

# THE GENUS *POECILOTRAPHERA* HENDEL

(DIPTERA: PLATYSTOMATIDAE)

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The flies of this genus are of at least potential economic importance, since, as noted below, they have been reared from guava, sugar cane, rice, and maize in southern Asia. Correction of a long-standing misidentification of the type of the genus is here made and two new species, *P. diaereta* and *P. honanensis*, are described.

Although the genus has been referred to the family Platystomatidae and the subfamily Trapherinae, the male postabdomen shows characters which recall the subfamily Ulidiinae of the Otitidae. The aedeagus (Figs. 3, 4, a), instead of being furnished with a specialized and often complex tip or glans, is simple and tubiform or band-like in the present genus and the African genera *Traphera* and *Lule*. The sperm pump (Fig. 3, sp) is wholly membranous, lacking the sclerotized cap found in the Platystomatinae.

## Genus *Poecilotrapphera* Hendel

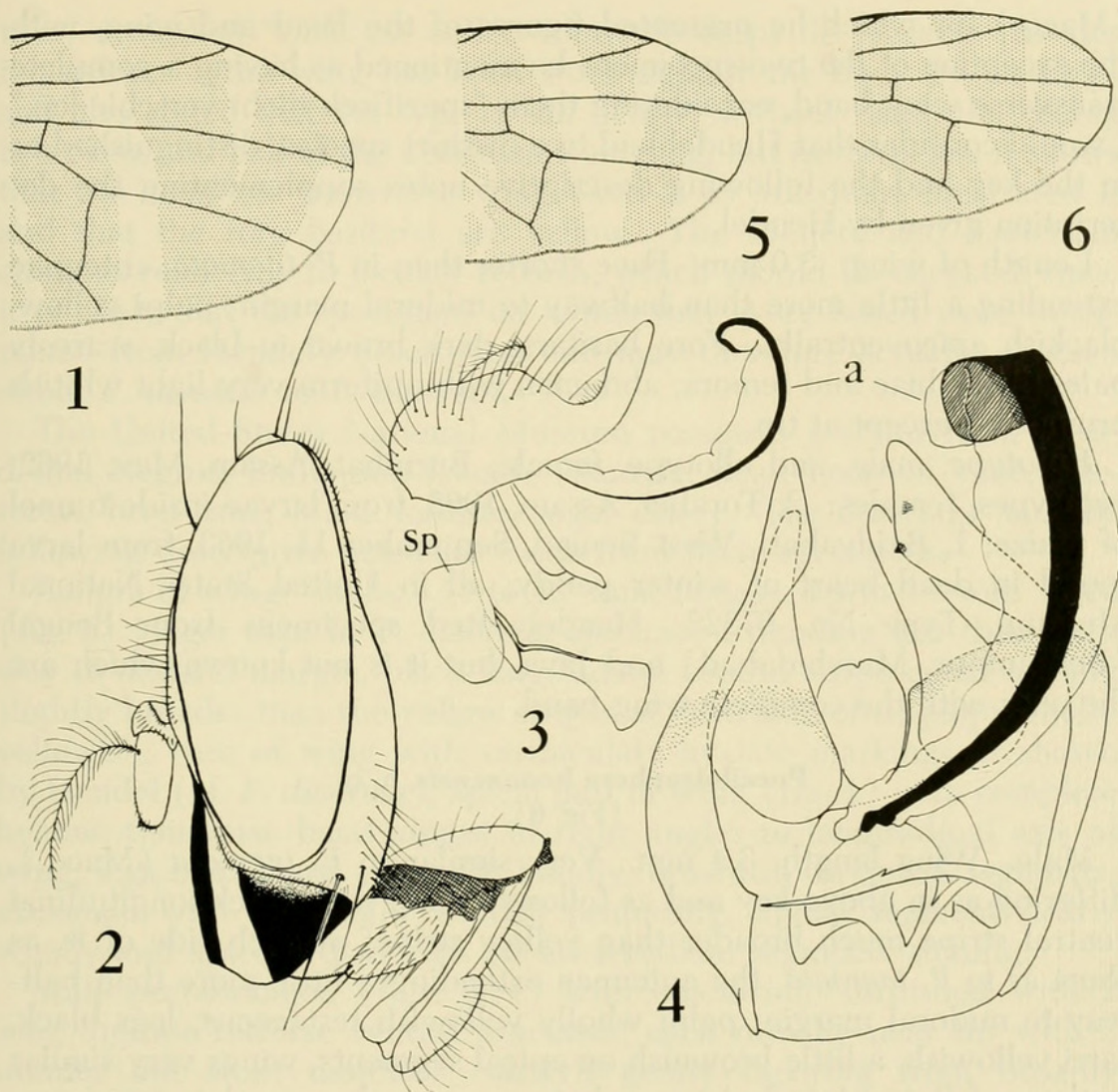
1914. Abhandl. Zool.-Bot. Ges. Wien 8 (1): 5, 21 ("typ. *taeniata* Macqu.");  
Genera Insectorum, fasc. 157: 11, 33 ("typus: *taeniata* Macquart").

The genus may be distinguished from related genera by the following characters: eyes bare; face convex and shining in nearly whole length; pterostigma well developed, veins *Sc* and *R*<sub>1</sub> well separated apically; *ta* distad of middle of discal cell; vein closing 2d basal cell much shorter than basal section of 4th vein; 2d vein in apical half gently bowed forward.

## KEY TO SPECIES OF *Poecilotrapphera*

- 1(2). Wing without complete transverse hyaline band, with 2 narrow whitish or hyaline costal triangles beyond pterostigma and 1 beyond *tp* on posterior margin; femora and tibiae wholly black; fore basitarsus dark brown to black; wing length, 4.14 to 4.7 mm ..... ***P. diaereta***, n. sp.
- 2(1). Wing with complete hyaline crossband just beyond crossveins; fore basitarsus brown to yellow.
- 3(4). Fore femur yellow; hyaline wedge from apex of 2d vein extending to posterior margin of wing and fusing with transverse band (fig. 5); abdomen heavily pruinose ..... ***P. comperei*** (Coquillett)
- 4(3). Fore femur black; hyaline wedge from apex to 2d vein ending in 1st posterior cell; abdomen nearly shining; wing length, 3.0 to 4.0 mm.
- 5(6). Black midfacial stripe broad, much broader than yellow stripes at each side of it; hyaline transverse band of wing (fig. 6) quite oblique.....  
..... ***P. honanensis***, n. sp.
- 6(5). Black midfacial stripe narrower, only slightly wider than yellow stripes at each side of it; hyaline transverse band of wing nearly at right angles to longitudinal axis of wing (fig. 1) ..... ***P. taeniata*** (Macquart)





Figs. 1-6. *Poecilotrapphera taeniata* (Macquart). 1, apical half of wing; 2, lateral view of head; 3, lateral view of male copulatory apparatus; 4, anterolateral view of same, more enlarged (a, aedeagus; sp, sperm pump). *P. comperei* (Coq.). 5, apical half of wing. *P. honanensis*, n. sp. 6, apical half of wing.

***Poecilotrapphera comperei* (Coquillett)**

(Fig. 5)

*Ortalis comperei* Coquillett, 1904, Proc. Ent. Soc. Wash. 6: 138.

*Poecilotrapphera comperei* (Coq.) Hendel, 1914, Abhandl. Zool.-Bot. Ges. Wien 8 (1): 22; Gen. Ins. 157: 33.

The types of this species in the United States National Museum, two males from Bangalore, India, reared from guava, have been examined. No further records are available.

***Poecilotrapphera diaereta*, n. sp.**

*P. taeniata* (Macquart) Hendel, 1914, Abhandl. Zool.-Bot. Ges. Wien 8 (1): 21; Gen. Ins. 157: 33, pl. 3, figs. 53, 54.

This is obviously the species that Hendel referred to *P. taeniata*



(Macq.) for which he presented figures of the head and wing, with the exception of the two specimens he mentioned as having a complete transverse wing band, considering them "spezifisch nicht verschieden." I would consider that Hendel had two distinct species, distinguished as in the key and the following descriptive notes supplementing the description given by Hendel.

Length of wing: 3.0 mm. Face shorter than in *P. taeniata*, antennae extending a little more than halfway to midoral margin; palpi yellow, blackish apicoventrally. Fore basitarsi dark brown to black, scarcely paler than tibiae and femora; abdomen with uniform very light whitish pruinosity, except at tip.

*Holotype*, male, and allotype, female; Burnihat, Assam, May, 1962; paratypes, females: 2, Torabet, Assam, 1962, from larvae inside tunnel of maize; 1, Baidyabati, West Bengal, September 11, 1963, from larva found in dead heart of winter paddy; all in United States National Museum, Type No. 67322. Hendel cited specimens from Bengal (Berhampur, Murshidabad) and Java, but it is not known which are the ones with the complete wing band.

***Poecilotrapphera honanensis*, n. sp.**

(Fig. 6)

Male. Wing length, 3.4 mm. Very similar to *P. taeniata* (Macq.), differing as in above key and as follows. Face with black longitudinal central stripe much broader than yellow stripes at each side of it, as short as in *P. taeniata*, the antennae extending a little more than halfway to midoral margin; palpi wholly yellowish testaceous; legs black, tarsi yellowish, a little brownish on apical segments, wings very similar to those of *P. taeniata*, but somewhat narrower, the complete transverse hyaline band quite oblique (fig. 6), the vermiculate pale markings at base of wing reduced, the two spots in anal cell nearly fused and the line directly posterior to whitish pterostigmal wedge reduced to 3 small spots; abdomen nearly wholly shining bluish black, pruinosity very slight.

*Holotype*, male, Honan Island, P'an-yu district, Canton, South China, December 5, 1933 (F. K. To), No. 67323 in United States National Museum.

***Poecilotrapphera taeniata* (Macquart)**

(Figs. 1-4)

*Urophora taeniata* Macquart, 1843, Mem. Soc. Roy. Sci. Agric. Arts Lille 1843: 379 [Dipt. exot. 2 (3): 222], pl. 30, fig. 6.

*Poecilotrapphera taeniata* (Macq.) Hendel, 1914, in part, Abhandl. Zool.-Bot. Ges. Wien 8 (1): 21; Meijere, 1924, Tijds. Ent. 67: 204; 67, suppl.: 61; Enderlein, 1924, Mitteil. Zool. Mus. Berlin 11: 100.

Macquart's type was from Java. His figure is inaccurate with regards to the basal part of the wing, since as E. Séguy (personal communica-



tion) remarked "l'aile est collée contre le corps de l'insecte par des moisissures" (the wing has been stuck against the body by wetting) and also stated that the type is "un débris" without head, the thorax is broken, and half of the abdomen is missing, but nevertheless it shows that the complete transverse wing band is as Macquart illustrated it and that the fore basitarsi are yellow. The Meijere and Enderlein citations refer only to locality records, which should be checked, since it is likely that the specimens on which they were based were determined from Hendel's description and may therefore actually concern either *P. taeniata* or *P. diaereta*.

The United States National Museum possesses a series from Occidental Negros, Philippine Islands (Saravia, dead heart of cane; Victorias, bred cane; Maaos millsite, sugar cane). The drawings and the following descriptive notes are made from these specimens.

Length of wing: male, 4.14 to 4.7 mm; female, 4.3 to 4.8 mm. Face (fig. 2) longer than in *P. diaereta*, antennae extending less than halfway to midoral margin, black longitudinal central stripe equal or only slightly broader than the yellow stripes at each side of it; palpi wholly yellowish; base of wing with vermiculate hyaline markings as shown by Hendel (cf. *P. diaereta*), apical part of wing (fig. 1) with complete hyaline transverse band almost at right angles to longitudinal axis of wing; legs black, tarsi yellowish basally, brownish on apical segments; abdomen with very light whitish pruinosity, apical segment nearly wholly and apicomedian area on intermediate segments shining.

Male postabdomen (figs. 3, 4) with epandrium furnished with 2 long digitate retrorse ventral processes, each mesally near tip with 2 minute but stout denticles; surstyli gently tapering from broadly rounded bases and well separated from epandrial processes; hypandrium simple, U-shaped; aedeagus (a) tubiform, largely membranous, but with apically expanded sclerotized anterior strip; aedeagal apodeme with head broadly expanded before attachment to aedeagus; stem with rectangular bend to hypandrium, before which it is bifurcate; epiphallus a roughly trapezoidal plate; sperm pump (sp) ovoid, wholly membranous, its apodeme as figured.

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Steyskal, George C. 1965. "The genus *Poecilotrappera* Hendel (Diptera: Platystomatidae)." *Proceedings of the Entomological Society of Washington* 67, 84–87.

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