

## A new species of *Phaenocarpa* from Bulgaria (Hymenoptera, Braconidae, Alysiinae)

by

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ABSTRACT. — *Phaenocarpa breviflagellum* spec. nov., is described from Bulgaria.

### INTRODUCTION

Among a collection of Braconidae from Bulgaria made by the second author were several specimens difficult to identify with the existing keys. One of the specimens proved to be a new species of the large genus *Phaenocarpa* Förster, 1862; it has the fourth antennal segment subequal to the third segment (without annellus), which is highly aberrant within the genus *Phaenocarpa*. However, the creation of a new genus for the new species is not possible, since intermediates occur. The first author has examined specimens of *Phaenocarpa tacita* Stelfox with the fourth segment of one antenna distinctly longer than the third segment, but in the other antenna the two segments are of similar length! The new species is described below as *Phaenocarpa breviflagellum* and is related to *P. brevipalpis* (Thomson, 1895) and *P. maria* (Haliday, 1838), because of the short palpi. *P. breviflagellum* differs from *brevipalpis* by the wider wings, the long vein 3-CU1 of fore wing (absent in holotype of *brevipalpis*) and the absence of an incision between the first and the second tooth of the mandible. *P. maria* differs by the partly dark brown legs, the higher number of antennal segments (♀: 19-21) and vein 3-SR of fore wing being about 1.2 times vein 2-SR.

The biology of the new species and its close relatives is unknown, but other species of *Phaenocarpa* are endoparasites of larvae of the following families of Diptera: Anthomyiidae, Drosophilidae, Lonchaeidae, Muscidae, (malacophagous) Sciomyzidae, and Trypetidae. The enlarged and outwardly bent mandibles are adapted to the emergence from the puparium of the host.

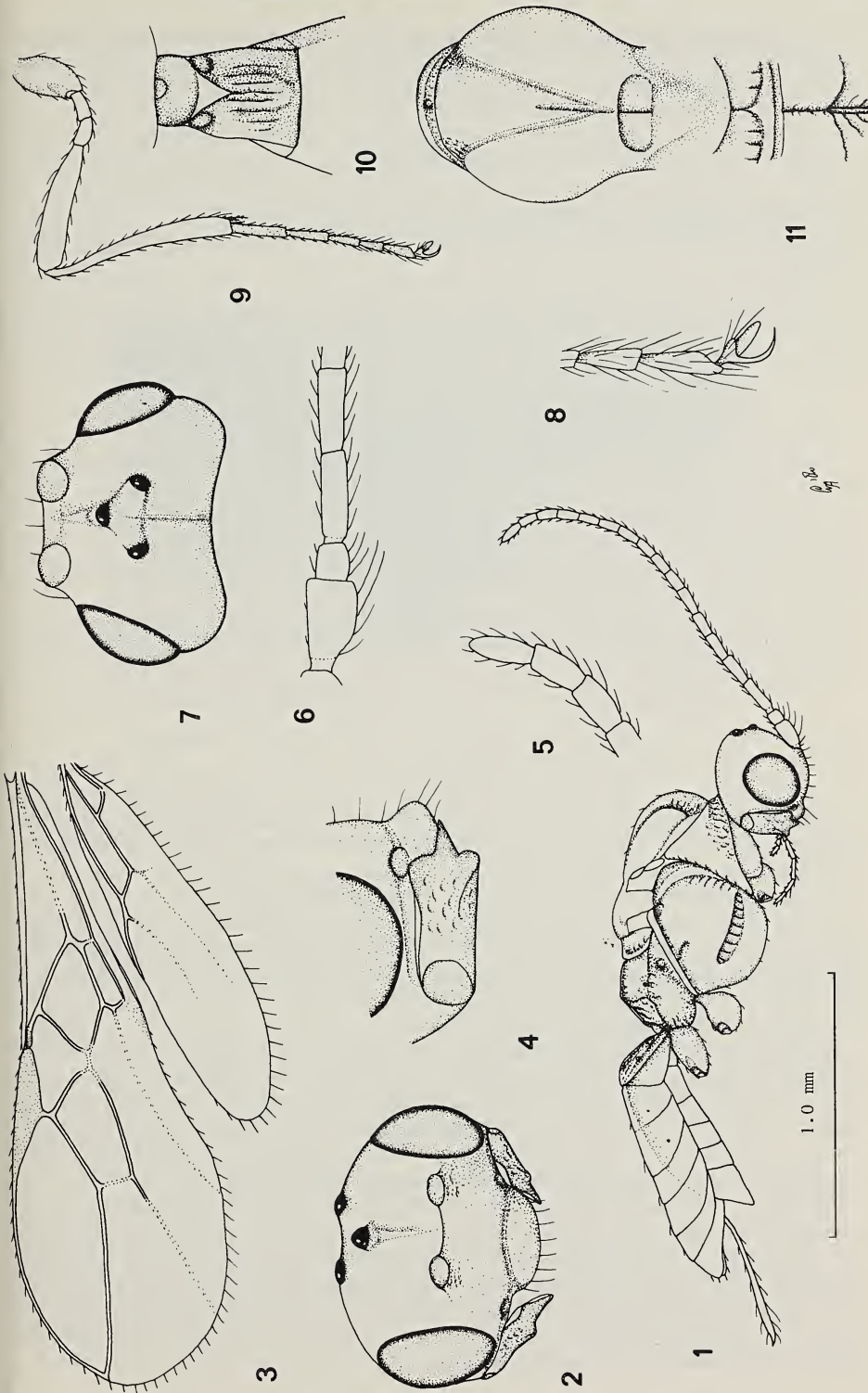
### *Phaenocarpa breviflagellum* spec. nov. (figs. 1-11)

Holotype, ♀, length of body 2.1 mm, of fore wing 2.3 mm.

Head. — Antennal segments 17, long setose, length of 3rd segment (including annellus) 1.1 times 4th segment (without annellus subequal to 4th segment), length of 3rd and 4th segments 3.5 and 3.1 times their width, respectively, and length of penultimate segment 1.7 times its width (fig. 5), without apical spine; maxillary and labial palp with 6, and 4 segments, respectively, slender; length of maxillary palp 0.7 times height of head; eye glabrous, not emarginate; dorsal length of eye 2.1 times temple (fig. 7); POL : Ø ocellus : OOL = 20 : 7 : 18; frons smooth, largely flat, but medially depressed (fig. 7); vertex smooth, convex, with medial groove; face convex, punctulate, and finely rugose near antennal sockets; anterior tentorial pits large, deep, and remote from eyes (fig. 2); clypeus convex, punctulate, its apical margin slightly convex, rather thick and not differentiated; epistomal suture complete, deep; malar space depressed, with no suture or oblique groove, and its length 0.2 times basal width of mandible; medial length of mandible 2.7 times its maximum width, 2nd tooth distinctly longer than both lateral teeth, with a carina from the 3rd tooth, and without distinct incisions between the teeth (fig. 4).

Mesosoma. — Length of mesosoma 1.3 times its height; antescutal depression absent; side of pronotum anteriorly rugose-crenulate, rest largely smooth; epicnemial area with some rugosity

Figs 1-11, *Phaenocarpa breviflagellum* spec. nov., holotype. 1, habitus, lateral aspect; 2, head, frontal aspect; 3, wings; 4, mandible, full sight on 2nd tooth; 5, apex of antenna; 6, 1st-4th basal segments of antenna; 7, head, dorsal aspect; 8, outer hind claw; 9, hind leg; 10, 1st tergite, dorsal aspect; 11, mesosoma, dorsal aspect. 1, 3, 9: scale-line, 1 ×; 2, 7, 10, 11: 1.6 ×; 4-6, 8: 2.5 ×.



(fig. 1); precoxal sulcus present in anterior two-thirds of mesopleuron, crenulate; rest of mesopleuron smooth; pleural suture rather narrow, and with some short crenulae; episternal scrobe rather large, deep (fig. 1); metapleural flange absent; metapleuron rugulose laterally and medially largely smooth; notauli completely impressed, anteriorly somewhat rugose, rest smooth (fig. 11); mesoscutal lobes rather convex, smooth; medial sulcus long (fig. 11), smooth; scutellar suture wide and long, with one longitudinal carina; scutellum smooth, convex; dorsal surface of propodeum smooth with a long medial carina (fig. 11); posterior surface of propodeum distinctly differentiated, without distinct areola, but with a pair of irregular carinae close to each other (fig. 11) and reticulate-rugose; propodeal spiracle rather small, submedially situated.

Wings. — Fore wing: First discal cell distinctly petiolate (fig. 3);  $r : 3\text{-SR} : \text{SR}1 = 3 : 33 : 75$ ;  $1\text{-SR} + M$  slightly sinuate; pterostigma elliptical; SR1 straight, ends near apex of wing; cu-a short, postfurcal;  $1\text{-CU}1 : 2\text{-CU}2 = 1 : 12$ ; CU1b subequal to  $3\text{-CU}1$ ; 1st subdiscal cell slightly widened distally;  $2\text{-SR} : 3\text{-SR} : r\text{-m} = 24 : 33 : 13$ . Hind wing: cu-a medium-sized, reclivous;  $M + \text{CU} : 1\text{-M} = 10 : 14$ .

Legs. — Length of femur, tibia, and basitarsus of hind leg 4.6, 9.3, and 4.3 times their width, respectively; length of hind tibial spurs 0.2 and 0.3 times hind basitarsus.

Metasoma. — Length of 1st tergite 1.3 times its apical width, its surface (sub)longitudinally rugose (fig. 10), strongly convex medially, flattened laterally and basally concave; dorsal carinae of 1st tergite distinctly developed in basal 0.6 and united posteriorly; spiracles of 1st tergite submedially situated and not protruding, dorsope somewhat smaller than their distance apart; setae in one row per tergite; ovipositor sheath 0.24 times fore wing, slender; hypopygium medium-sized and truncate apically.

Colour. — Black; legs (but tarsi infuscated, and middle and hind coxae, dark brown), tegulae, and mandibles, yellowish-brown; pterostigma (but apex slightly whitish), and palpi dark brown; wing membrane hyaline.

Holotype in Zaykov Collection Plovdiv: "4.8.1978, Rhodopi, v. Pereliw, leg. A. Zaykov".

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WHARTON, R., 1980. REVIEW OF THE NEARCTIC ALYSIINI (HYM., BRACONIDAE). With discussion of generic relationships within the tribe — *Univ. Calif. Publ. Ent.* 88: I-XI, 1-112. figs. 1-65. Price \$ 15,—.

In this paper Wharton gives the first modern review of the Nearctic Alysini.

In 1971 Marsh did not present a key to the genera because "this subfamily [Alysiinae in his sense, Alysini in the recent meaning] is so much in need of revision and the genera are so poorly represented in the National Collection...". In the Northern Hemisphere the tribe Alysini of the subfamily is one of the largest of the Braconidae and consists of larval endoparasites of various Diptera, ranging from miners to carrion-feeders.

The first chapter deals with the variation of ten species reared during this study and gives a firm base to the broad definitions which have been used in the descriptions of the 17 new species, consistent with the wide range in morphological variation observed. The general disregard for intraspecific variation (e.g., by Fischer in his important series of papers on Alysini) has (as correctly pointed out by Wharton) a misleading impression of diversity and biogeographic relationships, but has also resulted in problems in identification.

The main part of the review deals with the systematics of the New World genera of the Alysini; keys are presented to the species of several genera, two new genera are described (additionally to the new species mentioned earlier) and the genera are redefined (several Holarctic genera are used in a wider sense than before). The final chapter contains his ideas about the relationships of the known genera of Alysini. Except for some minor flaws (e.g., the inclusion of generic synonyms in different groupings) this paper is a most useful addition to the taxonomical literature on Braconidae. — C. van Achterberg.