

NEMATOCERA POLYNEURA (DIPTERA) FROM THE AZORES AND MADEIRA ¹

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With 1 figure

I am indebted to Prof. Dr. Per Brinck at the University of Lund, Sweden, for the privilege to work out the material of *Nematocera polyneura* brought home by the Lund University Expedition to the Azores and Madeira in 1957.

The knowledge of the fauna of these islands together with the fauna of the Canary Islands is of great interest to the systematists as well as to the study of zoogeography and it would be of interest to have at hand a complete account of the present knowledge of the whole tipulid fauna of these Atlantic Islands.

Unfortunately it is still difficult to identify some of the species—new to science—described by Dr. D. Elias Santos Abreu in the two valuable papers of 1923 and 1926 dealing with the tipulids of the Canary Islands. It is, therefore, impossible to give a complete list before we know more about the species mentioned in these two papers.

Subfamily *Tipulinae*

Pales (= *Nephrotoma* Meig. = *Pachyrhina* Macq.) *brevipennis*
Wollaston 1858 [B. Mannheims det.].

Pachyrhina brevipennis Wollaston 1858, Ann. Mag. Nat. Hist. Ser. 3, 1, p. 115.
Pachyrhina lucida Schiner 1868, Novara Reise. Diptera. p. 34.

1) Report No. 32 from the Lund University Expedition 1957 to the Azores and Madeira.

2) Frederiksberggade 44, Silkeborg, Denmark.

Pachyrhina maderensis van der Wulp 1885. Notes Leyden Mus. VII, p. 8.

Pales brevipennis Wollaston. — Mannheims 1951. in Lindner: «Die Fliegen», Liefgr. 167, p. 46, fig. 16.

Pales brevipennis Wollaston. — Mannheims 1962. Notulae Entomologicae. XLII, p. 132, fig. 1.

Madeira: Porto Novo, Ribeira do Porto Novo, 2 ♂, «Ravine», 22.IV. (Loc. 119).

Pales brevipennis is only known from Madeira.

***Tipula (Tipula) atlantica* Mannheims 1963 [Mannheims det.].**

Tipula (Tipula) atlantica Mannheims 1963. Notulae Entomologicae. XLII, 1962 (ed. 1963), p. 135, fig. 4

Madeira: Ribeira do Lapa. E of Pico do Serrado, 900 m, 1 ♂ (Paratype!), 27.IV. (Loc. 132).

The present species is only known from Madeira.

Subfamily *Limoniinae*

***Limonia (Dicranomyia) canariensis* Becker 1908.**

Dicranomyia canariensis Becker 1908. Mitt. Zool. Mus. Berlin. IV. 1908-10, p. 82.

Dicranomyia canariensis Becker. — Lackschewitz und Pagast 1941, in Lindner: «Die Fliegen», Liefgr. 139, p. 21, pl. V, fig. 43.

Azores: São Miguel. Caldeiras 5 km SE of Ribeira Grande 1 ♀. «Ravine», 14.III. (Loc. 28); São Miguel. River NW of Água Retorta, 1 ♀, 23.III. (Loc. 57); São Miguel. Furnas, hot springs, "swept in vegetation" 24.III. (Loc. 59).

Madeira: Terreiro da Luta, 850 m, stream, 2 ♀, "dancing", 20.IV. (Loc. 57).

The species is known from the Azores, the Canary Islands and Madeira.

***Limonia (Dicranomyia) azorica* n. sp.**

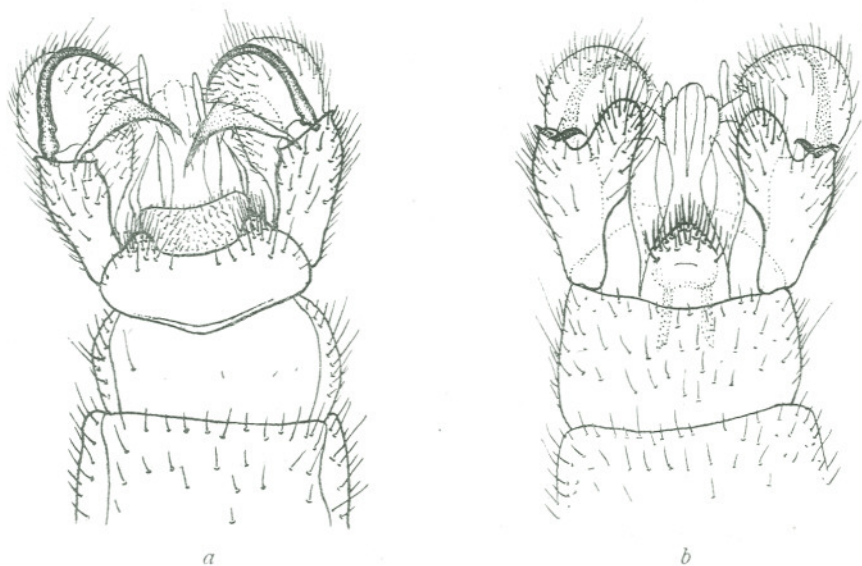
The whole material, 3 ♂ 1 ♀, is preserved in alcohol.

Holotype (♂) (in the Entomological Museum, University of Lund): Whole appearance dark brown, somewhat shining. Head dark brown. Scape of antennae dark brown, flagellum light brown with long black verticils, segments 7-11 rather elongate, last segment elongated pear-shaped, longer than the preceding segment. Proboscis and mouthpart brown. Thorax and

the abdomen dark brown. Halteres long, dark brown. Cx_1 and Cx_2 yellowish brown at the tip, Cx_3 yellowish. Legs and tarsi dark brown.

Wings brownish, tinged with a faint pterostigma, Sc_1 near the origin of R_s , Sc_2 well before tip of Sc_1 , cell $1.M_2$ closed, m-cu before base of cell $1.M_2$. Wing length 6 mm.

Hypopygium (fig. 1): Tergite 9 with a thumb-like projection covered



Hypopygium of *Limonia (Dicranomyia) azorica* n. sp. — a. Dorsal view, b. ventral view. H. Bülow-Hansen del.

with long stiff black hairs at each corner, ventral style small, rostrum long and pointed, with a single pale stout spine-like process. Both ♂ and ♀ are alike, also in the shape of the antennae.

In some respects *L. (D.) azorica* and *L. (D.) hamata* Becker are alike, even in the structure of the hypopygia, but the differences are obvious especially in the structure of the hypopygia.

Azores: São Miguel. Lagoa do Congro. 1 ♂ 1 ♀ (Allotype!) «among wet arboreal ferns», 16.III. (Loc. 34); São Miguel. Furnas, hot springs, on *Calluna* «swept in vegetation», 1 ♂, 24.III. (Loc. 59); Faial. Caldeira. 1 ♂ (Holotype!) «Swept in the vegetation, on *Juniperus*», 10.IV. (Loc. 105).

***Limonia (Dicranomyia) hamata* Becker 1908.**

Dicranomyia hamata Becker 1908. Mitt. Zool. Mus. Berlin. IV. 1908-10, p. 83.

Dicranomyia tyrrhenica Edwards 1928. Encycl. Entom. Ser. B. Diptera IV. p. 182.

Dicranomyia hamata Becker. — Lackschewitz und Pagast 1942, in Lindner: «Die Fliegen», Liefgr. 145, p. 45, pl. X fig. 81.

Azores: São Miguel. Caldeira das Sete Cidades. At Lagoa Azul. 1 ♂, «In Cryptomeria plantation and among Hedychium», 21.III. (Loc. 50).

L. (D.) hamata is recorded from the Azores, the Canary Islands and from Corsica.

***Limonia (Dicranomyia) maderensis* (Wollaston 1858), Becker 1908.**

Limnobia maderensis Wollaston 1858, Ann. Mag. Nat. Hist. (3) I. p. 114.

Dicranomyia maderensis Becker 1908, Mitt. Zool. Mus. Berlin, IV. 1908-10, p. 187.

Dicranomyia maderensis (Woll.) Becker. — Lackschewitz und Pagast 1941, in Lindner: «Die Fliegen», Liefgr. 139, p. 29, pl. VII, fig. 54.

Madeira: Terreiro da Luta. 850 m. stream, 23 ♂ 2 ♀, «dancing», 20.IV. (Loc. 112); Arieiro Mts. ca. 1700 m, «River», 2 ♂, 21.IV. (Loc. 114); Ribeira do Lapa. E of Pico do Serrado, 900 m, 11 ♂ 3 ♀ «dancing, River», 27.IV. (Loc. 132); 1 km E of Encumeada, ca 800 m, 2 ♂ 1 ♀ «dancing», 28.IV. (Loc. 135).

Only known from Madeira.

***Limonia (Dicranomyia) chorea* Meigen 1818.**

Limnobia chorea Meigen 1818, Syst. Besch. I p. 134.

Dicranomyia chorea Meigen. — Lackschewitz und Pagast 1941, in Lindner: «Die Fliegen» Liefgr. 139, p. 27, pl. VI, fig. 45.

Madeira: Terreiro da Luta. 850 m. stream, 1 ♀, 20.IV. (Loc. 112); Ribeira do Lapa. E of Pico do Serrado, 900 m, «on river bank, among Juncus and grass». 2 ♀, 27.IV. (Loc. 132).

L. (D.) chorea is a common species all over Europe.

***Limonia (Dicranomyia) luteipennis* Goetghebuer 1920.**

Dicranomyia luteipennis Goetghebuer 1920, Bull. Soc. Ent. Belgique. II. p. 108, fig. 1 and 4.

Dicranomyia luteipennis Goetghebuer. — Lackschewitz und Pagast 1941, in Lindner: «Die Fliegen», Liefgr. 139, p. 28, pl. VI fig. 51.

Azores: São Miguel. Lagoa do Canário. 1 ♂, 7.III. (Loc. 17); São Miguel. Caldeira das Sete Cidades. Lagoa Azul. 1 ♀ «under stones», 8.III. (Loc. 18); São Miguel. Valley of Ribeira Quente 2 km SE of Furnas, 1 ♂.

11.III. (Loc. 23); São Miguel. Caldeiras, 5 km SE of Ribeira Grande, 1 ♂, «Ravine», 14.III. (Loc. 28); São Miguel. River 5 km SSE of Ribeira Grande, 1 ♂, «swept in vegetation», 14.III. (Loc. 29); São Miguel. Relva, nascente dos Lagos 1 ♀, «Spring», 15.III. (Loc. 32); São Miguel. Lagoa do Congro, 7 ♂ 1 ♀, «in arboreal wet ferns», 16.III. (Loc. 34); São Miguel. Lagoa do Congro, 1 ♂, «Swept in vegetation. In Cryptomeria plantation», 16.III. (Loc. 34); São Miguel. Ribeira Seca, W R. Grande, 2 ♂ 1 ♀, «In dunes. Grassy ground», 15-20 m a.s., 18.III. (Loc. 37); São Miguel. Caldeira das Sete Cidades. At Lagoa Azul, 7 ♂ 1 ♀, «In Cryptomeria plantation and Hedychium», 21.III. (Loc. 50); São Miguel. 1.5 km S of Maia, 2 ♂, «Ravine», 23.III. (Loc. 62); São Miguel. River NW of Água Retorta, 1 ♀, «On shore», 23.III. (Loc. 57); São Miguel. At Lagoa do Fogo, 2 ♂ 6 ♀, «Wet heath. Vaccinium—Calluna», 23.III. (Loc. 54); São Miguel. Furnas, hot springs, 1 ♂, «Among Calluna, swept in vegetation», 24.III. (Loc. 59); São Miguel. Pico Verde, 1 ♀, «Spring», 24.III. (Loc. 61); Faial. Baía da Arcia das Fontes 1 km N of Praia do Norte, 2 ♀, «Grassy ground», 2.IV. (Loc. 77); Faial. Ribeira das Cabras 1 km NE of Praia do Norte, 1 ♂, 2.IV. (Loc. 76); Pico. Volc. Pico. W side, Furna de Frei Mathias, 1 ♀, 8.IV. (Loc. 98); Pico. Volc. W side ca. 350 m, 1 ♂ 2 ♀, «In Pittosporum and other plantation», 8.IV. (Loc. 99); Faial. Caldeira, 3 ♂ 3 ♀, «Swept in vegetation, among Juniperus», 10.IV. (Loc. 105); Flores. Ribeira d'Além da Fazenda, 1 ♀, «River bank», 14.IV. (Loc. 108); Flores, Central plateau S and SE of Caldeira Comprida, 1 ♀, «Raised bog», 14.IV. (Loc. 109).

The specimens determined as *L. (D.) luteipennis* Goetg. belong to the chorea-group, but they are not typical *luteipennis*. The specimens are quite yellow, the wings are clear and without any clouds. The two rostral spines are parallel and of medium size, length between the spines in chorea and mitis.

Hitherto *L. (D.) luteipennis* has been known only from Belgium, but I believe that the species has been overlooked.

***Limonia (Geranomyia) maculipennis* Macquart 1838.**

Aporosa maculipennis Macquart 1838. in Webb et Berthelot: Hist. Nat. des Iles Canaries. Ent. Dipt. p. 100, pl. IV. fig. 2.

Geranomyia canariensis Bergroth 1889. Wien. Ent. Zeitg. VIII. p. 118.

Geranomyia maculipennis Macq. — Lackschewitz und Pagast 1942, in Lindner: «Die Fliegen», Liefrg. 145 p. 50, pl. X, fig. 87

Madeira: Ribeira do Lapa. E of Pico do Serrado, 900 m, 1 ♂, 27.IV. (Loc. 132).

Recorded from Madeira and the Canary Islands.

Limonia (Geranomyia) unicolor Haliday 1833.

Geranomyia unicolor Haliday 1833. Entom. Magaz. I. p. 155.

Geranomyia maculipennis Curtis 1835. Brit. Entom. p. 573.

Geranomyia unicolor Haliday — Lackschewitz und Pagast 1942, in Lindner: «Die Fliegen», Liefgr. 145, p. 51, pl. XI, fig. 88.

Azores: Faial. Horta, «in town, at light». 1 ♂ 1 ♀, 10.IV. (Loc. 106).

L. (G.) unicolor Hal. is known from the Azores, the Canary Islands and from Great Britain. Lackschewitz found no differences between *L. (G.) unicolor* Hal. and *L. (G.) umbratica* Santos.

Limonia (Discobola) freyana P. Nielsen 1961.

Limonia (Discobola) freyana P. Nielsen 1961. Soc. Scient. Commentationes Biologicae XXIV, 2, p. 5-6, figs. 1-2.

Azores: São Miguel. Lagoa do Congro. 1 ♂. «among wet arboreal ferns», 16.III. (Loc. 34); São Miguel. Caldeira das Sete Cidades. At Lagoa Azul, 1 ♂ 1 ♀. «In Cryptomeria plantation and among Hedychium» 21.III. (Loc. 50); Faial. Nasce Água, 3 km S of Cedros, 1 ♂, 5.IV. (Loc. 93).

The present species is only known from the Azores.

Subfamily ***Eriopterinae***

Gonomyia (Gonomyia) sp.

Madeira: Faial. At mouth of Ribeira do Faial. Poço de maré. 1 ♀, 26.IV. (Loc. 129).

Erioptera (Trimicra) pilipes Fabricius 1787.

Tipula pilipes Fabricius 1787. Mantissa Insectorum. II. p. 324.

Erioptera (Trimicra) pilipes Fabr. — Edwards 1938: Trans. Soc. Brit. Ent. V. p. 129, pl. V, fig. 6.

Azores. São Miguel. Relva, tanque da Rocha Quebrada, 1 ♂, "At freshwater lake", 15.III. (Loc. 31).

A cosmopolitan species.