

**Discovery of *Terpsimyia semicineta* (BECKER),  
a marine dolichopodid fly in the Gulf of Siam  
(Insecta Diptera Dolichopodidae)\***

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**Abstract**

*Terpsimyia semicineta* (BECKER, 1922) was re-discovered for the first time since its description. It was found on the cliffs on the beach of Sam Roi Yot National Park in the Gulf of Siam. A detailed re-description is given and the species is classified now in the subfamily Diaphorinae. Instead of having a single pair of ornamented legs, the male exhibits remarkable secondary sexual characters on all three pairs of legs.

**Key words** : Diptera, Dolichopodidae, systematics.

**Introduction**

*Terpsimyia semicineta* was described by BECKER in 1922 from Taiwan (Anping, Formosa). He erected the genus *Hadroscelus* to host this species and placed the genus in the former subfamily Campsicneminae. DYTE (1975) gave a new name to this genus, because the name proposed by Becker was preoccupied. DYTE classified it in the subfamily Sympycninae, which is in fact a synonym of the Campsicneminae. The genus is still monotypical and was not reported since its description. Unfortunately, BECKER (1922) did not mention in which biotope his specimens were found so that the habitat of the species remained unknown.

In April 1996, the first author visited the cliffs on the beach of the Sam Roi Yot National Park and there we found a male of a "unknown" dolichopodid with remarkable male secondary sexual characters on all three pairs of legs. These characters fit more or less to the description given by BECKER (1922) of

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\* Received : 26.X.1998; accepted : 11.I.1999.

his *Hadroscelus* but the description of the face, a character of major generic importance, did not correspond to our specimen. Therefore we revised Becker's type material and apparently there was an inaccuracy in the original description because the types appeared to be conspecific with the specimen of Thailand. In the present paper we re-describe and illustrate all main features. In addition to other characters, the examination of the male genitalia revealed that *Terpsimyia* should be classified in the Diaphorinae instead of the Sympycninae. This at least if one accepts that the two subfamilies should indeed be considered distinct and not to be merged one day.

*Terpsimyia semicincta* (BECKER, 1922)  
(Figs 1-14)

Type species : *Hadroscelus semicinctus* BECKER, 1922 : 113, Fig. 64; monotypical.

*Terpsimyia semicincta* (BECKER, 1922) DYTE, 1975 : 257 : new name for *Hadroscelus* (pre-occupied QUENDENFELDT, 1885).

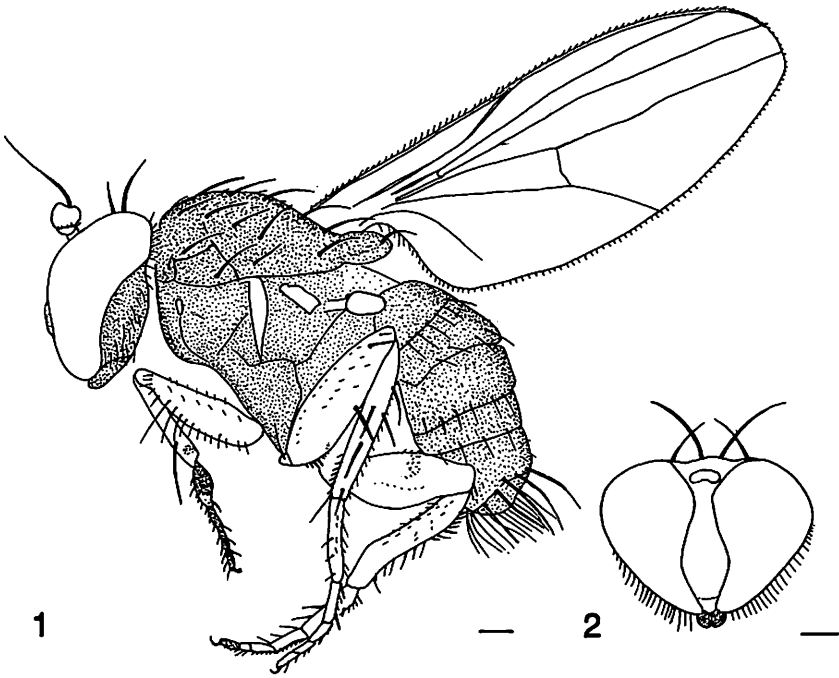
A small, thickset species of metallic green coloration. Face widened in middle and slightly bulging in both sexes. Thorax shining metallic green with a flattened area in front of the scutellum. Acrostichals short, biseriate; 5 dorso-centrals. All legs of male short and thickened, ornamented, with relatively large claws; legs of female not ornamented, but also rather short. Abdomen short, with 5 visible segments; hypopygium of male enclosed and tip of abdomen with long and dense bristling and tufts of white hairs.

*Material examined* : Taiwan, Anping 1912.IV, 1♂, 1♀, leg. Sauter [in Zool. Mus., Berlin]; Thailand, Sam Roi Yot, 2 April 1996, 1♂ (sample n° 96001 in coll. R.B.I.N.S., Brussels).

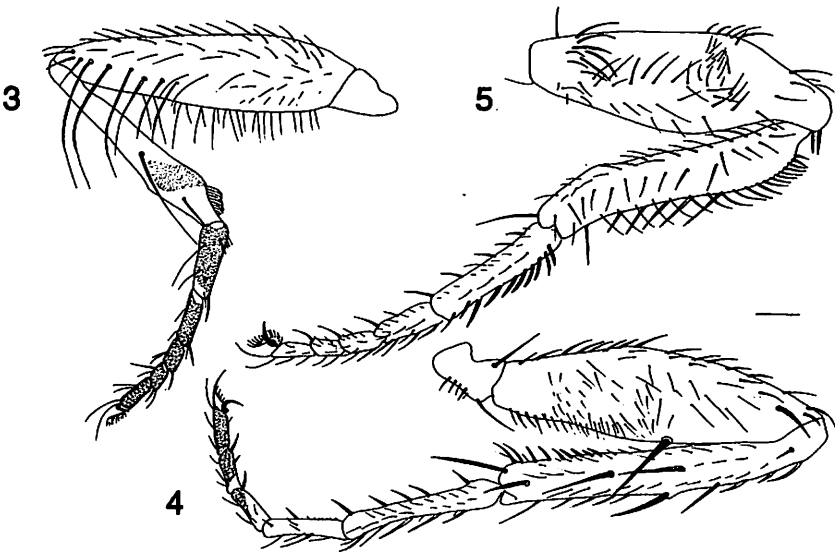
*Male*

Body length : 2.35 mm; wing length : 2.2 mm.

*Head.* Vertex shallowly excavated; ocellar callus low, nearly reaching upper level of eyes. Frons moderately wide, narrowing towards antennae, shining metallic green. Face with shining metallic green ground-colour, beneath antennae about as wide as the distance between the ocellar bristles, widening downwards until just below middle; there the face is more than two times as wide as beneath antennae, and bulges slightly beyond anterior eye margin (Figs 1-2); from there the face narrows again downwards, being below even narrower than beneath antennae. Palpi (Figs 2, 13) very small, blackish, each with a minute hairlike bristlet. Rostrum small, black. Eyes with short white pubescence. Occiput sunken between the eyes, dark metallic green. 2 moderately long, diverging ocellars; 2 slightly shorter, converging verticals; 2 tiny,



Figs 1-2. *Terpsimyia semicincta* (BECKER), male. 1 : Habitus; 2 : Head in front.



Figs 3-5. *Terpsimyia semicincta* (BECKER) male. 3 : Fore leg; 4 : Mid leg; 5 : Hind leg. Scale 0.1 mm.

very thin postocellars; no postverticals. Upper postoculars uniseriate, short, yellow; lateral and lower postoculars pluriseriate, white. *Antennae* (Fig. 6) short, yellow; anterior and upper margin of third segment browned. First segment deeper than long, bare. Second segment short, with a cirlet of short, black bristlets, that are longest on upperside. Third segment deeper than long, more or less trapezoid, with broadly rounded basal angles, and a rather blunt apex. Arista dorsal, thin, bare, nearly 3 times as long as antenna; basal arista segment more than half as long as third antennal segment.

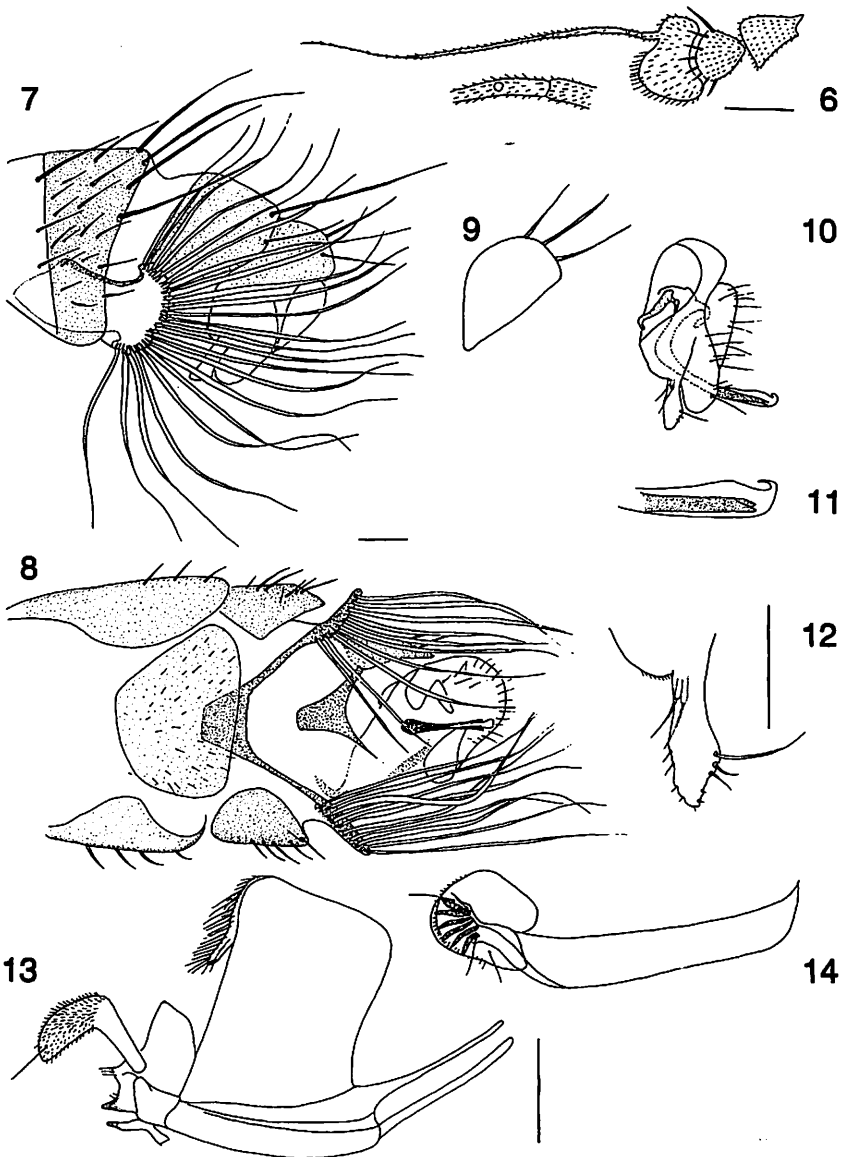
*Thorax* shining metallic green with coppery reflections, with a flattened area in front of scutellum. Acr short, biseriata; between de rows of acr and dc there is a row of more spaced small bristles. 5 dc, preceded by a short bristle. Humerus with 1 bristle and a small hair. 1 notopleural, 1 presutural, 1 sutural, 1 shorter and 1 longer supra-alar, 1 postalar. Scutellum with 2 marginals. No propleural bristle.

*Legs* rather short and thick. Fore coxa yellow; mid and hind coxae dark brown, with yellow apices. Trochanter and legs yellow. Fore tibia with a large black spot anteriorly beyond middle; fore tarsus black, with tip of first segment and bases of second and third segments narrowly yellow. Last three segments of mid and hind tarsi progressively blackened.

*Fore leg* (Fig. 3). Coxa and trochanter bare. Femur rather short and thick; on basal half, ventrally and posteroventrally, a short yellow hairiness; posteroventrally on apical half a row of long, bristlelike, bent yellow hairs. Tibia shorter than femur; a very long, hairlike posterior bristle beyond middle, and a shorter, hairlike pd in front of apex. First tarsal segment ovals broadened; tarsal segments 1-4 each with 2 rather strong apicoventral spinules. Length of tibia and tarsal segments (in mm) : 0.55 : 0.17 : 0.13 : 0.07 : 0.05 : 0.09.

*Mid leg* (Fig. 4). Coxa exteriorly with a few short hairs. Trochanter with a relatively strong bristle. Femur widened dorsoventrally, bent near base, flat and bare on inner side; posteroventrally, on basal half, a comb of short, black spinelike bristlets, continued more ventrally by a stripe of close-set, very short hairlets; beyond middle a strong, spinelike black pv; a small anterior preapical, and a very weak preapical pv. Tibia rather spindle-shaped, about as long as femur; 2 dorsal bristles on basal half, 2 anterior bristles, and a small anterior bristle near apex; ventrally on apical half a row of short, spine-like bristlets, growing longer towards apex of tibia; 1 rather strong ventral apical. First two tarsal segments posterodorsally with rather long hairs and anteroventrally with a row of spaced black spinules; third and fourth segments with small apicoventral spinules. Length of tibia and tarsal segments (in mm) : 0.75 : 0.35 : 0.2 : 0.1 : 0.05 : 0.1.

*Hind leg* (Fig. 5). Coxa with a small exterior bristle. Trochanter without bristles. Femur shaped as mid femur, but yet deeper, with its greatest depth



Figs 6-14. *Terpsimyia semicincta* (BECKER) male. 6 : Antenna with detail of arisal pit; 7 : Tip abdomen; 8 : Tip abdomen ventrally; 9 : Eighth sternum; 10 : Genital capsule; 11 : Tip aedeagus; 12 : ventral surstylus; 13 : mouth parts; 14 : labellum. Scale 0.1 mm.

just beyond middle; ventrally about middle a rather long, pale hairiness; anterodorsally, in front of apex, a roundish bare area, surrounded by slightly lengthened hairs; no preapical bristle. Tibia hardly shorter than femur, dorsoven-

trally widened, gently curved at apical third; ventrally, from middle unto shortly before apex, a low, nose-shaped projection (not very distinct on Fig. 5); dorsally at base a shallow excavation, preceded by 2 short, spine-like bristlets, and followed by a conspicuous comb of close-set, very short black bristlets; 5-6 rather short, but strong dorsal bristles; before apex a short, thin, erect dorsal bristlet; 1 small, thin anterior bristle on basal fourth, followed by a row of short, thin hairs; anteroventrally a row of slightly lengthened hairs; at ventral apex a rather long bristle. First tarsal segment slightly flattened, dorsally with a comb of short, but strong black spinules. Tarsal segments 1-4 with rather strong apicoventral spinules. Length of tibia and tarsal segments (in mm) : 0.75 : 0.33 : 0.15 : 0.1 : 0.07 : 0.1.

*Wing* (Fig. 1). hyaline, feebly brownish tinged; veins brown; costa and r1 yellowish. r4+5 and apical part of m1+2 more or less parallel. Apical part of m1+2 with a very slight curvature (wing boss) just before its middle. Tp straight, about half as long as apical part of m3+4. No anal vein. Axillary lobe well developed. Halteres yellow. Squamae yellow, with short white cilia.

*Abdomen* short, about as long as thorax, shining metallic green, ventrally partly yellowish; 5 visible segments (Fig. 1). Hairs and hindmarginal bristles on first three terga black, rather short. Fifth tergum with very long, black hindmarginal bristles (Fig. 7). Laterally and ventrally on margin of fifth segment with long bilaterally symmetrical projection bearing very long, close-set, white hairs with curled tips, surrounding and hiding sixth segment and hypopygium (Figs 7-8). Sixth tergum with a few long black bristles. Sternum eight with 3 macrochetae (Fig. 9). Hypopygium quite small (Fig. 10). Aedeagus with a recurved tip (Fig. 11).

#### *Female*

Body length 2.05 mm; wing length 2.3 mm.

Generally looking like the male. Face shaped as in male, but broader, beneath antennae more than 1.5 times as wide as the distance between the ocellar bristles. Coxae coloured as with the male, but legs entirely yellow, not ornamented or thickened. *Fore leg* : femur posteriorly and posterodorsally with a short dark hairiness; tibia shorter than femur, dorsally with a row of short, partly yellowish, partly dark hair-like bristles, all shorter than diameter of tibia; tarsus about as long as tibia, its first segment slightly broadened, ventrally with a row of short hairs. *Mid leg* : femur lacks bristles; tibia with 3 ad and 3 pd; ventrally the hairs are slightly lengthened. Tarsus a little shorter than tibia. *Hind leg* : femur without bristles, anteriorly with slightly longer hairs; tibia with a rather strong but not very long dorsal bristle just before middle, and an equally strong dorsal bristle just in front of apex; in between these two bristles a row of 5 short bristlets; 1 short and weak ad at 2/5 from base; tarsus about as long as tibia. Abdomen without long bristles or hairs; genital parts hidden.

### General discussion

The body stature and the shining metallic green body colour of *Terpsimyia* point to a relation with Diaphorine genera such as *Diaphorus*, *Chrysotus* and *Asyndetus*. The structure and position of the aedeagus is also typically Diaphorine. The macrochetæ on the eighth sternum being a quite unique feature usually present in *Diaphorus* and *Asyndetus* are quite decisive. However, a quite primitive *Chaetogonopteron* species (GROOTAERT & MEUFFELS, in press) also possesses a pair of macrochetæ, but it remains uncertain whether these structures are homologous. In addition many diaphorine genera have "halophilic" species. *Cryptophleps* is often found in mangroves (GROOTAERT & MEUFFELS, 1987; BICKEL, 1996), most *Asyndetus* species are associated with crab burrows (GROOTAERT & VAN DE VELDE, 1993) and some species of *Diaphorus* are found also near the beach. Only few Sympycninae are reported as halophilic.

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