

Phaenocarpa (Asobara) persimilis sp. n.
(Hymenoptera, Braconidae, Alysiinae) from Australia

By

J. PAPP

Mr. G. J. PRINCE (Melbourne) was kind enough to forward to me *Phaenocarpa* material reared by him from *Drosophila melanogaster* MEIG. The specimens proved to represent a new species, its description is as follows.

According to my opinion, taxon *Asobara* FÖRST. is but a subgenus of *Phaenocarpa* and not a genus (FISCHER, 1970). The single feature of *Asobara* is the indistinct basal cell (*B*) of the fore wing which may serve only for subgeneric characterization of the taxon respected.

Phaenocarpa (Asobara) persimilis sp. n. ♀♂

(Figs. 1-4)

♀. Body 2 mm long. Head from above transverse, almost twice as wide as long (45-47:25-24), 1.3 times wider than mesonotum, between tempora almost as wide as between eyes (44-45:45-47), tempora rounded, constricted. Eye nearly round, tempora half as long as diameter of eye (7-8:16-17). Ocelli small, forming an equilateral triangle, distance between hind ocelli 3 times as long as diameter of an ocellus. *POL* half as long as *OOL* (6:11-12). Face 1.3-1.4 times as wide as high. Upper and lower tooth of mandible rounded, median one pointed (Fig. 1). Maxillar palpi as long as cephalic width, 6th joint somewhat shorter than 5th one (9:11-12). Clypeus transverse, 3 times as wide as high, laterally rounded, medially broadly truncated. Head smooth, shiny. Face, clypeus, and outer surface of mandible with long hairs. Antenna 1.5 times as long as body, 20-21 jointed, hairy. 1st flagellar joint half as long as 2nd one (11:22-21), further ones slightly shortening so that penultimate joint nearly as long as 1st one (9:11), last joint pointed.

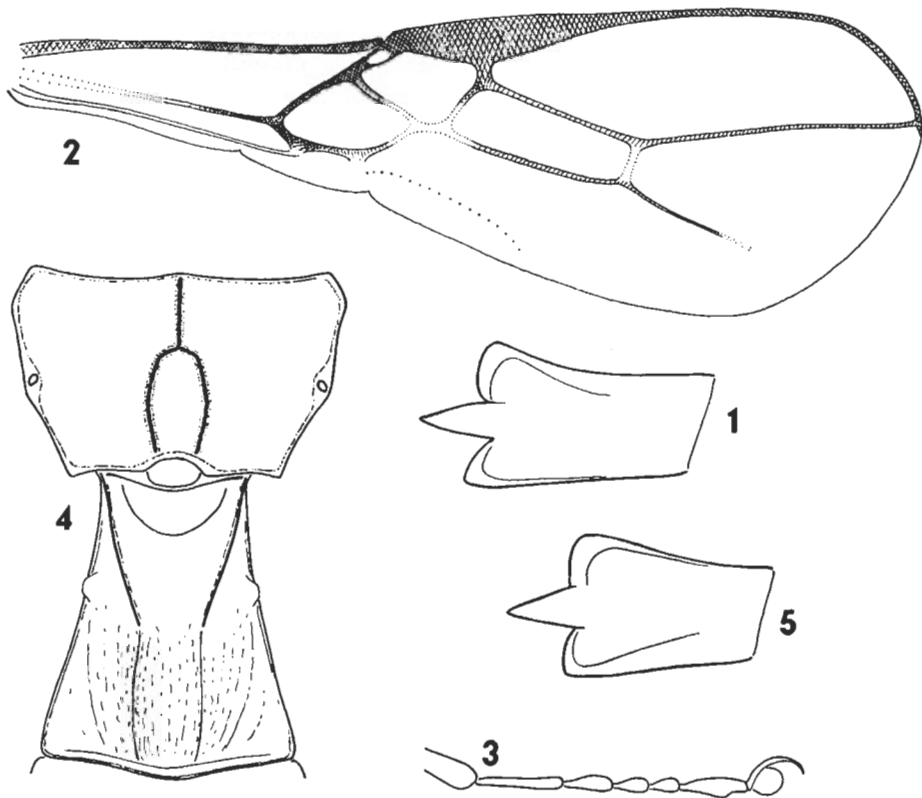
Thorax one-third as long as high, and twice longer than broad (62-65:40-42:33-32). Mesonotum hardly as long as broad (28-27:33-32), notauli very short and distinct on declivous fore part of mesonotum, otherwise indistinct. Dimple on hind median surface of mesonotum absent. Mesonotum with fine

and crenulated margin from tegula to prescutellar furrow. Prescutellar furrow wide, not deep, with a median and two lateral crenulae. Mesonotum and scutellum smooth, shiny. Propodeum with a short basal carina diverging like tuning-fork posteriorly, without transverse carination (Fig. 4), almost smooth, shiny. Mesopleura smooth, shiny, sternaulus distinct, uncrenulated. Legs slender. Hind tibia 1.5 times as long as hind femur. Basitarsus of 3rd leg nearly twice as long as 2nd tarsal joint (17-18:q) (Fig. 3).

Fore wing (Fig. 2). nearly 3 times as long as its greatest width, about the length of body. Stigma elongated triangled, r issues somewhat proximally from its middle, r_1 shorter than greatest width of stigma. r_2 straight, r_3 1.6 times as long as r_2 (50-48:30) reaches apex of wing, r_2 2.5 times as long as $cuqu_1$ (30:12-11), $cuqu_2$ half as long as $cuqu_1$, $n. rec.$ antefurcal, Cu_2 almost parallel-sided.

Abdomen as long as head and thorax together, nearly as wide as thorax. Tergite 1 (Fig. 4) slightly longer than wide at rear (23-24:21), gradually widening posteriorly, two basal keels converging posteriorly, spiracles before middle, hind half of tergite 1 rugose. Further tergites polished and with hairs. Ovipositor sheath (in lateral view) as long as body.

Black, brownish black, or brown. Abdomen usually somewhat lighter than thorax and head. Scape and pedicel brownish yellow or yellow, basal third



Figs. 1-4. *Phaenocarpa persimilis* sp. n.: 1 = left mandible, 2 = right fore wing, 3 = right 3rd tarsus, 4 = propodeum and tergite 1. - Fig. 5. *Phaenocarpa tabida* (NEES): left mandible

of flagellar joint 1 brownish yellow or yellow darkening distally, flagellar joint 2 yellow, brown, or blackish brown, further joints black, last 3–4 joints more or less pale. Mandible brownish yellow, its 3 teeth and margin dark brown. Palpi pale yellow. Tegulae brown to yellow. Legs yellow, coxae and trochanters light yellow. Tergite 1 rufous brown, always lighter than rest of abdomen. Wings hardly fumous, stigma and veins almost evenly pigmented.

♂. Similar to female. Body somewhat more slender. Antenna nearly twice longer than body, 22 jointed, apical joints not or hardly pale. Tergite 1 frequently light brown to yellow.

H o s t: *Drosophila melanogaster* MEIG. (Diptera, Drosophilidae), educ. G. J. PRINCE.

Type locality: 1. Australia, Melbourne, Templestowe, 12 October 1973 4 ♀ (1 ♀ holotype, 3 ♀ paratypes), and 23 November 1973, 135 ♀ (all paratypes) and 64 ♂ (1 ♂ allotype, 63 ♂ paratypes), leg. G. J. PRINCE. — 2. Australia, Tahbilk, 22 Nov., 1973, 1 ♀ (paratype), leg. G. J. PRINCE. — 3. Australia, Adelaide, 24 Nov., 1973, 1 ♀ (paratype), leg. G. J. PRINCE.

Holotype (♀), allotype (♂), and 61 ♀ + 28 ♂ paratypes in the Australian National Insect Collection, C. S. I. R. O., Canberra; 40 ♀ + 10 ♂ paratypes in the National Museum of Victoria, Melbourne; 39 ♀ + 24 ♂ paratypes in the Hungarian Natural History Museum Budapest, Hym. Typ.No. 2248–2290.

The specimens collected 23 Nov. 1973 and reared Dec. 1973 do not manifest any significant deviations from each other except 12 females and 3 males. Alar cell Cu_2 of this series is strongly constricted distally and not with subparallel sides as normally. This is the first record of the occurrence of the genus *Phaenocarpa* FÖRST. in Australia.

The new species is closely related to *Phaenocarpa (Asobara) tabida* (NEES), and near to *Ph. (A.) ashmeadi* PAPP (Philippines), *Ph. (A.) citri* FI. (Kinshasa-Congo), *Ph. (A.) leveri* NIXON (Fiji Islands), and *Ph. (A.) tabidula* TOB. (USSR: Leningrad).

Ph. tabida (NEES)

1. r_3 2.3–2.5 times as long as r_2 (60:26–24).
2. 2nd flagellar joint 1.3–1.6 times longer than 1st one (16:12–11).
3. Mandible as Fig. 5.
4. Propodeum with transverse carina too.
5. Deep, median, and linear suture from ocellar field to lower occiput.
6. Length 1.5–1.6 mm

Ph. ashmeadi PAPP

1. Head somewhat cubic, 1.25 times as wide as long (20:16).
2. 2nd flagellar joint 1.6 times as long as 1st one (8:5).
3. Tergite 1 longer than wide at rear (20:13–14)
4. Body brown; head, pronotum, propleura, and tergite 1 yellow. Antenna brown, apically white.

Ph. persimilis sp. n.

1. r_3 1.6 times as long as r_2 (50–48:30).
2. 2nd flagellar joint twice longer than 1st one (22–21:11).
3. Mandible as Fig. 1.
4. Propodeum without any transverse carina (Fig. 4).
5. Hind median part of head without linear suture.
6. Length 2 mm

Ph. persimilis sp. n.

1. Head almost twice as wide as long (45–47:25–24).
2. 2nd flagellar joint twice as long as 1st one (22–21:11).
3. Tergite 1 slightly longer than wide at rear (23–24:21).
4. Body black; tergite 1 rufous brown. Antenna black, apically more or less pale.

Ph. cūri Fr.

1. 2nd flagellar joint 1.58 times longer than than 1st one (15:9.5).
2. r_3 2.2 times longer than r_2 (53:24).
3. Ovipositor sheath half as long as abdomen
4. Length 1.7 mm
5. Mesonotum with dimple before prescutellar furrow
6. Last 5–6 flagellar joints ivory-white.

Ph. leveri NIXON

1. Head relatively more cubic, 1.7 times as broad as long.
2. Antenna 23 jointed, flagellar joints 1 to 2 as 5:8
3. Ovipositor sheath about two-thirds as long as abdomen.
4. Median carination of propodeum fine.
5. Tergite 1 very slightly shorter than broad at hind.
6. Body brown. Clypeus, cheeks, pronotum, propleura, and sometimes mesonotum light rufous.

Ph. tabidula TOB.

1. Cu_2 strongly constricted distally, $cuqu_1$ four times longer than $cuqu_2$.
2. Ovipositor sheath somewhat curved above.
3. Mesonotum with dimple before prescutellar furrow.
4. Maxillar palpi shorter than cephalic width, its last two joints of equal length.

Ph. persimilis sp. n.

1. 2nd flagellar joint twice longer than 1st one (22–21:11).
2. r_3 1.6 times longer than r_2 (50–48:30).
3. Ovipositor sheath as long as abdomen.
4. Length 2 mm.
5. Mesonotum without any dimple before prescutellar furrow.
6. Flagellum evenly dark, at least apically somewhat lightening.

Ph. persimilis sp. n.

1. Head relatively more transverse, 1.85–1.9 times as broad as long.
2. Antenna 20–21 jointed, flagellar joints 1 to 2 as 11:22–21.
3. Ovipositor sheath as long as body.
4. Median carination of propodeum strong.
5. Tergite 1 slightly longer than broad at hind (Fig. 4).
6. Body black, brownish black, or brown. Abdomen usually somewhat lighter than head and thorax together, tergite 1 rufous brown (♀), or brownish yellow (♂), always lighter than rest of abdomen.

Ph. persimilis sp. n.

1. Cu_2 normal, not strongly constricted distally, $cuqu_1$ twice longer than $cuqu_2$.
2. Ovipositor sheath straight.
3. Mesonotum without dimple.
4. Maxillar palpi as long as cephalic width, 6th joint somewhat shorter than 5th one (9:11–12).

ZUSAMMENFASSUNG

Phaenocarpa (Asobara) persimilis sp. n. aus Australien
(Hymenoptera, Braconidae, Alysiinae)

Beschreibung von *Phaenocarpa (Asobara) persimilis* sp. n. aufgrund von 141 ♀ und 64 ♂, die in Australien, in der Umgebung von Melbourne (Templestowe) im Jahre 1973 eingesammelt und aus *Drosophila melanogaster* MEIG. (Dipt., Drosophilidae) ausgezchtet wurden. Die neue Art steht der europäischen *Ph. (A.) tabida* (NEES) am nächsten und wird auch noch von *Ph. (A.) ashmeadi* PAPP (Philippinen), *Ph. (A.) cūri* Fr. (Kinshasa-Kongo), *Ph. (A.) leveri* NIXON (Fidschi-Inseln) und von *Ph. (A.) tabidula* TOB. (Sowjetunion: Umgebung von Leningrad) abgesondert. Die Artbeschreibung ergänzen 5 Abbildungen. Über das Vorkommen des Genus *Phaenocarpa* FÖRST. in Australien standen uns bisher noch keine Angaben zur Verfügung. Der Holo- (♀), Allo- (♂) und 61 ♀ + 29 ♂ enthaltende Paratyp wird in der Australian National Insect Collection (Canberra); der 40 ♀ + 10 ♂ zählende Paratyp im National Museum of Victoria (Melbourne) bzw. der aus 39 ♀ + 24 ♂ bestehende Paratyp im Naturwissenschaftlichen Museum (Budapest) aufbewahrt.

REFERENCES

1. FISCHER, M. (1963): *Neue Zuchtergebnisse der Braconiden (Hymenoptera)*. — *Z. angew. Zool.* (Berlin), 50: 195–214.
2. FISCHER, M. (1970): *Die Alysiniinae der Steiermark (Hymenoptera, Braconidae)*. — *Mitt. Abt. Zool. Bot. Joanneum (Graz)*, 34: 1–44.
3. FISCHER, M. (1971): *Untersuchungen über die europäischen Alysini mit besonderer Berücksichtigung der Fauna Niederösterreichs (Hymenoptera, Braconidae)*. — *Polskie Pismo Entom.* (Wrocław), 41: 19–160.
4. NIXON, G. E. J. (1939): *Notes on Alysiniinae with descriptions of three new species (Hym., Braconidae)*. — *Proc. R. Entom. Soc. London, Ser. B*, 8: 61–67.
5. PAPP, J. (1967): *A synopsis of the Phaenocarpa Först. species of the Oriental Region (Hymenoptera, Braconidae, Alysiniinae)*. — *Reichenbachia (Dresden)*, 8: 139–157.
6. ТОБИАС, В. И. (1962): *Материалы по фауне наездников-ализии (Hymenoptera, Braconidae, Alysiniinae) Ленинградской области*. — *Труды Зоол. Инст.*, 31: 81–137