

HEMIPTERA FROM THE AZORES AND MADEIRA¹

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With an appendix by RAIMOND POISSON, Rennes

From Professor Per Brinck, Lund I received for identification a material of Hemiptera (Heteroptera and Homoptera Cicadina) collected by him and Professor Erik Dahl, Lund, in the spring of 1957 in the Azores and Madeira.

The Hemipteran fauna of the Azores is incompletely investigated. The species known so far were listed by me in two papers (Comm. Biol. VIII, 8, 1941, and XIII, 18, 1954). The Hemipteran species recorded from Madeira, were listed by W. E. China in 1938 (Ark. f. Zool. 30 A, 2). In the present material I found four species (Heteroptera) which had not previously been recorded from the Azores. Altogether this material contains 21 species from the Azores and 12 from Madeira.

The fairly rich material—from the Azores as well as from Madeira—of *Microvelia gracillima* Reut. f. *azorica* Lindb. is particularly interesting. *M. gracillima* occurs in tropical Africa (Dakar, Niger area, Uganda), but it also lives in four of the Macaronesian islands: The Azores, The Madeiran Archipelago, the Canary Islands and the Cape Verde Islands. In 1941 I described the Azorean *Microvelia* as a separate species, *azorica*. I have now sent specimens of the *Microvelia* from the Azores and Madeira to the wellknown specialist of aquatic Hemiptera, Professor Raymond Poisson, Rennes. He found that these specimens represent a form of *gracillima*. A supplementary description of this form *M. gracillima azorica* Lindb., is published as an appendix of the present paper.

1) Report N.º 6 from the Lund University Expedition.

2) Zoological Museum of the University of Helsingfors.

Species From the Azores**HETEROPTERA****PENTATOMIDAE***Nezara viridula* (L.)

São Miguel: Ribeira Grande, 27.II. (Loc. 1), 2 specimens. — Caldeira das Sete Cidades, Lagoa Azul, 21.III. (Loc. 51), 1 specimen.

Tropical-subtropical cosmopolitan species. At least partly anthropochorous.

LYGAEIDAE*Kleidocerys ericae* (Horv.)

São Miguel: Caldeiras, 5 km SE of Ribeira Grande, 14.III. (Loc. 28), 16 specimens, 1 larva (instar V). — 1 km W of Ribeira Seca, W of Ribeira Grande, 22.III. (Loc. 53), 1 specimen. — Lagoa do Fogo, 22.III. (Loc. 54), 29 specimens, 3 larvae (V). — Furnas, Hot springs, 24.III. (Loc. 59), 2 specimens. — Valley of Ribeira Quente, 2 km SE of Furnas, 11.III. (Loc. 23), 1 specimen.

Faial: Cabeço do Canto, 4.IV. (Loc. 89), 6 specimens. — Costa da Nau, 3 km NW of Capêlo, 4.IV. (Loc. 88), 3 specimens.

In the Mediterranean subregion and the southern parts of Central Europe. Subspecies *truncatulus* (Walk.) occurs in the Canarian and Madeiran Archipelagos.

Heterogaster urticae (Fabr.)

Santa Maria: Limestone area, 20.III. (Loc. 48), 3 specimens.

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

A Mediterranean species which extends to the southernmost parts of Northern Europe. Canary Islands.

Plinthisus brevipennis (Latr.)

São Miguel: Relva, tanque da Rocha Quebrada, 15.III. (Loc. 31), 1 specimen.

Santa Maria: Praia, 20.III. (Loc. 47), 1 specimen.

A Mediterranean species which extends to the southernmost parts of Northern Europe. — Previously not recorded from the Azores.

Aphanus rolandri (L.)

São Miguel: Tanque 1 km SE of Lagoa do Congro, 16.III. (Loc. 33), 1 specimen.

A common Mediterranean species which extends to Central Europe and the southern parts of Northern Europe. Canary Islands.

Emblethis griseus (Wlff.)

Faial: Praia do Almoxarife, 31.III. (Loc. 72), 5 specimens.

A Mediterranean species which extends to the southern parts of the Euro-Siberian subregion. Introduced to the Nearctic region. Canary Islands — Previously not recorded from the Azores.

Scolopostethus decoratus (Hhn.)

São Miguel: 3 km E of Riberinha (north coast), 25.III. (Loc. 63), 1 specimen. — 3 km N of Furnas, heath, 11.III. (Loc. 25), 1 specimen.

Santa Maria: Pico alto, alt. 575 m, 19.III. (Loc. 41), 1 specimen. — Pico alto, alt. 590 m, 19.III. (Loc. 40), 1 specimen.

Pico: São João, 9.IV. (Loc. 103), 1 specimen.

Faial: Costa da Nau, 3 km NW of Capêlo, 4.IV. (Loc. 88), 3 specimens.

In the Euro-Siberian and Mediterranean subregions. In Northern Europe on *Calluna vulgaris*. — Not before recorded from the Azores.

REDUVIIDAE

Pirates chiragra (Fabr.)

Santa Maria: Aeroporto, 19-20.III. (Locs. 44, 45), 1 specimen. — Praia, 20.III. (Loc. 47), 1 larva (V).

Distribution: Spain, Greece; Canary Islands, Madeira. Previously not recorded from the Azores.

NABIDAE

Nabis pseudoferus Remane

São Miguel: Caldeiras, 5 km SE of Ribeira Grande, 14.III. (Loc. 28), 2 specimens.—São Pópulo, 7.5 km E of Ponta Delgada, 4.III. (Loc. 10), 1 specimen.

The distribution of this species (described from Germany) is incompletely known.

MIRIDAE

Monalocoris filicis atlantica Lindb.

São Miguel: 1.5 km S of Maia, 25.III. (Loc. 62), 3 specimens.—Sete Cidades, 2.III. (Loc. 7), 1 specimen.—Caldeiras, 5 km SE of Ribeira Grande, 4.III. (Loc. 28), 1 specimen.

Faial: Ribeira das Cabras, 1 km NE of Praia do Norte, in *Pittosporum*-vegetation, 2.IV. (Loc. 76), 1 specimen.

This form of the common *M. filicis* (L.) was recorded from Great Britain, Germany and Madeira.

VELIIDAE

Microvelia gracillima Reut. f. *azorica* Lindb.

São Miguel: Charco da Madeira, 6 km N of Ponta Delgada, 1.III. (Loc. 4), 2 specimens.

Santa Maria: Valverde, 20.III. (Loc. 49), 1 specimen.

Flores: Central Plateau, S and SE of Caldeira Comprida, 14.IV. (Loc. 109), 3 specimens.—Central Plateau, Lagoa Branca, freshwater pool, 14.IV. (Loc. 110), 5 specimens.

An Ethiopian species. Forma *azorica* also occurs in Madeira, while the typical *gracillima* lives in the Canary and the Cape Verde Islands.

CORIXIDAE

Corixa affinis affinis Leach

São Miguel: Charco da Madeira, 6 km N of Ponta Delgada, 1.III. (Loc. 4), 35 adults, 18 larvae (II-V).—2 km NE of Ponta Delgada, swimming pool, 5.III. (Loc. 9), 5 adults.—Ponta Delgada, 2 km NE of the

town, swimming pool, 3.III. (Loc. 9), 1 adult. — Fonte Grande, SE of Feteiras, 6.III. (Loc. 12), 5 adults, 8 larvae (I-V). — Lagoa do Carvão, freshwater pool, 7.III. (Loc. 13), 1 larva (II), 1 larva (III), 2 larvae (IV). — Lagoa do Pau Pique, 7.III. (Loc. 15), 1 adult. — Caldeira das Sete Cidades, 8.III. (Loc. 18), 2 adults. — Tanque, 1 km SE of Lagoa do Congro, 16.III. (Loc. 33), 17 adults, 26 larvae (II-V). — Pond, 500 m E of Lagoa do Pau Pique, 7.III. (Loc. 16), 2 larvae (III). — Fonte of Casas Telhadas, SW of Ribeira Grande, 18.III. (Loc. 36), 1 adult. — 1 km W of Praia, Pond I, 20.III. (Loc. 46), 9 adults. — Pico da Azeitona, NE of Ponta da Garça, freshwater pool, 23.III. (Loc. 56), 1 larva (IV).

Santa Maria: 1 km W of Praia, 20.III. (Loc. 46), Pond II, 2 adults; Pond III, 1 adult, 3 larvae (I), 3 larvae (II).

Terceira: at lagoa do Ginjal, in a pond, 27.III. (Loc. 66), 1 adult, 1 larva (II), 1 larva (V).

Pico: Volc. Pico, Western side, alt. about 800 m, 8.IV. (Loc. 97), 3 adults.

Faial: 3 km WNW of Pedro Miguel, 5.IV. (Loc. 92), 5 adults, 1 larva (III), 1 larva (IV), 3 larvae (V).

Flores: Central Plateau, Caldeira Comprida, 14.IV. (Loc. 109), 1 adult, 2 larvae (II).

In the Mediterranean subregion; Canary Islands and Madeira,

HOMOPTERA CICADINA

CIXIIDAE

Cixius insularis Lindb.

São Miguel: Ponta Delgada, 2 km NE of the town, 3.III. (Loc. 9), 1 specimen. — 1.5 km S of Maia, 25.III. (Loc. 62), 1 specimen.

Faial: Cabeço do Canto, 4.IV. (Loc. 89), 1 specimen.

Flores: Central Plateau, S and SE of Caldeira Comprida, 14.IV. (Loc. 109), 1 specimen.

An endemic species of the Azores.

FLATIDAE

Cyphopterum azoricum Lindb. (*curvipenne* Lindb. nec. Walk.)

São Miguel: Ribeira da Praia, 3 km W of Vila Franca do Campo, 13.III. (Loc. 27), 1 adult.

Flores: Ribeira d'Além da Fazenda, 14.IV. (Loc. 108), 1 larva.
An endemic species of the Azores.

ARAEOPIDAE

Kelisia ribauti W. Wagh.

São Miguel: Furnas, hot springs, 24.III. (Loc. 59), 1 specimen.

The distribution of this species is incompletely known; possibly it is a Euro-Siberian species. Madeira.

Calligypona propinqua (Fieb.)

São Miguel: Ribeira das três Voltas, near Ribeira Chã, 23.III. (Loc. 55), 6 specimens.—Ribeira Seca, W of Ribeira Grande, 18.III. (Loc. 37), 1 specimen.—Caldeira das Sete Cidades, 8.III. (Loc. 18), 1 specimen.—2 km NE of Ponta Delgada, 3.III. (Loc. 9), 1 specimen.

A tropical and subtropical cosmopolitan species, at least partly spread by man. Madeira, Canary Islands, Cape Verde Islands.

C. vibix Hpt.

São Miguel: Ribeira das três Voltas, near Ribeira Chã, 23.III. (Loc. 55), 4 specimens.—Fonte da Rocha, near Relva, 4.5 km W of Ponta Delgada, 5.III. (Loc. 11), 1 specimen.

A South Mediterranean species, partly anthropochorous. Canary Islands, Cape Verde Islands.

JASSIDAE

Aphrodes albifrons (L.)

São Miguel; São Pópulo, 7.5 km E of Ponta Delgada, 1.III. (Loc. 3), 2 larvae (V), 1 larva (IV), 1 larva (III).—Sete Cidades, 2.III. (Loc. 7), 1 larva (IV).—Caldeira das Sete Cidades, 8.III. (Loc. 18), 3 larva (IV).—At Lagoa das Furnas, 10.III (Loc. 22), 2 larvae (V).—Ribeira da Praia, 3 km W of Vila Franca do Campo, 13.III. (Loc. 27), 1 larva (V).—Relva, nascente dos Lagos, 15. III. (Loc. 32), 2 larvae (V).—Lagoa do Fogo, 22.III. (Loc. 54), 1 larva (III).

Santa Maria: Limestone area, 20.III. (Loc. 48), 1 adult ♀.—Águas dos Moros, 19.III. (Loc. 43), 1 larva (IV).

Pico: Volc. Pico, west side, alt. about 800, 8.IV. (Loc. 97), 1 larva (V).
A European species, introduced(?) to North America. Madeira.

Euscelidius variegatus (Kbm.)

São Miguel: Ribeira das três Voltas, near Ribeira Chã, 23. III. (Loc. 55), 2 specimens.—Ponta Delgada, 2 km NW of the town, III. (Loc. 9), 1 specimen.—2 km E of Ribeira Grande, 9.III. (Loc. 19), 1 specimen.

Distribution: Mediterranean subregion and the southern parts of the Euro-Siberian subregion. Canary Islands.

Macrosteles sp.

São Miguel: Fonte da Rocha, near Relva, 4.5 km W of Ponta Delgada, 5.III. (Loc. 11), 1 adult ♀.—Caldeiras, 5 km SE of Ribeira Grande, 14.III. (Loc. 28), 1 larva (V).

From the Azores *M. sexnotatus* (Fall.) has been recorded.

Balclutha pellucens Horv.?

São Miguel: Caldeiras, 5 km SE of Ribeira Grande, 14.III. (Loc. 28), 2 specimens.—Ribeira da Praia, 3 km W of Vila Franca do Campo, 13.III. (Loc. 27), 1 specimen.

B. pellucens has already been recorded from Madeira and the Canary Islands.

Species from Madeira

HETEROPTERA

CYDNIDAE

Cydnus aterrimus (Forst.)

Serra d'Água, Power-station, alt. 600 m, 23.IV. (Loc. 120), 2 specimens
A common Mediterranean species. Canary Islands.

PENTATOMIDAE

Sciocoris sideritidis Woll.

Porto Novo, Ribeira do Porto Novo, 22.IV. (Loc. 119), 1 specimen.

Canary Islands; also recorded from Sicily, It may be that *sideritidis* is identical with *S. maculatus* Fieb. from Southern Europe.

LYGAEIDAE

Kleidocerys ericae truncatulus (Walk.)

Arieiro Mts, alt. about 1700 m, 21.IV. (Loc. 114), 1 specimen.

Common on *Erica arborea* and *scoparia* in the Canary Islands and in the Madeiran archipelago. The typical form of *K. ericae* (Horv.) occurs in the Mediterranean subregion and in the southern parts of Central Europe.

Esuridea lathridioides (Reut.)

Casa das Queimadas, alt. 800 m, 24.IV. (Loc. 122), 1 specimen.

An endemic species of the island Madeira. In the forest region.

Aphanus rolandri (L.)

Serra d'Água, Power-station, alt. 600 m, 23.IV. (Loc. 120), 1 specimen.

A common Mediterranean species which extends to Central Europe and the southern parts of North Europe. Canary Islands.

Eremocoris maderensis (Woll.)

Arieiro Mts, alt. about 1700 m, 21.IV. (Loc. 114), 1 specimen.

Forest region. Only known from Madeira and from La Gomera and Tenerife among the Canarian Islands.

TINGITIDAE

Acalypta parvula (Fall.)

Terreiro da Luta, alt. 850 m, 20.IV. (Loc. 112), 1 specimen.

Distribution: Western Europe and Algeria.

REDUVIIDAE

Coranus aegyptius (Fabr.)

Serra d'Água, Power-station, alt. 600 m, 23.IV. (Loc. 120), 1 specimen.

A common Mediterranean species. Canary Islands.

MIRIDAE

Monalocoris parvulus (Reut.)

Ribeira da Lapa, E of Pico do Serrado, alt. 900 m, on a river bank among *Juncus* and grasses, 27.IV. (Loc. 132), 1 specimen.

An endemic species living on *Eupteris aquilina*.

SALDIDAE

Saldula pallipes (Fabr.)

Arieiro Mts, alt. about 1700 m, at river, 21.IV. (Loc. 114), 1 specimen. — Faial, at mouth of Ribeira do Faial, under stone, 21.IV. (Loc. 116), 1 larva (V).

A Holarctic species which is widely distributed in the northern parts of the Palaearctic and Nearctic regions.

VELIIDAE

Velia maderensis Noualh.

1 km E of Encumeada, alt. about 800 m, 28.IV. (Loc. 135), 3 specimens. — Arieiro, alt. about 1700 m, in a stream, 21.IV. (Loc. 114), 5 specimens, 1 larva. — Ribeiro Frio, alt. 850 m, 7 km SW of Faial, 21.IV. (Loc. 115). — Casa das Queimadas, alt. 800 m, 24.IV. (Loc. 122), 3 specimens + 1 larva. — Santa Cruz, Ribeira da Boaventura, 22.IV. (Loc. 118), 3 specimens.

An endemic species of Madeira.

Microvelia gracillima Reut. f. *azorica* Lindb.

Serra d'Água, Power-station, in river, 23.IV. (Loc. 120), 2 specimens. — Faial, at the mouth of Ribeira do Faial, 21.IV. (Loc. 116), 4 specimens. — Ribeiro Seco, in a pool near the shore, 19.IV. (Loc. 111), 6 specimens.

An Ethiopian species. Forma *azorica* also occurs in the Azores, while the typical *gracillima* lives in the Canaries and the Cape Verde Islands.

Appendix by RAIMOND POISSON*Microvelia gracillima* f. *azorica* Lindb.

M. azorica Lindb. Comm. Biol. VIII, 8, 1941:18.

Mâle aptère: Vertex noirâtre avec deux taches postoculaires d'une pubescence argentée. Une large bande antérieure transversale jaune sur le disque

du pronotum, associée médianement à une autre bande jaune, l'ensemble formant un T. Marge postérieure liserée de jaunâtre, le reste du disque noirâtre. Lobes métanotaux latéraux jaune-roux. Connexivum relevé obliquement. Premier tergite jauneroux, ainsi que le milieu des tergites 4, 5, 6, la teinte allant en s'élargissant; le 7^e tergite est presque entièrement jauneroux, sauf ses marges latérales. Les tergites 5, 6 et 7 sont en outre luisants. Latéro-tergites jaunes, sauf le 7^e. Le 8^e tergite est noirâtre.

Face ventrale presque entièrement jaunâtre, y compris les latéro-sternites, sauf la zona linéaire des stigmates, noire antérieurement. Pattes noirâtres, le sommet des fémurs jaune-flave, ainsi que la base du premier segment antennaire. Pointe du rostre noire.

Femelle aptère: Connexivum développé, relevé obliquement, ses marges non disposées parallèlement, mais s'écartant l'une de l'autre d'une manière semi-circulaire. Tête colorée comme chez les mâles aptères. Une bande transversale antérieure jaune sur le pronotum est plus ou moins recouverte d'un duvet argenté sur les côtés et sillonnée, au milieu, d'un trait brun qui se prolonge sur le reste du disque par une bande noire veloutée; le reste du pronotum est noir, sa marge postérieure pouvant être finement jaunâtre. Lobes métanotaux noirs. Tergite 1, noir, avec un fin trait longitudinal médian jaunâtre se prolongeant sur le tergite 2; ou bien, tergite 1, roux au centre ainsi que les tergites 5, 6 et 7 sont en outre luisants. Latéro-tergites en grande partie jaunâtres; face ventrale jaunâtre avec la bande des stigmates noire, ou bien noirâtre et revêtue d'une pubescence argentée.

Femelle macroptère: Les taches laiteuses des hémélytres sont très élargies. Disque du pronotum noir, sauf deux étroites taches collaires représentées par une petite bande brunâtre. Face ventrale noire, sauf les latéro-sternites.

Longueur: Mâle aptère: 1,7 mm.; femelle aptère: 2,15 mm.; femelle macroptère: 2,3 mm.

Distr.: Les Açores, Madère.

Obs. *Microvelia gracillima* f. *azorica* se rattache au groupe de *Microvelia pygmaea* Duf. Cette forme est en outre très proche de *Microvelia bourbonensis* Poiss. 1957, de la Réunion et de *Microvelia lakatomivolae* Poiss. 1957, de Madagascar.