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## NEOSCIARA WENDALINAE, AN INTERESTING NEW NEMATOCERON FROM THE NETHERLANDS (DIPTERA, LYCORIIDAE)

by

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In the course of the year 1954 I received for identification a little Nematoceron belonging to the family Lycoriidae (Sciaridae). After a careful examination of the material and the literature I arrived at the conclusion that my specimens represented a hitherto undescribed species. It belongs to the genus *Neosciara* Petzey, 1918 (sensu Lengersdorf, 1930 and Frey, 1942). There is some confusion about the naming and delimitation of the genera in the subfamily Lycoriinae. The four most important opinions are:

I. Lengersdorf (1930): Genus *Lycoria* Meigen, 1800, syn. *Sciara* Meigen, 1803, Gruppe I (no name, veins cu and m with bristles) and Gruppe II *Neosciara* Petzey, 1918 (cu and m bare).

II. Séguy (1940): Genus *Lycoria* Meigen, 1800 (cu and m with bristles) and *Sciara* Meigen, 1803 (veins cu and m bare).

III. Frey (1942): Genus *Sciara* Meigen, 1803, syn. *Lycoria* Meigen, 1800 (cu and m with bristles) and genus *Neosciara* Petzey, 1918 (cu and m without bristles).

IV. Frey (1948): Genus *Sciara* Meigen, 1803 (cu and m with bristles) and genus *Bradysia* Winnertz, 1867, containing the subgenus *Neosciara* Petzey, 1918.

The character concerning the bristles on the veins cu and m is very important for distinguishing these genera. When summarizing the above opinions we find that the species with bristles on cu and m have been named *Lycoria* Meigen, 1800 = *Sciara* Meigen, 1803 (Lengersdorf, 1930); *Lycoria* Meigen, 1800 (Séguy, 1940); *Sciara* Meigen, 1803 = *Lycoria* Meigen, 1800

(Frey, 1942, 1948). The species lacking setae on the veins cu and m have been named *Neosciara* Petzey, 1918 (Lengersdorf, 1930, Frey, 1942); *Sciara* Meigen, 1803 (Séguy, 1940); *Bradysia* Winnertz, 1867 (*Neosciara* Petzey, 1918) (Frey, 1948). I consider the opinions of Lengersdorf (1930) and Frey (1942) the most acceptable, so I placed my new species with bare cu and m in the genus *Neosciara*.

Description of the new species:

***Neosciara wendalinae* nov. spec.**

Male imago.

Eyes large, almost bare (hairs hardly visible), glittering black; palpi composed of three joints, pale yellowish brown, the last joint palest, long and narrow, almost twice as long as the second, with a few bristles. Antennae long, brownish black, consisting of two basal and fourteen flagellar joints, the second basal joint at the top broadly rounded, the joints of the flagellum all stalked (stalks very pale brown), cylindrical and somewhat swollen, with rather long hairs. Last joint somewhat larger and still more thickened.

Head, thorax, and scutellum dark black-brown, distal margin of scutellum darker; pleura somewhat paler coloured. Body with long dark bristles; scutellar bristles longer than the thoracal bristles.

Abdomen dark brown, connecting membrane between tergite and sternite pale greyish brown. Hypopygium (fig. 1b) brown; basal joint robust, longer than the second joint, which at its end bears a bundle of robust blackish brown spines.

Legs long, pale brown, tarsi somewhat darker, trochanter with dark brown spot. Second and third pairs of legs each with a pair of firm pale yellowish brown spurs on the inside of the distal part of the tibia; first pair of legs with only one tibial spur. Coxa relatively long, femur of the posterior legs about twice as long as the coxa, femur of the anterior and median legs shorter. Tibia longer than femur, especially that of the posterior legs. Claws bicoloured, base pale yellowish brown, other parts dark brown.

Wings (fig. 1a) rather large, vitreous. Veins pale brown, except m<sub>1</sub>, m<sub>2</sub>, cu<sub>1</sub> and cu<sub>2</sub><sup>1)</sup>, which are much paler. Veins distinct, except the stalk of the forked m, which has disappeared totally. Cross-vein beyond the middle of r<sub>1</sub>, end of the costa a little beyond the half of the distance between the distal ends of rr and m<sub>1</sub>; forking of m hardly divergent, somewhat bell-shaped, rather acute angulate basally. End of r<sub>1</sub> in c before base of the fork of the m. Analis strongly reduced, present as a mere trace. Costa densely covered with stiff bristles, r<sub>1</sub> and rr with somewhat less dense

1) Terminology of the veins according to Lengersdorf (1930).

covering of similar bristles; on rr the bristles begin somewhat before the middle of the distance between the insertion of cu and the cross-vein.

Halteres rather large, pale brownish yellow, long stalked, anterior half with some bristles.

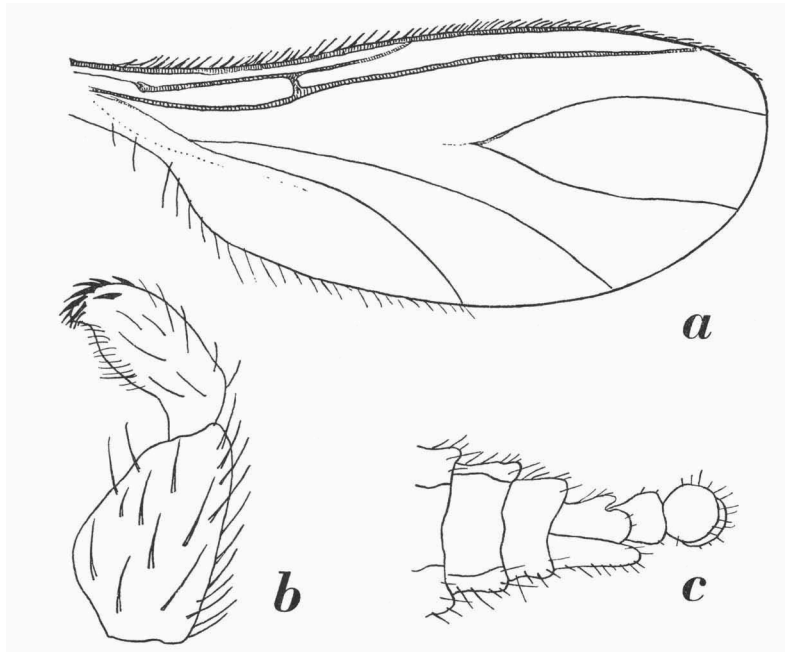


Fig. 1. *Neosciara wendalinae* nov. spec. a, wing ♂; b, left branch of hypopygium, dorsal surface; c, female genitalia, from left side. All figures highly magnified.

Female imago.

Same as ♂, except the slightly more swollen abdomen. Genitalia (fig. 1c) prominent, last joint almost circular.

Larva unknown.

Measurements: length body ♂ and ♀ 2.0-2.1 mm  
 length wing ♂ and ♀ 2.0-2.1 mm  
 breadth wing ♂ and ♀ 0.9 mm

Material:

Holotype ♂, Slootdorp (Netherlands, province of Noord-Holland) in house, August 30, 1954, leg. G. J. Masseling; allotype ♀, same data; paratype ♂, same data.

Paratypes (2 ♂♂), same locality, May 18, 1954, same collector.

Paratypes (7 ♂♂, 1 ♀), same locality, July 13/14, 1954, same collector.

Paratypes (2 ♂♂), same locality, September 15, 1954, same collector.

Paratypes (3 ♂♂), same locality, September 17, 1954, same collector.

The material here discussed is preserved in alcohol in the Rijksmuseum van Natuurlijke Historie, Leiden.

I name this new species in honour of my future wife.

I am very much obliged to Mr. G. J. Masseling (Gendringen) for collecting the material here considered. At my request he also made some biological observations.

The gnats were found in a classroom of a school, oriented southward, near and on plants of the following species: *Zantedeschia aethiopica* Spreng. (Araceae, S. Africa); *Billbergia* × *windii* Hort. = *B. decora* × *nutans* (Bromeliaceae, cultivated); *Tradescantia* spec. (Commelinaceae, America); *Maranta* spec. (Marantaceae, tropical America); *Delosperma hirtum* Schwantes (Aizoaceae, Cape); *Tolmiea menziesii* Torr. & Gray (Saxifragaceae, N. W. America); *Fittonia argyro-neura* E. Coem. (Acanthaceae, Peru). Mr. Masseling, however, could never observe any damage done to these plants. The classroom is heated in winter and has a little higher humidity of the air than the other rooms on account of regular watering of the plants. When on some days he gave more water, he could observe afterwards more Lycoriids. They prefer, as most gnats of this family do, the shadow. *Neosciara wendalinae* is the most active in the morning; newly emerged specimens are found only before 9.30 a.m. At first they can not fly, but after approximately half an hour the wings are sufficiently unfolded. During the flightless period they can run as fast as older specimens.

Mr. Masseling found this *Neosciara* during the whole year, generally 10-20 specimens each time. The larvae perhaps live in the plants (polyphagous larvae) or in the earth of these plants.

The present species is easily to be recognized by the combination of two characters, viz., the peculiar wing venation and the structure of the male genitalia.

It is very difficult to make some well founded remarks on the affinities of *Neosciara wendalinae*. There are a few species in which the petiole of the forked m has more or less disappeared, e.g., *Neosciara boletiphaga* Lengersdorf (Finland), *N. carbonaria* (Meigen) (Europe), *N. morenae* (Strobl) (Iberian peninsula), *N. tritici* (Coquillet) (North America, Europe), *Lycoria evanescens* Enderlein (Brazil), *L. prothalliorum* De Meijere (Holland), *Sciara congregata* Johannsen (North America), and *S. psittacus* Pettey (North America). It is altogether conceivable that different species obtained their reduced wing venation by convergency, and that they are not at all related.

The shape of the hypopygium is very characteristic; it faintly resembles those of *Neosciara pauperata* (Winnertz) (Europe), *N. sexdentata* Petzey (North America), and *N. tilicola* (Loew), syn. *N. modesta* (Staeger) (Europe).

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