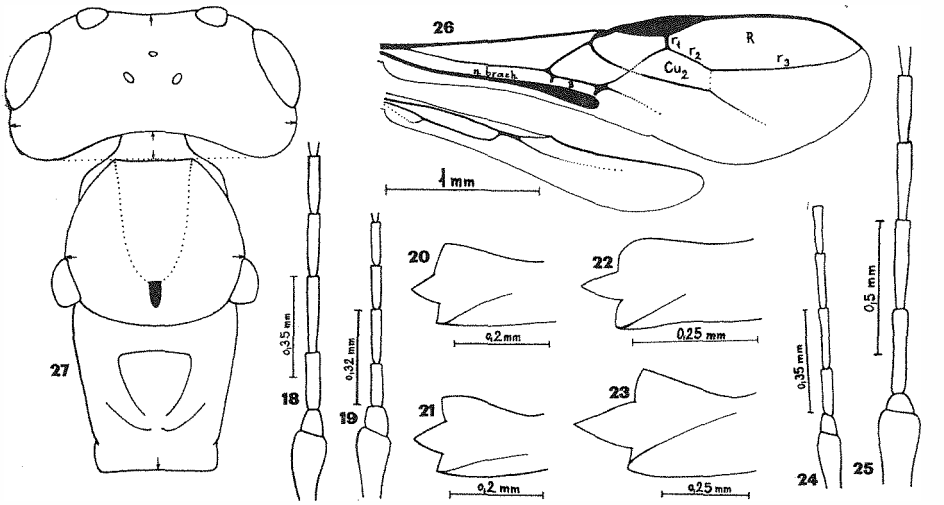

Fig. 18—27:

Fig. 18. *Phaenocarpa livida* (HALIDAY): first 4 antennal joints. — Fig. 19. *Phaenocarpa laticellula* sp. n.: first 4 antennal joints. — Fig. 20. *Phaenocarpa flavipes* (HALIDAY): mandible. — Fig. 21. *Phaenocarpa laticellula* sp. n.: mandible. — Fig. 22. *Phaenocarpa eunice* (HALIDAY): mandible. — Fig. 23. *Phaenocarpa livida* (HALIDAY): mandible. — Fig. 24. *Phaenocarpa flavipes* (HALIDAY): first 4 antennal joints. — Fig. 25. *Phaenocarpa eunice* (HALIDAY): first 4 antennal joints. — Fig. 26. *Phaenocarpa eunice* (HALIDAY): right pair of wings. — Fig. 27. *Phaenocarpa livida* (HALIDAY): head and thorax from above (arrows indicating points of measurements)

Ratio of thoracic to cephalic width 9.5:13. Ratio of thoracic length to width 9.5:4.5. Thorax smooth and shiny. Margin of pronotum finely rugulose. Parapsida present only in traces (its decurrence not marked by hairs); dimple deep. Prescutellar groove crenulate. Two areae superiores of propodeum nearly smooth, other areas roughly rugose. Sternauli roughly crenulate, wide. Longitudinal median line of mesosternum crenulate. — Thorax brownish black (similar to head). Prosternum brown, tegula yellow.

Wing (Fig. 26) slightly fumose, as long as body, narrow (in comparison with other species): ratio of length to greatest width 13:5. Cell *R* extending almost to alar apex, end of vein r_3 slightly bent. Vein r_1 relatively long, ratio of length of r_2 to r_3 1:3. Ratio of length to width of Cu_2 2:0.8. End of *n. brachialis* (at *B*) swollen. Stigma and venation yellowish brown.

Legs normal, pubescent. Ratio of femur 3, tibia, and tarsus 1:1.4:1.35. Leg 1 yellow, tarsus fumose. Coxae and trochanters 2—3 yellow, femora and tibiae slightly fumous yellow, tarsus fumous brownish yellow.

Abdomen slightly longer than thorax (1:0.8), but shorter than head and thorax combined. Ratio of abdominal length to width 2.5:1, as wide as (or slightly narrower than) thorax. Ratio of length to distal width of tergite 1 as 17:13. Ratio of proximal base, two spiracles, distal width and length 10:11:13:17. Spiracle situated considerably in front of transversal median axis, hardly protuberant. Proximal third of tergite 1 smooth, other surfaces finely and lineately rugulose (Fig. 5, in STELFOX, 1941: 4). Other abdominal segments smooth

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and shiny, sparsely pubescent. — Tergite 1 blackish brown, other tergites brown, end of abdomen darkening.

Length of body 3.5 mm (according to STELFOX 4 mm), alar expanse 8 mm.

♀ (not yet collected in the Carpathian Basin). — Ovipositor apparatus slightly longer than abdomen. — *N. brachialis* not swollen. Otherwise as male.

Host unknown.

Range: Ireland, England, Roumania. — Collected in a single locality in the Carpathian Basin: III/4: Remec (= Remeț), Roumania, 15 July, 1907, 1 ♂, leg. BÍRÓ. New for the fauna of the Carpathian Basin (Roumania).

Distinguishing features

1. The lack of the parapsida. — 2. the fine rugulosity of the first tergite. — 3. the long antenna. — 4. the shape of the mandible (Fig. 22). — 5. the swollen *n. brachialis* of the male (Fig. 26). — 6. the ovipositor slightly longer than the abdomen. — 7. the colour of the body.

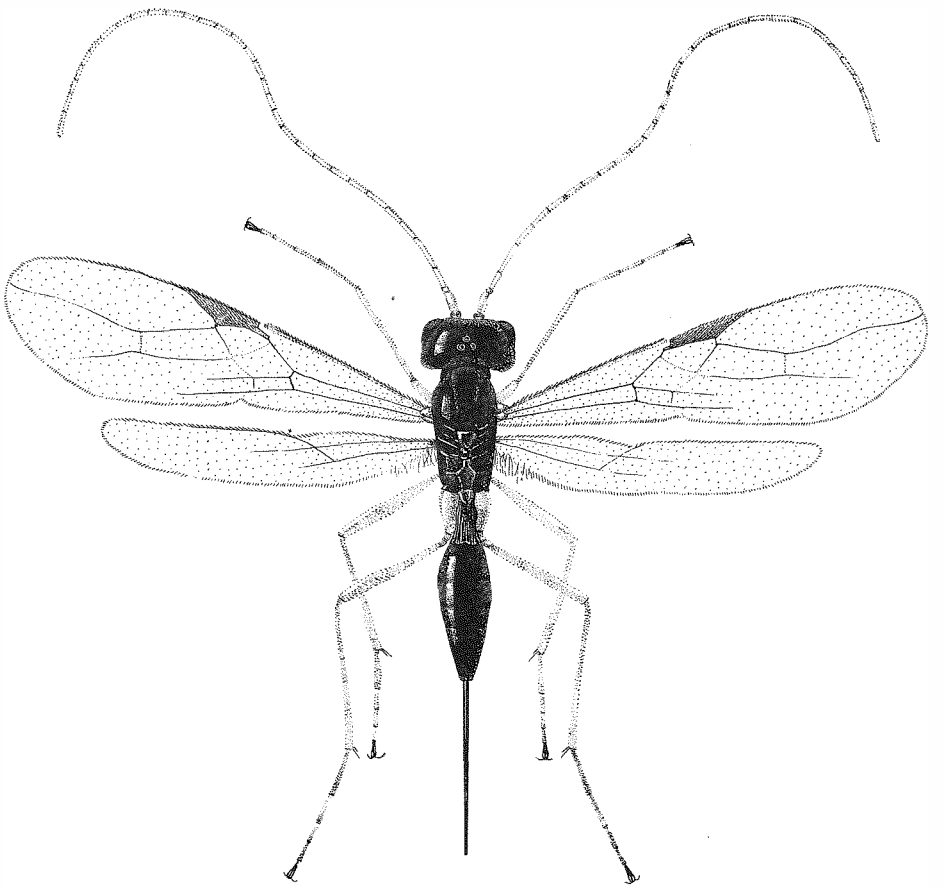

Fig. 28. *Phaenocarpa flavipes* (HALIDAY)

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Phaenocarpa flavipes (HALIDAY)

(Figs. 20, 24, 28)

Alysia flavipes HALIDAY, Ent. Mag., 1838, **5**, p. 236, ♀ ♂.
Phaenocarpa flavipes (HALIDAY): MARSHALL, Cat. Brit. Hym., 1872, p. 128.

♀♂. — Ratio of cephalic width to length 10:6 (Fig. 28). Eye not protruding from outline of head, almost rounded, glabrous. Arrangement of ocelli similar to that of *Phaenocarpa tabida*. Tempora (in relation to eye) not protuberant: cephalic width slightly less at tempora than at eye. Head smooth and shiny, face finely rugulose near inner margin of eye. Hairs of face, clypeus, and mandible long, occipital hairs sparse. All three teeth of mandible (Fig. 20) pointed, middle tooth relatively small, imaginary line connecting lower and upper bases not perpendicular to longitudinal axis of mandible (lower tooth slightly "more backward"). Antenna long, nearly twice (♀♀) or twice (♂♂) as long as body, number of antennal joints 30—33. Ratio of first 4 flagellar joints 6.5:9:8:7 (Fig. 24). All joints pubescent. Flagellar joints gradually shortening, only last 3—4 joints of equal length. — Head brownish black (♀♀) or brown (♂♂). Face generally lighter than other parts of head. Mandible brownish yellow, palpi pale yellow, base of tempora (toward mandible) light (depending upon basic colour, brown, yellowish brown, or yellow). Antenna dark yellow (♀♀) or brown (♂♂), scape and pedicel always yellow.

Ratio of thoracic to cephalic width 7:10 (Fig. 28). Ratio of thoracic length to width 7:3.2, therefore thorax relatively long. Hardly pubescent. Parapsida present in traces only, its decurrence marked by hairs. Dimple deep, almost reaching prescutellar groove. The latter wide, deep, crenulate. Scutellum rounded, triangular. All areas of propodeum present (♀♀), or only area submedia defined by absence of transversal median ridge (♂♂). Propodeum smooth and shiny, area submedia and areae sublaterales occasionally rugulose. — Thorax brownish black (♀♀) or brown (♂♂). Prothorax light to a varying degree. Tegula yellow.

Wing (Fig. 28) hyaline, longer than body, 1.2—1.4:1 (♀♀) or 1.1—1.2:1 (♂♂). Cell *R* extending to alar apex. Vein r_1 short, ratio of r_2 to r_3 2.5:1. Cell Cu_2 nearly thrice (♀♀) or thrice (♂♂) as long as it is wide. *N. par.* interstitial. Stigma and venation yellowish brown.

Legs normal, yellow, claws dark. Ratio of femur 3, tibia, and tarsus 1:1.35:1.35.

Abdomen (Fig. 28) narrow; as long as (♀♀) or shorter than (♂♂) head and thorax combined, but longer than thorax (♂♂). Ratio of abdominal length to width 9:3, narrower than thorax (0.9:1). Tergite 1 narrow, ratio of its length to distal width 9:3. Ratio of proximal base, two spiracles, distal base and length 2:2.5:3:9. Spiracle situated in front of transversal median axis. Apart from the latero-distal corner, tergite 1 longitudinally lineately rugose. Other segments smooth and shiny. Hairs in rows on distal margins of segments. Ovipositor apparatus as long as abdomen. — Abdomen, similar to head and thorax, blackish brown (♀♀) or brown (♂♂). Tergites 2—3 and all sternites not so dark (♀♀). Ovipositor brownish yellow, sheath brownish black.

Length of body 2.1—2.4 mm (♀♀: 2.1—2.3 mm, ♂♂: 2.2—2.4 mm), alar expanse 4.8 to 5.5 mm.

Host unknown.

Range: England, Holland, Poland, Czechoslovakia, Hungary, Roumania. — Collected sporadically in the Carpathian Basin: I/1: Örszentmiklós, 6 Oct., 1913, 1 ♀, leg. SAJÓ; — II/1: Netted in Quercetum petraeae-cerris, around Alsópere, Bakonynána, 26—28 August 1964, 1 ♀, leg. PAPP; Svábhegy, Normafa-Disznófő, Budapest, 22 June, 1899, 1 ♀, leg. SZÉPLIGETI; Hármashatárhegy, Budapest, 30 May, 1895, 1 ♂, leg. SZÉPLIGETI; Vinyesándor-major, Cuha valley, 27 June, 1957, 1 ♀, leg. PAPP.

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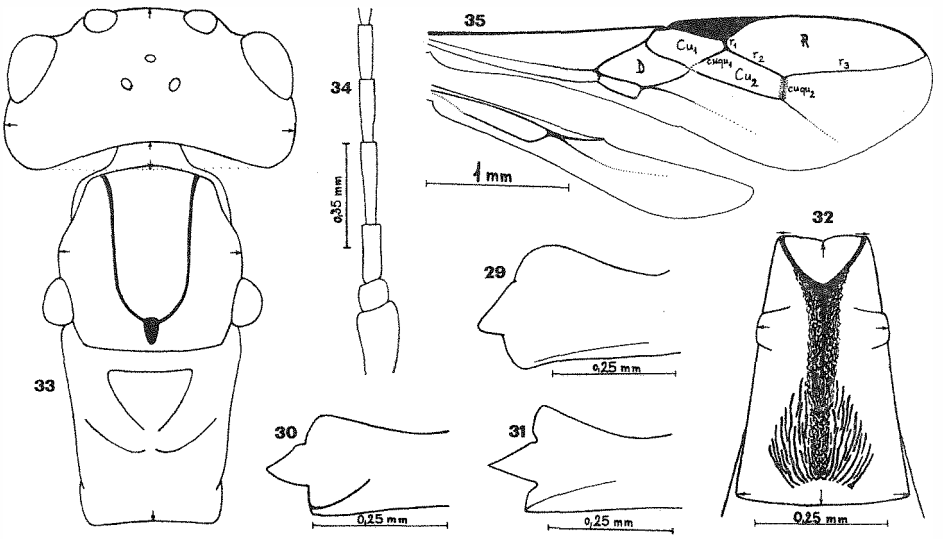

Fig. 29—35:

Fig. 29. *Phaenocarpa pratellae* (CURTIS): mandible. — Fig. 30. *Phaenocarpa picinervis* (HALIDAY): mandible. — Fig. 31. *Phaenocarpa nitida* THOMSON: mandible. — Fig. 32. *Phaenocarpa picinervis* (HALIDAY): tergite 1 (arrows indicating points of measurements). — Fig. 33. *Phaenocarpa nitida* THOMSON: head and thorax from above (arrows indicating points of measurements). — Fig. 34. *Phaenocarpa nitida* THOMSON: first 4 antennal joints. — Fig. 35. *Phaenocarpa picinervis* (HALIDAY): right pair of wings

Distinguishing features

1. The short body (2.1—2.4 mm). — 2. the narrow first tergite (9:3). — 3. the absence of the parapsida. — 4. the surface of the propodeum. — 5. the narrow and long Cu_2 (Fig. 28). — 6. the ratio of the ovipositor apparatus to the abdomen (1:1). — 7. the colour of the body.

Phaenocarpa laticellula sp. n.

(Figs. 19, 21, 36)

♀. — Head (Fig. 36) slightly cuboidal, ratio of width to length 10:6.5. Head smooth and shiny. Face very finely rugulose along inner margin of eye, rugulosity expanding toward scape. Hairs of face, clypeus, and mandible long and sparse, but short (yet also sporadic) in other cephalic areas (vertex, occiput, tempora). Eye hardly protruding from outline of head, oval. Tempora hardly wider than one third of the diameter of the eye. Cephalic width between tempora slightly less than between eyes. Ocelli forming an isosceles triangle, base of triangle nearly one and a half times as long as its sides. Proximal ocellus smaller than the two distal ocelli. All three teeth of mandible (Fig. 21) pointed, lower and middle teeth slightly projecting (axis of lower and upper teeth subtending an acute angle with longitudinal axis of mandible). Lower margin of mandible arcuate, in contrast to other species. Antenna nearly one and a half times as long as the body (1.3—1.4:1), number of antennal joints 26. Ratio of first 4 flagellar joints 6:7.5:6.5:6 (Fig. 19). Joints gradually shortening to last joint. — Head blackish brown. Mandible yellow, edge of teeth dark. Base of tempora light. Palpi pale yellow. Scape and pedicel yellow, flagellar joints 1—3(—4) darkening brown, other joints brown.

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Ratio of thoracic (Fig. 36) to cephalic width 10:7, hence thorax rather wide. Ratio of thoracic length to width 9:4.4. Pro- and mesonotum smooth and shiny. Proximal fourth of parapsida deep (on mesonotal surface bending toward pronotum), otherwise present only in traces and marked by hairs. Dimple deep. Prescutellar groove crenulate, laterally closed. Scutellum smooth and shiny, rounded, triangular. Metanotum smooth and shiny. Edges on propodeum incomplete: only proximal half of median ridge, one fourth of edge defining area submedia, middle of transversal ridge (originating from edge of area submedia), and lateral ridge present. Propodeum finely rugulose only along ridges, otherwise smooth and shiny. Sternauli crenulate. Hairs of thorax (primarily those of scutellar margin, metanotum and propodeum) long and sparse. — Thorax dark brown, distally (beginning from scutellum) slightly lightening.

Wing (Fig. 36) hyaline, longer than body, 2.3 mm (1.1:1). Cell Cu_2 strikingly wide, ratio of length to greatest width 1.3:1 („laticellula"). Cell R extending to alar apex. Vein r_1 short, ratio of r_2 to r_3 1:2, hence r_3 short (in contrast to majority of species). Vein r_3 sinuous. Stigma and venation brownish yellow.

Legs normal, pubescent. Ratio of femur 3, tibia and tarsus 1:1.5:1.5. Legs yellow, end of tarsal joints and claws black.

Abdomen as long as thorax, but slightly narrower (1:0.9). Ratio of abdominal length to width 9:6.5. Ratio of proximal base, two spiracles, width and length of distal base 4:5:6.5:9. Spiracle considerably anterior of transversal median axis, hardly protuberant.

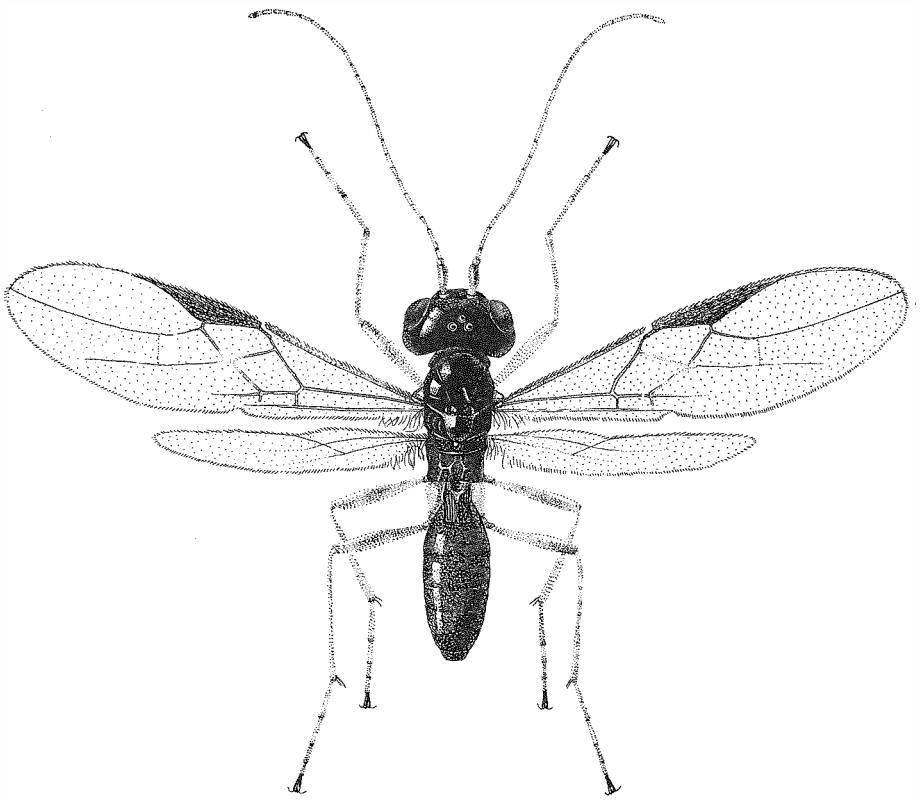

Fig. 36. *Phaenocarpa laticellula* sp. n.

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Median portion of tergite 1 conspicuously protuberant between two ridges originating from corner of proximal base, finely rugulose, lateral margin smooth, shiny. Other abdominal segments smooth and shiny, with sparse, long hairs. Ratio of ovipositor apparatus to abdominal length 1.6:1, hence slightly longer than half of abdomen. — Abdomen dark brown, protuberant section of tergite 1 yellowish brown, lateral margins yellow. Ovipositor apparatus yellow, sheath dark brown.
Length of body 2.1 mm, alar expanse 2.4 mm.

♂. — Differences from female: 1. Head more cuboidal, ratio of width to length 9:7; 2. Number of antennal joints 23—24; 3. Ratio of cephalic to thoracic width 9:7; 4. Ratio of thoracic length to width 8:4.5; 5. Abdomen as long as head and thorax together; 6. Head dark brown, thorax and abdomen brown, otherwise distribution of lighter parts as in female; 7. Length of body 2.2—2.3 mm; alar expanse 4.8—5 mm.

Localities: II/1: Hüvösvölgy, Budapest, 21 July, 1926, 2 ♂♂, leg. Bíró (Paratypes); Visegrád, 12 June, 1926, 1 ♀, leg. Bíró (Holotype).

The new species is most closely related to *Ph. flavipes* Haliday, but differs by the protuberant median portion of the first tergite, the wide Cu_2, the ratios of the head, thorax, and abdomen, and the colour of the body.

Distinguishing features

1. The short body .— 2. the slightly cuboidal head (Fig. 36). — 3. the wide Cu_2 (Fig. 36). — 4. the almost complete disappearance of the parapsida. — 5. the incomplete edges of the propodeum. — 6. the protuberant median portion of the first tergite. — 7. the colour of the body.

Phaenocarpa livida (Haliday)

(Figs. 18, 23, 27)

Alysia livida Haliday, Entom. Mag., 1838, **5**, p. 237, ♀♂.
Phaenocarpa livida (Haliday): Marshall, Cat. Brit. Hym., 1872, p. 128.

♀♂. — Head twice as wide as it is long (14:7) (Fig. 27), smooth and shiny. Face between eye and scape as well as impression between clypeus and face very finely rugulose. Head hairy, with dense, long hairs on face, clypeus, and mandible. Eye only slightly protruding, glabrous, nearly circular (rather excentrical toward mandible). Ocelli located as in *Ph. nitida*. Tempora as wide as half the diameter of the eye, not protuberant (in relation to eye) when viewed from above (Fig. 27). All three teeth (Fig. 23) on mandible pointed. Middle tooth slightly longer than half the length of the other parts of the mandible. Antenna longer than body, ♀♀ 1.2—1.3:1, ♂♂ 1.4—1.5:1. Number of antennal joints 27—28 (♀♀) or 31—33 (♂♂). Ratio of first 4 flagellar joints 8:10.5:8.5:8 (Fig. 8). All joints pubescent. Flagellar joints gradually shortening, last 7—8 (♀♀) or 9—10 (♂♂) joints of equal length. — Head brownish black. Clypeus (almost entirely) and mandible brownish yellow, base of tempora (toward mandible) brown. Scape and pedicel yellow, first 3—4 flagellar joints (♂♂!) brownish yellow tending to dark, other joints brownish black.

Ratio of thoracic to cephalic width (Fig. 27) 9:14. Ratio of thoracic length to width 10:5.5. Thorax smooth and shiny, sporadic hairs (on propodeum) long. Parapsida present in traces only, marked by hairs. Dimple deep, generally as long as (or shorter than) width of prescutellar groove. This latter shallow, wide, finely rugulose (and not crenulate). Median and transversal median ridges of propodeum clearly projecting; proximal to transversal median ridge hardly and finely rugulose, distally ridge-like wrinkles, rather concentrically arranged (♀♀!). Distal quarter of sternauli attenuately broken. — Thorax brownish black, tegula yellow.

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Wing hyaline, longer (♀♀) or hardly longer (♂♂) than body (♀♀ 1.2—1.3:1, ♂♂ 1.05 to 1.1:1). Cell *R* extending to alar apex. Vein r_1 short, originating near middle of stigma (♂♂!), ratio of r_2 to r_3 1:2.2. *N. par.* almost interstitial. Stigma and venation pale yellow.

Legs normal. Ratio of femur 3, tibia, and tarsus 1:1.4:1.3. Leg brownish yellow (♀♀) or yellow (♂♂).

Abdomen wider than thorax (1:0.8), also longer than thorax, but shorter than head and thorax combined. Ratio of abdominal length to width 1:2.3 (♀♀) or 1:2.6 (♂♂). Tergite 1 relatively narrow, one and a half times as long as the width of its distal base. Ratio of proximal base, two spiracles, width and length of distal base 8:10:13:19. Spiracle situated considerably anterior of transversal median axis, hardly protruding. Lateral margin of tergite 1 nearly smooth, otherwise lineately (♀♀) or irregularly (♂♂) rugulose. Other segments smooth and shiny. Distal margin of segments with scattered hairs. Ovipositor apparatus longer than half of abdomen (0.7:1). Abdomen dark brown, tergites 2—3 of males brown. Tergite 1 brownish black, longitudinal median stripe of sternites brownish yellow (♀♀). Ovipositor brownish yellow, sheath black.

Length of body 3—3.5 mm (♀♀ 3.2—3.5 mm, ♂♂ 3—3.3 mm), alar expanse 7.5—9 mm.

Host unknown.

Range: England, Sweden, Hungary, Soviet Union. — Collected in 1 hilly and 2 plain localities in the Carpathian Basin: I/1: Borosjenő (= Ineu), Roumania, 1 ♀, leg. DIÓSZEGHY; Rákos, Budapest, 1 ♀ 1 ♂, leg. SZÉPLIGETI; Túrkeve, Sept. 1933, 1 ♀, leg. ? — II/1: Hűvösvölgy, Budapest, 4 July, 1929, 1 ♂, leg. BÍRÓ.

Distinguishing features

1. The almost total absence of the parapsida. — 2. the shape of the mandible (Fig. 23). — 3. the ratio of the first 4 flagellar joints: 8:10.5:8.5:8 (Fig. 18). — 4. the relatively wide thorax (Fig. 27). — 5. the finely rugulose prescutellar groove. — 6. the ridges and sculpture of the propodeum. — 7. the shape and sculpture of the first tergite. — 8. the colour of the body.

Phaenocarpa livida var. *flava* ♂, var. nov.

Difference from nominate form: all antennal joints yellow.

Locality: I/1: Szigetszentmiklós, May, 1912, 1 ♂, leg. BÍRÓ.

Phaenocarpa nitida THOMSON (♂ novus)

(Figs. 31, 33, 34)

Phaenocarpa nitida THOMSON, Opusc. Entom., 1895, P. 20, p. 2283, ♀.

♀. — Head (Fig. 33) almost twice as wide as it is long (14:8). Eye protruding from outline of head when viewed from above, glabrous, elliptical. Ocelli forming an isosceles triangle, base of triangle nearly twice as long as its sides. Ocelli oval, two distal ocelli one and a half times as large as proximal third. Bisecting line of triangle formed by ocelli coinciding with median axis of eye. Head smooth and strikingly shining („nitida"). Clypeus, centre of face (above clypeus), and base of tempora (above mandible) very finely rugulose, occasionally also smooth. Face, clypeus, and mandible pubescent, other cephalic parts with sparse and minute hairs. Tempora as wide as two thirds of the diameter of the eye, protuberant (in relation to eye) when viewed from above (Fig. 33). Upper tooth of mandible (Fig. 31) slightly obtuse, middle and lower teeth pointed. Both bases of middle tooth excised. Antennae almost one and a half times as long as the body (1.4:1), number of antennal joints 35—37. Ratio of first 4 flagellar joints 7:11:8:7.5 (Fig. 34). All joints pubescent.

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Flagellar joints distally shortening, last 7—9 joints of equal length. — Head piceous black. Palpi pale yellow. Mandible brownish yellow. Scape and pedicel fumosely brownish yellow, flagellum dark brown.

Ratio of thoracic to cephalic width 8:13, hence thorax narrow in comparison with the majority of species (Fig. 33). Ratio of thoracic length to width 15:8. Lower (sternal) margin of pronotal sides finely crenulate. Parapsida evenly deep and wide in its entire length, also very finely crenulate. Dimple as long as width of prescutellar groove, deep. Prescutellar groove shallow, with a median, ridge-like crenulum. Proximal half of propodeum almost entirely smooth, distal half roughly rugose. Edges of area submedia and median ridge present, other edges indistinct. Sternauli distally attenuating, roughly crenulate. Thorax sporadically hairy-pubescent, scattered hairs of propodeum as long as those of face. — Thorax piceous black, strikingly shining („nitida"). Tegula yellow.

Wing hyaline, longer than body 4—4.1 mm (1.1—1.2:1). Cell *R* almost reaching alar apex. Vein r_1 short, ratio of r_2 to r_3 2.1:1. *N. par.* not interstitial. Stigma and venation pale yellow.

Legs normal. Ratio of femur 3, tibia, and tarsus 1:1.3:0.9, hence tarsus shorter than femur. Leg brownish yellow, tarsi fumous, end of tarsi and claws almost black.

Abdomen narrower than thorax (0.9:1), but as long as thorax, ratio of length to width 1:0.5, flattened when viewed from above. Tergite 1 as long as its distal width. Ratio of proximal base, two spiracles, length and width of distal base 8:10.5:13:19. Spiracle situated in transversal median axis, protuberant. Median portion — protuberant between edges — of tergite 1 longitudinally and lineately rugose, otherwise smooth and shiny. Other segments smooth and shiny, sparsely hairy. Ovipositor apparatus half as long as abdomen. — Abdomen brownish black. Ovipositor brownish yellow, sheath black.

Length of body 3.6—3.8 mm, alar expanse 9—11 mm.

♂. — Differences from female: 1. Head entirely smooth. — 2. antenna twice as long as body. — 3. prescutellar groove deep, not crenulate. — 4. tergite 1 narrower (1:0.85). — 5. tergites 2—3 yellowish brown. — 6. length of body 3.3—3.5 mm, alar expanse 7.5—9 mm.

THOMSON described *Phaenocarpa nitida* from a female specimen only. By the kind help of H. ANDERSSON (Lund), I received a specimen from the THOMSON collection which, as I found it, represents the male sex of *Phaenocarpa nitida*, collected in the terra typica (Örtofta, Scania, Sweden).

Host unknown.

Range: Sweden, Hungary. — Collected hitherto in a few localities in the Carpathian Basin: I/1: Rákos, Budapest, 7 May, 2 ♂♂; 25 August, 1895, 1 ♂, leg. SZÉPLIGETI; Bugac, 23 May, 1898, 1 ♂, leg. SZÉPLIGETI; the Gemenc forest, Pörböly, 18 May, 1957, 1 ♂, leg. MIHÁLYI; Sárszentmihály, 27 May, 1923, 1 ♂, leg. BÍRÓ; Szigetszentmiklós, 30 Sept., 1911, 1 ♂, leg. BÍRÓ. — II/1: Budapest, 1 ♀, leg. SZÉPLIGETI. — VI/2: Diás, Kisbalaton (Vörs), 31 August — 2 Sept., 1950, 1 ♂, leg. KASZAB. New for the fauna of the Carpathian Basin (Hungary).

Distinguishing features

1. The evenly deep parapsida. — 2. the shape of the mandible (Fig. 31). — 3. the ratio of the first 4 flagellar joints 7:11:8:7.5 (Fig. 34). — 4. the relatively narrow thorax (Fig. 33). — 5. the attenuating sternauli (♀♀). — 6. the colour and conspicuous shine of the body.

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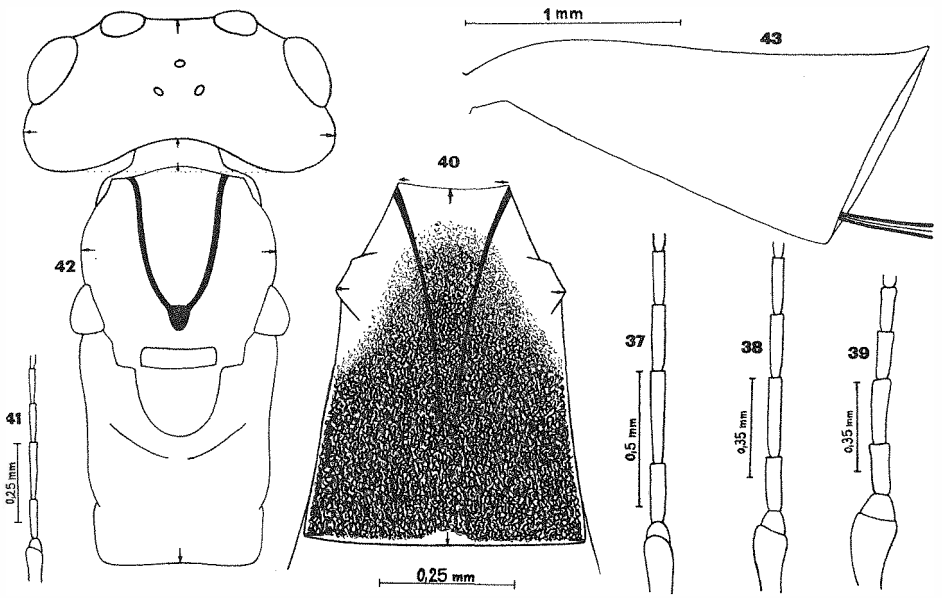

Fig. 37—43:
Fig. 37. *Phaenocarpa picinervis* (HALIDAY): first 4 antennal joints. — Fig. 38. *Phaenocarpa pratellae* (CURTIS): first 4 antennal joints. — Fig. 39. *Phaenocarpa pullata* (HALIDAY): first 4 antennal joints. — Fig. 40. *Phaenocarpa pullata* (HALIDAY): tergite 1 (arrows indicating points of measurements). — Fig. 41. *Phaenocarpa tabida* (NEES): first 4 antennal joints. — Fig. 42. *Phaenocarpa pratellae* (CURTIS): head and thorax from above (arrows indicating points of measurements). — Fig. 43. *Phaenocarpa pullata* (HALIDAY): abdomen, side-view

Phaenocarpa picinervis (HALIDAY)

(Figs. 30, 32, 35, 37)

Alysia picinervis HALIDAY, Entom. Mag., 1838, **5**, p. 233, ♀♂.
Phaenocarpa picinervis (HALIDAY): FÖRSTER, Verh. nat. Ver. preuss. Rheinl. Westph., 1862, **19**, p. 267.

♀♂. — Head nearly twice as wide as it is long (12:7), smooth and shiny; finely rugulose only between inner margin of eye and scape. Eye only slightly protruding when viewed from above. Eye round, not hairy. Tempora slightly wider than half the diameter of the eye (2.1:4). Ocelli forming an isosceles triangle, base of triangle longer than its sides (1.3:1). Two distal ocelli situated behind axis connecting centre of eyes. Head hairy, hairs of face, clypeus, mandible, and lower portion (toward mandible) of tempora long. Upper and lower teeth of mandible (Fig. 30) blunt, upper edge (at base) of middle tooth broken. Antenna longer than body, 4.5—6 mm (♀♀ 1:1.3, ♂♂ 1:1.4), pubescent. Number of antennal joints varying: 26—29 (♀♀) or 28—31 (♂♂). Ratio of first 4 flagellar joints 8:13:9:7.5 (Fig. 37). — Head brownish black. Mandible yellow, base of tempora (articulatory point of mandible) yellowish transparent. Scape and pedicel rufous yellow, flagellar joints 1—4 rufous yellow tending to fumose, other joints brownish black.

Thorax narrow, ratio of cephalic to thoracic width 12:8. Thorax smooth and shiny. Parapsida evenly deep, not crenulate, almost straight (or hardly arcuately converging distally), widening at junction of dimple. The latter either connected with prescutellar

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groove or not. Proximal rim of prescutellar groove with a scalariform margin, with 3 to 5 crenulate. All edges present on propodeum. Proximally of transversal median ridge surface almost entirely smooth and shiny, distally more or less roughly rugose. Length of sternauli generally equalling two thirds of mesopleural width, crenulate. Thorax (mainly mesopleura and propodeum) sparsely hairy. — Thorax black. Tegula dark yellow (as legs).

Wing hyaline (Fig. 35), longer than body, 3.5—4.5 mm. Cell *R* extending to alar apex. Vein r_1 short, ratio of r_2 to r_3 2:3; r_3 sinuous. Cell Cu_2 almost thrice as long as it is wide, punctately fumose ("picinervis") in narrow stripe on both sides of $cuqu_2$. Cells characteristically elongate (Cu_1, Cu_2, *D*). Stigma yellow, venation yellow or (distally) brownish yellow.

Legs narrower than normal. Ratio of femur 3, tibia, and tarsus 1:1.5:1.4. Legs deeply yellow. End of tarsi and claws black. End of tibia 3 and tarsus fumose.

Abdomen as long as head and thorax together. Abdomen slightly wider than thorax, ratio of its width to length 1:2.3. Ratio of length to distal width of tergite 1 as 15:10. Ratio of proximal base, two spiracles, width and length of distal base 6:8:10:15 (Fig. 32). Two edges originating from corner of proximal base meeting medially in front of spiracle and continuing in median line to middle of tergite. Tergite 1 rugose along median line, expanding distally into lineately rugose area, otherwise tergite smooth. Spiracle proximal of transversal median axis. Other tergites and all sternites smooth, shiny, with scattered minute hairs. Ovipositor apparatus longer than half of abdomen, 1.6:1. — Tergite 1 black, other parts of abdomen brownish black.

Length of body 3—5 mm (♀♀ 3—4 mm, ♂♂ 3.5—5 mm), alar expanse 10—14 mm.

Host unknown.

Range: Ireland, England, Sweden, Hungary, Roumania. — Collected sporadically in hilly or mountainous areas in the Carpathian Basin: II/1: Hüvösvölgy, Budapest, 4 July, 1929, 1 ♀, 1 Oct., 1929, 2 ♂♂, leg. Bíró; Fehérvárcsurgó, July 1923, 1 ♀, leg. Bíró; Bitva-rétek, Nyárád, 4 May, 1965, 1 ♀ and 2 ♂♂, leg. Papp; Tihany, June, 1929, 1 ♀, leg. Zilahi-Sebess. — III/2: Tihuca (= Tihuța), Roumania, 1 ♂, leg. Pável. — III/5: shores of the river Maros, Nagyenyed (Aiud), Roumania, 25 July, 1917, 1 ♂, leg. Bíró. — VI/2: Héviz, 1 ♀, leg. Horváth. — New for the fauna of the Carpathian Basin (Hungary and Roumania).

Distinguishing features

1. The punctate fumosity along $cuqu_2$ (Fig. 35). — 2. the course of the parapside. — 3. the sculpture and shape of the first tergite (Fig. 32). — 4. the ratio of the first 4 flagellar joints (Fig. 37), and the ratio of the antenna length to body length: 1.3—1.4:1. — 5. the colour of the body.

Phaenocarpa pratellae (Curtis)

(Figs. 29, 38, 42)

Alysia pratellae Curtis, Brit. Entom., 1826, **III**, p. 141, ♀♂.
Phaenocarpa pratellae (Curtis): Marshall, Cat. Brit. Hym., 1872, p. 128.

♂. — Head (Fig. 42) narrow, ratio of its width to length 15:7, smooth and shiny. A narrow rugose stripe between scape and inner margin of eye. Sides of face (along inner margin of eye), clypeus, and base of mandible hairy. Eye protruding, glabrous, oval. Position of ocelli as in *Phaenocarpa nitida*. Tempora almost as wide as diameter of eye, slightly protruding in relation to eye (when viewed from above) (Fig. 42). All three teeth of mandible (Fig. 29) blunt (or two outer teeth rounded). Margin of upper tooth continuing almost without constriction (breaking or arching) on middle tooth. Antenna slightly more than one and a half times as long as the body (1.55:1), number of antennal joints 40—41. Ratio of first 4 flagellar joints 7.5:11:9:8 (joint 1 strikingly shorter than joint 2; Fig. 38).

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All joints pubescent. Flagellar joints gradually shortening, only last 3 joints of equal length. — Head blackish brown. Scape and pedicel dark yellow, first 2—3 flagellar joints tending to brown, other joints brown. Face and clypeus brownish yellow, mandible and base of tempora yellow.

Ratio of thoracic (Fig. 42) to cephalic width 8:15. Ratio of thoracic length to width 12:5.5, hence thorax long in comparison with the majority of species. Thorax smooth and shiny. Crenulate sternal margin of pronotal sides wide. Parapsida evenly deep and smooth hence not crenulate, in its entire length. Dimple shallow, as long as width of prescutellar groove. The latter with closed sides and a medial ridge, not crenulate. Scutellum circular. Edges of propodeum more or less well developed, all areas distinct. Areae superiores smooth, other areas rugose as if ridged. Sternauli only semilaterally impressed (not sulcate), crenulate. — Prothorax and median portion (bordered by parapsida) of mesonotum dark yellow, other parts of mesonotum, scutellum, mesopleura, and mesosternum brownish yellow, other thoracic parts fumosely yellowish brown. Tegula light yellow.

Wing hyaline, as long as body. Cell *R* extending to alar apex. Vein r_1 short, ratio of r_2 to r_3 2.3:1. *N. par.* almost interstitial. Stigma and venation pale brownish yellow.

Legs normal. Ratio of femur 3, tibia, and tarsus 1:1.4:1.5, therefore tarsus longer than tibia, in contrast to the majority of species. — Legs pale yellow, end of tarsi and claws dark.

Abdomen as long as head and thorax together. Abdomen wider than thorax (1:0.9), ratio of its length to width 2.6:1. Tergite 1 one third longer than width of its distal margin. Ratio of proximal base, two spiracles, width and length of distal base 7:10:13:17. Spiracle conspicuously protruding, situated in transversal median axis. Protruding portion of tergite 1 longitudinally lineately rugose, otherwise tergite almost completely smooth and shiny. Other segments also smooth and shiny, hairs on distal margin of segments in rows. — Base of abdominal segment 1 blackish brown, other portions brown. Segments 2—3(—4) yellowish brown, other segments blackish brown.

♀. — No female specimen is known from the Carpathian Basin. According to FAHRINGER (manuscript), the female corresponds to the male. The ovipositor apparatus is as long as, or longer than, the body.

Length of body 4—4.2 mm (seldom 2.8—3 mm), alar expanse 8.5—9 mm.

Host unknown.

Range: England, Sweden, Finland, Switzerland, Roumania, Soviet Union, Japan. — Collected in two montainous localities in the Carpathian Basin: III/4: Szurduk (= Surduc), Roumania, 1916, 1 ♂, leg. BÍRÓ. — III/5: Borosbenedek (= Benic), Roumania, 28 July, 1917, 1 ♂, leg. BÍRÓ. New for the fauna of the Carpathian Basin (Roumania).

Distinguishing features

1. The evenly deep and smooth parapsida (Fig. 42). — 2. the relatively long thorax (Fig. 42). — 3. the rounded teeth of the mandible (Fig. 29). — 4. the ratio of the first 4 flagellar joints, 7.5:11:9:8 (Fig. 38). — 5. the long antenna. — 6. the colour of the body.

Phaenocarpa pullata (HALIDAY)

(Figs. 39, 40, 43, 44, 50)

Alysia pullata HALIDAY, Entom. Mag., 1838, **5**, p. 232. ♀♂.

Homophyla pullata (HALIDAY): FÖRSTER, Verh. nat. Ver. preuss. Rheinl. Westph., 1862, **19**, p. 266.

Phaenocarpa pullata (HALIDAY): MARSHALL, Trans. Entom. Soc. London, 1894, p. 251.

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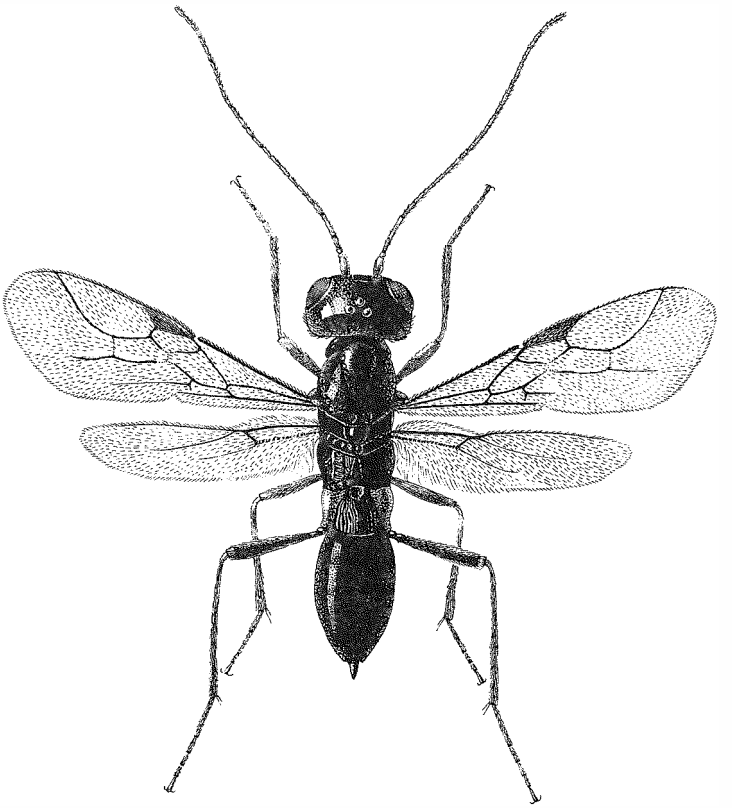

Fig. 44. *Phaenocarpa pullata* (HALIDAY)

♀♂. — Head (Fig. 44) cuboidal, ratio of its width to length 14:9. Finely punctate (and rugulose) between inner margin of eye and scape. A linear groove in median line, on lower portion of face (above clypeus). Otherwise head smooth and shiny. Face and mandible pubescent. Vertex sparsely hairy, hairs of occiput and tempora located centrally. Eye hardly protruding, glabrous. Tempora convex, cephalic width greater between tempora than between eyes. Ocelli forming an equilateral triangle. Ocelli spaced as far apart as 2.5—3 times their diameter. Two distal ocelli situated behind (or in) median line of eye. All three teeth of mandible (Fig. 50) pointed. Upper edge of middle tooth (toward face) medially slightly projecting. Imaginary line connecting outer margin of two outside teeth perpendicular to longitudinal axis of mandible. Antennae slightly shorter (♀♀) than, or as long as (♂♂), body. Number of antennal joints 32—35, generally 34. Ratio of first 4 flagellar joints 7:8.5:7:6 (Fig. 39). Last 7—9 joints nearly cuboidal, hardly longer than wide. — Head black; tempora frequently indistinctly light (yellowish, rufous, brownish) at base of mandible; vertex and part of occiput toward tempora dark brown. Scape and pedicel rusty brown, other joints black.

Thorax (Fig. 44) not so narrow as generally in other *Phaenocarpa* species: ratio of cephalic to thoracic width 12:9. Sides of pronotum either very finely rugulose to a varying extent, or with a linear impression of diverse length, otherwise smooth and shiny. Mesonotum, scutellum, and pleura smooth and shiny. Upper quarter of mesopleura (below

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tegula) rugose in a relatively large area, as well as proximal margin. Sternauli nearly as long as width of mesopleura, crenulate. Parapsida evenly deep, distally either arcuately or almost straightly convergent, slightly crenulate (♂♂!). Dimple deeper and wider than parapsida, crenulate (♂♂!), not reaching prescutellar groove. The latter of normal depth, with 3(−5) elevated and 4(−6) deepened crenulae. Propodeum roughly rugose, quarter toward metanotum nearly smooth and shiny. Rugose and smooth areas not delimited by edges, but area submedia discernible in traces. — Thorax black. Pronotum and mesonotum (near parapsida) rufous to a varying extent.

Wing (Fig. 44) hyaline, slightly shorter than (♀♀), or as long as (♂♂), body: 3.4—3.5 mm. Cell *R* not reaching alar apex, though its distal end nearer to apex than to distal end of stigma. Vein r_1 short, ratio of r_2 to r_3 1:2.4; vein r_3 slightly arcuate. *N. par.* interstitial. Stigma and venation dark brown. Immediate vicinity of end of *n. bas.* near stigma fumous.

Legs normal. Ratio of femur 3, tibia, and tarsus 1:1.4: 1.4, therefore tibia 3 and tarsus 3 generally of equal length.

Abdomen (Fig. 44) as long as (or slightly shorter than) head and thorax together, ratio of its length to width 2:1—1.2, hence rather stout, flattened laterally (Fig. 43). Tergite 1 (Fig. 40) longer than width of its distal base (21:18). Ratio of proximal base, two spiracles, width and length of distal base 5.5:11:18:21. Spiracle in vicinity of proximal base. Two ridges originating from proximal corner arcuately converging and nearly meeting beyond middle. Greater portion of tergite 1 rugose, but nearly smooth at proximal base and around spiracles. Other segments smooth and shiny. Tergite 1 with sparse, minute hairs. Ovipositor apparatus extremely short, hardly extending beyond end of abdomen (Fig. 43). — Abdomen brownish black or black. Tergites 2—3(—4) may be lighter (yellowish red, yellowish brown). First sternites generally also light (yellow, yellowish red, reddish yellow). Ovipositor pale brownish yellow, sheath black.

Length of body 3.3—3.6 mm, generally 3.4 mm; alar expanse 7.4—8.2 mm.

Host unknown. Concerning its ecology, MORLEY (1933: 160) states: "Ecology still unknown, but association with water obvious and the restricted span of perfect life unusual among Parasitica".

Range: Ireland, England, Finland, Czechoslovakia, Hungary, Roumania. — Rather frequent in the Carpathian Basin: I/1: Borosjenő (= Ineu), Roumania, 1 ♂, leg. DIÓSZEGHY; Kelebia, 1913, 1 ♀, leg. BÍRÓ; Örszentmiklós, 17 April, 1887, 3 ♀♀, leg. SAJÓ. — II/1: Budapest, 1 ♀, leg. SZÉPLIGETI; Hármashatárhegy, Budapest, 3 and 15 April, 1938, 1 ♂, each leg. LOKSA; Svábhegy, Budapest, 6 May, 1900, 3 ♀♀, 7 May, 1903, 1 ♂, leg. SZÉPLIGETI; Adalak, Svábhegy, Budapest, 2 May, 1898, 2 ♂♂, leg. SZÉPLIGETI; Mogyoróskert, Gézaháza (Csesznek), 22 May, 1957, 1 ♀, leg. PAPP; netted in maize field, Martonvásár, 7 April, 1955, 1 ♀ and 2 ♂♂, leg. GOZMÁNY; Remetehegy, Nagykovácsi, 25 April, 1957, 1 ♀, leg. MIHÁLYI; Pápa, May, 1900, 1 ♀, leg. SZÉPLIGETI; Pilismarót, 20 May, 1899, 1 ♂, leg. SZÉPLIGETI. — II/2: Kurtabérc, Mts. Bükk, in Nardetum, 8 June, 1954, 1 ♂, leg. HALÁSZFY; Sződ, June, 1920, 1 ♀, leg. BÍRÓ; Gajáritelep, Vác, 4 April, 1924, 1 ♀, leg. BÍRÓ. — III/1: Borosznó (= Brusnó), Czechoslovakia, 1 ♂, leg. SZÉPLIGETI; Dobogókő, Pilisszentkereszt, 26 April, 1957, 1 ♀, leg. MIHÁLYI et ZSIRKÓ. — III/5: Borosbenedek (= Benic), Roumania, 28 July, 1917, 1 ♂, leg. BÍRÓ; netted in wet meadow, Nagyenyed (= Aiud), Roumania, 31 July, 1917, 1 ♂, leg. BÍRÓ. — VI/1: Zobák (Komló), Mts. Mecsek, 29 April—2 May, 1951, 1 ♀, leg. L. et M. MÓCZÁR. — VI/2: Simontornya, 27 March, 1911, 1 ♀, leg. PILLICH. — New for the Carpathian Basin (Czechoslovakia, Hungary, Roumania).

Distinguishing features

1. The nearly cuboidal head (Fig. 44). — 2. the shape of the mandible (Fig. 50). — 3. the venation and the position of the cells of the wings (Fig. 44). — 4. a short ovipositor (Fig. 43). — 5. the colour of the body.

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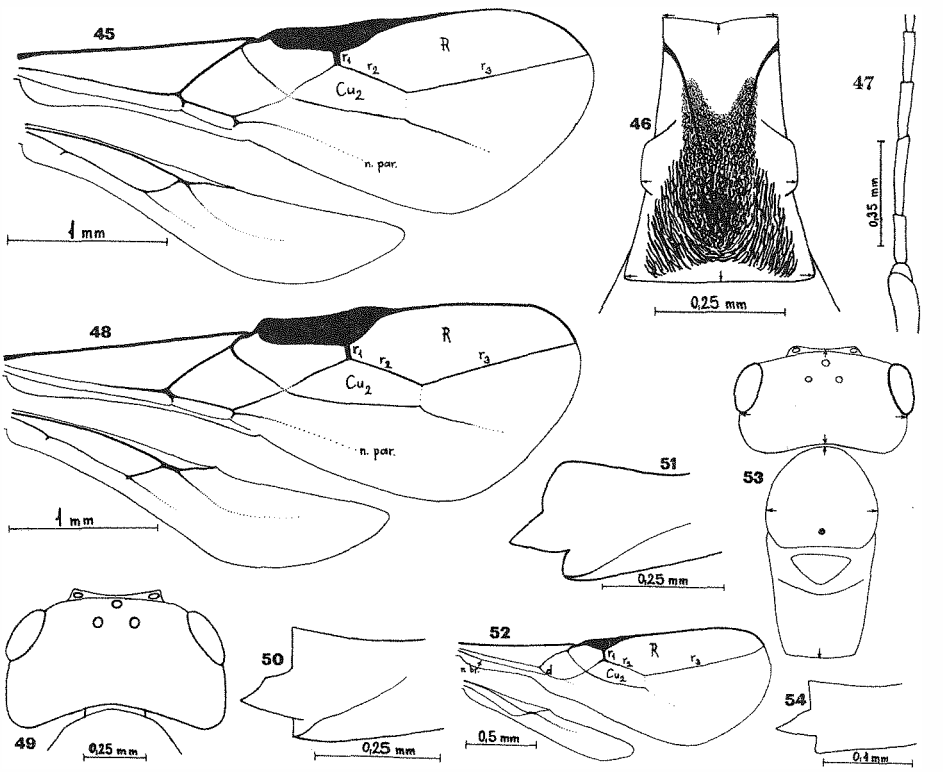

Fig. 45—54:

Fig. 45. *Phaenocarpa ruficeps* (NEES): right pair of wings female. — Fig. 46. *Phaenocarpa ruficeps* (NEES): tergite 1 (arrows indicating points of measurements). — Fig. 47. *Phaenocarpa ruficeps* (NEES): first 4 antennal joints. — Fig. 48. *Phaenocarpa ruficeps* (NEES): right pair of wings (male). — Fig. 49. *Phaenocarpa ruficeps* (NEES): head from above. — Fig. 50. *Phaenocarpa pullata* (HALIDAY): mandible. — Fig. 51. *Phaenocarpa ruficeps* (NEES): mandible. — Fig. 52. *Phaenocarpa tabida* (NEES): right pair of wings. — Fig. 53. *Phaenocarpa tabida* (NEES): head and thorax from above (arrows indicating points of measurements). — Fig. 54. *Phaenocarpa tabida* (NEES): mandible

Phaenocarpa ruficeps (NEES)

(Figs. 45, 46, 47, 48, 49, 51, 55)

Bassus ruficeps NEES, Magaz. Ges. naturf. Fr. Berlin, 1812, 5, p. 205, nr. 8, ♀♂.
Phaenocarpa ruficeps (NEES): MARSHALL, Trans. Entom. Soc. London, 1894, p. 528.

♀. — Head (Fig. 49) twice as wide as it is long (14:7). Area adjacent to inner margin of eye (especially between eye and scape) finely punctate-rugose. Otherwise head smooth and shiny. Face with long and dense pubescence, vertex nearly glabrous, occiput with sparse, long, central hairs. Eye only slightly protruding, but cephalic width still slightly greater between tempora than between eyes. Ocelli forming an isosceles triangle. Two distal ocelli slightly larger than proximal third, situated in front of, or in, median line connecting eyes. Middle tooth of mandible (Fig. 51) pointed, upper and lower teeth blunt (seldom slightly

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pointed). Imaginary line connecting two points joining middle tooth to upper and lower teeth not perpendicular to longitudinal axis of mandible. Antenna longer than body (1.3—1.4:1), number of antennal joints 25—29, single joints narrow in comparison with *Phaenocarpa conspurcator*. Ratio of first 4 flagellar joints 7:11:8:7 (Fig. 47). — Head yellowish or rufous brown. Lower half of face, antennal socket and vicinity of ocelli indistinctly outlined in dark brown or brownish black. Mandible brownish yellow, occasionally yellowish brown, its margin and middle tooth black. Palpi pale yellow. Colour of head varying.

Ratio of thoracic to cephalic width 10:14. Thorax smooth and shiny. Parapsida well developed, distally arcuately converging, gradually shallower (occasionally reaching dimple in traces only), not crenulate. Dimple long, one and a half times as long as the width of the prescutellar groove, not joining prescutellar groove. The latter of normal width, with 3(—5) crenulae. Sculpture of propodeum resembling that of *Phaenocarpa conspurcator*. Sternauli nearly as long as width of mesopleura, crenulate. — Thorax brownish or piceous black. Mesonotum (and frequently also scutellum) rufous brown, tegula and upper corner (below tegula) of mesopleura brownish yellow or yellowish brown.

Wing (Fig. 45, 55) hyaline, longer than body: 4—4.3 mm (1.2—1.3:1). Proximal half of stigma of approximately equal width throughout, its end rounded, brown. Cell *R* almost reaching alar apex. Vein r_1 short, ratio of r_2 to r_3 1:2.5. Cell Cu_2 long and narrow, ratio of its length to width 2.8:1. *N. par.* not interstitial. Venation brown or yellowish brown.

Legs normal, yellow. Ratio of femur 3, tibia, and tarsus 1:1.5:1.3.

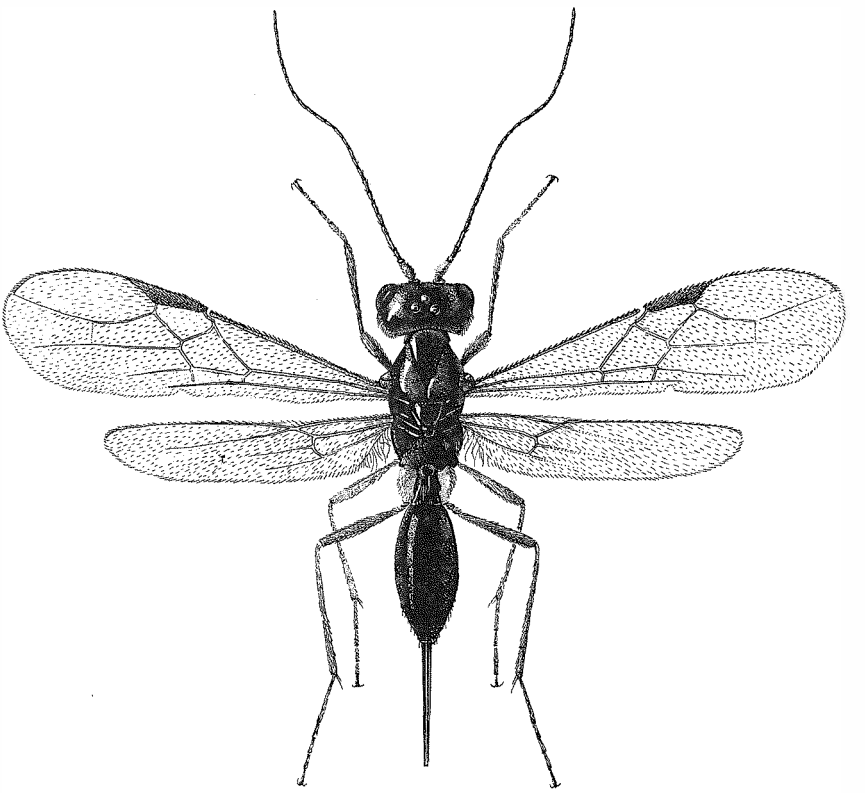

Fig. 55. *Phaenocarpa ruficeps* (NEES)

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Abdomen shorter than head and thorax combined (1:1.4), ratio of abdominal length to width 2.5:1, slightly flattened laterally. Tergite 1 (Fig. 46) longer than width of its distal base (17:15.5). Ratio of proximal base, two spiracles, width and length of distal base 8:9.5:15.5:17. Spiracle generally situated somewhat distal of transversal median axis. Two ridges originating from side of tergite arcuately converging near proximal base, medially more distant from one another than from spiracle. Proximal third of tergite nearly smooth, rugose area becoming rougher distally and lineately rugose laterally (distally). Margin of tergite almost smooth (Fig. 46). Other segments smooth and shiny. Tergite 1 glabrous, hairs of other segments sparse, long, located in rows along distal margins. Last tergite pubescent. Segmental borders hardly discernible. Ovipositor apparatus shorter than abdomen (Fig. 55): 0.8—0.7:1. — Abdomen brownish black (or piceous black). Tergites (and sternites) rufous brown to a varying extent. Ovipositor brownish yellow, sheath black.

Length of body 3—3.2 mm; alar expanse 8.5—10 mm.

♂. — Differences from female: 1. Parapsida only initially deep, distally indistinct or present in traces only. — 2. dimple long, frequently extending to middle of mesonotum (and finely crenulate). — 3. outer margin of stigma projecting, cell Cu_2 conspicuously narrow, ratio of its length to width 3.2:1 (Fig. 48). — 4. head, thorax, (and occasionally abdomen) light (rufous, yellowish brown, brownish yellow) to a varying extent and more than in female; colour of body more varying than in female. — 5. length of body 2.8—3.2 mm; alar expanse 7.5—8.5 mm.

Host: *Anthomya radicum* Linnaeus, *Lonchaea vaginalis* Pallas, *Piophila casei* Linnaeus, *Tortrix laevigana* Linnaeus (Duțu-Lăcătusu, 1956: 595).

Range: Europe (England, Sweden, Germany, Switzerland, Poland, Hungary, Roumania, Soviet Union). — The most frequently collected species in the Carpathian Basin: I/1: Bátorliget, 27 August, 1932, 1 ♀, leg. Szilády; Borosjenő (= Ineu), Roumania, 1 ♀, leg. Dószeghy; Ujpest, Budapest, 9 July, 1895, 1 ♀, leg. Szépligeti; Deliblát (= Deliblato), Yugoslavia, 12 July, 1892, 1 ♀, leg. Bíró (?); in silvis humidis retis opis, Hajduhadháza, 12 Sept., 1921, 1 ♂, leg. Zilahi-Sebess; ex puppe Sarcophagidae in feaces hominis, Kisoroszi, 6 Sept., 1961, 1 ♀ leg. J. B. Szabó; marsh forest, Ócsa, 15 July, 1953, 1 ♀, leg. Mrs. Kakass; Szigetszentmiklós, 16 Sept., 1911, 1 ♀, Oct., 1911, 3 ♂♂, 8 May, 1912, 2 ♂♂, leg. Bíró. — II/1: Gerence, Bakonybél, 1 August, 1959, 1 ♂, leg. Zsirkó; Budapest, 1 ♀, leg. Szépligeti; Obuda, Budapest, 1 ♂, leg. Szépligeti; Zugliget, Budapest, 9 Sept., 1896, 1 ♀, leg. Szépligeti; Fehérvárcsurgó, 22 July, 1923, 1 ♀, 2 ♂♂, leg. Bíró; netted, Nagyvázsony, 26 May, 1960, 1 ♂, leg. Papp; Pilismarót, 1 ♂, leg. Szépligeti; Vinyesándormajor, Cuha, 23 May, 1957, 1 ♂, leg. Papp. — II/2: Nagyvisnyó, Mts. Bükk, 5 June, 1955, 1 ♀, leg. Mihályi and Zsirkó. — III/1: Zöldtó, Késmárk (= Kezmarok), Czechoslovakia, 2 Sept., 1909, 1 ♂, leg. Bíró (?). — III/2: Tihuca (= Tihuța), Roumania, 1897, 1 ♂, leg. Pável. — III/3: Cetate Boli, Roumania, 1916, 1 ♂, leg. Horváth. — III/4: Biharfüred (= Stina de Vale), Roumania, 1907, 1 ♀, 2 ♂♂, leg. Bíró. — III/5: Nagyenyed (= Aiud), Roumania, 1917, 2 ♀♀, leg. Bíró. — VI/2: Balatonfüred, 29 August, 1951, 1 ♂, leg. Soós.

Distinguishing features

1. The shape of the head (Fig. 49), the ratio of the cephalic to the thoracic width (14:10) (Fig. 55). — 2. the shape of the mandible (Fig. 51). — 3. the decurrence of the parapside. — 4. the venation of the wing and the shape of the stigma (Figs. 45, 48). — 5. the colour of the body.

Phaenocarpa ruficeps var. *testacea* (Nees)

Bassus testaceus Nees, Mag. Ges. naturf. Fr. Berlin, 1812, 6, p. 206.
Phaenocarpa testacea (Nees): Marshall, Cat. Brit. Hym., 1872, p. 127.
Phaenocarpa ruficeps var. *testacea* (Nees): Fahringer, Opusc. brac. (Alysiinae), manuscript.

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Differences from the nominate form: body yellowish red, abdomen brown beyond tergite 2.

Locality: around Vadászház, Németbánya, 22—25 August, 1963, 2 ♂♂, leg. PAPP.

Phaenocarpa tabida (NEES)

(Figs. 41, 52, 53, 54)

Alysia tabida NEES, Ichneum. affin. Mon., 1834, **1**, p. 252, ♀.

Alysia tabida NEES: HALIDAY, Entom. Mag., 1838, **5**, p. 237, ♀♂.

Asobara tabida (NEES): FÖRSTER, Verh. nat. Ver. preuss. Rheinl. Westph., 1862, **19**, p. 267.

Phaenocarpa tabida (NEES): MARSHALL, Trans. Entom. Soc. London, 1894, p. 527.

♀. — Head (Fig. 53) cuboidal, ratio of width to length 8: 4. 8. Entire head completely smooth and shiny, sparsely pubescent; hairs of face, clypeus, and mandible long. Ocelli forming an isosceles triangle, base of triangle almost twice as long as its sides. Ocelli oval. Distal two ocelli situated in front of median axis connecting eyes. Eye slightly protruding, glabrous, round. All three teeth of mandible (Fig. 54) pointed, imaginary line connecting upper and lower teeth not perpendicular to longitudinal axis of mandible (upper tooth slightly projecting). Antenna one and a half times as long as the body (1.6:1). All antennal joints pubescent, thin and long in comparison with other species. Number of antennal joints 19—20, generally 20. Ratio of first 4 flagellar joints 5.5:8:5.5:5 (Fig. 41). Flagellar joints gradually shortening, last 5—7 joints of equal length. — Head dark brown. Mandible yellow, margin narrowly dark. First 3 antennal joints yellow, joint 4 abruptly darkening, other joints dark brown. Palpi pale yellow.

Thorax (Fig. 53) wide in comparison with the majority of species, ratio of cephalic to thoracic width 5:3.2; ratio of thoracic length to width 6:3.2, therefore thorax stout. Thorax smooth, shiny, sparsely hairy. Parapsida present in traces, if at all, on proximal fourth (bending toward pronotum) of mesonotum (its decurrence not even marked by hairs). Dimple shallow. Prescutellar groove narrow and shallow, finely crenulate. Propodeum smooth, shiny, its edges perceptibly elevated. Sternauli narrow, finely crenulate. — Thorax not so dark brown as head. Pronotum and tegula yellow. Propodeum yellowish brown.

Wing (Fig. 52) hyaline, longer than body: 1.9—2 mm (1.3:1). Cell *R* extending to alar apex. End of vein r_3 slightly bent. Vein r_1 long (in comparison with the majority of species), almost as long as width of stigma. Ratio of r_2 to r_3 1:2.5. *N. brachialis* terminating in *d*, hence cell *B* absent. Cell Cu_2 thrice as wide as it is long. Stigma dark yellow, venation yellow.

Legs normal, densely pubescent. Ratio of femur 3, tibia, and tarsus 1:1.5:1.45.

Abdomen slightly longer than thorax (1.1:1), but shorter than head and thorax together. Abdomen narrower than thorax (0.85:1), ratio of abdominal length to width 2.1:1, therefore abdomen relatively short. Ratio of length to distal width of tergite 1 as 8:6.5. Ratio of proximal base, two spiracles, width and length of distal base 4:5:6.5:8. Spiracle situated slightly anterior of transversal median axis. Two edges originating from proximal corner extending to entire length of tergite, arcuately converging but not coalescent. Tergites almost completely smooth and shiny. Other abdominal segments entirely smooth, shiny, hairs on distal third long. Ovipositor apparatus shorter than abdomen (0.8:1). — Abdomen dark, similar to head. Tergite 1 dark yellow. Ovipositor pale yellow, sheath brown.

♂. — Difference from female: number of antennal joints 20—22.
Length of body 1.5—1.6 mm; this is the smallest of all *Phaenocarpa* species known from the Carpathian Basin. Alar expanse 4.5—5 mm.

Host unknown.

DOI: 10.21248/contrib.entomol.18.5-6.569-603

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Range: England, Sweden, Switzerland, Hungary, Soviet Union. — Collected sporadically in the Carpathian Basin: I/1: Szigetszentmiklós, May 1912, 1 ♀, leg. Bíró. — II/1: Hüvösvölgy, Budapest, 5—8 August, 1926, 2 ♀♀, leg. Bíró. Istvánkút, Háromhuta, 13 August 1957, 2 ♂♂, leg. Mrs. Sólymos. Leányvölgy, Nagyvisnyó, 5 August, 1956, 1 ♂, leg. Mihályi. Révfülöp, 26 August, 1926, 2 ♀♀, leg. Bíró. Vác-Szokolya, 2 September, 1926, 1 ♂, leg. Bíró. — III/1: Tátrafüred (= Starý Smokovec), Czechoslovakia, 28 August, 1909, 1 ♀, leg. Bíró. — III/5: Nagyenyed (= Aiud), Roumania, 26 September, 1915, 1 ♂, leg. ? — V/1: Velem, 24 June, 1960, 1 ♀, leg. Mrs. Sólymos. — VI/1: Peterd, 12 August, 1925, 1 ♂, leg. Bíró. — New for the fauna of the Carpathian Basin (Hungary, Czechoslovakia, Roumania).

Distinguishing features

1. The short body (1.5—1.6 mm). — 2. the absence of cell *B* (Fig. 52). — 3. the cuboidal head (Fig. 53). — 4. the shape of the mandible (Fig. 54). — 5. the clearly projecting edges of the propodeum. — 6. the almost completely smooth first tergite. — 7. the colour of the body.

Zusammenfassung

Nachdem der Verfasser zuvor die im Karpathenbecken (Mitteleuropa) gefundenen Arten von *Aphaereta* Foerster vom taxonomischen Standpunkt aus überarbeitet hatte, legt er jetzt seine neue Abhandlung über *Phaenocarpa* Foerster vor. Von den 43 bisher bekannten paläarktischen Arten wurden 14 im Karpathenbecken gefunden, die jetzt mit insgesamt 153 Exemplaren im Ungarischen Naturwissenschaftlichen Museum in Budapest aufbewahrt werden. Darunter befinden sich drei neue Arten. Sieben Arten sind neu für die Fauna des Karpathenbeckens. Im Zuge weiterer Untersuchungen werden sich diese Zahlen noch erhöhen, besonders die der Neufunde in diesem Gebiet. Bisher sind folgende Arten aus dem Karpathenbecken bekannt: ***Phaenocarpa angustiptera* sp. n.**, ***Ph. collaris* sp. n.**, *Ph. conspurcator* (Haliday), *Ph. eugenia* (Haliday), *Ph. eunice* (Haliday), *Ph. flavipes* (Haliday), ***Ph. laticellula* sp. n.**, *Ph. livida* (Haliday), *Ph. nitida* Thomson, *Ph. picinervis* (Haliday), *Ph. pratellae* (Curtis), *Ph. pullata* (Haliday), *Ph. ruficeps* (Nees), *Ph. tabida* (Nees). — Die Arbeit enthält eine Charakteristik der Gattung *Phaenocarpa*, einen Schlüssel der Arten, eine genaue Beschreibung jeder Art, ihre Verbreitung und eine Liste der Fundorte im Karpathenbecken (Tschechoslowakei, Ungarn, Rumänien und Jugoslawien). — Durch Untersuchung der Typen stellte der Autor fest, daß *Ph. arctica* Thomson mit *Ph. conspurcator* Haliday synonym ist. Außerdem beschreibt er das bisher unbekannte Männchen von *Ph. nitida* Thomson.

Summary

The author, having revised from the taxonomical viewpoint the *Aphaereta* Förster species found in the Carpathian Basin (Central Europe) now presents his new essay on *Phaenocarpa* Förster. From the known 43 Palaearctic species 14 have been collected in the Carpathian Basin which are now deposited in the Hungarian Museum of Natural History, Budapest, in all 153 specimens. Out of the species 3 are new to science, and 7 are new to the fauna of the Carpathian Basin These numbers, of course, especially the new records to the Carpathian Basin, will increase as scientific research progresses. The following species are known so far from the Carpathian Basin: ***Phaenocarpa angustiptera* sp. n.**, ***Ph. collaris* sp. n.**, *Ph. conspurcator* (Haliday), *Ph. eugenia* (Haliday), *Ph. eunice* (Haliday), *Ph. flavipes* (Haliday), ***Ph. laticellula* sp. n.**, *Ph. livida* (Haliday), *Ph. nitida* Thomson, *Ph. picinervis* (Haliday), *Ph. pratellae* (Curtis), *Ph. pullata* (Haliday), *Ph. ruficeps* (Nees), *Ph. tabida* (Nees). — This essay contains a characterization of the genus *Phaenocarpa*, a key to the species, a detailed description of each species, their distribution and a list of the localities in the Carpathian Basin (Czechoslovakia, Hungary, Roumania, and Yugoslavia).

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By examining types the author found that *Phaenocarpa arctica* THOMSON and *Ph. tatrica* NIEZABIETOWSKI are synonym with *Ph. conspurcator* (HALIDAY), and he describes the male of *Ph. nitida* THOMSON which was unknown so far.

Резюме

После того, как автор обрабатывал найденые в Карпатском бассейне виды *Aphaereta* FÖRSTER с таксономической точки зрения, он предлагает изложение о *Phaenocarpa* FÖRSTER. Из 43 до сих пор известных палеарктических видов найдены 14 в Карпатском бассейне, которые в 153 экземплярах хранятся в Венгерском Музее в Будапеште. Из них три новых вида и семь видов новы для фауны. В дальнейшем эти числа будут повышатся, в частности те новых находок. До сих пор известны следующие виды: ***Phaenocarpa angustiptera* sp. n.**, ***Ph. collaris* sp. n.**, *Ph. conspurcator* (HALIDAY), *Ph. eugenia* (HALIDAY), *Ph. eunice* (HALIDAY), *Ph. flavipes* (HALIDAY), ***Ph. laticellula* sp. n.**, *Ph. livida* (HALIDAY), *Ph. nitida* THOMSON, *Ph. picinervis* (HALIDAY), *Ph. pratellae* (CURTIS), *Ph. pullata* (HALIDAY), *Ph. ruficeps* (NEES), *Ph. tabida* (NEES). — В работе имеется характеристика рода *Phaenocarpa*, ключ видов, точное описание каждого вида, его распространение и список местонахождений в Карпатском бассейне (Чехословакия, Венгрия, Румыния и Югославия). Исследованием типов автор отметил, что *Phaenocarpa arctica* THOMSON синоним с *Phaenocarpa conspurcator* HALIDAY, кроме того он описывает до сих пор неизвестного самца *Phaenocarpa nitida* THOMSON.

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DOI: 10.21248/contrib.entomol.18.5-6.569-603

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Digitale Literatur/Digital Literature

Zeitschrift/Journal: Beiträge zur Entomologie = Contributions to Entomology

Jahr/Year: 1968

Band/Volume: 18

Autor(en)/Author(s): Papp Jenö

Artikel/Article: A Survey of the Phaenocarpa Förster species of the Carpathian Basin, Central Europe (Hymenoptera, Braconidae: Alysiinae). 569-603