

PSYCHODIDAE (DIPTERA) FROM THE AZORES AND MADEIRA¹

By B. OVERGAARD NIELSEN²

2 Figs., 1 Plate

Through the courtesy of professor P. Brinck, Ph. D., University of Lund, Sweden, the material of *Psychodidae* collected by the Lund University Expedition to the Azores and Madeira in 1957, was placed at my disposal. I am much indebted to prof. Brinck for this favour.

As only little information on the psychodid fauna of these islands is available the material collected by the Swedish expedition is very valuable. Frey (1945, 1949) records *Telmatoscopus meridionalis* Eat. from the Azores and Madeira and *Psychoda phalaenoides* L. from the Azores, but this information is based on Séguy (1936); the material of *Psychodidae* collected by a Finnish expedition to the Azores and Madeira in 1938 is not included in Frey's papers, as these flies are still untreated.

The type material of new species described in this paper, is in the collections of the Zoological Institute, University of Lund, Sweden.

Subfamily *Psychodinae*

Genus *Psychoda* Latr.

Subgenus *Psychoda* s. str.

Psychoda cinerea Banks

Azores, São Miguel: Ponta Delgada, in the museum, 6.III.1957, 1 ♂. Fonte at Casas Telhadas, SW of Rib. Grande, 18.III.1957, loc. 36, under stone, 1 ♂.

1) Report No. 37 from the Lund University Expedition in 1957 to the Azores and Madeira.

2) Zoological Institute, University of Aarhus, Denmark.

Fonte Grande SE Feteiras, 6.III.1957, loc. 12, at the spring, 1 ♂.

Ponta Delgada, 2 km NE of town, swimming-pool, loc. 9, 3.III.1957, 1 ♂, 2 ♀♀.

Ponta Delgada, in house, 15.III.1957, 12 ♀♀.

River 5 km SSE of Ribeira Grande, loc. 29, 14.III.1957, 1 ♀.

Caldeira das Sete Cidades, at Lagoa Azul, 21.III.1957, loc. 50, 4 ♂♂, 3 ♀♀.

Furnas, hot springs, 24.III.1957, loc. 59, wet heath, 1 ♂, 1 ♀.

Relva, tanque da Rocha Quebrada, 15.III.1957, loc. 31, on shore, fresh-water lake, 1 ♀.

Ribeira das Três Voltas, near Ribeira Chã, 16.III.1957, loc. 35, river, 1 ♂.

Azores, Faial: Nasce Água, 3 km S of Cedros, 5.IV.1957, loc. 93, ravine, under boards, 6 ♂♂, 2 ♀♀.

Fajã 2 km W of Praia do Norte, 2.IV.1957, loc. 78, swarming at weekend cottage, 5 ♀♀.

Horta town, at light, 10 IV.1957, loc. 106, 6 ♀♀.

Azores, Flores: Central plateau S and SE of Caldeira Comprida, 14.IV.1957, loc. 109, 1 ♀.

Azores, Santa Maria: 3 km NE Vila do Mourato, 19.III.1957, loc. 38, spring, 1 ♀.

Psychoda cinerea is a cosmopolite.

Psychoda severini Tonn.

Azores, São Miguel: At Lagoa do Fogo, loc. 54, 22.III.1957. Wet heath (*Vaccinium-Calluna*), 1 ♀.

Fonte Grande SE Feteiras, loc. 12, 6.III.1957, at the spring, 1 ♀.

Pico Verde, loc. 61, spring, 24.III.1957, 4 ♀♀.

Ponta Delgada, 2 km NE of town, swimming-pool, loc. 9, 3.III.1957, 2 ♀♀.

1.5 km S of Maia, 25.III.1957, loc. 62, ravine, 14 ♀♀.

2 km E of Ribeira Grande, 9.III.1957, loc. 19, on *Crucifera*, 1 ♀.

Caldeira das Sete Cidades, 8.III.1957, loc. 18, under moss and dead plants, 1 ♀.

Furnas, hot springs, 24.III.1957, loc. 59, 1 ♀.

Lagoa do Congro, 16.III.1957, loc. 34, in *Cryptomeria* plantation, 1 ♀.

1 km N of Povoação, Ribeira dos Lagos, 24.III.1957, loc. 60, under stone, 1 ♀.

Fonte at Casas Telhadas, SW of Ribeira Grande, 18.III.1957, loc. 36. Berlese sample, 1 ♀.

Azores, Faial: Porta da Boca da Ribeira, 1 km E of Ribeirinha, loc. 74, 1.IV.1957, 1 ♀.

Baía da Areia das Fontes, 1 km N of Praia do Norte, 2.IV.1957, loc. 77, 2 ♀♀.

0.5 km WNW of Ribeirinha, loc. 73, 1.IV.1957, in a damp ravine, 1 ♀.

Baía da Areia das Fontes, 1 km N of Praia do Norte, 2.IV.1957, loc. 77, ravine, 5 ♀♀.

Zona do Mistério, 2 km W of Praia do Norte, loc. 80, under stone in a wood, 2.IV.1957, 1 ♀.

Fajã, 2 km W of Praia do Norte, 2.IV.1957, loc. 78, swarming at week-end cottage, 7 ♀♀.

Ribeira das Cabras, 1 km NE of Praia do Norte, 2.IV.1957, loc. 76, in *Pittosporum* plantation, 1 ♀.

Azores, Terceira: Caldeira de Guilherme Moniz, 27.III.1957, loc. 65, cold stream, under stone, 1 ♀.

At Lagoa do Ginjal, 27.III.1957, loc. 66, under stone at the road, 1 ♀.

Psychoda severini is a cosmopolite.

Psychoda alternata Say

Azores, São Miguel: Ribeira Secca, W R. Grande, 18.III.1957, loc. 37, 3 ♂♂, 6 ♀♀.

1 km N of Povoação. Ribeira dos Lagos, loc. 60, 24.III.1957, river-bank, 2 ♀♀.

Ponra Delgada, 2 km NE of town, swimming-pool, loc. 9, 3.III.1957, 2 ♀♀.

São Roque, 15.III.1957, loc. 30, swarming, several ♂♂ and ♀♀.

Azores, Faial: Horta, town, at light, loc. 106, 10.IV.1957, 5 ♀♀.

Madeira: Funchal, in a ravine in the W part of Funchal, loc. 3, 19.IV.1957, 1 ♀.

Psychoda alternata is a cosmopolite.

Psychoda albipennis Zett.

Azores, São Miguel: Ponta Delgada, 2 km NE of town, swimming-pool, loc. 9, 3.III.1957, 1 ♂, 2 ♀♀.

1 km. N of Povoação. Ribeira dos Lagos, 24.III.1957, loc. 60, under stone, 1 ♂, 1 ♀.

Azores. Faial: 3 km WNW of Pedro Miguel, loc. 92, 5.IV.1957, 2 ♀♀.

Porta da Boca da Ribeira, 1 km E of Ribeirinha, loc. 74, grassy ground, under stone, 1.IV.1957, 1 ♀.

Baía da Areia das Fontes, 1 km N of Praia do Norte, loc. 77, ravine, 2.IV.1957, 1 ♀.

Horta, town at light, loc. 106, 10.IV.1957, 1 ♀.

Azores. Pico: Volc. Pico, W side, about 350 m. loc. 99, in *Pittosporum* and other plantation, 8.IV.1957, 2 ♂♂, 2 ♀♀.

Psychoda albipennis is a widespread species; it is recorded from many European countries and from Algeria.

Subgenus *Philosepedon* Eaton

Psychoda (Philosepedon) humeralis Mg.

Azores, São Miguel: Ponta Delgada, 8.III.1957, in house, 1 ♂.

Distribution: Britain, Germany, France, Spain, North Africa, Italy, Switzerland, Hungary, Austria, and Denmark.

Genus *Trichopsychoda* Tonnoir

Trichopsychoda brincki n. sp.

Fig. 1.

As all the material was kept in alcohol, no information on the vestiture is available.

Male. Head: Eye bridges 4 facets wide, separated by the width of about 1 facet. Antenna 16-segmented, scape 1.3 times longer than wide, pedicel not longer than wide, fig. 1b. Basal flagellar segments elongate, neck slightly shorter than bulb, fig. 1b; segment 13 without neck, segments 14-16 small, equal, distinctly separated, fig. 1c, segments 3-13 with a pair of ascoids, the latter with only one long anterior and a long posterior arm, fig. 1d. Palpal formula: 1:2.1:2.9:3.3.

Thorax: Wing venation *a* as in fig. 1a. Wing forks basal to tip of Cu or anterior fork on level with tip of Cu, origin of $R_2 + R_3$ before apex of basal cell, posterior fork incomplete or loosely connected. Wing membrane as well as veins hairy.

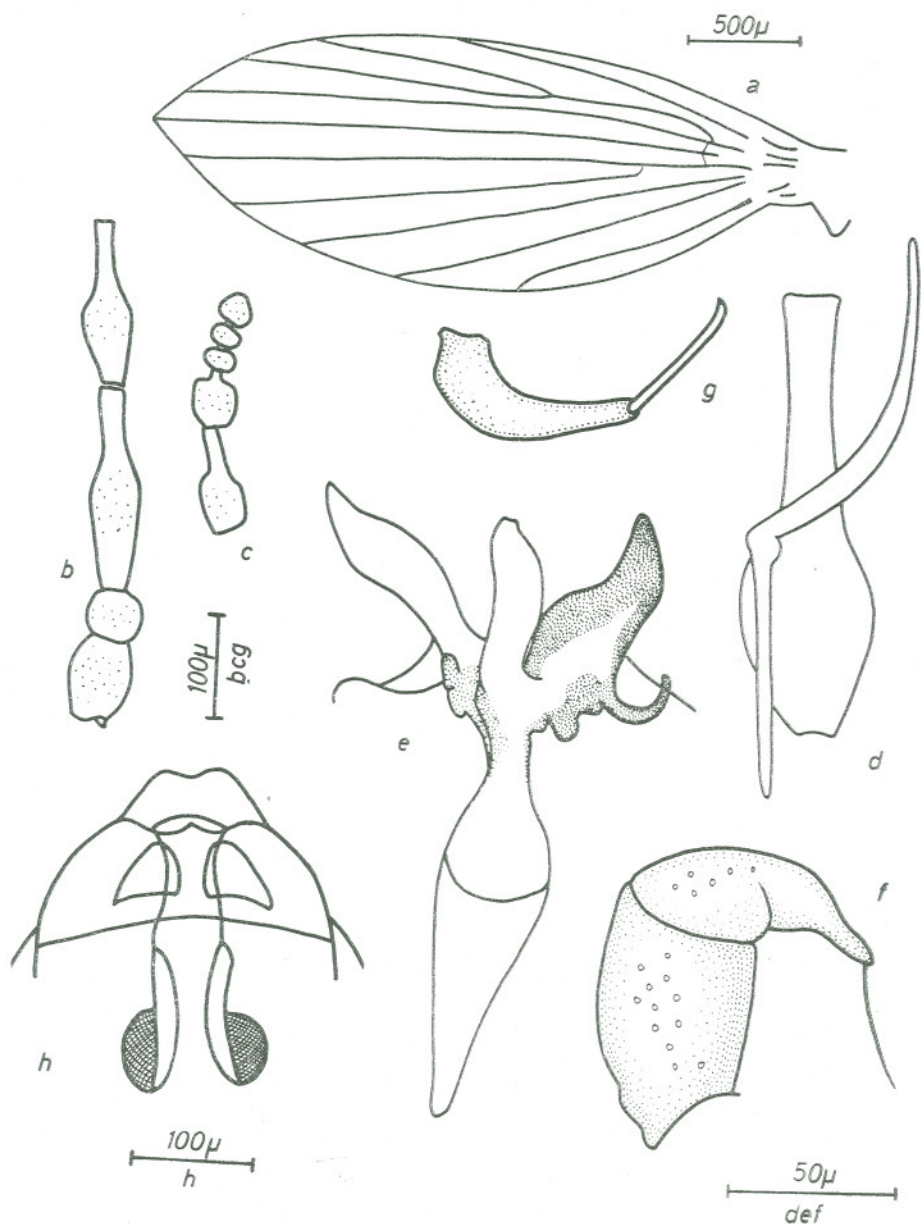


Fig. 1.—*Trichopsychoda brincki* n. sp., male and female. *a*. Wing. *b*. Basal segments of antenna. *c*. Tip of antenna. *d*. Antennal segment with an ascoid. *e*. Aedeagus. *f*. Coxite and style. *g*. Cercopod and retinaculum. *h*. Female subgenital plate and spermathecae.

Abdomen: Hypopygium; coxite longer than wide, tip of style with a very long and slender bristle, fig. 1f, aedeagus as in fig. 1e, one of lateral parameres heavily sclerotised. A single spatulate retinaculum about half the length of the cercopod, fig. 1g.

Wing length: 3 mm.

Female. similar to male; subgenital plate and spermathecae as fig. 1h.

Holotype: male; Madeira, Casa das Queimadas, 880 m, 24.IV.1957, loc. 122, ravine. *Allotype*: female; Madeira, Ribeira da Lapa, E of Pico do Serrado, 900 m, 27.IV.1957, loc. 132. *Paratypes*: Madeira, Ribeira da Lapa, E of Pico do Serrado, 900 m, 27 IV.1957, loc. 132, swarming, 2 ♂♂ 2 ♀♀. Madeira, Casa das Queimadas, 880 m, 24 IV.1957, loc. 122, ravine, 3 ♂♂, 2 ♀♀.

This species is very closely related to *Trichopsychoda maderensis* Satchell, but differs from the latter in certain important features. Ascoids of *Trichopsychoda maderensis* furnished with a long posterior arm and with very short anterior arms, while the ascoids of *Trichopsychoda brincki* have a long posterior and only one, long anterior arm. In *Trichopsychoda maderensis* the eyes are touching, while the eyes of *T. brincki* are separated by the width of a little more than one facet. The palpal formula of *T. maderensis* is: 1:2:2.4:2.9 and that of *T. brincki*: 1:2.1:2.9:3.3. As for the wing venation the two species are alike, but possibly the wing forks of *T. brincki* are slightly more basal than in *T. maderensis*. The coxites of *T. brincki* are somewhat longer than those of *T. maderensis*. In *T. brincki* the tips of the styles carry a long, conspicuous bristle, which is absent in *T. maderensis*. Aedeagus of the two species is similar, but in *T. maderensis* both of the two lateral parameres are heavily sclerotised, while in *T. brincki* only one of the parameres is sclerotised. The female subgenital plate of the two species is of the same shape, but the spermathecae differ.

A feature common to *T. maderensis* and *T. brincki* is the presence of only one retinaculum, and in this respect these two species from Madeira differ from other species of *Trichopsychoda* hitherto known. Satchell (1955) discusses the position of the genus *Trichopsychoda* and re-defines it. In connexion with this discussion it must be emphasized, that *T. brincki* differs from all other species of *Trichopsychoda* hitherto known, in the shape of the ascoids, one of the anterior arms being lost. In the subgenus *Threticus* Eaton a similar type of ascoids is present. In the diagnosis of the genus *Trichopsychoda* given by Satchell (1955), the presense of Y-shaped

ascoids is included. If *T. brincki* belongs to be genus *Trichopsychoda*, this character has no generic value.

Genus *Telmatoscopus* Eaton

Telmatoscopus (Telm.) ustulatus (Walker)

Azores, Santa Maria, 3 km NE of Vila do Porto, Fonte do Mourato, 19.III.1957, loc. 38, spring, 5 ♂♂, 1 ♀.

Distribution: *Telm. (Telm.) ustulatus* is known from several European countries and from North Africa.

Telmatoscopus (Telmatoscopus) cornutus n. sp.

Fig. 2, plate 1.

As all the material was kept in alcohol, no information on the vestiture of this species is available.

Male. Head: Eye bridges 3 facets wide, touching. Antenna 16-segmented, scape about 1.3 times as long as wide, pedicel not longer than wide, fig. 2 b. Basal flagellar segments with neck a little shorter than bulb, apical segments as in fig. 2 c, segments 3-16 with ascoids as in fig. 2 d. Palpal formula: 1:1.4:1.5:1.8.

Thorax: Wing venation as fig. 2 a. Anterior fork, posterior fork, and tip of Cu at level. Origin of R_2+R_3 at the apex of basal cell. Veins with scattered thickenings, fig. 2 a. Wing length: 2.1 mm.

Abdomen: Hypopygium, fig. 2 e, 3. Coxite about 1.5 times longer than wide, style slightly curved, rather blunt. Aedeagus, fig. 2 e, as in *Telm. (Telm.) ustulatus*, but covered by two long projections. Cercopods with 12-14 retinacula.

This species is closely related to *Telm. (Telm.) ustulatus*, but differs in the width of the eye bridges (*Telm. (Telm.) ustulatus* 4 facets wide, *Telm. cornutus* 3 facets wide), in the palpal formula (*Telm. ustulatus* 1:1.1:1.1:1.4 and *Telm. cornutus* 1:1.4:1.5:1.8), in the number of retinacula (*Telm. ustulatus* about 8 retinacula and *Telm. cornutus* 12-14), and in the presence of two projections above the aedeagus.

Female unknown.

Holotype: Male, Madeira, 1 km W of Quinta Grande, 300 m, 28.IV.1957, loc. 136, ravine. *Paratypes*: Madeira, Rib. da Lapa, E of Pico do Serrado, 900 m, 27.IV.1957, loc. 132, swarming, 2 ♂♂.

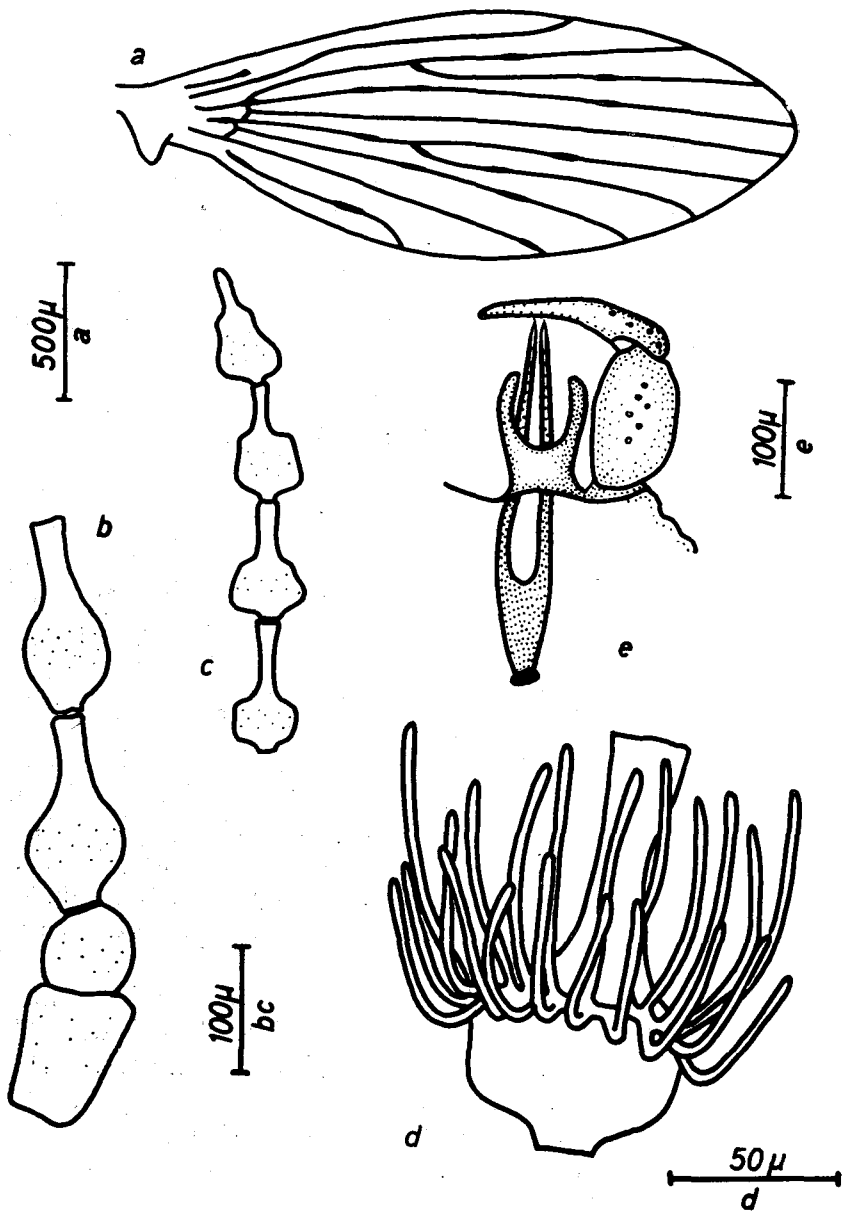


Fig. 2. — *Telmatoscopus (Telmatoscopus) cornutus* n.sp. male. a. Wing. b. Basal segments of antenna. c. Tip of antenna. d. Antennal segment with ascoids. e. Coxite, style, and aedeagus.



Telmatoscopus (Telmatoscopus) cornutus n. sp., male. Hypopygium.

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