

CHIRONOMIDAE (DIPTERA, NEMATOCERA) FROM THE AZORES
AND MADEIRA ¹⁾

By PAUL FREEMAN ²⁾

The insects on which this report is based were collected during a Lund University Expedition in 1957 to the Azores and Madeira by Dr. and Mrs. Per Brinck and Dr. and Mrs. Erik Dahl. The bulk of the material has been returned to Dr. Brinck to be placed in the Lund University collections (Ent. dept., Zool. inst.) but representatives of most of the species have been retained in the British Museum.

The Chironomidae of these islands are not unknown, collections having been made in 1938 during an expedition by Richard Frey, Ragnar Storå and Carl Cedercreutz and reported on by Storå in 1945 and 1949; he recorded 29 species from the Azores and 17 from Madeira. I have been able to recognize 27 species in the material brought back by the Brinck-Dahl expedition, 20 species from the Azores and 15 from Madeira, several occurring in both; eleven of the records are new.

Of the 27 species represented in the above collection, 19 are European in distribution, the other eight being species or subspecies described by Storå from the Azores, four of which are also known to occur in Madeira. One of the most interesting new records is of *Heptagyia legeri* Goetghebuer, a species previously known only from the Alps.

1) Report No. 2 from the Lund University Expedition in 1957 to the Azores and Madeira. Reprinted from «Opuscula Entomologica», Bd 24, 1959, with localities added.

2) British Museum (Natural History).

Subfamily **Tanypodinae*****Pentaneura nubila*** (Meigen, 1830)

Madeira: Terreiro da Luta, 850 m., dancing by stream, 2 ♀, 20. IV. (Loc. 112).
A common European species, previously recorded by Storå from both Azores and Madeira.

Pentaneura cingulata (Walker, 1856)

Azores: São Miguel, 1.5 km. S of Maia in ravine, 2 ♂, 1 ♀, 25. III. (Loc. 62).
Another common European species but not previously recorded from either Azores or Madeira.

Subfamily **Diamesinae*****Diamesa (Nesodiamesa) alata*** Storå, 1945

Azores, São Miguel: Furnas, Park, 2 ♀, 11.III (Loc. 24); Caldeiras, 5 km. SE of Ribeira Grande, 1 ♂, 14.III (Loc. 28); Spring of Ribeira Grande, 6 ♂, 14.III. (Loc. 28); River NW Água Retorta, 1 ♂, 23.III (Loc. 57).

Azores, Terceira: 4 km. S of Vila Nova, 1 ♂, 27.III. (Loc. 67).

Azores, Faial: Caldeira, 2 ♀, 10.IV. (Loc. 105).

This interesting species of which the male antenna has only eight segments and no plumes, is known only from Azores and Madeira.

Heptagyia legeri (Goetghebuer, 1933)

Protanypus legeri Goetghebuer 1933, Bull. Ann. Soc. ent. Belg. 73:357.

Heptagyia punctulata Goetghebuer, 1934, *Ibid.* 74:337 (Syn. nov.).

Heptagyia legeri and *punctulata* Goetghebuer, 1939, in Lindner, Flieg. Pal. Reg. 3 (13 d): 22.

Madeira: Arieiro Mts., ca. 1700 m., rivulet, 5 ♂, 1 ♀ 21.IV. (Loc. 114).

Goetghebuer described these two species from specimens caught in the Alps on the Argentière Glacier (Massif du Mont Blanc) and in a spring at 900 m. in Upper Bavaria, respectively. He stated that in *legeri* the mesonotum is shining, the male antenna 14-segmented and lacking plumes and with segments 3 - 13 egg-shaped, the true base of M₃₊₄ very slightly beyond the posterior fork. He distinguishes *punctulata* because the mesonotum is matt, the male antenna

14-segmented, plumes very scanty and segments 3-13 cylindrical, true base of M_{3+4} at the posterior fork.

The Madeiran specimens show some of the characters of each: the mesonotum is shining but has some powdery pruinosity, the antennae of the male are 14-segmented but the segments are more or less cylindrical, the plumes are scanty and the true base of M_{3+4} is variable in position and is either at or basal to the posterior fork. It is probable that the type series of *punctulata* was in spirit and that the antennal segments were partially collapsed making them appear cylindrical and rendering the segmentation difficult to see. I can see no reason for maintaining them as separate species.

H. legeri is an interesting species which at first glance appears to fall into the subfamily Podonominae because the vein R_{2+3} is completely absent even though R_1 and R_{4+5} are well separated, and the postnotum is shorter and more rounded than is usual in the family. However, there is a definite postnotal furrow, the wings are devoid of macrotrichia and the female antennae are only 7-segmented, whilst the dorso-central hairs are difficult to see and are more or less decumbent. These characters, combined with the short postnotum, suggest that *Heptagyia* is probably the correct genus. A point missed by Goetghebuer is that the eyes are densely pubescent, unlike other species of the genus. Taking *legeri* into consideration, it would seem that *Heptagyia* is intermediate in adult characters between the Podonominae and Diamesinae.

Subfamily Orthoclaadiinae

Metriocnemus fuscipes (Meigen, 1818)

Azores, São Miguel: Furnas, Park, 1 ♂, 11.III. (Loc. 24); Caldeiras, 5 km. SE of Ribeira Grande, 1 ♂, 14.III. (Loc. 28); Lagoa do Fogo, 14 ♂, 4 ♀, 22.III. (Loc. 54); Pico Verde, 3 ♂, 24.III. (Loc. 61).

Azores, Faial: Pool 1 km. ESE of Cabeço do Fogo, 7 ♂, 4.IV. (Loc. 90).

Azores, Pico: Volc. Pico W side, ca. 350 m., 1 ♂, 1 ♀, 8.IV. (Loc. 99).

Madeira: Terreiro da Luta, 850 m., 1 ♂, 1 ♀, 20.IV. (Loc. 112); Ribeira da Lapa, E of Pico do Serrado, 900 m., 3 ♂, 1 ♀, 27.IV. (Loc. 132).

Storå has already recorded this common European species from both Azores and Madeira.

Metriocnemus stylatus Kieffer, 1924

Azores, São Miguel: Valley of Ribeira Quente, 2 km. SE of Furnas, 1 ♂, 2 ♀, 11.III. (Loc. 23); Furnas, Park, 2 ♂, 11.III. (Loc. 24); Caldeiras, 5 km. SE of Ribeira

Grande, 2 ♂, 1 ♀, 14.III. (Loc. 28).

Azores, Faial; Caldeira, 1 ♀, 10.IV. (Loc. 105).

Madeira: Arieiro Mts., ca. 1700 m., rivulet, 1 ♂, 21.IV. (Loc. 114); Casa das Queimadas, 880 m., 1 ♂, 24.IV. (Loc. 122); Ribeiro da Lapa, E of Pico do Serrado, 900 m., 1 ♂, 27.IV. (Loc. 132).

There is a previous record of this species from the Azores, but the Madeiran record is new; it is otherwise known from England and Germany.

Cricotopus vitripennis (Meigen, 1818)

Azores, São Miguel: São Populo, 7.5 km. E of Ponta Delgada, 7 ♀, 12.III. (Loc. 20); Ribeira da Praia, 3 km W of Vila Franca do Campo, low-water in rocky tidal zone, numerous ♀♀, 13.III. (Loc. 29).

Azores, Faial: Praia do Almoxarife, on shore, 2 ♂, 31.III. (Loc. 72).

Recorded either as this species or as *halophilus* Kieffer, which was regarded by Edwards as no more than a variety of this species, from both Azores and Madeira. The larvae are marine.

Cricotopus sylvestris (Fabricius, 1794)

Azores, São Miguel: Charco da Madeira, 6 km. N of Ponta Delgada, on shore of freshwater lake, 7 ♂, 4 ♀, 1.III. (Loc. 4).

These specimens belong to the form with pale scutellum that Edwards regarded as a variety of the species, calling it var. *ornatus* Meigen. Storå treated this as a distinct species and has recorded it from the Azores under that name, I prefer to regard *sylvestris* as a variable species and not to name the varieties.

Trichocladius iridipennis Storå, 1945

Azores, São Miguel: Ribeira da Praia, 3 km. W of Vila Franca do Campo, river bank, 4 ♂, 2 ♀, 13.III. (Loc. 27); River SSE of Ribeira Grande, 2 ♀, 14.III. (Loc. 29); Furnas, hot springs, 1 ♀, 24.III. (Loc. 59).

This species is known only from the Azores where it has a wide distribution.

Cardiocladius freyi Storå, 1945

Azores, São Miguel: Ribeira da Praia, 3 km. W of Vila Franca do Campo, on river bank, 3 ♂, 13.III. (Loc. 27); River SSE of Ribeira Grande, 1 ♂, 14.III. (Loc. 29); Ribeira das três Voltas, near Ribeira Chã, 8 ♂, 5 ♀, 16.III. (Loc. 35); 1 km. N of Povoação, Ribeira dos Lagos, river bank, 1 ♂, 1 ♀, 24.III. (Loc. 60).

Azores, Flores: Ribeira d'Além da Fazenda, river, 2 ♂ 1 ♀, 14.IV. (Loc. 108); Central Plateau, S and SE of Caldeira Comprida, 2 ♂, 14.IV. (Loc. 109).

Madeira: Terreiro da Luta, 850 m., 1 ♀, 20.IV. (Loc. 112); Arieiro Mts., Ribeira das Cales, 1300 m., 1 ♂, 3 ♀, 21.IV. (Loc. 113); Ribeira da Lapa, E of Pico do Serrado, 900 m., 3 ♂, 1 ♀, 27.IV. (Loc. 132).

This species has been recorded by Storå from the Azores, Madeira and Canary Islands; it is not known from elsewhere.

Chaetocladius melaleucus (Meigen, 1818)

Azores, São Miguel: Caldeiras, 5 km. SE of Ribeira Grande, 1 ♀, 14.III. (Loc. 28).

Although there was only a single female of this species in the collection, it was possible to identify it because of the striking thoracic pruinose pattern. It is a widely distributed but not particularly common Palaearctic species and I have also recorded it from the Ruwenzori Range in Uganda; Storå has recorded it from the Azores and Madeira.

Psectrocladius sordidellus insularis Storå, 1945

Azores, São Miguel: Lagoa do Pau pique, 1 ♂, 7.III. (Loc. 15); Caldeira das Sete Cidades, at Lagoa Azul, 6 ♂, 1 ♀, 8.III. (Loc. 18); Ribeira das três Voltas, near Ribeira Chã, 5 ♂, 6 ♀, 16.III. (Loc. 35); Caldeira das Sete Cidades, at Lagoa Azul on shore, 4 ♂. 21.III. (Loc. 50).

Azores, Faial; Pool 1 km. ESE of Cabeço do Fogo, 1 ♂, 4 ♀, 4.IV. (Loc. 90).

Azores, Flores; Central Plateau, S and SE of Caldeira Comprida, 5 ♂, 2 ♀, 14.IV. (Loc. 109).

This variety was described by Storå for some Azores specimens, but he thought it was probably the same as Edwards' gäve as *sordidellus*? variety, in his work on the British fauna. I am unable to decide which of the species described by Wulker in his revision of the genus (1956: *Arch. Hydrobiol.* 24: 1-66) fits it best.

Orthocladius devonicus (Edwards, 1929)

Madeira: Arieiro Mts., Ribeira das Cales, 1300 m., 9 ♂, 5 ♀, 21.IV (Loc. 113).

These specimens agree well with Edwards' original material; the species has already been recorded by Storå from Madeira and Canary Islands but not from the Azores.

Orthocladus semivirens (Kieffer, 1909)

Madeira: Arieiro Mts., ca. 1700 m., by rivulet, 1 ♂, 3 ♀, 21.IV. (Loc. 114).

This is a western European species, recorded from Britain, France and Germany, without previous records from either Madeira or Azores.

Orthocladus rivularis Storå, 1945

Azores, São Miguel: Fonte Grande, SE Feiteiras, 1 ♂, 1 ♀, 6.III. (Loc. 12); Ribeira da Praia, 3 km. W of Vila Franca do Campo, on shore and river bank, and at low-water in rocky tidal zone, 6 ♂, 8 ♀, 13.III. (Loc. 27); Lagoa do Congro, 3 ♀, 16.III. (Loc. 34); Ribeira das tres Voltas, near Ribeira Chã, 2 ♀, 23.III. (Loc. 55); 1.5 km. S of Maia in ravine, 2 ♂, 2 ♀, 25.III. (Loc. 62),

Azores, Faial: Praia do Almoxarife, on shore, 1 ♂, 31.III. (Loc. 72); Nasce Água, 3 km. S of Cedros, 1 ♂, 1 ♀, 5.IV. (Loc. 93); Caldeira, swept from vegetation, 14 ♂, 5 ♀, 10.IV. (Loc. 105).

Azores, Flores: Ribeira d'Além da Fazenda, by river, 4 ♂, 3 ♀, 14.IV. (Loc. 108).

This species is similar to *rhyacobia* Kieffer and *rubicundus* Meigen and is known only from the Azores.

Nanocladus (Eukiefferiella) atlanticus (Storå, 1936)

Azores, São Miguel: São Populo, 7.5 km. E of Ponta Delgada, in rocky tidal zone, 90 ♂, 4 ♀, 2. III. (Loc. 26); Ribeira da Praia, 3 km. W of Vila Franca do Campo, large number of both sexes, 13. III. (Loc. 27); São Roque, in rocky tidal zone, numerous males 15.III. (Loc. 30); Ribeira das três Voltas, near Ribeira Chã, on shore in rocky tidal zone, numerous males, 16.III. (Loc. 35).

Azores, Pico: 1 km. S of Areia Larga, in rocky tidal zone, 3 ♂, 11.IV. (Loc. 107).

Madeira: Faial, at mouth of Ribeira do Faial, rocky shore, many males, 26.IV. (Loc. 129), Funchal, Ribeiro Seco, on rocky shore, many males, 25-29.IV. (Loc. 137).

This species was originally described from the Canary Islands, but has since been found both in Azores and Madeira; it is not known from elsewhere. It is very likely to be a marine breeding species.

The genus *Nanocladus* Kieffer is an earlier description for *Microcricotopus* Thienemann and is based on a perfectly typical African species. I prefer to keep *Eukiefferiella* as a subgenus rather than treat the two as distinct genera as has been done by Brundin.

Limnophyes minimus (Meigen, 1818)

Azores, São Miguel: Fonte da Rocha near Relva, 4.5 km. W of Ponta Delgada, 3 ♂, 1 ♀, 5.III. (Loc. 11); Lagoa do Pau pique, 1 ♂, 7.III. (Loc. 15); Caldeira das Sete Cidades at Lagoa Azul, 2 ♂, 2 ♀, 8.III. (Loc. 18); Valley of Ribeira Quente, 2 km. SE of Furnas, 8 ♂, 10 ♀, 11.III. (Loc. 23); Furnas Park, 5 ♂, 5 ♀, 11.III. (Loc. 24); Furnas hot springs, wet heath, 7 ♂, 10 ♀, 24.III. (Loc. 59); Caldeiras, 5 km. SE of Ribeira Grande, many of both sexes, 14.III. (Loc. 28); Lagoa do Congro, 1 ♂, 16.III. (Loc. 34); Caldeiras das Sete Cidades, at Lagoa Azul, 6 ♂, 6 ♀, 21.III. (Loc. 50); Ribeira das três Voltas, near Ribeira Chã, 1 ♀, 23.III. (Loc. 55); River NW Água Retorta, 3 ♂, 4 ♀, 23.III. (Loc. 57); 1.5 km. S of Maia in ravine, 6 ♂, 5 ♀, 25.III. (Loc. 62); 3 km. E of Ribeirinha (N. Coast) 1 ♂, 4 ♀, 25.III. (Loc. 63).

Azores, Faial: 0.5 km. WNW of Ribeirinha, 8 ♂, 1 ♀, 1.IV. (Loc. 73); Horta town, 1 ♂, 3.IV. (Loc. 84).

Azores, Pico: Volc. Pico W side, ca. 350 m., 7 ♂, 8.IV. (Loc. 99).

Madeira: Ribeira da Lapa, E of Pico do Serrado, 900 m., 9 ♂, 6 ♀, 27.IV. (Loc. 132).

A very common European species, which has already been found in Canary Islands, Azores and Madeira.

Limnophyes prolongata (Kieffer, 1923)

Madeira: Casa das Queimadas, 900 m., 1 ♂, 27.IV. (Loc. 122).

The male hypopygium renders this species easily determinable. It has a European distribution but has not previously been recorded either from Madeira or Azores.

Smittia stercoraria (Degeer, 1776)

Azores, São Miguel: Charco da Madeira, 6 km. N of Ponta Delgada, on shore of freshwater lake, 7 ♂, 2 ♀, 1.III (Loc. 4); 2 km. E of Ribeira Grande, 20 ♂, 28 ♀, 9.III. (Loc. 19); 1 km. WSW of Porto Formoso, 1 ♀, 9.III. (Loc. 21); Ribeira Seca, W of Ribeira Grande, many of both sexes, 18.III. (Loc. 37); 1.5 km. S of Maia, in ravine, 2 ♂, 1 ♀, 25.III. (Loc. 62).

Azores, Pico: Volc. Pico W side, ca. 350 m., 1 ♂, 8.IV. (Loc. 99).

Azores, Faial: Praia do Almoxarife, 12 ♂, 1 ♀, 31.III. (Loc. 72).

Madeira: Casa das Queimadas, 880 m., 8 ♂, 24.IV. (Loc. 122).

There are already records of this common European species from Azores, Madeira and Canary Islands.

Smittia azorica Storå, 1945

Azores, São Miguel: Fonte da Rocha near Relva, 4.5 km. W of Ponta Delgada, 2♂, 1♀, 5.III. (Loc. 11); Lagoa do Carvão, freshwater lake, 6♂, 6♀, 7.III. (Loc. 13); 3 km. NE Furnas, Ribeira Quente, 35♂, 3♀, 10.III. (Loc. 22); Ribeira da Praia, 3 km. W of Vila Franca do Campo, on shore, in vegetation and on river bank, 29♂, 21♀, 13.III. (Loc. 27); Caldeiras, 5 km. SE of Ribeira Grande, 18♂, 5♀, 14.III. (Loc. 28); Lagoa do Fogo, many of both sexes, 22.III. (Loc. 54); 1 km. N of Povoação, Ribeira dos Lagos, river bank, 1♂, 3♀, 24.III. (Loc. 60); 1 km. S of Maia, in ravine, 5♂, 3♀, 25.III. (Loc. 62); 3 km. E of Ribeirinha, 1♂, 25.III. (Loc. 63).

Azores, Faial: Baía da Areia das Fontes, 1 km. N of Praia do Norte, in ravine, 5♂, 4♀, 2.IV. (Loc. 77); Horta, Ribeira dos Flamengos, 4♂, 3.III. (Loc. 71); Horta, town, 6♂, 1♀, 3.IV. (Loc. 84); pool 1 km. ESE of Cabeço do Fogo, numerous males, 4.IV. (Loc. 90).

Azores, Pico: Volc. Pico, W side, ca. 600 m on grassy ground, 22♂, 3♀, 8.IV. (Loc. ?).

Azores, Flores: Ribeira d'Além da Fazenda, river, numerous males, 14.IV. (Loc. 108); Central Plateau, S and SE of Caldeira Comprida, 3♂, 2♀, 14.IV. (Loc. 109).

Known records of this species are confined to the Azores.

Subfamily **Corynoneurinae*****Thienemanniella clavicornis*** (Kieffer, 1911)

Azores, São Miguel: Ribeira da Praia, 3 km. W of Vila Franca do Campo, on river bank, 4♂, 18♀, 13.III. (Loc. 27); Furnas, hot springs, on wet heath, 1♂, 24.III. (Loc. 59); 1.5 km. S of Maia, in ravine, 5♂, 2♀, 25.III. (Loc. 62).

Madeira: Arieiro Mts., ca. 1700 m., by rivulet, 2♂, 1♀, 21.IV (Loc. 114);

This is the first record of a member of this subfamily from either Azores or Madeira. The species has been recorded from Britain and Germany; Edwards states that it is found by hill streams.

Subfamily **Clunioninae*****Thalassomyia frauenfeldi*** Schiner, 1856

Azores, São Miguel: São Populo, 7.5 km. E of Ponta Delgada, 18♂, 1♀, 12.III. (Loc. 26); Ribeira da Praia, 3 km. W of Vila Franca do Campo, low-water,

in rocky tidal zone, 47 ♂, 7 ♀, 13.III. (Loc. 27); Ribeira das três Voltas, near Ribeira Chã, rocky tidal zone, 8 ♂, 16.III. (Loc. 35).

Azores, Terceira: 0.5 km. E of Angra do Heroísmo, 1 ♂, 28.III. (Loc. 70).

Azores, Faial: Praia do Almoxarife, 1 ♂, 31.III. (Loc. 72); Horta, Porto Pim, 7 ♂, 5 ♀, 7.IV. (Loc. 94); Horta, at light, 7 ♂, 4 ♀, 10.IV. (Loc. 106).

Azores, Pico: 1 km. S of Areia Larga, 22 ♂, 2 ♀, 11.IV. (Loc. 167).

Azores, Flores: Ribeira d'Além da Fazenda, many of both sexes, 14.IV. (Loc. 108).

In common with most other species of the subfamily, this species is found on the sea shore and the larvae are marine. It has been recorded from the coast lines of European countries and from the Azores, Madeira and Canary Islands.

Subfamily **Chironominae**

Chironomus thummi Kieffer, 1911

Azores, São Miguel: Ponta Delgada, swimming pool, 2 km. NE of town, 1 ♂, 4 ♀, 5.III. (Loc. 9); Relva at tanque da Rocha Quebrada, 16 ♂, 14 ♀, 15.III. (Loc. 31); Tanque, 1 km. S of Lagoa do Congro, 1 ♂, 1 ♀, 16.III. (Loc. 33); Pico da Azeitona, NE of Ponta da Garcia, 2 ♂, 4 ♀, 23.III. (Loc. 56); 1.5 km S of Maia, 1 ♂, 25.III. (Loc. 62).

Azores, Faial: 1 km. WNW of Pedro Miguel, 2 ♂, 5.IV.; 3 km. WNW of Pedro Miguel, 2 ♂, 5.IV. (Loc. 92).

Azores, Pico: 1 km. S of Areia Larga, 2 ♂, 11.IV. (Loc. 107).

Storå has previously recorded *Chironomus dorsalis* Meigen and *C. cingulatus* var. *venustus* Staeger from the Azores, but the above material seems to me to be much more like *C. thummi* than these other two and I am accordingly placing it in that species. *C. thummi* is a common European species not previously recorded from either Azores or Madeira.

Polypedilum nubeculosum (Meigen, 1818)

Azores, São Miguel: Charco da Madeira, 6 km. N of Ponta Delgada, on shore of freshwater lake, 1 ♂, 1.III. (Loc. 4); Sete Cidades, at Lagoa Verde, 2 ♂, 2.III. (Loc. 8); Lagoa do Carvão, freshwater lake, 18 ♂, 10 ♀, 7.III. (Loc. 13); Lagoa do Congro, 2 ♂, 16.III. (Loc. 34); Caldeira das Sete Cidades, at Lagoa Azul, 2 ♂, 21.III. (Loc. 51); river NW of Água Retorta, 1 ♂, 23.III. (Loc. 57); Pico Verde, 7 ♂, 24.III. (Loc. 61).

Azores, Pico: Volc. Pico, W side, ca. 800 m., 1 ♀, 8.IV. (Loc. 97).

This common European species has not previously been recorded from either Azores or Madeira.

Polypedilum convictum (Walker, 1856)

Madeira: Casa das Queimadas, 880 m., 1 ♂, 24.IV. (Loc. 122).

This species is widely distributed and rather common in Western Europe; it is readily identified by the shape of appendage 1 of the male hypopygium. It has not previously been recorded from either Madeira or Azores.

Micropsectra subviridis (Goetghebuer, 1922)

Azores, São Miguel: Ribeira da Praia, 3 km. W of Vila Franca do Campo, on river bank, 1 ♂, 13.III. (Loc. 27); Lagoa do Fogo, freshwater lake, many of both sexes, 22.III. (Loc. 54).

Azores, Faial: Pool 1 km. ESE of Cabeço do Fogo, 7 ♂, 4.IV. (Loc. 90).

Azores, Pico: Volc. Pico, ca. 1000-1100 m., 16 ♂, 8.IV (Loc. 95); Volc. Pico, W side, ca. 800 m., freshwater pool, 13 ♂, 8.IV (Loc. 97).

Azores, Flores: Central Plateau, Lagoa Branca, many of both sexes, 14.IV (Loc. 109).

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

Storå has recorded this species from both Azores and Madeira; Edwards states that it is rather common in Britain, the only other record known to me is Belgium.

Micropsectra freyi Storå 1945

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

Storå described this species from the Azores and it has not previously been recorded from elsewhere. It can be distinguished from *subviridis* by the longer appendage 2a and differently shaped appendage 1a.

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TURBELLARIA FROM MADEIRA AND THE AZORES ¹⁾

By EVELINE MARCUS and ERNST MARCUS ²⁾

The worms described in the following were collected by Drs. Per Brinck and Erik Dahl from February to April 1957. Though the bulk of the collection, 198 worms of the Tricladida Paludicola, were all immature, and therefore could not be determined, the rest contains morphological and zoogeographical novelties, as was to be expected as our knowledge of the turbellarian fauna, particularly of the Azores, is so meagre.

The material is deposited in the collection of the Zoological Institute of the Lund University.

1) Report No. 3 from the Lund University Expedition in 1957 to the Azores and Madeira.

2) Zoological Institute of the University of São Paulo, Brazil.