

Two new flower fly groups from the Orient (Diptera: Syrphidae) with the description of a new species

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ABSTRACT

Two new groups of flower flies are described: *Philippinophilus* gen. n. (type-species, *Helophilus celeber* Osten Sacken) and *Allobaccha* (*Petioleomyia* subgen. n., type-species, *Baccha triangulifera* Austen) from the Oriental Region. One new species is also described (*Allobaccha* (*Petioleomyia*) *semperi* sp. n.) from the Philippines.

Keywords: Diptera, Syrphidae, new genus, new subgenus, Philippines, Oriental region

INTRODUCTION

Flower flies are common conspicuous pollinators. In Europe and also in North America (but to a lesser intent), they are well known and a favourite among amateur entomologists. Unfortunately, elsewhere our knowledge of them is much more limited. So, herewith two unusual groups of these flies from the Orient are described with the hope that subsequent workers will continue to advance our knowledge of them.

Our knowledge of the Oriental biota, especially of the insects and flies is limited. For flies (Diptera), there are no comprehensive monographs and only a few older regional revisions (Brunetti, 1923 (India (broadly)); Curran, 1928; 1931a & b (Malaya & Borneo) and Shiraki, 1930 (Taiwan)). The flies were naturally summarized in the Catalog of Oriental Diptera (flower flies by Knutson, Thompson & Vockeroth (1975)), but beyond that little has been done. For the flower flies of the Philippines, beyond a few scattered descriptions of new species, the only attempts of faunistic revisions were papers by Osten Sacken (1882); Bezzi (1914; 1917) and Sack (1926).

SYSTEMATICS

GENUS *Philippinophilus* gen. n. Thompson

Type-species, *Helophilus celeber* Osten Sacken.

Description

Head: Face black, broad, about as broad as long, occupying about $\frac{1}{2}$ head width, straight, pollinose and pilose laterally, narrowly bare medially; gena narrow, about $\frac{1}{4}$ as broad as long; anterior tentorial pit short extending along ventral $\frac{1}{2}$ of eye; facial stipes very narrow; frontal prominence indistinct, at dorsal $\frac{1}{2}$ of head; frontal lunule small; frons narrow, broad, about as $\frac{3}{4}$ as broad at antenna, with slightly convergent sides dorsally, $\frac{1}{2}$ as broad at vertex as at antenna, pollinose and pilose; vertex square, as long as broad, pollinose and pilose; ocellar triangle equilateral, small; eye bare, dichoptic in ♂; antenna short, about $\frac{1}{2}$ as long as face; basoflagellomere oval; arista bare, about $1\frac{1}{4}$ times as long as antenna.

Thorax: Slightly longer than broad (1.1), short pilose; mesonotum pollinose, black pollinose and yellow pollinose laterally with two yellow pollinose submedial vittae; katapisternum broadly discontinuously pilose, with broadly separated patches; metasternum bare; katapimeron bare; anepimeron pilose anteriorly, with dorsomedial triangular portion pilose, bare posteriorly; postalar pile tuft absent; metathoracic pleuron bare; metathoracic spiracle large, about as large as basoflagellomere; plumula elongate; scutellum without apical sulcus, without ventral pile fringe. Legs: mid coxa bare posteriorly; metafemur slightly swollen, metatibia transverse apically, not carinate ventrally. Wing: Cell R_1 broadly open; stigmatic crossvein absent, stigmatic area dark; cell R_{4+5} with long petiole, about twice as long as humeral crossvein; vein R_{4+5} sinuate; vein M_2 very short, virtually absent; vein A_1+CuA_2 short, oblique.

Abdomen: Elongate-oval, about $\frac{2}{3}$ as broad as long.

Etymology: The name is obviously based on the country of origin with the ending of '*ophilus*' from the Latin meaning 'lover of'. The gender is masculine.

Diagnosis: Within the current classification of flower flies, *Philippinophilus* falls into the subtribe Helophilina of the tribe Eristalini, subfamily Eristalinae. Among the genera of Helophilina, *Philippinophilus* is not closely related to any other helophiline group. *Philippinophilus* is distinguished from all other helophiline groups by the pilose triangular portion of the mesoanepimeron. Other distinctive characters are the following: 1) face is not tuberculate, but straight, 2) metafemur is swollen; 3) metatrochanter is produced apicoventrally into a distinct tooth; 4) metatibia is carinate to apex; 5) petiole of cell R_{4+5} is short, shorter than humeral crossvein; and 6) frontal prominence is not greatly produced, not extending anterior to oral margin.

Philippinophilus celeber (Osten Sacken) comb. n.
(Figs 1–4)

The characters and groups of Helophilina were summarized in a key by Thompson (2000), where I separated out *celeber* as an unnamed group.

Helophilus celeber Osten Sacken 1882: 166. Type-locality: 'PHILIPPINES' [not restricted] Holotype ♂ (SDEI). van der Wulp, 1896: 111 (catalog citation); Knutson *et al.*, 1975: 353 (catalog citation); Thompson, 2000: 376 (key reference).

Tubifera celeber. Kertész, 1910: 251 (catalog citation); Bezzi, 1914: 309 (citation); Sack, 1926: 587 (Philippines, citation only).

The type-species and only known species of this group is apparently rare as I know of only two specimens. The holotype is in Senckenberg Deutsches Entomologisches Institut, Frankfurt, and a female from the British Museum (Natural History), London. Images of the holotype are herewith provided.

Material examined

Holotype, ♂, and 1 ♀, PHILIPPINES: Mindanao, 13 May 1920, Dr A. Moore, B.M. 1921-449, on foliage (BM(NH)).

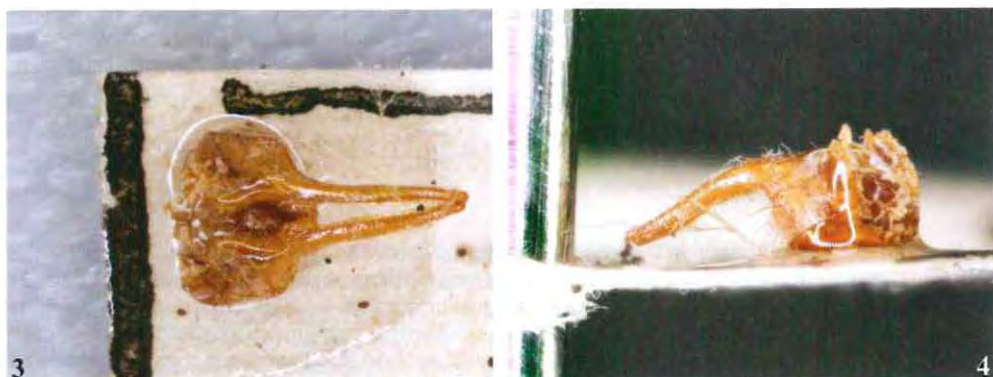
Key to petiolate syrphine groups

- A Postpronotum pilose; ♂ abdomen with 4 unmodified pregenital segments; tergum 5 not visible in dorsal view Microdontinae
- Postpronotum bare or rarely pilose*; ♂ abdomen with 5 unmodified pregenital segments; tergum 5 visible in dorsal view Syrphinae B

* If postpronotum pilose and other characters do not apply, see couplet 2



Figs 1–2. — *Philippinophilus celeber* (Osten Sacken), holotype ♂: 1, dorsal view; 2, lateral view. Scale bar = 5mm.



Figs 3–4. — *Philippinophilus celeber* (Osten Sacken), ♂, epandrium and associated structures: 3, ventral view; 4, lateral view.

- B Abdomen oval or elongate; segment 2 broader medially than segment 1 and as broad or broader than segment 3 other Syrphinae
- Abdomen petiolate; segment 2 narrower medially than either segments 1 or 3. 1
- 1 Arista plumose, with pile more than twice as long as aristal width. Face black (Palearctic) *Spazigaster*
- Arista bare 2
- 2 Postpronotum pilose or laterotergum with a tuft of long pile *Allobaccha* (*Allobaccha*)
- Postpronotum bare and laterotergum without a pile tuft 3
- 3 Anepisternum anteriorly with short but distinct pile posterodorsally 11
- Anepisternum bare anteriorly; metathoracic pleuron bare 4
- 4 Wing margin posteriorly with a series of closely spaced black maculae. Eye bare, metasternum bare *Asiobaccha*
- Wing margin without such maculae 5
- 5 Face and scutellum black in ground colour; face usually without tubercle, flat *Leucopodella*
- Face and / or scutellum partially pale in colour, usually yellow or yellowish brown in ground colour 6
- 6 Metasternum pilose *Ocyptamus* (*Orphnabaccha*)
- Metasternum bare 7
- 7 Metafemur with distinct anteroventral and posteroventral rows of spinose setae; vein M1 very abruptly and strongly sinuate; vein R₄₊₅ sinuate; postmetacoxal bridge complete 10
- Metafemur without spinose setae; vein M₁ at most slightly sinuate; Vein R₄₊₅ not sinuate, usually straight or nearly so 8
- 8 Thorax without yellow macular except on scutellum *Pseudodoros*
- Postpronotum yellow; mesonotum with lateral yellow vitae at least in front of suture; pleuron partially yellow 9
- 9 Face greatly produced anteriorly; plumula absent; abdomen not emarginate; wing dark anteriorly; ♂ dichoptic (Neotropical) *Rhinoprosopa*
- Face not produced anteriorly; wing not dark anteriorly, uniform in coloration; plumula present; abdomen distinctly emarginate; ♂ holoptic (Palearctic) *Doros*
- 10 Vein R 4+5 strongly sinuate; 1st abdominal tergum produced laterally into a strong spur; occiput with dorsal cilia reduced to a single row *Salpingogaster*
- Vein R 4+5 only slightly sinuate; 1st tergum not produced into a spur; occiput with dorsal cilia in 3–4 rows *Eosalpingogaster*
- 11 New World; metathoracic pleuron usually with some erect or subappressed pile ventral to spiracle; alula variable, usually present; abdominal petiole variable *Ocyptamus*
- Oriental & Australian [New Guinea]; metathoracic pleuron bare; abdominal petiole very long *Petioleomyia* subgen. n.

Allobaccha (*Petioleomyia*) subgen. n. Thompson & Vockeroth

Type-species, *Baccha triangulifera* Austen.

Description

With all the characters of *Allobaccha* but differing from the type species and others by the following combination of characters: 1) face convex, without distinct tuberculate swelling; 2) vertical triangle of ♂ very long and narrow; 3) Ocellar triangle strongly anterior in position; 4) postpronotum bare; 5) anterior anepisternum with a vertical row of pile posterior to prothorax spiracle; 6) alula absent; 7) with or without postmetacoxal bridge; 8) abdomen with very long and narrow petiole, much longer than thorax, 2nd abdominal segment about twice as long as thorax, completely cylindrical, 3rd segment cylindrical on basal $\frac{2}{3}$; 9) 4th sternum in ♂, medially

produced into a short truncated process; 10) 9th tergum of ♂ enlarged dorsally, with lobe like structures lateral to the cerci; 11) surstylar apodeme dorsally produced between styli and anterior to cerci.

Key to species of *Allobaccha* (*Petioleomyia*) Group

- 1 Face with medial brown vittata; postmetacoxal bridge complete 3
- Face completely yellow; postmetacoxal bridge incomplete (Philippines) 2
- 2 Scutellum with a black apical macula *signata*
- Scutellum all yellow *macgregori*
- 3 Mesonotum with lateral yellow vitta ending at suture 4
- Mesonotum with lateral yellow vitta extending beyond transverse suture ... *semperi* sp. n.
- 4 Protibia entirely yellow; 3rd tergum with posterior margin yellow or narrowly black; 2nd tergum with distinct subposterior yellow fascia. ♂ 4th sternum with posteromedial process short and wide *triangulifera*
- Protibia dark medially; 3rd tergum with posterior margin broadly black; 2nd tergum with at most indistinct subposterior yellow fascia. ♂ 4th sternal process long and narrow ... *elegans*

Allobaccha (*Petioleomyia*) *elegans* (Brunetti)

Baccha elegans Brunetti, 1915: 220, pl. 4: 5 (habitus). Type-locality: INDIA. West Bengal: Darjeeling Hills, Sukna, 500ft. & Burma. Dawna Hills base of. (ST ♂, ♀ ZSI).

Baccha (*Allobaccha*) *elegans*. Knutson *et al.*, 1975: 323 (catalog citation).

Allobaccha elegans. Ghorpade, 1994: 7 (key reference, India), 2014: 17 (catalog citation).

Brunetti (1923: 125) later considered his species, *elegans*, to be the same as Austen's *triangulifera*, but Ghorpade (1994: 7) separated the two species as noted in the above key.

Allobaccha (*Petioleomyia*) *macgregori* (Curran)

Baccha macgregori Curran, 1929: 492. Type-locality: PHILIPPINES. Luzon: Manila (LT ♂ USNM here designated).

Baccha (*Allobaccha*) *macgregori*. Knutson *et al.*, 1975: 322 (catalog citation).

Curran described his species 'from 2♂♂, 4♀♀' and then stated 'The type and allotype in the United States National Museum' where today there is a male labeled by Curran as holotype and female as allotype. So as to prevent future confusion, that male holotype is herewith designated lectotype to ensure consistent interpretation of his name.

Allobaccha (*Petioleomyia*) *signata* (Sack)

Baccha signata Sack, 1926: 575. Type-locality: PHILIPPINES. Mindanao: Kolambugan (HT ♂ USNM).

Baccha (*Allobaccha*) *signata*. Knutson *et al.*, 1975: 323 (catalog citation).

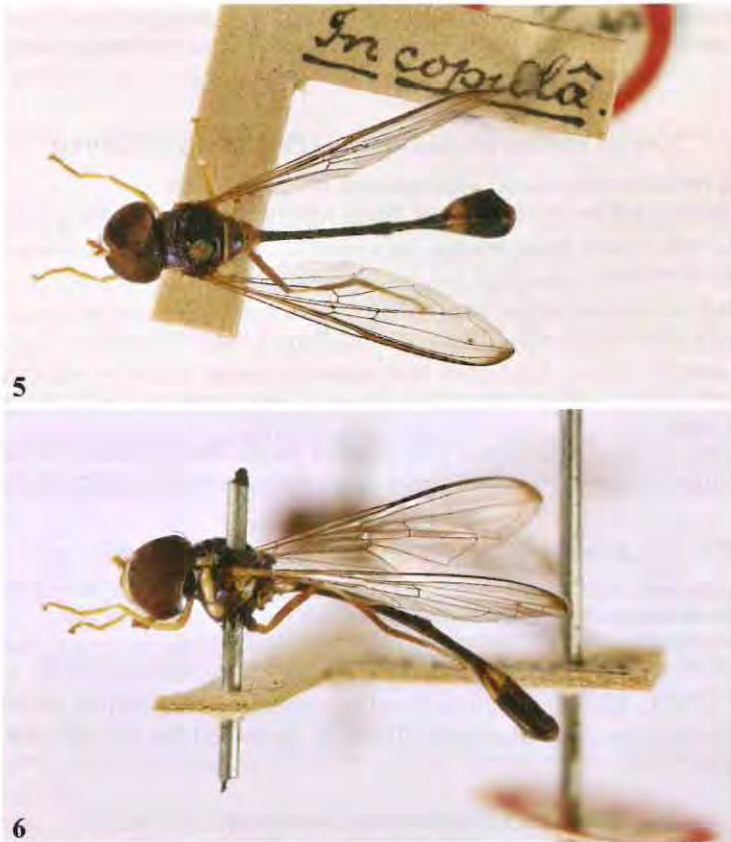
The holotype of *signata* is in the USNM, but now lacks its head. Additional specimens have not been found.

Allobaccha (*Petioleomyia*) *triangulifera* (Austen) (Figs 5 & 6)

Baccha triangulifera Austen, 1893: 138, pl. 4: 5 (habitus). Type-locality: SRI LANKA, Huldamura. (LT ♂ here designated BMNH). Wulp, 1896: 122 (catalog citation); Kertész, 1910: 164 (catalog citation); Brunetti, 1923: 124 (India, description, *elegans* as synonym).

Baccha (*Allobaccha*) *triangulifera*. Knutson *et al.*, 1975: 323 (catalog citation).

Allobaccha triangulifera. Ghorpade, 1994: 7 (key reference, Sri Lanka), 2014: 17 (catalog citation).



Figs 5–6. — *Allobaccha triangulifera* (Austen), lectotype, ♂: 5, dorsal view; 6, lateral view.

Distribution: Sri Lanka

Baccha triangulifera Austen was described from ‘A pair taken in copulá’ in Huldamulla, Sri Lanka by Lieutenant-Colonel Yerbury. These specimens are now on the same pin in The Natural History Museum, London, and the male is herewith designated as lectotype for the species-group name.

Allobaccha (Petioleomyia) semperi sp. n. Thompson

Thompson manuscript species 74–31

Description

Head: Face yellow with broad black medial vitta, white pilose; gena brownish yellow; frontal triangle yellow; lunula brownish; antenna orange; vertical triangle black; occiput black, white pollinose and pilose.

Thorax: Black with yellow maculae; postpronotum yellow; proanepisternum yellow; proepimeron black; mesonotum black except broadly yellow laterally from pronotum to slightly beyond wing base, becoming brownish yellow from there to scutellum, pale pilose; scutellum yellow except for large black apicomedial macula; mesopleuron black except with large yellow maculae on posterior anepisternum and dorsally on katepisternum and yellow laterotergum, light silvery pollinose, pale pilose. Legs: anterior legs yellow except black coxae, pale pilose; metacoxa black, black pilose; metatrochanter yellow, pale pilose; metafemur brownish, pale

pilose; metatibia yellow on basal $\frac{1}{2}$, black apically, pale pilose; metabasitarsomere brownish black; metatarsus with apical tarsomeres yellow, pale pilose. Wing: hyaline except costal area brown; costal cell light brown, microtrichose; subcostal cell dark brown, microtrichose; cell R_1 microtrichose except base to fork of RS; cell R_{4+5} microtrichose; cell R bare; cells R_{4+5} , DM and CuA1 microtrichose except narrowly bare basally; cell BM bare except narrowly microtrichose along posterior border on basal $\frac{1}{2}$; cell CuP bare except narrowly on posterior $\frac{1}{2}$; anal lobe bare except microtrichose on apical half; alula very narrow, about as narrow costal cell, bare.

Abdomen: 1st tergum yellow, pale pilose; 2nd tergum reddish brown, black pilose; other terga black except 3rd tergum with apicomedial indistinct brownish red macula; 1st sternum brownish medially, yellow laterally, silvery pollinose, white pilose; other sterna brown, black pilose; 5th sternum with small apicomedial projection, which is clefted medially.

Etymology: This species is dedicated to Carl Gottfried Semper, an early explorer of the Philippines (see Weidner (1967: 159–162) for a short summary of his contributions).

Material examined

Holotype, ♂, PHILIPPINES: Mindanao: Misamis Oriental, Mount Kibungol, 20km southeast of Gingoog, 700–800m, 9–18 April 1960, H. Torrevillas collector, deposited in the B.P. Bishop Museum, Honolulu.

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