

# BOCAGIANA

Museu Municipal do Funchal

---

Madeira

20. V. 1974

No. 35

---

## LIST OF THE APHIDS OF MADEIRA ISLAND

(HOMOPTERA, APHIDOIDEA)

by

Fernando Albano Ilharco

Universidade de Lourenço Marques, Instituto Superior de Agronomia

This is the 5th note on the scientific results of an APHIDOLOGICAL EXPEDITION TO THE ARCHIPELAGO OF MADEIRA. The author is very grateful to the Calouste Gulbenkian Foundation, Lisbon, Portugal, for the grant conceded towards the realization of the expedition.

### INTRODUCTION

At least the following authors have written on the aphid fauna of Madeira Island: Tavares (1903, 1905, 1914), van der Goot (1912), Sousa (1942), Vieira (1951 a, b), Baeta Neves (1953), Baptista & Suspiro (1955), Doncaster (1956), Müller (1965), Neves (1966), and Eastop (1966, 1971).

In 1966, my collaborator Mr. Alexandre Gomes and I spent two months in the Archipelago of Madeira collecting aphids. An amount of 322 samples and 559 records have been made, 292 samples and 515 records being from Madeira Island and 30 samples and 44 records from Porto Santo. The aphid fauna of the Island of Porto Santo has recently been studied (Ilharco, 1973) and this paper deals with the one of Madeira Island. Previously I had only reported two species, *Thelaxes suberi* and *Pentalonia nigronervosa*, but Granate (1971, 1972)

---

(<sup>1</sup>) Then both in Estação Agronómica Nacional, Oeiras, Portugal.

and Gouveia (1972), working up material collected by the expedition, have reported some other species.

Besides, the Commonwealth Institute of Entomology has published the following Maps concerning aphids which are said to occur in Madeira: Nos. 242 (1968), 18R (1968), 87R (1969), 264 (1969), 288 (1971), and 289 (1971).

Summing-up, the following 35 aphid species were already known from Madeira Island:

<i>Acyrtosiphon pisum</i>	<i>Hyadaphis foeniculi</i>
<i>Acyrtosiphon spartii</i>	<i>Macrosiphum euphorbiae</i>
<i>Aphis fabae</i>	<i>Metopolophium dirhodum</i>
<i>Aphis gossypii</i>	<i>Myzus ornatus</i>
<i>Aphis nerii</i>	<i>Myzus persicae</i>
<i>Aphis pomi</i>	<i>Ovatus crataegarius</i>
<i>Aphis solanella</i>	<i>Pentalonia nigronervosa</i>
<i>Aphis umbrella</i>	<i>Pineus sylvestris</i>
<i>Aulacorthum solani</i>	<i>Rhopalosiphum maidis</i>
<i>Brachycaudus prunicola</i>	<i>Rhopalosiphum nymphaeae</i>
<i>Cerataphis lataniae</i>	<i>Rhopalosiphum padi</i>
<i>Cerataphis orchidearum</i>	<i>Rhopalosiphum rufiabdominalis</i>
<i>Cinara maghrebica</i>	<i>Sitobion avenae</i>
<i>Dysaphis emicis</i>	<i>Thelaxes suberi</i>
<i>Dysaphis plantaginea</i>	<i>Toxoptera aurantii</i>
<i>Dysaphis pyri</i>	<i>Tuberolachnus salignus</i>
<i>Dysaphis tulipae</i>	<i>Viteus vitifolii</i>
<i>Eriosoma lanigerum</i>	

In Madeira Island we have collected an amount of 90 different species of which 60 are now new records to the Island. In the registers of E. A. M. there are three unpublished records of species which have not been collected by the expedition and are new to the island. In all, the aphid fauna of Madeira Island contains now 98 known species. Considering Porto Santo, that number goes to 102.

For this paper, an amount of 1672 slides have been mounted, but some duplicates and almost all the nymphs remain in alcohol. In all, 6293 specimens have been studied, 3901 being apterous parthenogenetic females, 1956 alate females, 2 males, 3 sexual females, and 431 nymphs.

All the material belongs to the Aphid Collection of the Estação Agronómica Nacional, Oeiras, Portugal, where it is registered with numbers 479-717 and 748-800. Provisionally it is kept in the Entomology Laboratory of the University of Lourenço Marques.

The species are listed alphabetically, and, concerning each record, the following information is given: the locality and date of collecting, the register number, the host plant, and the number of specimens mounted, this being printed in *italics* if all the adult forms have been mounted. Records No. 515a, 515b, 549f, 597b, 754a, 762c, 778b, and 797f are not considered as no complete identification has been possible.

I am very grateful to Dr. D. Hille Ris Lambers, Bennekom, Holland, Dr. V. F. Eastop, British Museum, London, Drs. H. L. G. Stroyan and R. N. B. Prior, Plant Pathology Laboratory, Harpenden, England, for their kind identifications or confirmations of same.

Thanks are also due to Dr. Louise Russell, Insect Identification & Beneficial Insect Introduction Institute, Beltsville, U. S. A., for the gift of a slide containing *Pemphigus populitransversus* and to Dr. H. Szelegiewicz, Institute of Zoology, Polish Academy of Sciences, Warszawa, Poland, for a slide with *Eulachmus rileyi*.

Dr. Helene Tambs-Lyche, Malmosevej 83A, Virum, Denmark and Dr. V. F. Eastop most kindly provided me with photocopies of rare papers by van der Goot and Gomez-Menor. My best thanks.

To my colleague and friend Eng. Rui Vieira, Junta Geral, Funchal, Madeira, I am specially indebted for accomodation and facilities at the Estação Agrária do Funchal, and also for the gift of literature and kind information on some host plants of Madeira.

Some host plant material has been identified most kindly by Eng. A. R. Pinto da Silva, Estação Agronómica Nacional, Oeiras, and the late Prof. J. C. Vasconcellos, Instituto Superior de Agronomia, Lisboa.

### Abbreviations

al. fem. — alate viviparous female

al. mal. — alate male

al. vagr. — alate vagrant (out of its host)

apt. fem. — apterous viviparous (or oviparous) female

apt. vagr. — apterous vagrant (out of its host)

nym. — nymph

sex. fem. — sexual female

CAEAN — Colecção de Afídeos da Estação Agronómica Nacional  
(Aphid Collection of Estação Agronómica Nacional)

E. A. M. — Estação Agrária da Madeira (Agricultural Station of Madeira)

### LIST OF SPECIES

#### 1. *Acyrtosiphon ilka* Mordwilko

According to Eastop (1971) this species is only known from France, Greece, Turkey, Southern Siberia, Oblast and Zabaykalsk, where it has always been recorded from *Papaveraceae*. Dr. Hille Ris Lambers, who has identified the sample from Madeira, most kindly informed me (*in litt.*) that *Acyrtosiphon bidentis* Eastop is probably the same species. If this is true, then the species is also known from Kenya, Morocco and Yemen (Eastop, 1971), where it has been collected from a number of plant families other than *Papaveraceae*.

*A. ilka* is not known from Continental Portugal or other Macaronesian islands.

## 2. *Acyrtosiphon lactucae* (Passerini)

New to Madeira Island. The species is already known from Continental Portugal, and also exists in Porto Santo (Ilharco, 1973). Not yet known from the Azores and Canary Islands.

Ribeira Brava (1.6.1966, No. 773, *Lactuca serriola*, 4 apt. fem., 3 al. fem.).

## 3. *Acyrtosiphon pelargonii* (Kaltenbach)

In the registers of E. A. M. there are unpublished records of this species under the name *Aulacorthum pelargonii* Kaltenbach. It is said that the aphids grow at the underside of the leaves of *Pelargonium*, *Geranium* and *Cineraria* (here certainly other species). From these records by Rui Vieira (Funchal, 15.12.1955.) I assume the species is present in Madeira Island, although not collected by the expedition.

Gomez-Menor (1963) reports *Aulacorthum pelargonii* from Canary Islands but the aphid really encountered is not known (Eastop, 1971; Tams-Lyche, 1971).

There is no record of *Acyrtosiphon pelargonii* from Porto Santo and the Azores. It is however present in Continental Portugal.

## 4. *Acyrtosiphon pisum* (Harris)

Eastop (1971) reports this species from Madeira, but without indication of host plant and locality. In the registers of E. A. M. there is an unpublished record of *A. pisum* in Funchal on peas (Rui Vieira, 23.5.1956).

The species is also known from Continental Portugal, Azores (Müller, 1965), Canary Islands (Gomez-Menor, 1963) and Porto Santo (Ilharco, 1973).

Funchal (19.4.1966, No. 505, *Trifolium campestre*, 1 apt. fem., 2 al. fem.; 26.4.1966, No. 550b, *Vicia sativa*, 1 nym.; 27.4.1966, No. 555a, *Pisum sativum*, 8 apt. fem., 1 al. fem.).

## 5. *Acyrtosiphon spartii* (Koch)

Eastop (1971) reports *A. spartii* from Madeira as a subspecies of *A. pisum*, but he believes that *spartii* may be «only a name given to the populations of *pisum* which prefer living on shrubs rather than on herbs». My record is based on a single adult apterous viviparous female which shows a very distinct pigmentation degree on antennae, legs and siphunculi, especially the very apex of femora, the apex of tibiae and tarsi, which are black. Siphunculi are darker at apex and at middle.

*A. spartii* is not known from Continental Portugal, Azores and Porto Santo. Gomez-Menor (1963) records *Acyrtosiphon genistae*

Mordwilko from Canary Islands and Eastop (1971) and Tambs-Lyche (1971) believe that the aphid implied is *A. spartii*. I have asked Prof. Gomez-Menor for some material of his *A. genistae* from *Spartocytisus nubigenis* in Tenerife (Canary Islands) but no answer has been obtained. The question will remain obscure.

The record of *A. spartii* in Madeira by Eastop (1971) is from *Cytisus* sp. on 20.6.1929. The locality pointed out is «Carcin», a name which should be an incorrect transliteration of Caniço. The host plant, *Cytisus* sp., may well be *Sarothamnus scoparius*.

Canico (2.5.1966, No. 584b, *Sarothamnus scoparius*, 1 apt. fem.).

## 6. *Amphorophora rubi* (Kaltenbach)

This is the first record of this species in Portuguese Territory. The species is common in Europe, and has been recorded from Turkey (Tuatay & Remaudière, 1964), continental Asia (Hille Ris Lambers, 1949; Narzikulov & Umarov, 1969) and U. S. A. (Palmer, 1952). It was not known from Macaronesia.

In Europe two subspecies are usually accepted, viz. *rubi* s. str. and *idaei* (Börner), both from *Rubus*. The taxon from Madeira agrees well with *idaei*.

Funchal (19.4.1966, No. 503b, *Rubus* sp., 1 apt. fem.); Caniçal (5.5.1966, No. 617b, *Rubus* sp., 1 nym.); Choupana (5.5.1966, No. 635a, *Rubus* sp., 2 apt. fem., 4 al. fem., 5 nym.); Poiso, Feiteira de Baixo (9.5.1966, No. 642b, *Rubus* sp., 9 apt. fem., 8 al. fem.); Lombo da Ponta do Pargo (12.5.1966, No. 674b, *Rubus* sp., 4 apt. fem.).

## 7. *Aphis capsellae* Kaltenbach

This is the first record of *A. capsellae* in Macaronesia. The species is known from Continental Portugal but it was not represented in the CAEAN.

The sample from Madeira was identified by Dr. Hille Ris Lambers.

Funchal (26.4.1966, No. 549d, *Capsella bursa-pastoris*, 16 apt. fem., 11 al. fem., 1 nym.).

## 8. *Aphis craccivora* Koch

This very common and Cosmopolitan aphid species is now for the first time reported from the Archipelago of Madeira, unless a record of an aphid on *Acacia melanoxylon* at Monte (Funchal) by Tavares (1903) is referred to it. I also have not found any record from the Azores or Canary Islands. It is widespread in Continental Portugal.

Funchal (26.4.1966, No. 547, *Vicia ?sativa*, 10 apt. fem.; 26.4.1966, No. 549a, *Capsella bursa-pastoris*, 25 apt. fem., 8 al. fem.; 26.4.1966, No. 550a, *Vicia sativa*, 11 apt. fem.; 28.4.1966, No. 572c, *Plantago* sp., 1 apt. fem.); Camacha, Achadinha (2.5.1966, No. 590, *Vicia sativa*, 15 apt. fem., 3 al. fem.); Boaventura (16.5.1966,

No. 703, *Vicia sativa*, 10 apt. fem., 3 al. fem.); Curral das Freiras (31.5.1966, No. 756b, *Vicia faba*, 10 apt. fem., 3 al. fem.).

### 9. *Aphis diphaga* Walker

This aphid is only known from Europe where it has been found on the underside of the leaves of some species of *Epilobium*.

In Madeira Island the insects were collected on the stems and inflorescences of a non-identified plant which did not seem an *Epilobium*. Dr. Hille Ris Lambers, to whom I have sent some specimens, most kindly told me that the aphids appear to be *Aphis diphaga*.

*A. diphaga* was not known in Macaronesia. There is no record from Continental Portugal.

Funchal (20.4.1966, No. 517, Host plant?, 9 apt. fem., 6 al. fem.).

### 10. *Aphis euphorbiae* Kaltenbach

Now for the first time reported from an island of Macaronesia. The subspecies from Madeira is the same as that of Continental Portugal, *tirucallis* Hille Ris Lambers.

Funchal (18.4.1966, No. 487a, *Euphorbia helioscopia*, 19 apt. fem., 8 al. fem.; 20.4.1966, No. 522d, 1 apt. vagr.); Porto Novo (3.5.1966, No. 607a, *Euphorbia piscatoria*, 25 apt. fem., 4 al. fem.); Ribeira da Janela (14.5.1966, No. 681, *Euphorbia piscatoria*, 30 apt. fem., 29 al. fem.).

### 11. *Aphis fabae* Scopoli

At least the following authors have referred the black bean aphid to Madeira Island: Vieira (1951b), on *Vitis vinifera*, Neves (1966), on *Citrus*, Granate (1971, 1972) and Gouveia (1972) both from material collected by the expedition. However, the reference of Tavares (1905) to *Aphis rumicis* on *Solanum tuberosum* in Funchal may well be the first record of *A. fabae* in Madeira.

The species is known from the whole of Macaronesia (Iharco, 1973; Granate, 1971, 1972; Gomez-Menor, 1960; Tambs-Lyche, 1971). It is widespread in Continental Portugal.

Funchal (18.4.1966, No. 483c, *Lagerstroemia indica*, 2 al. fem.; 18.4.1966, No. 495c, *Abutilon* sp., 1 al. fem.; 19.4.1966, No. 504b, *Eupatorium adenophorum*, 3 al. fem.; 19.4.1966, No. 510a, *Solanum nigrum*, 16 apt. fem., 6 al. fem.; 20.4.1966, No. 516b, *Chrysanthemum* sp., 2 apt. fem., 3 al. fem.; 20.4.1966, No. 519a, *Chenopodium album*, 17 apt. fem., 2 al. fem.; 26.4.1966, No. 549b, *Capsella bursa-pastoris*, 19 apt. fem., 3 al. fem.; 27.4.1966, No. 555c, *Pisum sativum*, 2 al. fem.; 27.4.1966, No. 564, *Vicia faba*, 12 apt. fem., 13 al. fem.; 28.4.1966, No. 568e, *Solanum tuberosum*, 1 al. fem.; 8.6.1966, No. 794a, *Cymbidium lowianum*, 52 apt. fem., 26 al. fem.); Caniço (2.5.1966, No. 582a, *Chrysanthemum* sp., 4 apt. fem.); Poiso, Feteira de Cima (9.5.1966, No. 639b, *Erica scoparia*, 4 apt. fem.); Ribeiro Frio (9.5.1966, No. 648a, *Rumex* sp., 10 apt. fem., 2 al. fem., 1 nym.; 9.5.1966, No. 649c, *Salix* sp., 1 al. fem.); Porto do Moniz (12.5.1966, No. 662b, *Chelidonium majus*, 3 al. fem.);

12.5.1966, No. 667a, *Rumex* sp., 32 apt. fem., 19 al. fem.); Ponta do Pargo (12.5.1966, No. 673, *Nerium oleander*, 47 apt. fem., 10 al. fem.); Seixal (14.5.1966, No. 685b, *Bidens pilosa*, 31 apt. fem., 1 al. fem.); Seixal, Ribeira da Fajã da Eira (14.5.1966, No. 686a, *Hypericum grandifolium*, 1 apt. fem., 2 al. fem.); Boaventura (16.5.1966, No. 704, *Bidens pilosa*, 29 apt. fem., 30 al. fem.); 16.5.1966, No. 706a, *Chrysanthemum indicum*, 36 apt. fem., 5 al. fem.); Curral das Freiras (31.5.1966, No. 756a, *Vicia faba*, 35 apt. fem., 11 al. fem.); 31.5.1966, No. 757, *Rumex* sp., 18 apt. fem., 1 al. fem.); Ribeira Brava (1.6.1966, No. 771, *Papaver dubium*, 32 apt. fem.).

## 12. *Aphis farinosa* Gmelin

Widely distributed in Madeira Island.

In the whole area of willow culture *A. farinosa* is an important pest. It also feeds on the indigenous *Salix canariensis* and on other introduced willows. This is the first record of *A. farinosa* in Macaronesia. It is rare in Continental Portugal.

Ribeiro Frio (9.5.1966, No. 644b, *Salix* ?*babylonica*, 1 apt. fem., 1 al. fem.; 9.5.1966, No. 649b, *Salix* sp., 2 al. fem.); Faial, Lombo de Cima (9.5.1966, No. 650b, *Salix alba* × *viminialis*, 2 al. fem.; 9.5.1966, No. 651, *Salix alba* × *viminialis*, 7 apt. fem.); S. Vicente (14.5.1966, No. 687a, *Salix alba* × *viminialis*, 15 apt. fem., 3 al. fem.); Boaventura (16.5.1966, No. 690b, *Salix alba* × *viminialis*, 3 al. fem.; 16.5.1966, No. 691a, *Salix alba* × *viminialis*, 25 apt. fem., 15 al. fem.; 16.5.1966, No. 692, *Salix canariensis*, 14 apt. fem., 2 al. fem., 3 sex. fem.); S. Jorge (16.5.1966, No. 709b, *Salix canariensis*, 13 apt. fem., 1 al. fem.); Curral das Freiras (31.5.1966, No. 755c, *Salix alba* × *viminialis*, 1 apt. fem.); Ribeira Brava (1.6.1966, No. 764b, *Salix alba* × *viminialis*, 10 apt. fem., 2 al. fem.); Calheta (6.6.1966, No. 788, *Salix* sp., 4 apt. fem., 1 al. fem.).

## 13. *Aphis gossypii* Glover

This is the most widespread aphid in the whole island of Madeira, though it has only been recorded a few times previously. In the registers of E.A.M. there are some unpublished notes by Rui Vieira (1.9.1955) on the host plants of *A. gossypii* in Funchal (*Hibiscus rosa-sinensis*, *Cucurbita* spp., *Cucumis melo*, *Geranium* spp., *Pelargonium* spp., *Citrus* spp.). The first published record seems to be that by Neves (1966) and not those by Granate (1971, 1972) as she then considered at my suggestion.

*A. gossypii* is in Madeira a serious pest of a number of plants, mainly in the gardens of Funchal. I have seen in Funchal that all the *Hibiscus* of Avenida do Mar are quite infested by *A. gossypii* and *Myzus persicae*. These plants are therefore undesirable foci of continuous infestations all the year round. Measures against the aphids with this *status quo* will be very difficult.

*A. gossypii* is known from the whole Macaronesia (Iharco, 1973; Neves, 1966; Granate, 1971, 1972; Tambs-Lyche, 1971). It is widespread in Continental Portugal.

Funchal (18.4.1966, No. 479b, *Nerium oleander*, 1 al. fem.; 18.4.1966, No. 480b, *Salvia splendens*, 1 al. fem., 2 nym.; 18.4.1966, No. 482b, *Hibiscus rosa-*

*sinensis*, 3 apt.fem., 10 al.fem.; 18.4.1966, No. 483b, *Lagerstroemia indica*, 5 apt.fem., 3 al.fem.; 18.4.1966, No. 484b, *Cassia* sp., 2 apt.fem., 1 nym.; 18.4.1966, No. 494a, *Jacaranda mimosifolia*, 7 apt.fem., 9 al.fem., 1 nym.; 18.4.1966, No. 495b, *Abutilon* sp., 5 apt.fem., 8 al.fem.; 18.4.1966, No. 498b, Host plant?, 4 apt.fem., 7 al.fem.; 18.4.1966, 500b, *Lathyrus odoratus*, 1 al.fem.; 19.4.1966, No. 501a, *Jacaranda mimosifolia*, 12 apt.fem., 8 al.fem.; 19.4.1966, No. 504c, *Eupatorium adenophorum*, 1 al.fem.; 19.4.1966, No. 508c, *Sonchus* sp., 1 al.fem.; 19.4.1966, No. 510c, *Solanum nigrum*, 5 apt.fem., 5 al.fem.; 20.4.1966, No. 514, Host plant?, 5 apt.fem., 3 al.fem.; 20.4.1966, No. 516c, *Chrysanthemum* sp., 1 al.fem.; 20.4.1966, No. 518c, *Nicotiana glauca*, 1 apt.fem.; 20.4.1966, No. 521b, *Fumaria* sp., 5 apt.fem.; 25.4.1966, No. 534b, *Solanum tuberosum*, 2 apt.fem., 3 al.fem.; 25.4.1966, No. 535c, *Punica granatum*, 3 al.fem.; 26.4.1966, No. 539b, *Polygonaceae?*, 1 al.fem.; 26.4.1966, No. 543b, *Poncirus trifoliata*, 2 apt.fem., 1 al.fem.; 26.4.1966, No. 552b, *Eriobotrya japonica*, 5 apt.fem.; 27.4.1966, No. 558c, *Prunus armeniaca*, 2 al.fem.; 28.4.1966, No. 566d, *Prunus amygdalus*, 1 al.fem.; 28.4.1966, No. 568d, *Solanum tuberosum*, 1 al.fem.; 28.4.1966, No. 571b, *Pyrus communis*, 1 al.fem.; 28.4.1966, No. 572a, *Plantago* sp., 14 apt.fem.; 29.4.1966, No. 575c, *Muehlenbeckia* sp., 1 al.fem.; 4.5.1966, No. 616b, *Sonchus squarrosus*, 1 al.fem.; 11.6.1966, No. 797b, *Sanguisorba maderensis*, 2 apt.fem., 4 al.fem.; S. Gonçalo (2.5.1966, No. 579a, *Chorisia speciosa*, 7 apt.fem., 1 nym.); Caniço (2.5.1966, No. 580b, *Cydonia oblonga*, 1 apt.fem., 17 al.fem.); Camacha, Achadinha (2.5.1966, No. 587b, *Pyrus communis*, 1 apt.fem.); Caniçal (5.5.1966, No. 619, *Punica granatum*, 18 apt.fem., 7 al.fem.; 5.5.1966, No. 621b, *Galactites tomentosa*, 1 al.fem.); Porto do Moniz (12.5.1966, No. 663a, *Gerbera jamesonii*, 26 apt.fem., 3 al.fem.; 12.5.1966, No. 664d, *Chrysanthemum indicum*, 1 al.fem.; 12.5.1966, No. 665b, *Rosa* sp., 2 al.fem.; 12.5.1966, No. 666a, *Hibiscus rosa-sinensis*, 9 apt.fem., 9 al.fem.; 12.5.1966, No. 667e, *Rumex* sp., 1 al.fem.); Santana (16.5.1966, No. 713b, *Malus domestica*, 2 al.fem.; 16.5.1966, No. 715c, *Hibiscus rosa-sinensis*, 1 al.fem.); Curral das Freiras (31.5.1966, No. 755b, *Salix alba* × *viminialis*, 5 apt.fem., 2 al.fem.); Ribeira Brava (1.6.1966, No. 769a, *Nerium oleander*, 5 apt.fem., 2 al.fem.).

#### 14. *Aphis hederæ* Kaltenbach

Now for the first time reported from Madeira Island. However, in the registers of E. A. M. there are unpublished records of *A. hederæ* in Funchal (Monte) on *Hedera helix* and *Hedera canariensis* (Rui Vieira, 15.12.1955).

I have not found any reference to the presence of *A. hederæ* in the other islands of Macaronesia. The aphid is known from Continental Portugal.

Funchal (27.4.1966, No. 559, *Hedera canariensis*, 17 apt.fem., 2 al.fem.); Camacha (3.5.1966, No. 593, *Hedera canariensis*, 17 apt.fem., 17 al.fem.); Terreiro da Luta (5.5.1966, No. 636, *Hedera canariensis*, 16 apt.fem., 1 al.fem.); S. Jorge (16.5.1966, No. 711, *Hedera canariensis*, 23 apt.fem., 26 al.fem.).

#### 15. *Aphis nasturtii* Kaltenbach

Also known from Continental Portugal but up to now unknown from Macaronesia.

Boaventura (16.5.1966, No. 707b, *Rumex* sp., 32 apt.fem., 9 al.fem.).

#### 16. *Aphis nerii* Boyer de Fonscolombe

Van der Goot (1912) reports this aphid from Madeira as *Aphis*



*gomphocarpi* n. sp.. Later (1917) he considered that name a synonym of *Aphis nerii* Boyer de Fonscolombe. No other record is known, except that from the registers of E. A. M. which are private (Rui Vieira: *Asclepias curassavica*, *Gomphocarpus fruticosus*, *Nerium oleander*. Funchal, 1.9.1955).

The species is also known from Canary Islands (van der Goot, 1912; Gomez-Menor, 1960; Tambms-Lyche, 1971) but is unknown from Porto Santo and the Azores. It is common in Continental Portugal.

Contrary to a usual concensus *A. nerii* is a useful species, therefore its combat must be avoided. In fact, the oleander aphid is a focus of useful parasites and predators and does not infest cultivated plants other than some ornamentals.

Funchal (18.4.1966, No. 479a, *Nerium oleander*, 10 apt.fem., 1 al.fem.; 20.4.1966, No. 513, *Gomphocarpus fruticosus*, 10 apt.fem., 10 al.fem.).

#### 17. *Aphis paralios* Hille Ris Lambers (in litt.)

This new species is to be described by Dr. Hille Ris Lambers, who kindly has identified the sample, from material collected in Yugoslavia.

Porto Novo (3.5.1966, No. 607b, *Euphorbia piscatoria*, 22 apt.fem., 14 al.fem.).

#### 18. *Aphis pomi* De Geer

In the registers of E. A. M. there are the following comments on the presence of *A. pomi* in Madeira:

«It is a very injurious insect, existing in the island a long time ago. Some references to it are already known» (Rui Vieira, 15.12.1955).

In the papers available to me I have only found the references of Tavares (1903, 1905) to *Aphis eriobotryae* Schouteden (a synonym of *A. pomi*) on *Eriobotrya japonica* at S. Martinho, June, and Map no. 87 (revised) of the Commonwealth Institute of Entomology refers to specimens in the British Museum collected in 1929 at Cabo Girão.

The species is also known from Porto Santo (Ilharco, 1973) and Canary Islands (Gomez-Menor, 1960). It is common in Continental Portugal.

Funchal (18.4.1966, No. 489c, 2 al. *vagr.*; 18.4.1966, No. 493a, *Eriobotrya japonica*, 17 apt.fem., 11 al.fem.; 26.4.1966, No. 552a, *Eriobotrya japonica*, 13 apt.fem., 9 al.fem.; 28.4.1966, No. 569a, *Malus domestica*, 17 apt.fem., 13 al.fem.; 28.4.1966, No. 571a, *Pyrus communis*, 9 apt.fem., 4 al.fem.); Gaula (3.5.1966, No. 604, *Eriobotrya japonica*, 11 apt.fem., 1 al.fem.; 3.5.1966, No. 605, *Pyrus communis*, 10 apt.fem.); Santo da Serra, Cova do Castanheiro (3.5.1966, No. 611, *Cydonia oblonga*, 2 apt.fem.); Santana (16.5.1966, No. 714a, *Cydonia oblonga*, 13 apt.fem.,

1 *al. fem.*); Curral das Freiras (31.5.1966, No. 752a, *Malus domestica*, 3 apt. fem., 3 al. fem.); Ribeira Brava (1.6.1966, No. 763, *Eriobotrya japonica*, 25 apt. fem., 12 al. fem.); Arco da Calheta (6.6.1966, No. 785b, *Malus domestica*, 10 apt. fem., 8 al. fem.); 6.6.1966, No. 786c, *Malus domestica*, 3 apt. fem., 1 al. fem.).

### 19. *Aphis punicae* Passerini

Now for the first time reported from Macaronesia. In the registers of E. A. M. there is a record of *A. punicae* on *Punica granatum* in Funchal by Rui Vieira (15.12.1955).

The species is known from Continental Portugal.

Funchal (25.4.1966, No. 535a, *Punica granatum*, 31 apt. fem.).

### 20. *Aphis ruborum* (Börner)

Widespread in Madeira Island and certainly in the whole of Macaronesia, although there is only a single and doubtful record from Canary Islands by Tambs-Lyche (1971). As *A. ruborum* is very variable in size, colour and some ratios I believe the record of Tambs-Lyche is quite right.

*A. ruborum* is already known from Continental Portugal.

Funchal (19.4.1966, No. 503a, *Rubus* sp., 14 apt. fem., 10 al. fem.); Caniço (2.5.1966, No. 585, *Rubus* sp., 14 apt. fem., 6 al. fem.); Santo da Serra, Cova do Castanheiro (3.5.1966, No. 612, *Rubus* sp., 9 apt. fem., 2 al. fem.); Caniçal (5.5.1966, No. 617a, *Rubus* sp., 9 apt. fem., 5 al. fem.); Portela (5.5.1966, No. 625, *Rubus* sp., 2 apt. fem., 20 al. fem.); Choupana (5.5.1966, No. 635b, *Rubus* sp., 3 apt. fem., 10 al. fem.); Poiso, Feiteira de Baixo (9.5.1966, No. 642a, *Rubus* sp., 22 apt. fem., 13 al. fem.); Lombo da Ponta do Pargo (12.5.1966, No. 674a, *Rubus* sp., 15 apt. fem., 14 al. fem.).

### 21. *Aphis sarothamni* Franssen

New to Macaronesia. However, the record of Gomez-Menor (1960) of *Aphis cytisorum* Hartig on *Genista* in Canary Islands might be better applied to *A. sarothamni*.

The species is already known from Continental Portugal.

Canico (2.5.1966, No. 584a, *Sarothamnus scoparius*, 8 apt. fem., 7 al. fem.); Santo da Serra (5.5.1966, No. 627, «broom», 16 apt. fem.); Porto da Cruz (9.5.1966, No. 654, *Sarothamnus scoparius*, 10 apt. fem., 11 al. fem.).

### 22. *Aphis sedi* Kaltenbach

New to Macaronesia. Already known in Continental Portugal.

Gaula (3.5.1966, No. 603, *Sedum japonicum*, 19 apt. fem., 6 al. fem.).

### 23. *Aphis solanella* Theobald

Tavares (1903) referred to this aphid with the name *Aphis rumicis*. It is quite clear that the aphid which crumples the leaves

of *Solanum nigrum* in Madeira is *A. solanella* as in other parts of the world.

*A. solanella* is known from Porto Santo (Ilharco, 1973), the Azores (Müller, 1965) and certainly also from Canary Islands (Tambms-Lyche, 1971). It is widespread in Continental Portugal.

Funchal (18.4.1966, No. 481a, *Solanum nigrum*, 7 apt.fem., 2 al.fem.; 18.4.1966, No. 485a, *Papaver somniferum*, 20 apt.fem., 1 al.fem.; 20.4.1966, No. 522c, *Chrysanthemum* sp., 3 apt.fem.; 25.4.1966, No. 536a, *Solanum nigrum*, 12 apt.fem.; 26.4.1966, No. 539a, *Polygonaceae?*, 2 apt.fem., 5 al.fem.); Machico, Ladeiros (3.5.1966, No. 614, *Polygonaceae*, 7 apt.fem., 7 al.fem.); Caniçal (5.5.1966, No. 620a, *Solanum nigrum*, 12 apt.fem.); Boaventura (16.5.1966, No. 707a, *Rumex* sp., 32 apt.fem., 1 al.fem.); Ribeira Brava (1.6.1966, No. 772, *Solanum nigrum*, 30 apt.fem., 44 al.fem.); Calheta (6.6.1966, No. 789, *Solanum nigrum*, 23 apt.fem., 2 al.fem.).

## 24. *Aphis spiraeicola* Patch

A first reference to the presence of *A. spiraeicola* in Madeira and the Azores was published by me in a foot note (Ilharco, 1968d). As no data was then written these are indeed first records.

The species is common in Continental Portugal and widespread in Madeira Island. It is also known from Porto Santo (Ilharco, 1973) and Canary Islands (Tambms-Lyche, 1971).

Funchal (18.4.1966, No. 492a, *Scrophulariaceae*, 10 apt.fem., 11 al.fem.; 18.4.1966, No. 494b, *Jacaranda mimosifolia*, 10 apt.fem.; 18.4.1966, No. 497, *Escallonia* sp., 10 apt.fem., 10 al.fem.; 20.4.1966, No. 518b, *Nicotiana glauca*, 8 apt.fem., 1 al.fem., 2 nym.; 20.4.1966, No. 522a, *Chrysanthemum* sp., 7 apt.fem., 4 al.fem.; 25.4.1966, No. 535b, *Punica granatum*, 2 apt.fem., 1 al.fem.; 26.4.1966, No. 543a, *Poncirus trifoliata*, 2 apt.fem., 2 al.fem.; 27.4.1966, No. 558b, *Prunus armeniaca*, 9 apt.fem., 10 al.fem.; 27.4.1966, No. 562, *Malus domestica*, 14 apt.fem., 1 al.fem.; 27.4.1966, No. 565, *Spiraea cantoniensis*, 16 apt.fem., 15 al.fem.; 28.4.1966, No. 566a, *Prunus amygdalus*, 11 apt.fem., 6 al.fem.; 28.4.1966, No. 568f, *Solanum tuberosum*, 2 al.fem.; 11.6.1966, No. 797e, *Sanguisorba maderensis*, 2 al.fem.); Caniço (2.5.1966, No. 580a, *Cydonia oblonga*, 17 apt.fem., 1 al.fem.; 2.5.1966, No. 582b, *Chrysanthemum* sp., 1 apt.fem.); Camacha, Achadinha (2.5.1966, No. 587a, *Pyrus communis*, 14 apt.fem., 7 al.fem.); Poiso, Feiteira de Cima (9.5.1966, No. 639a, *Erica scoparia*, 12 apt.fem., 1 al.fem.); Santana (16.5.1966, No. 713a, *Malus domestica*, 28 apt.fem.; 16.5.1966, No. 714b, *Cydonia oblonga*, 2 apt.fem., 1 al.fem.; 16.5.1966, No. 716a, *Citrus deliciosa*, 12 apt.fem., 55 al.fem.); Curral das Freiras (31.5.1966, No. 752b, *Malus domestica*, 3 apt.fem., 2 al.fem.; 31.5.1966, No. 755d, *Salix alba* × *viminialis*, 2 apt.fem.); Ribeira Brava (1.6.1966, No. 769b, *Nerium oleander*, 1 apt.fem., 1 al.fem.); Arco da Calheta (6.6.1966, No. 786d, *Malus domestica*, 1 apt.fem.).

## 25. *Aphis ulicis* Walker

To my knowledge, this species has only been reported from England and Holland (Börner, 1952), and recently from France (Stary, Remaudière & Leclant, 1971). It feeds on *Ulex europaeus*.

Camacha, Achadinha (2.5.1966, No. 589, *Ulex europaeus*, 12 apt.fem., 12 al.fem.); Portela (5.5.1966, No. 626, *Ulex europaeus*, 20 apt.fem., 11 al.fem.).

26. *Aphis umbrella* (Börner)

Recorded by Tavares (1905) from *Malva parviflora* in Funchal, using the name *Aphis malvae* Koch. The author refers to the characteristic umbrella-shaped leaf gall caused by the aphid.

The species is known from Continental Portugal but not from any other Macaronesian island.

Funchal (19.4.1966, No. 507, *Malva* ?*parviflora*, 3 apt.fem., 5 al.fem.; 19.4.1966, No. 510d, *Solanum nigrum* — accidentally — 3 apt.fem., 2 al.fem.); Poiso (9.5.1966, No. 638b, *Lavatera* sp., 2 apt.fem.).

27. *Aulacorthum solani* (Kaltenbach)

Tavares (1914) reported from Funchal, 1906, an aphid on *Solanum jasminoides* to which he gave the name *Macrosiphum solani* Kalt. The record may well be correct.

Müller (1965) records *A. solani* from the Azores and Tambs-Lyche (1971) from Canary Islands. The aphid has not been found in Porto Santo. It is common in Continental Portugal.

Funchal (19.4.1966, No. 504a, *Eupatorium adenophorum*, 5 apt.fem., 1 nym.; 26.4.1966, No. 538c, 1 al.vagr.; 29.4.1966, No. 577b, *Quercus borealis*, 1 apt.fem.; 2.6.1966, No. 779b, *Anthurium* sp., 1 apt.fem.; 2.6.1966, No. 780a, *Bignoniaceae*, 36 apt.fem., 1 nym.; 11.6.1966, No. 797d, *Sanguisorba maderensis*, 1 nym.); Camacha, Pedras do Rochão (3.5.1966, No. 595a, *Prunus avium*, 4 apt.fem., 3 al.fem., 1 nym.); Santo da Serra, Margaçã (5.5.1966, No. 624b, *Castanea sativa*, 7 apt.fem.); Poiso, Feiteira de Baixo (9.5.1966, No. 640, *Acer pseudoplatanus*, 1 al.fem.); Estreito da Calheta (12.5.1966, No. 679, *Lonicera etrusca*, 4 nym.); Boaventura (16.5.1966, No. 696b, *Prunus* sp., 1 nym.); Eira do Serrado (31.5.1966, No. 750a, *Leontodon rothii*, 1 apt.fem.); Ribeira Brava (1.6.1966, No. 762b, *Polygonum persicaria*, 1 apt.fem.).

28. *Brachycaudus cardui* (Linné)

In Macaronesia only known up to now from Porto Santo (Ilharco, 1973). Well known in Continental Portugal.

Funchal (19.4.1966, No. 509, *Galactites tomentosa*, 10 apt.fem., 9 al.fem.; 20.4.1966, No. 516a, *Chrysanthemum* sp., 4 apt.fem.; 20.4.1966, No. 523, *Galactites tomentosa*, 5 apt.fem., 5 al.fem.; 28.4.1966, No. 570, *Cynara scolymus*, 10 apt.fem., 9 al.fem.); Camacha, Aguas Mansas (3.5.1966, No. 600a, *Gerbera jamesonii*, 15 apt.fem., 3 al.fem.); Caniçal (5.5.1966, No. 621a, *Galactites tomentosa*, 16 apt.fem., 4 al.fem.); Ponta de S. Lourenço (5.5.1966, No. 622, «thistle», 9 apt.fem., 7 al.fem.); Camacha (5.5.1966, No. 631, *Carduus pycnocephalus*, 15 apt.fem., 9 al.fem.); Porto do Moniz (12.5.1966, No. 661, «thistle», 20 apt.fem., 20 al.fem.); Fajã da Ovelha (12.5.1966, No. 678a, «thistle», 10 apt.fem., 11 al.fem.); Seixal (14.5.1966, No. 685a, *Bidens pilosa*, 23 apt.fem., 5 al.fem.); Boaventura (16.5.1966, No. 693a, *Chrysanthemum sylvaticum*, 14 apt.fem.); Curral das Freiras (31.5.1966, No. 758, *Galactites tomentosa*, 5 apt.fem., 1 al.fem.); Pousada dos Vinháticos (1.6.1966, No. 775, *Galactites tomentosa*, 13 apt.fem., 3 al.fem.).

## 29. *Brachycaudus helichrysi* (Kaltenbach)

Now for the first time reported from Madeira Island, but already known from Porto Santo (Ilharco, 1973), the Azores (Müller, 1965) and Canary Islands (Tambis-Lyche, 1971). Widespread in Continental Portugal.

Camacha (5.5.1966, No. 628b, *Chrysanthemum indicum*, 9 apt.fem.); Poiso (9.5.1966, No. 637b, *Anthemideae*, 19 apt.fem., 16 al.fem.; 9.5.1966, No. 638c, *Lavatera* sp., 1 apt.fem., 1 nym.); Porto do Moniz (12.5.1966, No. 663b, *Gerbera jamesonii*, 1 apt.fem., 2 al.fem.; 12.5.1966, No. 664b, *Chrysanthemum indicum*, 1 apt.fem., 1 al.fem.); Ribeira da Janela (14.5.1966, No. 683, *Pelargonium peltatum*, 14 apt.fem., 3 al.fem., 1 nym.); Boaventura (16.5.1966, No. 693b, *Chrysanthemum sylvaticum*, 10 apt.fem., 17 al.fem.; 16.5.1966, No. 706b, *Chrysanthemum indicum*, 2 apt.fem.).

## 30. *Brachycaudus prunicola* (Kaltenbach)

Known in Madeira Island since 1914 (Tavares, 1914). This author believed the aphid is common in the island, which is quite correct. The host plant pointed out by Tavares is *Prunus persica* and the aphid was named *Anuraphis persicae* Boyer.

In the registers of E. A. M. there are also records by Rui Vieira (15.12.1955) on peach-trees in Funchal and Caniço.

*B. prunicola* is already known from Porto Santo (Ilharco, 1973) and Canary Islands (Gomez-Menor, 1960). It is widespread in Continental Portugal.

Funchal (26.4.1966, No. 551, *Prunus* sp., 8 apt.fem., 7 al.fem.; 27.4.1966, No. 558a, *Prunus armeniaca*, 7 apt.fem., 7 al.fem.; 28.4.1966, No. 566b, *Prunus amygdalus*, 1 apt.fem., 12 al.fem.; 28.4.1966, No. 567, *Prunus persica*, 12 apt.fem., 2 al.fem.); Camacha, Pedras do Rochão (3.5.1966, No. 595b, *Prunus avium*, 1 apt.fem.); Camacha, Águas Mansas (3.5.1966, No. 598, *Laurus azorica*, 10 apt.fem., 10 al.fem.; 3.5.1966, No. 599, *Prunus domestica*, 18 apt.fem., 1 al.fem.); Machico, Ladeiros (3.5.1966, No. 615, *Prunus persica*, 20 apt.fem., 17 al.fem.); Boaventura (16.5.1966, No. 696a, *Prunus* sp., 23 apt.fem.; 16.5.1966, No. 700, *Prunus amygdalus*, 34 apt.fem., 17 al.fem., 3 nym.); Curral das Freiras (31.5.1966, No. 753, *Prunus persica*, 20 apt.fem., 2 al.fem.); Ribeira Brava (1.6.1966, No. 765, *Prunus persica*, 2 al.fem.).

## 31. *Brachycaudus rumexicolens* (Patch)

This species is nowadays known from almost the whole of Europe, and central Asia, Africa north of parallel 13°S, Himalayas and North America. The record of *Brachycaudus amygdalinus* from South Africa by Quednau (1962) is probably also applied to *rumexicolens*. Tambis-Lyche (1971) records it from Canary Islands. There is no record from Continental Portugal, Azores and Porto Santo.

The identification of the sample no. 667c was confirmed by Dr. R. N. B. Prior.

Funchal (29.4.1966, No. 575a, *Muehlenbeckia* sp., 6 apt.fem., 19 al.fem.); Porto do Moniz (12.5.1966, No. 667c, *Rumex* sp., 2 apt.fem., 17 al.fem., 1 nym.).

### 32. *Brevicoryne brassicae* (Linné)

The well known cabbage aphid has never been referred to Madeira Island. However, in the registers of E. A. M. the aphid is recorded from the whole cultivated area of the island, hosting mainly cabbage and stock (Rui Vieira, 15.8.1955).

Ilharco (1973) reports *B. brassicae* from Porto Santo and Gomez-Menor (1963) from Canary Islands. It is widespread in Continental Portugal.

Funchal (25.4.1966, No. 532, *Brassica oleracea*, 15 apt.fem., 10 al.fem.; 11.6.1966, No. 796, *Sinapidendron rupestre*, 14 apt.fem., 4 al.fem., 3 nym.); Faial, Lombo de Cima (9.5.1966, No. 652, *Brassica oleracea*, 2 apt.fem., 11 al.fem.); Porto da Cruz (9.5.1966, No. 657a, *Raphanus raphanistrum*, 15 apt.fem.); Curral das Freiras (31.5.1966, No. 759, *Brassica oleracea*, 15 apt.fem., 12 al.fem., 2 nym.); Arco da Calheta (6.6.1966, No. 784a, *Brassica oleracea*, 16 apt.fem., 10 al.fem.).

### 33. *Capitophorus elaeagni* (Del Guercio)

Now for the first time recorded from Macaronesia. It is known in Continental Portugal.

Canical (5.5.1966, No. 621c, *Galactites tomentosa*, 2 apt.fem., 2 nym.); Fajã da Ovelha (12.5.1966, No. 578b, «thistle», 1 nym.).

### 34. *Capitophorus hippophaes* (Walker)

Previously not known from Macaronesia. Several times recorded from Continental Portugal. The subspecies of Madeira is *C. hippophaes hippophaes*.

Ribeira Brava (1.6.1966, No. 762a, *Polygonum persicaria*, 22 apt.fem., 8 al.fem.).

### 35. *Cavariella aegopodii* (Scopoli)

In Macaronesia this aphid was only known from Canary Islands (Gomez-Menor, 1963; Tambs-Lyche, 1971). It is known from Continental Portugal.

Dr. Hille Ris Lambers has confirmed the identification of sample no. 649a.

Camacha (3.5.1966, No. 592b, *Melanoselinum decipiens*, 1 al.fem.); Poiso (9.5.1966, No. 637e, 3 al.vagr.); Ribeiro Frio (9.5.1966, No. 644c, *Salix ? babylonica*, 1 al.fem.; 9.5.1966, No. 649a, *Salix* sp., 2 apt.fem., 3 nym.).

### 36. *Cavariella theobaldi* (Gillette & Bragg)

New to Macaronesia and also unknown in Continental Portugal.

It is common in Europe and North America. Collected in Madeira only from its primary host, willows.

Ribeiro Frio (9.5.1966, No. 644a, *Salix ?babylonica*, 1 apt. fem.); Faial, Lombo de Cima (9.5.1966, No. 650a, *Salix alba* × *viminalis*, 22 apt. fem., 1 al. fem.); S. Vicente (14.5.1966, No. 687b, *Salix alba* × *viminalis*, 10 apt. fem., 2 al. fem., 2 nym.); Boaventura (16.5.1966, No. 691b, *Salix alba* × *viminalis*, 1 apt. fem., 1 al. fem.); Ribeira Brava (1.6.1966, No. 764c, *Salix alba* × *viminalis*, 2 al. fem.); Estreito da Calheta (6.6.1966, No. 790, *Salix alba* × *viminalis*, 10 al. fem.).

### 37. *Cerataphis lataniae* (Boisduval)

Vieira (1951a) records this species from a number of palms, orchids and *Strelitzia augusta* in Funchal. In the registers of E. A. M. the same author also locates the species at Machico and Câmara de Lobos (15.7.1955). However, *C. lataniae* does not feed on orchids and on palms another species may be implied, *C. variabilis* Hille Ris Lambers. From orchids the species is *C. orchidearum* (Westwood), which I have collected on *Cymbidium lowianum* in Funchal. The *Cerataphis* from palms may be or not *C. lataniae* but I do not see any reason to exclude *C. lataniae* in favour of *C. variabilis*. Therefore, I believe the records by Vieira may well be correct.

*C. lataniae* is unknown from Continental Portugal and has not been recorded from Porto Santo, the Azores and Canary Islands. Its world distribution is not well known, as some records may be applied to *C. orchidearum*, others to *C. variabilis*.

### 38. *Cerataphis orchidearum* (Westwood)

The records by Vieira (1951a) to *C. lataniae* from orchids are certainly applied to *C. orchidearum*. No other record is known to Macaronesia. The aphid is also present in Continental Portugal.

Funchal (11.6.1966, No. 799, *Cymbidium lowianum*, 31 apt. fem., 17 nym.).

### 39. *Chaitophorus versicolor* Koch

Now for the first time reported from Macaronesia. Common in Continental Portugal.

All the samples collected in Madeira Island have been identified or the identification confirmed by Dr. Hille Ris Lambers. In fact, I have suspected that some American species might be introduced into the island, as some samples were collected from American *Populus* and the apterous viviparous females not rarely had blunt or furcated hairs and pale siphunculi, characters already seen on continental material but not described by the authors. Dr. Hille Ris Lambers (*in litt.*) most kindly informed me that acute, blunt or furcated hairs are usual

in other species of *Chaitophorus* and such a condition would also be expected in *C. versicolor*.

Funchal (27.4.1966, No. 553, *Populus deltoides*, 2 apt.fem., 10 nym.; 28.4.1966, No. 573, *Populus yunnanensis*, 15 apt.fem., 2 al.fem., 1 nym.; 28.4.1966, No. 574, *Populus nigra*, 30 apt.fem., 6 al.fem., 1 al.mal., 8 nym.); Porto da Cruz (9.5.1966, No. 656a, *Populus ? tremula*, 10 apt.fem., 12 al.fem.); Ribeira Brava (1.6.1966, No. 761, *Populus nigra*, 35 apt.fem., 4 al.fem.).

#### 40. *Cinara cupressi* (Buckton)

New to Macaronesia and also unknown from Continental Portugal.

Eastop (1972) gives to *C. cupressi* the following world distribution: Europe, Iraq, British Columbia and North America. The species lives on *Cupressaceae*.

Funchal (26.4.1966, No. 537, *Juniperus oxycedrus*, 1 al.fem.; 26.4.1966, No. 538a, *Juniperus phoenicea*, 8 apt.fem., 1 al.fem.).

#### 41. *Cinara juniperi* (De Geer)

The only record of this species from Macaronesia is by Eastop (1966, 1972) who records it from the Azores. *C. juniperi* is not yet known from Continental Portugal. It feeds on *Juniperus*.

*C. juniperi* has been reported according to Eastop (1972) from the following regions: Europe, Morocco, Greenland, North America, Japan, Taiwan, and New Zealand.

Ribeiro Frio (9.5.1966, No. 645, *Juniperus communis*, 5 apt.fem., 7 nym.).

#### 42. *Cinara maghrebica* Mimeur

This is an older name for *Cinara excelsae* Hille Ris Lambers.

There is no doubt that the species really found in Madeira on *Pinus pinaster* at Montado do Barreiro by Baeta Neves (1953) is *C. maghrebica* and not *C. pinihabitans*. In the registers of E. A. M. there are records of the same species (also named *C. pinihabitans*) at Pico do Arieiro and Funchal on *Pinus pinaster*, *Pinus pinea* and *Pinus radiata* (Rui Vieira, 15.7.1955).

*C. maghrebica* is certainly spread in the whole of Macaronesia, although up to now only known from Madeira and Porto Santo (Ilharco, 1973). It is a Mediterranean species, well known from Continental Portugal.

Funchal (27.4.1966, No. 557, *Pinus canariensis*, 6 apt.fem., 1 al.fem., 3 nym.; 3.5.1966, No. 591, *Pinus pinaster*, 5 apt.fem., 4 al.fem.); Gaula (3.5.1966, No. 601a, *Pinus pinaster*, 5 apt.fem., 14 al.fem., 5 nym.); Portela (9.5.1966, No. 659, *Pinus pinaster*, 12 apt.fem., 1 al.fem.); Santa (12.5.1966, No. 669, *Pinus pinaster*, 2 nym.); Seixal (14.5.1966, No. 684, *Pinus pinaster*, 15 apt.fem., 14 al.fem.); Levada da Ribeira da Jamela (14.5.1966, No. 689, *Pinus pinaster*, 3 apt.fem., 7 nym.); Boaven-



tura (16.5.1966, No. 702, *Pinus pinaster*, 3 al. fem., 4 nym.); Pico dos Barcelos (31.5.1966, No. 748, *Pinus pinea*, 4 apt. fem., 2 al. fem., 3 nym.); Eira do Serrado (31.5.1966, No. 751, *Pinus pinaster*, 2 apt. fem., 1 al. fem., 3 nym.); Pousada dos Vinháticos (1.6.1966, No. 777, *Pinus pinaster*, 6 apt. fem., 3 nym.); Paul da Serra (6.6.1966, No. 782, *Pinus pinaster*, 6 apt. fem., 2 al. fem., 1 nym.).

#### 43. *Cinara tujafilina* (Del Guercio)

New to Macaronesia. Already known from Continental Portugal

Funchal (22.4.1966, No. 528, *Platycladus orientalis*, 7 apt. fem., 4 nym.; 22.4.1966, No. 529, ? *Thuja* sp., 9 apt. fem., 1 nym.; 26.4.1966, No. 538b, *Juniperus phoenicea*, 1 al. fem.; 26.4.1966, No. 548, *Platycladus orientalis*, 10 apt. fem.; 27.4.1966, No. 563, *Juniperus* sp., 3 apt. fem., 4 nym.).

#### 44. *Dysaphis crithmi* (Buckton)

This is a very rare species, up to now only known from South England, South Eire, Channel Islands and Port Cros Island (South France) (Stroyan, 1963). It lives on *Crithmum maritimum*.

Ribeira da Janela (14.5.1966, No. 680a, *Crithmum maritimum*, 15 apt. fem., 10 al. fem.).

#### 45. *Dysaphis emicis* (Mimeur)

Müller (1965) reported one alate vagrant on *Juncus* and grass, 27.4.1957, at Ribeira da Lapa. This is the only record of *D. emicis* to Madeira Island. However, I have collected it at Porto Santo. Up to now unknown from the Azores and Canary Islands. In Continental Portugal only known from Oeiras.

#### 46. *Dysaphis foeniculus* (Theobald)

This is the first record of *D. foeniculus* from Macaronesia. It feeds on *Umbelliferae*. Eastop (1966) gives the following world distribution: Cyprus, Algeria, Egypt, Eritrea, East Africa, Rhodesia, Pakistan, U. S. A., Australia, and New Zealand. Müller & Schöll (1958) recorded it from South Africa. The species is evidently unknown from Continental Portugal.

Dr. H. L. G. Stroyan has confirmed the identification of the sample containing this species.

Camacha (3.5.1966, No. 592a, *Melanoselinum decipiens*, 26 apt. fem., 20 al. fem.).

#### — *Dysaphis lappae* (Koch)

Tavares (1905) records *Aphis lappae* Koch from *Apium graveolens* in Funchal, an aphid species which does not live on *Umbelliferae*

but on *Compositae*. Another species must therefore be implied. It is said that the insects live on the upperside of leaves, crumpling them. I do not know what the species pointed out by Tavares is, but the closest species, *Dysaphis apiifolia*, *D. crataegi* and *D. foeniculus* do not feed on the upperside of leaves and no other aphid could be confused with *lappae* of Koch. So, *Hyadaphis foeniculi*, *Cavariella* species and *Aphis fabae* are excluded. On the other hand, *Dysaphis lappae* should be deleted from the list of the aphids of Madeira Island.

#### 47. *Dysaphis plantaginea* (Passerini)

Tavares (1903, 1905) referred to this species under the name of *Myzus pyrarius* Pass. (*Malus domestica*, S. Martinho). In the registers of E. A. M. there are records of the same species (as *Dentatus malicola* Mordw.) at Santana and Queimadas on apple (Rui Vieira, 15.12.1955).

*D. plantaginea* is common in Continental Portugal but up to now has not been recorded from the other islands of Macaronesia.

Funchal (26.4.1966, No. 544, *Plantago* sp., 1 al. fem.; 28.4.1966, No. 569b, *Malus domestica*, 8 apt. fem., 2 al. fem.; 28.4.1966, No. 572b, *Plantago* sp., 1 apt. fem.; 7.6.1966, No. 792b, 1 al. vagr.); Ponta de S. Lourenço (5.5.1966, No. 623, *Plantago lagopus*, 1 apt. fem.); Arco da Calheta (6.6.1966, No. 785a, *Malus domestica*, 12 apt. fem., 7 al. fem.; 6.6.1966, No. 786b, *Malus domestica*, 14 apt. fem., 1 al. fem.).

#### 48. *Dysaphis pyri* (Boyer de Fonscolombe)

Tavares (1914) described a leaf pseudogall from *Pyrus communis* in Funchal and ascribed it to *Anuraphis pyri* Koch. However, *Anuraphis farfarae* (Koch) (= *Anuraphis pyri*) produces a pseudogall quite different from that described by Tavares which agrees well with the one produced by *Dysaphis pyri*. Besides, as *A. farfarae* is a strictly holocyclic aphid and its secondary host plants — *Tussilago* and *Petasites* — are not represented in the island, I do believe that the record of Tavares is better applied to *D. pyri* than to *A. farfarae*.

I have not found *D. pyri* in Madeira. The species is also unknown from Porto Santo, the Azores and Canary Islands, but there are some records from Continental Portugal.

#### 49. *Dysaphis tulipae* (Boyer de Fonscolombe)

Granate (1971, 1972) recorded this species from material collected by the expedition for the first time from Madeira Island. The species is not known from any other island of Macaronesia, but it has been already recorded from Continental Portugal.

In the registers of E. A. M. there are records of *D. tulipae* (under *Dentatus tulipae*) from tulips and lilies in Funchal (Rui Vieira, 8.4.1958).

Ribeiro Frio (9.5.1966, No. 643a, *Iris albicans*, 21 apt. fem., 19 al. fem.).

#### 50. *Eriosoma lanigerum* (Hausmann)

Tavares (1914) referred to *Myzoxylus laniger* Hausm. on *Pyrus communis* in Funchal, a record which may be or may not be right, as *E. lanigerum* does not usually feed on pear-tree. According to the registers of E. A. M. by Rui Vieira (15.8.1955), the woolly aphid is spread in Madeira and was probably introduced a long time ago. He has recorded *E. lanigerum* on apples in Funchal, Camacha and Santo da Serra.

Gomez-Menor (1963) records the species from Canary Islands and it has hitherto never been found in Porto Santo. The woolly apple aphid is widespread in Continental Portugal and it certainly also exists in the Azores.

Arco da Calheta (6.6.1966, No. 786a, *Malus domestica*, 10 apt. fem.).

#### 51. *Eucallipterus tiliae* (Linné)

This species has hitherto never been found in Macaronesia. It is already known from Continental Portugal.

Funchal (21.4.1966, No. 526, *Tilia tomentosa*, 2 al. fem.); Santana (16.5.1966, No. 712a, *Tilia tomentosa*, 23 al. fem., 18 nym.).

#### 52. *Eulachnus rileyi* (Williams)

According to Hille Ris Lambers (1967) specimens of *E. rileyi* from the French and Italian Riviera, Venice and Continental Portugal differ from those from Western and Central Europe in the antennal and dorsal tibial hairs, being shorter and with blunt or incrassate apices in the Southern material and longer ones with fine tips in the Northern specimens. For the former material the name *tauricus* Bozhko may be available, a name applied to a dark brown aphid from Crimea. Hille Ris Lambers (*op. cit.*) considers *tauricus* at most a subspecies of *rileyi*, but I myself have considered it a full species (Ilharco, 1968b).

With material from Continental Portugal and Madeira Island and with a slide kindly sent from Poland by Dr. H. Szelegiewicz I have concluded that there is no reason to consider *tauricus* different from *rileyi*. In fact, the specimens from Poland have blunter tibial hairs than those from Continental Portugal, and in the specimens from Madeira some hairs are somewhat acute. Considering the colour in life, sample no. 76 from Lisbon contained brown specimens but in the sample no 276 from Odeceixe (South Portugal) the aphids were black<sup>1</sup>. Sample no. 556 from Madeira contained one dark brown apterous

<sup>(1)</sup> The other samples referred to by Ilharco (1968b) with no. 47, 225, 282, 337 and 421a are not correctly identified. The correction will be made elsewhere.

form and nymphs, all producers of wax, but the specimens from sample no. 601b do not produce wax and are simply brown.

Following a suggestion by Hille Ris Lambers (1967) I assume that *E. rileyi* is similar to *Chaitophorus versicolor* in the variation of some hairs and therefore the name *tauricus sensu* H. R. L. is considered by me a synonym of *rileyi*. The question, however, needs more study.

*E. rileyi* is reported from Canary Islands by Tambs-Lyche (1971).

Funchal (27.4.1966, No. 556, *Pinus canariensis*, 1 apt. fem., 3 nym.); Gaula (3.5.1966, No. 601b, *Pinus pinaster*, 3 apt. fem., 1 al. fem., 13 nym.).

### 53. *Hyadaphis foeniculi* (Passerini)

*H. foeniculi* has been known in Madeira Island since 1903 (Tavares, 1903, 1905). It was then named *Siphocoryne xylostei* Schrk. and recorded from *Lonicera etrusca* at Monte (Funchal). In Macaronesia, the species is also known from Porto Santo (Iharco, 1973). It is common in Continental Portugal.

Camacha (19.6.1966, No. 800, *Lonicera etrusca*, 35 apt. fem., 5 al. fem., col. Rui Vieira).

### 54. *Hyperomyzus lactucae* (Linné)

Widespread in Madeira Island, though only now reported for the first time. It is very common in Continental Portugal and is also known from Porto Santo (Iharco, 1973) and Canary Islands (Gomez-Menor, 1963).

Sample no. 629b was identified by Dr. Hille Ris Lambers, as the apterous forms showed a slightly pigmented dorsum, a characteristic of some old individuals (Hille Ris Lambers, *in litt.*).

Funchal (18.4.1966, No. 485b, 3 apt. vagr.; 18.4.1966, No. 488, *Sonchus ? oleraceus*, 10 apt. fem., 10 al. fem.; 18.4.1966, No. 489b, *Sonchus ? oleraceus*, 3 apt. fem.; 19.4.1966, No. 508b, *Sonchus* sp., 5 apt. fem., 1 al. fem.; 4.5.1966, No. 616a, *Sonchus squarrosus*, 2 al. fem.); Machico, Ladeiros (3.5.1966, No. 613c, *Sonchus squarrosus*, 8 apt. fem., 7 al. fem.); Camacha (5.5.1966, No. 629b, *Sonchus* sp., 10 apt. fem., 10 al. fem.); Porto do Moniz (12.5.1966, No. 668b, *Sonchus oleraceus*, 14 apt. fem.); Ponta do Pargo, Pedregal (12.5.1966, No. 670c, *Sonchus squarrosus*, 1 apt. fem., 2 al. fem., 1 nym.); Ribeira da Janela (14.5.1966, No. 682, *Sonchus oleraceus*, 8 apt. fem., 2 al. fem., 2 nym.); Ribeira Brava (1.6.1966, No. 768b, *Sonchus oleraceus*, 2 nym.; 1.6.1966, No. 770, *Sonchus oleraceus*, 8 apt. fem., 2 al. fem.).

### 55. *Hyperomyzus picridis* (Börner)

The record of this European aphid in Madeira Island is based on a single alate female collected on *Salix alba* × *viminalis*, which is not a host of the species. *H. picridis* is a holocyclic species, alternating

between *Ribes* and *Picris*, but also able to hibernate without eggs on *Picris*, which should be the condition in Madeira.

*H. picridis* is not known from any other Macaronesian island and has hitherto never been recorded from Continental Portugal.

Ribeira Brava (1.6.1966, No. 764d, 1 *al. vagr.*).

#### 56. *Kallistaphis flava* (Mordwilko)

New to Macaronesia. Already known from Continental Portugal.

Funchal (29.4.1966, No. 576, *Betula pubescens*, 1 *apt. fem.*, 4 nym.).

#### 57. *Longiunguis pyrarius* (Passerini)

New to Macaronesia, where it almost certainly lives anholocyclicly on *Gramineae*. Already known from Continental Portugal.

Camacha, Pedras do Rochão (3.5.1966, No. 597a, *Briza minor*, 1 *apt. fem.*, 1 nym.); Choupana (5.5.1966, No. 632, *Gramineae*, 14 *apt. fem.*).

#### 58. *Macrosiphoniella sanborni* (Gillette)

These are the first published records of *M. sanborni* from Madeira Island. However, in the registers of E. A. M. there are records by Rui Vieira (15.8.1955) on cultivated *Chrysanthemum* in Funchal. The species is known from Continental Portugal and Gomez-Menor (1963) reports it from Canary Islands.

Camacha (5.5.1966, No. 628a, *Chrysanthemum indicum*, 15 *apt. fem.*, 10 *al. fem.*); Porto do Moniz (12.5.1966, No. 664a, *Chrysanthemum indicum*, 16 *apt. fem.*, 3 *al. fem.*, 4 nym.); Boaventura (16.5.1966, No. 701, *Chrysanthemum indicum*, 1 *al. fem.*).

#### 59. *Macrosiphum ? centranthi* Theobald

Originally described from England (Theobald, 1915) and recently recorded from South Africa (Müller & Schöll, 1958) and Switzerland (Meier, 1961), always from *Valerianaceae*, mainly *Centranthus* and *Valeriana*. The records from Madeira Island are from quite different families, *Leguminosae* and *Umbelliferae*, the former undoubtedly a true host as a large population with many nymphs were collected, the latter might be an accidentally host, as a single adult apterous female was collected.

As *M. centranthi* from *Lathyrus odoratus* would be a very unexpected record, a slide containing three apterous females from sample no. 500a has been sent to Dr. Eastop who most kindly confirmed my identification, but suggested the use of a ? mainly because of the host plant. I would like to comment a little more upon this matter. *Lathyrus odoratus* is in Madeira Island an introduced garden plant and, therefore,

no new species is to be expected from it, mainly such a conspicuous species as I have collected. On the other hand, if my material is indeed *M. centranthi*, as I do believe, then one must conclude that either it is a polyphagous species or a migrating one, at least a facultative migrating species as, for instance, *Macrosiphum rosae*. As Meier (1961) has described the sexual forms of *M. centranthi* from *Valeriana*, most probably it is a holocyclic species with a facultative migration to other plants, as for instance *Lathyrus odoratus*. According to a kind information by Dr. Eastop (*in litt.*) in the British Museum there are similar specimens from *Dianthus* in New Zealand, which may be *centranthi* as they have dark knees as my material and the types of another similar usually accepted species, *Macrosiphum silenium*, have rather paler legs. I also would like to suggest that *Macrosiphum silenium* of Gomez-Menor (1963) from Canary Islands is also *M. centranthi*.

Funchal (18.4.1966, No. 500a, *Lathyrus odoratus*, 16 apt. fem., 1 al. fem.);  
Ribeira da Janela (14.5.1966, No. 680b, *Crithmum maritimum*, 1 apt. fem.).

#### 60. *Macrosiphum euphorbiae* (Thomas)

Granate (1971, 1972) reports this Cosmopolitan aphid from Madeira Island working up material collected by the expedition. Gouveia (1972) also reports the species from other material collected by the expedition. *M. euphorbiae* is also known from the other Macaronesian islands (Ilharco, 1973; Granate, 1971, 1972; Gouveia, 1972; Gomez-Menor, 1973; Tambs-Lyche, 1971). It is widespread in Continental Portugal.

Funchal (20.4.1966, No. 519b, *Chenopodium album*, 5 apt. fem., 3 al. fem.; 20.4.1966, No. 521a, *Fumaria* sp., 3 apt. fem., 1 al. fem.; 27.4.1966, No. 555b, *Pisum sativum*, 2 apt. fem., 5 al. fem.; 28.4.1966, No. 568b, *Solanum tuberosum*, 1 apt. fem.); S. Gonçalo (2.5.1966, No. 579c, *Chorisia speciosa*, 9 apt. fem., 1 al. fem.); Caniçal (5.5.1966, No. 620b, *Solanum nigrum*, 7 nym.); Poiso (9.5.1966, No. 637c, *Anthemideae*, 1 apt. fem.); Ribeiro Frio (9.5.1966, No. 643b, *Iris albicans*, 2 apt. fem., 1 al. fem., 3 nym.); Porto do Moniz (12.5.1966, No. 662a, *Chelidonium majus*, 10 apt. fem., 9 al. fem.; 12.5.1966, No. 667d, *Rumex* sp., 1 apt. fem.); Ponta do Pargo, Pedregal (12.5.1966, No. 670d, *Sonchus squarrosus*, 1 al. fem.); Fajã da Ovelha (12.5.1966, No. 677a, *Oxalis pes-caprae*, 3 apt. fem., 3 al. fem.); Seixal, Ribeira da Fajã da Eira (14.5.1966, No. 686b, *Hypericum grandifolium*, 2 al. fem.); Ponta Delgada (14.5.1966, No. 688a, *Solanum tuberosum*, 11 apt. fem., 2 al. fem.); Boaventura (16.5.1966, No. 697, *Chrysanthemum* sp., 2 apt. fem.); Arco da Calheta (6.6.1966, No. 787b, *Sonchus oleraceus*, 2 apt. fem., 1 al. fem.).

#### 61. *Macrosiphum rosae* (Linné)

In the registers of E. A. M. there are unpublished records by Rui Vieira (15.8.1955) of *M. rosae* at the whole area of the culture of roses. The species is already known from Canary Islands (Gomez-Menor, 1963) and Continental Portugal, but unknown from Porto Santo and the Azores.

Funchal (26.4.1966, No. 542, *Rosa* sp., 11 apt.fem., 5 al.fem.); Camacha (5.5.1966, No. 630a, *Rosa* sp., 11 apt.fem., 16 al.fem.); Porto da Cruz (9.5.1966, No. 653a, *Rosa* sp., 1 apt.fem.); Porto do Moniz (12.5.1966, No. 665a, *Rosa* sp., 19 apt.fem., 2 al.fem.); Ribeira Brava (1.6.1966, No. 767, *Rosa* sp., 2 apt.fem., 10 al.fem.).

## 62. *Melanaphis bambusae* (Fullaway)

Now for the first time recorded from Macaronesia. Already known from Continental Portugal.

Funchal (26.4.1966, No. 546, *Bambusa vulgaris*, 12 apt.fem., 15 al.fem., 2 nym.); Camacha (3.5.1966, No. 592c, 1 apt.vagr.).

## 63. *Melanaphis donacis* (Passerini)

In Macaronesia only known from the Island of Porto Santo (Ilharco, 1973). It is a useful aphid and therefore its combat should be avoided (Ilharco, *op cit.*). Common in Continental Portugal.

Funchal (22.4.1966, No. 530, *Arundo donax*, 11 apt.fem., 11 al.fem.); Gaula (3.5.1966, No. 602, *Arundo donax*, 19 apt.fem.); Porto do Moniz (12.5.1966, No. 660, *Arundo donax*, 18 apt.fem., 19 al.fem.); Boaventura (16.5.1966, No. 705, *Arundo donax*, 6 al.fem.); Ribeira Brava (1.6.1966, No. 766, *Arundo donax*, 4 apt.fem., 20 al.fem.); Arco da Calheta (6.6.1966, No. 783, *Arundo donax*, 5 nym.).

## 64. *Metopolophium dirhodum* (Walker)

Up to now only referred to Madeira Island by Gouveia (1972) from material collected by the expedition. The species is not known from any other Macaronesian island. It is known from Continental Portugal.

Most of the material from Madeira has been sent to Dr. Eastop as I have suspected that another species might be involved, as the cauda is shorter and bearing fewer caudal hairs than in normal *M. dirhodum*. Dr. Eastop believes that the species is *dirhodum* and the shortness of cauda may mean something related to hot weather in Madeira. This suggestion may well be correct, as the material which I have not been able to identify is all from Funchal (mean annual temperature 18.7°C.) whereas the other from colder localities I have not had any difficulty in identifying.

Samples no. 490, 491, 502, and 512 have been identified by Dr. Eastop. In the case of no. 778a he confirmed my identification.

Funchal (18.4.1966, No. 490, *Gramineae*, 10 apt.fem., 10 al.fem.; 18.4.1966, No. 491, *Hordeum* sp., 5 apt.fem.; 19.4.1966, No. 502, *Bromus unioloides*, 14 apt.fem., 1 al.fem.; 20.4.1966, No. 512, *Avena barbata*, 8 apt.fem., 1 al.fem.); Ponta do Pargo (12.5.1966, No. 872b, *Hordeum* sp., 1 apt.fem.); Eira do Serrado (31.5.1966, No. 749, *Briza maxima*, 10 apt.fem.); Pousada dos Vinháticos (1.6.1966, No. 778a, *Triticum vulgare*, 1 apt.fem., 3 al.fem.).

## 65. *Myzaphis rosarum* (Kaltenbach)

New to Macaronesia. Already known from Continental Portugal.

Camacha (5.5.1966, No. 630b, *Rosa* sp., 2 apt.fem., 1 al.fem., 2 nym.); Porto da Cruz (9.5.1966, No. 653b, *Rosa* sp., 20 apt.fem., 2 al.fem.).

### 66. *Myzocallis castanicola* Baker

Now for the first time reported from Macaronesia. Also already known from Continental Portugal.

Funchal (19.4.1966, No. 511a, *Quercus robur*, 8 al.fem., 7 nym.; 21.4.1966, No. 527, 1 al.vagr.; 26.4.1966, No. 545b, *Quercus suber*, 10 al.fem., 3 nym.); Caniço (2.5.1966, No. 581, *Castanea sativa*, 14 al.fem., 7 nym.; 2.5.1966, No. 586a, *Quercus robur*, 15 al.fem., 5 nym.); Santa Cruz (3.5.1966, No. 608b, *Quercus robur*, 2 al.fem., 1 al.mal., 9 nym.); Santo da Serra (3.5.1966, No. 609 and No. 610, *Quercus robur* and *Quercus borealis*, 4 al.fem., 7 nym.); Santo da Serra, Margaçã (5.5.1966, No. 624a, *Castanea sativa*, 15 al.fem.); Choupana (5.5.1966, No. 633, *Castanea sativa*, 1 al.fem.); Ribeiro Frio (9.5.1966, No. 646, *Quercus robur*, 3 al.fem., 1 nym.); Portela (9.5.1966, No. 658, *Castanea sativa*, 5 al.fem., 4 nym.); Fajã da Ovelha (12.5.1966, No. 676a, *Quercus robur*, 2 al.fem., 5 nym.); S. Jorge (16.5.1966, No. 710b, *Quercus robur*, 1 al.fem.); Cabo Girão (6.6.1966, No. 781, *Castanea sativa*, 7 al.fem., 4 nym.).

### 67. *Myzocallis komareki* (Pasek)

This species has hitherto never been found in Macaronesia. It is known from Continental Portugal.

Funchal (26.4.1966, No. 545a, *Quercus suber*, 27 al.fem., 15 nym.; 8.6.1966, No. 795b, *Quercus suber*, 2 nym.).

### 68. *Myzus cerasi* (Fabricius)

I have not collected this aphid in Madeira Island. However, in the registers of E. A. M. there is a record by Rui Vieira (15.5.1958) where it is said: «Seen for the first time in May 1958, on seedlings of *Prunus avium* in the nursery of Junta Geral at Santo da Serra. The seedlings had been brought in from Setúbal».

I do not know any other record of *M. cerasi* from Macaronesia. It is known from Continental Portugal.

### 69. *Myzus cymbalariellus* Stroyan

New to Macaronesia and also unknown from Continental Portugal. This somewhat polyphagous aphid has been reported from England, Wales, Channel Islands, Australia and New Zealand by Eastop (1966) and South Africa by Müller & Schöll (1958). The species seems to be very rare in Madeira Island.

Camacha, Águas Mansas (3.5.1966, No. 600c, *Gerbera jamesonii*, 2 apt.fem.); Eira do Serrado (31.5.1966, No. 750c, *Leontodon rothii*, 1 apt.fem.).



70. *Myzus ornatus* Laing

Map no. 264 (1969) of the Commonwealth Institute of Entomology (series A) gives Madeira Island and the Azores within the distribution area of *M. ornatus*. The species is also present in Porto Santo (Ilharco, 1973) and Continental Portugal.

Funchal (18.4.1966, No. 480a, *Salvia splendens*, 15 apt.fem., 1 al.fem.; 18.4.1966, No. 486b, *Cruciferae*, 1 apt.fem.; 18.4.1966, No. 496a, *Echium nervosum*, 10 apt.fem.; 18.4.1966, No. 498a, Host plant?, 15 apt.fem., 1 nym.; 18.4.1966, No. 499b, *Bougainvillea* sp., 2 apt.fem.; 19.4.1966, No. 510b, *Solanum nigrum*, 1 apt.fem.; 25.4.1966, No. 534c, *Solanum tuberosum*, 1 al.fem.; 25.4.1966, No. 536c, *Solanum nigrum*, 9 apt.fem.; 4.5.1966, No. 616c, *Sonchus squarrosus*, 1 apt.fem.; 11.6.1966, No. 797a, *Sanguisorba maderensis*, 20 apt.fem.); Camacha, Pedras do Rochão (3.5.1966, No. 596, *Fragaria vesca*, 5 apt.fem.); Camacha, Aguas Mansas (3.5.1966, No. 600b, *Gerbera jamesonii*, 2 apt.fem.); Machico, Ladeiros (3.5.1966, No. 613d, *Sonchus squarrosus*, 2 apt.fem.); Poiso (9.5.1966, No. 637a, *Anthemideae*, 9 apt.fem., 2 al.fem.; 9.5.1966, No. 638a, *Lavatera* sp., 8 apt.fem.); Poiso, Feiteira de Baixo (9.5.1966, No. 641, *Plantago* sp., 6 apt.fem.); Ribeiro Frio (9.5.1966, No. 648b, *Rumex* sp., 2 apt.fem.); Boaventura (16.5.1966, No. 694, *Plantago* sp., 1 al.fem.); 16.5.1966, No. 708a, *Impatiens holstii*, 15 apt.fem., 1 al.fem.); Santana (16.5.1966, No. 715a, *Hibiscus rosa-sinensis*, 19 apt.fem.; 16.5.1966, No. 716c, *Citrus deliciosa*, 7 apt.fem.).

71. *Myzus persicae* (Sulzer)

This Cosmopolitan polyphagous aphid is widespread in Madeira Island. The first certain records were published by Gouveia (1972) from material collected by the expedition. However, in the registers of E. A. M. Rui Vieira wrote on 1.9.1955: «On peach-tree, plum-tree and potatoes. The whole cultivated area of the island, up to 1200 m. Very common in Funchal and Lugar de Baixo. Sometimes very injurious to fruit-trees and potatoes when it requires chemical control. Already recorded from the island». I have not been able to find any record prior to Gouveia (1972) but the reference of Tavares (1914) to *Rhopalosiphum galeactitis* Macchiati on *Antirrhinum majus* in Funchal may well be applied to *M. persicae*. Some local publication may also be implied.

*M. persicae* is already known from Porto Santo (Ilharco, 1973), the Azores (Gouveia, 1972) and Canary Islands (Gomez-Menor, 1963; Tamba-Lyche, 1971). Most common in Continental Portugal.

Funchal (18.4.1966, No. 481b, *Solanum nigrum*, 1 nym.; 18.4.1966, No. 482a, *Hibiscus rosa-sinensis*, 14 apt.fem., 16 al.fem.; 18.4.1966, No. 483a, *Lagerstroemia indica*, 5 apt.fem., 5 al.fem.; 18.4.1966, No. 484a, *Cassia* sp., 5 apt.fem., 3 al.fem.; 18.4.1966, No. 485c, *Papaver somniferum*, 2 apt.fem.; 18.4.1966, No. 486a, *Cruciferae*, 8 apt.fem., 1 nym.; 18.4.1966, No. 487b, *Euphorbia helioscopia*, 2 apt.fem., 1 nym.; 18.4.1966, No. 489a, *Sonchus ? oleraceus*, 14 apt.fem., 1 al.fem.; 18.4.1966, No. 492b, *Scrophulariaceae*, 1 apt.fem.; 18.4.1966, No. 493b, *Eriobotrya japonica*, 1 apt.fem.; 18.4.1966, No. 495a, *Abutilon* sp., 10 apt.fem., 3 al.fem.; 18.4.1966, No. 496b, *Echium nervosum*, 3 apt.fem., 1 al.fem.; 18.4.1966, No. 498c, Host plant?, 7 apt.fem.; 18.4.1966, No. 499a, *Bougainvillea* sp., 13 apt.fem., 3 al.fem., 1 nym.; 19.4.1966, No. 501b, *Jacaranda mimosifolia*, 1 al.fem.; 20.4.1966, No. 518a, *Nicotiana glauca*, 5 apt.fem., 1 nym.; 20.4.1966, No. 519c, *Chenopodium album*, 6 apt.fem.; 20.4.1966,

No. 522b, *Chrysanthemum* sp., 1 apt. fem., 1 al. fem.; 25.4.1966, No. 534a, *Solanum tuberosum*, 1 apt. fem.; 25.4.1966, No. 536b, *Solanum nigrum*, 2 apt. fem.; 26.4.1966, No. 541b, *Rosa* sp., 1 apt. fem.; 26.4.1966, No. 549e, *Capsella bursa-pastoris*, 2 al. fem.; 27.4.1966, No. 555d, *Pisum sativum*, 3 al. fem.; 28.4.1966, No. 568c, *Solanum tuberosum*, 2 al. fem.; 29.4.1966, No. 575b, *Muehlenbeckia* sp., 9 apt. fem., 2 al. fem.; 8.6.1966, No. 794b, *Cymbidium lowianum*, 1 apt. fem.; S. Gongalo (2.5.1966, No. 579b, *Chorisia speciosa*, 17 apt. fem.); Poiso (9.5.1966, No. 637d, *Anthemideae*, 1 apt. fem.); Porto da Cruz (9.5.1966, No. 657b, *Raphanus raphanistrum*, 8 apt. fem.); Porto do Moniz (12.5.1966, No. 664c, *Chrysanthemum indicum*, 1 al. fem.); 12.5.1966, No. 666b, *Hibiscus rosa-sinensis*, 6 apt. fem., 1 nym.; 12.5.1966, No. 667b, *Rumex* sp., 2 apt. fem.); Ponta do Pargo (12.5.1966, No. 671, *Caryophyllaceae*, 14 apt. fem.); Fajã da Ovelha (12.5.1966, No. 677b, *Oxalis pes-caprae*, 9 apt. fem.); Ponta Delgada (14.5.1966, No. 688b, *Solanum tuberosum*, 3 apt. fem., 2 al. fem.); Boaventura (16.5.1966, No. 708c, *Impatiens holstii*, 2 apt. fem.); Arco da Calheta (6.6.1966, No. 784b, *Brassica oleracea*, 4 apt. fem.).

## 72. *Neomyzus circumflexus* (Buckton)

New to Madeira Island. Already known from Continental Portugal and the Azores (Müller, 1965). Not yet reported from Canary Islands and Porto Santo.

Funchal (28.4.1966, No. 568a, *Solanum tuberosum*, 1 apt. fem.; 29.4.1966, No. 575d, *Muehlenbeckia* sp., 1 apt. fem.; 2.6.1966, No. 779a, *Anthurium* sp., 48 apt. fem., 4 al. fem., 12 nym.; 2.6.1966, No. 780b, *Bignoniaceae*, 5 apt. fem.; 11.6.1966, No. 797c, *Sanguisorba maderensis*, 1 apt. fem.); Boaventura (16.5.1966, No. 708b, *Impatiens holstii*, 3 apt. fem.); Santana (16.5.1966, No. 715b, *Hibiscus rosa-sinensis*, 3 apt. fem.).

## 73. *Ovatus crataegarius* (Walker)

Eastop (1966) considers Madeira Island within the distribution area of *O. crataegarius*. He has kindly informed me (*in litt.*) that the record was by Dr. O. Lundblad on 16.7.1935 at Rabaçal, based on a single apterous female without host data. I have not been able to collect the species, which is not known from any other Macaronesian island and is not common in Continental Portugal.

## 74. *Pemphigus populitransversus* Riley

This is the first record of this North American species from Europe, however, not the first from a region other than America, as Müller & Schöll (1958) has reported it from South Africa.

The record of *P. populitransversus* from Madeira is based on seven alate sexuparae, one is a vagrant female but six were collected on the upperside of the leaves of a *Populus* species, probably *P. tremula*. The aphids produced amounts of cotton-like wax.

In order to confirm my identification I have asked Dr. Louise Russel for a slide containing sexuparae of *P. populitransversus* from North America. My material quite agrees with the American material. A

slide was also sent to Dr. Eastop who also confirms the identity of the species.

Funchal (28.4.1966, No. 569c, 1 al. vagr.); Porto da Cruz (9.5.1966, No. 656b, *Populus ? tremula*, 6 al. fem.).

#### 75. *Pentalonia nigronervosa* Coquerel

In 1966 I found *P. nigronervosa* for the first time in Madeira Island. This record has been used in several papers: Ilharco, 1968c; Granate, 1971, 1972, Map. no. 242 (1968) of the Commonwealth Institute of Entomology (series A). The species is not present in Porto Santo and Continental Portugal, but is known from the Azores (Ilharco, Granate, Map. no. 242, *op. cit.*) and Canary Islands (Gomez-Menor, 1963).

Funchal (25.4.1966, No. 531, *Musa cavendishii*, 14 apt. fem., 6 al. fem.).

#### 76. *Pentatrichopus fragaefolii* (Cockerell)

I have not collected this aphid in the Archipelago of Madeira. However, in the registers of E. A. M. there is a record by Rui Vieira (May, 1952) from strawberries in Funchal. The aphid is not known from any other Macaronesian island. There are some records from Continental Portugal.

#### 77. *Phyllaphis fagi* (Linné)

Now for the first time reported from Macaronesia, although known for a long time from Madeira, where Rui Vieira encountered it on *Fagus sylvatica* at Estreito de Câmara de Lobos in June 1955 (Registers of E. A. M.). As far as I have observed *P. fagi* is a serious pest to the few beech-trees present in the island. It is a rare species in Continental Portugal.

Camacha (3.5.1966, No. 594, *Fagus sylvatica*, 14 apt. fem., 10 al. fem.).

#### 78. *Pineus sylvestris* Annand

Baeta Neves (1953) found this American adelgid on *Pinus sylvestris* at Montado do Barreiro in August, 1952. I have not visited that locality and have not found any other adelgid in the whole island. The identification, by Gomez-Menor, may well be correct, but another species may also be implied. By now I prefer to maintain *P. sylvestris* in the aphid list of Madeira Island.

As far as I know *P. sylvestris* has hitherto never been found in the Palaearctic zone.

79. *Plectriconophorus chrysanthemii* (Theobald)

The record of this species from Madeira Island is based on a single nymph of an apterous female from *Chrysanthemum indicum*. The species has hitherto never been found in Continental Portugal and I do not know any record for Macaronesia.

*P. chrysanthemii* was described from South Africa by Theobald (1920) and later recorded from France (Remaudière, 1952), England, Egypt, China and Formosa (Hille Ris Lambers, 1953), Ireland, Rhodesia and Australia (Eastop, 1966).

Camacha (5.5.1966, No. 628c, *Chrysanthemum indicum*, 1 nym.).

80. *Pterocomma populeum* (Kaltenbach)

New to Macaronesia. Already known from Continental Portugal.

Ribeira Brava (1.6.1966, No. 760, *Populus nigra*, 16 apt. fem., 2 nym.).

81. *Rhodobium porosum* (Sanderson)

Not previously recorded from Macaronesia. A line living outdoors in Lisbon (Ilharco, 1968a) has been probably eradicated.

Funchal (28.4.1966, No. 541a, *Rosa* sp., 10 apt. fem., 7 nym.); Porto do Moniz (12.5.1966, No. 665c, *Rosa* sp., 1 apt. fem.).

82. *Rhopalosiphum maidis* (Fitch)

In Macaronesia *R. maidis* is already known from Madeira Island (Granate, 1971, 1972), the Azores (Müller, 1965; Granate, 1971, 1972; Gouveia, 1972) and Canary Islands (Gomez-Menor, 1960). It is common in Continental Portugal.

In the registers of E. A. M. there are records of *R. maidis* on maize in Funchal, Santana and Lugar de Baixo (Rui Vieira, 15.12.1955).

Funchal (20.4.1966, No. 520, *Zea mays*, 14 apt. fem., 1 al. fem., 3 nym.).

83. *Rhopalosiphum nymphaeae* (Linné)

Granate (1971, 1972) reports the presence of this species in Madeira Island from the sample collected by the expedition. In the registers of E. A. M. Rui Vieira records *R. nymphaeae* on *Nymphaea alba* and *N. coerulea* in Funchal (15.12.1955). It is not known from any other Macaronesian island. There are some records from Continental Portugal.

Funchal (7.6.1966, No. 792a, *Nymphaea alba*, 33 apt. fem., 1 al. fem., 2 nym.).

84. *Rhopalosiphum padi* (Linné)

Eastop (1966) considers Madeira Island within the distribution

area of *R. padi*. He has kindly informed me that in the British Museum there is a sample from Feiteiras<sup>1</sup> collected on maize on 3.8.1954 by J. Hodgson. Granate (1971, 1972) refers to some samples collected by the expedition. Map no. 288 (1971) of the Commonwealth Institute of Entomology (series A) also gives *R. padi* for Madeira. The species is also known from the Azores (Müller, 1965; Granate, 1971, 1972; Gouveia, 1972; Map no. 288, 1971), and there are some records from Continental Portugal.

Funchal (19.4.1966, No. 511c, 1 al. vagr.; 27.4.1966, No. 554, *Strelitzia nicolai*, 10 apt. fem., 10 al. fem.); Ponta do Pargo (12.5.1966, No. 672c, *Hordeum* sp., 1 apt. fem.); Boaventura (16.5.1966, No. 695b, *Avena* sp., 1 apt. fem.); Pousada dos Vinháticos (1.6.1966, No. 778c, *Triticum vulgare*, 1 al. fem.).

### 85. *Rhopalosiphum rufiabdominalis* (Sasaki)

Doncaster (1956) records a single alate taken on *Psoralea* from Carreira Island, Spain. Map no. 289 (1971) of the Commonwealth Institute of Entomology (series A) from an information of Dr. Eastop corrects the locality which is in fact a small place near Prazeres at the southern coast of Madeira Island. The record dates from 1929. The same Map and Gouveia (1972) also record *R. rufiabdominalis* from the Azores. The species is known from Continental Portugal.

My record from Madeira is based on a single apterous female collected on *Capsella bursa-pastoris*.

Funchal (26.4.1966, No. 549c, 1 apt. vagr.).

### 86. *Schizaphis fritzmuelleri* Leclant

This species was described in 1967 from French material collected on *Carex divulsa*. Later (1968) Leclant considers the species near another described from Russia, *S. pyri* Shaposhnikov, a host alternating species between *Pyrus* and probably *Cyperaceae*. Dr. Hille Ris Lambers, who kindly has identified the single apterous female collected in Madeira, also suggests a possible synonymy between *S. fritzmuelleri* and a Russian species I assume to be *S. pyri*. The apterous from Madeira was collected on the rosaceous *Sanguisorba maderensis* (= *Marcetella maderensis*) which should be an accidentally host plant (or a primary one?). Leclant (1967) ascribes to *S. fritzmuelleri* a single alate female from the Azores described by Müller (1965) without name.

*S. fritzmuelleri* is not yet known from Continental Portugal.

Funchal (11.6.1966, No. 797g, *Sanguisorba maderensis*, 1 apt. fem.).

(1) There are a number of localities in Madeira Island named Feiteiras. It is therefore quite impossible to know which is the one visited by Mr. J. Hodgson.

87. *Sitobion avenae* (Fabricius)

A first reference to this species in Madeira was made by Gouveia (1972) working up material collected by the expedition. Müller (1965) and Gouveia (1972) report *S. avenae* from the Azores and Gomez-Menor (1963) from Canary Islands. It is common in Continental Portugal.

Funchal (19.4.1966, No. 506a, *Hordeum* sp., 10 apt.fem., 1 al.fem.); Ponta do Pargo (12.5.1966, No. 672a, *Hordeum* sp., 1 apt.fem.); Boaventura (16.5.1966, No. 695c, *Avena* sp., 1 al.fem.); Ribeira Brava (1.6.1966, No. 762d, 1 apt.vagr.; 1.6.1966, No. 774a, *Paspalum dilatatum*, 13 apt.fem., 3 al.fem.).

88. *Sitobion fragariae* (Walker)

New to Macaronesia. Already known from Continental Portugal.

Funchal (19.4.1966, No. 506b, *Hordeum* sp., 3 apt.fem., 1 al.fem.); Boaventura (16.5.1966, No. 695a, *Avena* sp., 10 apt.fem.); Ribeira Brava (1.6.1966, No. 774b, *Paspalum dilatatum*, 1 apt.fem.).

89. *Thelaxes suberi* (Del Guercio)

Already reported by Ilharco (1967) from material collected by the expedition. Not known from any other Macaronesian island. Common in Continental Portugal.

Funchal (8.6.1966, No. 793, *Quercus ilex*, 54 apt.fem., 17 nym.; 8.6.1966, No. 795a, *Quercus suber*, 1 apt.fem.).

90. *Toxoptera aurantii* (Boyer de Fonscolombe)

The references of Tavares (1903, 1914) to aphids on *Pittosporum coriaceum* and *Camellia japonica* in Funchal are undoubtedly applied to *T. aurantii* as Granate (1971, 1972) has already supposed. References to this aphid in Madeira besides Granate (*op. cit.*), have been made by Sousa (1942), Neves (1966) and probably others. In the registers of E. A. M. there are records by Rui Vieira on *Citrus* in the whole cultivated area of the southern coast of Madeira, up to 400 m (15.8.1955).

*T. aurantii* is known from Porto Santo (Ilharco, 1973), Canary Islands (Gomez-Menor, 1960) and the Azores (Granate, 1971, 1972). It is very common in Continental Portugal.

Funchal (18.4.1966, No. 494c, *Jacaranda mimosifolia*, 1 al.fem.; 21.4.1966, No. 524, *Camellia japonica*, 13 apt.fem., 7 al.fem., 3 nym.; 21.4.1966, No. 525, *Visnea mocanera*, 8 apt.fem., 10 al.fem., 1 nym.; 25.4.1966, No. 533, *Jasminum ? sambac*, 10 apt.fem., 10 al.fem.; 26.4.1966, No. 543c, *Poncirus trifoliata*, 2 apt.fem., 2 al.fem.; 27.4.1966, No. 560, *Citrus limon*, 12 apt.fem., 6 al.fem.; 27.4.1966, No. 561, *Ilex ? aquifolium*, 5 apt.fem., 1 al.fem.; 28.4.1966, No. 566c, *Prunus amygdalus*, 1 apt.fem.; 29.4.1966, No. 577a, *Quercus borealis*, 2 apt.fem., 2 al.fem.; 29.4.1966, No. 578, *Buxus sempervirens*, 15 apt.fem., 11 al.fem.); Faial, Lombo de Cima (9.5.1966, No. 650c, *Salix alba* × *viminalis*, 4 apt.fem.); Porto da Cruz (9.5.1966, No. 655,

*Citrus* sp., 4 apt. fem., 7 nym.); Boaventura (16.5.1966, No. 698, *Pittosporum undulatum*, 1 apt. fem., 1 al. fem.; 16.5.1966, No. 699, *Malus domestica*, 4 apt. fem., 2 al. fem.); Santana (16.5.1966, No. 712b, *Tilia tomentosa*, 4 al. fem.; 16.5.1966, No. 716b, *Citrus deliciosa*, 7 apt. fem., 9 al. fem.); Pousada dos Vinháticos (1.6.1966, No. 776, *Ilex canariensis*, 5 apt. fem., 5 al. fem.).

### 91. *Tubaphis ranunculina* (Walker)

New to Macaronesia and not yet known from Continental Portugal. It is a European aphid, recently recorded from India (A. Ghosh, M. Ghosh, & Raychaudhuri, 1971). It feeds on *Ranunculus*.

Ribeiro Frio (9.5.1966, No. 647, *Ranunculus repens*, 14 apt. fem., 1 al. fem., 3 nym.); Curral das Freiras (31.5.1966, No. 754b, *Ranunculus repens*, 5 apt. fem.).

### 92. *Tuberculoides annulatus* (Hartig)

Not previously reported from Macaronesia. Common in Continental Portugal, although the material there collected needs a revision.

Funchal (19.4.1966, No. 511b, *Quercus robur*, 1 al. fem.; 7.6.1966, No. 791, *Myrica faya*, 5 al. fem., 5 nym.); Caniço (2.5.1966, No. 586b, *Quercus robur*, 6 al. fem., 9 nym.); Camacha, Achadinha (2.5.1966, No. 588, *Quercus robur*, 10 al. fem., 7 nym.); Santa Cruz (3.5.1966, No. 608a, *Quercus robur*, 22 al. fem., 9 nym.); Fajã da Ovelha (12.5.1966, No. 676b, *Quercus robur*, 2 al. fem., 14 nym.); S. Jorge (16.5.1966, No. 710a, *Quercus robur*, 7 al. fem., 2 nym.).

### 93. *Tuberolachnus salignus* (Mordwilko)

Baeta Neves (1953) reports this species from Madeira Island from material collected by Rui Vieira at Camacha in August 1950. In the registers of E. A. M. there are also records from Funchal, Boaventura and Santana, all from *Salix alba* × *viminalis*. The species is also known, according to Tambs-Lyche (1971), from Canary Islands and Azores.

*T. salignus* is also known from Continental Portugal.

Boaventura (16.5.1966, No. 690a, *Salix alba* × *viminalis*, 4 apt. fem., 1 nym.); S. Jorge (16.5.1966, No. 709a, *Salix canariensis*, 15 apt. fem., 3 al. fem., 2 nym.); Faial (16.5.1966, No. 717, *Salix alba* × *viminalis*, 13 apt. fem., 11 al. fem.); Curral das Freiras (31.5.1966, No. 755a, *Salix alba* × *viminalis*, 11 nym.); Ribeira Brava (1.6.1966, No. 764a, *Salix alba* × *viminalis*, 7 apt. fem., 1 al. fem.).

### 94. *Uroleucon jaceae* (Linné)

In Macaronesia only previously reported from Porto Santo (Ilharco, 1973). Already known from Continental Portugal.

The taxon from Madeira Island is the subspecies *U. jaceae* s. str..

Porto Novo (3.5.1966, No. 606, «thistle», 19 apt. fem., 8 al. fem.).



95. *Uroleucon picridis* (Fabricius)

Also new to Madeira Island, but already known from Porto Santo (Ilharco, 1973) and Canary Islands (Tambms-Lyche, 1971). Also known from Continental Portugal.

Canigo (2.5.1966, No. 583, *Sonchus* sp., 3 apt.fem., 3 al.fem.); Machico, Ladeiros (3.5.1966, No. 613a, *Sonchus squarrosus*, 4 apt.fem., 2 al.fem.); Caniçal (5.5.1966, No. 618, *Sonchus* sp., 7 apt.fem., 1 al.fem.); Choupana (5.5.1966, No. 634, *Leontodon rothii*, 1 al.fem.); Ponta do Pargo, Pedregal (12.5.1966, No. 670b, *Sonchus squarrosus*, 7 apt.fem., 1 al.fem.); Lombo da Ponta do Pargo (12.5.1966, No. 675b, *Sonchus squarrosus*, 8 apt.fem.).

96. *Uroleucon sonchi* (Linné)

There is no published record of *U. sonchi* from Madeira Island. However, in the registers of E. A. M. there are records from *Sonchus* spp. in Funchal (Rui Vieira, 15.8.1955).

*U. sonchi* is known from the whole of Macaronesia (Ilharco, 1973; Müller, 1965; Gomez-Menor, 1963; Tambms-Lyche, 1971). It is widespread in Continental Portugal.

Funchal (19.4.1966, No. 508a, *Sonchus* sp., 5 apt.fem., 5 nym.); Machico, Ladeiros (3.5.1966, No. 613b, *Sonchus squarrosus*, 12 apt.fem.); Camacha (5.5.1966, No. 629a, *Sonchus* sp., 8 apt.fem.); Porto do Moniz (12.5.1966, No. 668a, *Sonchus oleraceus*, 9 apt.fem., 1 nym.); Ponta do Pargo, Pedregal (12.5.1966, No. 670a, *Sonchus squarrosus*, 15 apt.fem., 4 al.fem., 1 nym.); Lombo da Ponta do Pargo (12.5.1966, No. 675a, *Sonchus squarrosus*, 11 apt.fem., 12 al.fem.); Ribeira Brava (1.6.1966, No. 768a, *Sonchus oleraceus*, 1 apt.fem., 2 al.fem.); Arco da Calheta (6.6.1966, No. 787a, *Sonchus oleraceus*, 1 apt.fem., 2 nym.).

97. *Viteus vitifolii* (Fitch)

Vieira (1951b) studied this phylloxerid in Madeira Island. He considers it was introduced into the island around 1872 according to a Report of 1883 by Almeida Brito. The species was very injurious from 1872 to 1883 but since then it has been more or less reduced to the leaf form. At present there is no problem with the aphid which only produces the leaf gall form, mostly on American vines but also on *Vitis vinifera*. Baptista & Suspiro (1950) describe the progress of the grape phylloxera in Madeira during the first years of its introduction and comment upon some experiments then carried out in the island.

*V. vitifolii* is nowadays known from the whole of Europe.

Funchal (11.6.1966, No. 798, *Vitis vinifera*, 9 apt.fem., 14 nym.).

98. *Wahlgreniella arbuti* (Davidson)

Not previously recorded from Macaronesia. In Continental Portugal only known from Lisbon.

I have collected this species in Madeira from *Arbutus unedo*



and *Rosa* sp., the former sample containing many apterous and alate females and nymphs of the two forms, the latter containing only five alate females and three nymphs of alate forms. On *Rosa*, *W. arbuti* was mixed with *Macrosiphum rosae* and *Myzaphis rosarum*. I only have seen the specimens during the choice for mounting on slides. They are quite similar to the material from *Arbutus* and I do not see any reason to consider them a different species. However, Hille Ris Lambers (1949) considered two species, one from North America on *Rosa* (= *W. nervata*) and another from Europe and North America from *Arbutus* (= *W. arbuti*), accepting the idea that a migrating species links or at least linked in the past the two related species. Rather than suggesting a migrating species in Madeira I prefer to accept a non-migrating one on which the hot weather has modified the strict monophagy. There is a similar situation with, for instance, *Aphis fabae* which in Continental Portugal quite refuses *Solanum nigrum* or *Myzocallis castanicola* which in Madeira also lives on *Quercus suber*. Experimental work and more observations are certainly necessary in order to solve the proposed suggestions.

Funchal (26.4.1966, No. 540, *Arbutus unedo*, 15 apt. fem., 7 al. fem.); Camacha (5.5.1966, No. 630c, *Rosa* sp., 5 al. fem., 3 nym.).

#### LIST OF HOST PLANTS

<i>Abutilon</i> sp.	<i>Avena</i> sp.
<i>Aphis fabae</i>	<i>Rhopalosiphum padi</i>
» <i>gossypii</i>	<i>Sitobion avenae</i>
<i>Myzus persicae</i>	» <i>fragariae</i>
<i>Acacia melanoxylon</i> R. Br.	<i>Bambusa vulgaris</i> Wendland
? <i>Aphis craccivora</i>	<i>Melanaphis bambusae</i>
<i>Acer pseudoplatanus</i> L.	<i>Betula pubescens</i> Ehrhart
<i>Aulacorthum solani</i>	<i>Kallistaphis flava</i>
<i>Anthemideae</i>	<i>Bidens pilosa</i> L.
<i>Brachycaudus helichrysi</i>	<i>Aphis fabae</i>
<i>Macrosiphum euphorbiae</i>	<i>Brachycaudus cardui</i>
<i>Myzus ornatus</i>	<i>Bignoniaceae</i>
» <i>persicae</i>	<i>Aulacorthum solani</i>
<i>Anthurium</i> sp.	<i>Neomyzus circumflexus</i>
<i>Aulacorthum solani</i>	<i>Bougainvillea</i> sp.
<i>Neomyzus circumflexus</i>	<i>Myzus ornatus</i>
<i>Antirrhinum majus</i> L.	» <i>persicae</i>
? <i>Myzus persicae</i>	<i>Brassica oleracea</i> L.
<i>Arbutus unedo</i> L.	<i>Brevicoryne brassicae</i>
<i>Wahlgreniella arbuti</i>	<i>Myzus persicae</i>
<i>Arundo donax</i> L.	<i>Briza maxima</i> L.
<i>Melanaphis donacis</i>	<i>Metopolophium dirhodum</i>
<i>Asclepias curassavica</i> L.	<i>Briza minor</i> L.
<i>Aphis nerii</i>	<i>Longiunguis pyriarius</i>
<i>Avena barbata</i> Pott ex Link	<i>Bromus unioloides</i> (Willd.) Rasp.
<i>Metopolophium dirhodum</i>	<i>Metopolophium dirhodum</i>
	«Broom»
	<i>Aphis sarothamni</i>

- Buxus sempervirens* L.  
 Toxoptera aurantii  
*Camellia japonica* L.  
 Toxoptera aurantii  
*Capsella bursa-pastoris* (L.) Med.  
 Aphis capsellae  
 » craccivora  
 » fabae  
 Myzus persicae  
*Carduus pycnocephalus* L.  
 Brachycaudus cardui  
*Caryophyllaceae*  
 Myzus persicae  
*Cassia* sp.  
 Aphis gossypii  
 Myzus persicae  
*Castanea sativa* Mill.  
 Aulacorthum solani  
 Myzocallis castanicola  
*Chelidonium majus* L.  
 Aphis fabae  
 Macrosiphum euphorbiae  
*Chenopodium album* L.  
 Aphis fabae  
 Macrosiphum euphorbiae  
 Myzus persicae  
*Chorisia speciosa* St. Hil.  
 Aphis gossypii  
 Macrosiphum euphorbiae  
 Myzus persicae  
*Chrysanthemum indicum* L.  
 Aphis fabae  
 » gossypii  
 Brachycaudus helichrysi  
 Macrosiphoniella sanborni  
 Myzus persicae  
 Pleotrichophorus chrysanthemi  
*Chrysanthemum sylvaticum* Hoffg  
 & Link  
 Brachycaudus cardui  
 » helichrysi  
*Chrysanthemum* sp.  
 Aphis fabae  
 » gossypii  
 » solanella  
 » spiraeicola  
 Brachycaudus cardui  
 Macrosiphoniella sanborni  
 Macrosiphum euphorbiae  
 Myzus persicae  
*Cineraria* sp.  
 ? Ayrthosiphon pelargonii  
*Citrus deliciosa* Ten.  
 Aphis spiraeicola  
 Myzus ornatus  
 Toxoptera aurantii  
*Citrus limon* (L.) Burm. f.  
 Toxoptera aurantii  
*Citrus* sp.  
 Aphis fabae  
 » gossypii  
 Toxoptera aurantii  
*Crithmum maritimum* L.  
 Dysaphis crithmi  
 Macrosiphum ? centranthi  
*Cruciferae*  
 Myzus ornatus  
 » persicae  
*Cucumis melo* L.  
 Aphis gossypii  
*Cucurbita* sp.  
 Aphis gossypii  
*Cydonia oblonga* Mill.  
 Aphis gossypii  
 » pomi  
 » spiraeicola  
*Cymbidium lowianum* Reichb. f.  
 Aphis fabae  
 Cerataphis orchidearum  
 Myzus persicae  
*Cynara scolymus* L.  
 Brachycaudus cardui  
*Echium nervosum* Ait.  
 Myzus ornatus  
 » persicae  
 ? *Epilobium* sp.  
 Aphis diphaga  
*Erica scoparia* L.  
 Aphis fabae  
 » spiraeicola  
*Eriobotrya japonica* (Thunb.) Lindl.  
 Aphis gossypii  
 » pomi  
 Myzus persicae  
*Escallonia* sp.  
 Aphis spiraeicola  
*Eupatorium adenophorum* Spreng.  
 Aphis fabae  
 » gossypii  
 Aulacorthum solani  
*Euphorbia helioscopia* L.  
 Aphis euphorbiae  
 Myzus persicae  
*Euphorbia piscatoria* Ait.  
 Aphis euphorbiae  
 » parailios  
*Fagus sylvatica* L.  
 Phyllaphis fagi  
*Fragaria vesca* L.  
 Myzus ornatus  
*Fragaria* sp.  
 Pentatrichopus fragaefolii

- Fumaria* sp.  
   Aphis gossypii  
   Macrosiphum euphorbiae  
*Galactites tomentosa* Moench  
   Aphis gossypii  
   Brachycaudus cardui  
   Capitophorus elaeagni  
*Geranium* sp.  
   Acyrtosiphon pelargonii  
   Aphis gossypii  
*Gerbera jamesonii* Hook.  
   Aphis gossypii  
   Brachycaudus cardui  
   » helichrysi  
   Myzus cymbalariellus  
   » ornatus  
*Gomphocarpus fruticosus* (L.) R. Br.  
   Aphis nerii  
*Gramineae*  
   Longiunguis pyriarius  
   Metopolophium dirhodum  
*Hedera canariensis* Willd.  
   Aphis hederæ  
*Hedera helix* L.  
   Aphis hederæ  
*Hibiscus rosa-sinensis* L.  
   Aphis gossypii  
   Myzus ornatus  
   » persicae  
   Neomyzus circumflexus  
*Hordeum* sp.  
   Metopolophium dirhodum  
   Rhopalosiphum padi  
   Sitobion avenae  
   » fragariae  
*Hypericum grandifolium* Choisy  
   Aphis fabae  
   Macrosiphum euphorbiae  
*Ilex ? aquifolium* L.  
   Toxoptera aurantii  
*Ilex canariensis* Poir.  
   Toxoptera aurantii  
*Impatiens holstii* Engl. & Warb.  
   Myzus ornatus  
   » persicae  
   Neomyzus circumflexus  
*Iris albicans* Lgl.  
   Dysaphis tulipae  
   Macrosiphum euphorbiae  
*Iris* sp.  
   Dysaphis tulipae  
*Jacaranda mimosifolia* D. Don  
   Aphis gossypii  
   » spiraeola  
   Myzus persicae  
   Toxoptera aurantii  
   *Jasminum ? sambac* Ait.  
   Toxoptera aurantii  
   *Juniperus communis* L.  
   Cinara juniperi  
   *Juniperus oxycedrus* L.  
   Cinara cupressi  
   *Juniperus phoenicea* L.  
   Cinara cupressi  
   » tujafilina  
   *Juniperus* sp.  
   Cinara tujafilina  
   *Lactuca serriola* L.  
   Acyrtosiphon lactucae  
   *Lagerstroemia indica* L.  
   Aphis fabae  
   » gossypii  
   Myzus persicae  
   *Lathyrus odoratus* L.  
   Aphis gossypii  
   Macrosiphum ? centranthi  
   *Laurus azorica* (Seub.) Franco  
   Brachycaudus prunicola  
*Lavatera* sp.  
   Aphis umbrella  
   Brachycaudus helichrysi  
   Myzus ornatus  
   *Leontodon rothii* Ball  
   Acyrtosiphon ilka  
   Aulacorthum solani  
   Myzus cymbalariellus  
   *Lonicera etrusca* Santi  
   Aulacorthum solani  
   Hyadaphis foeniculi  
   *Malus domestica* Borkh.  
   Aphis gossypii  
   » pomi  
   » spiraeola  
   Dysaphis plantaginea  
   Eriosoma lanigerum  
   Toxoptera aurantii  
   *Malva parviflora* L.  
   Aphis umbrella  
   *Melanoselelinum decipiens* (Schrad  
   & Wendl.) Hoffm.  
   Cavariella aegopodii  
   Dysaphis foeniculus  
   *Muehlenbeckia* sp.  
   Aphis gossypii  
   Brachycaudus rumexicolens  
   Myzus persicae  
   Neomyzus circumflexus  
   *Musa cavendishii* Lambert  
   Pentalonia nigronervosa  
   *Myrica faya* Ait.  
   Tuberculoides annulatus

- Nerium oleander* L.  
   Aphis fabae  
     » gossypii  
     » nerii  
     » spiraeicola  
*Nicotiana glauca* Graham  
   Aphis gossypii  
     » spiraeicola  
   Myzus persicae  
*Nymphaea alba* L.  
   Rhopalosiphum nymphaeae  
*Nymphaea caerulea* Savig.  
   Rhopalosiphum nymphaeae  
 «Orchids»  
   Cerataphis orchidearum  
*Oxalis pes-caprae* L.  
   Macrosiphum euphorbiae  
   Myzus persicae  
 «Palms»  
   ? Cerataphis lataniae  
*Papaver dubium* L.  
   Aphis fabae  
*Papaver somniferum* L.  
   Aphis solanella  
   Myzus persicae  
*Paspalum dilatatum* Poir.  
   Sitobion avenae  
     » fragariae  
*Pelargonium peltatum* Ait.  
   Brachycaudus helichrysi  
*Pelargonium* sp.  
   Acyrtosiphon pelargonii  
   Aphis gossypii  
*Pinus canariensis* Spreng.  
   Cinara maghrebica  
   Eulachnus rileyi  
*Pinus pinaster* Ait.  
   Cinara maghrebica  
   Eulachnus rileyi  
*Pinus pinea* L.  
   Cinara maghrebica  
*Pinus radiata* D. Don  
   Cinara maghrebica  
*Pinus silvestris* L.  
   Pineus sylvestris  
*Pisum sativum* L.  
   Acyrtosiphon pisum  
   Aphis fabae  
   Macrosiphum euphorbiae  
   Myzus persicae  
*Pittosporum coriaceum* Ait.  
   Toxoptera aurantii  
*Pittosporum undulatum* Vent.  
   Toxoptera aurantii  
*Plantago lagopus* L.  
   Dysaphis plantaginea  
   *Plantago* sp.  
     Aphis craccivora  
       » gossypii  
   Dysaphis plantaginea  
   Myzus ornatus  
*Platycladus orientalis* (L.) Franco  
   Cinara tujafilina  
*Polygonaceae*?  
   Aphis gossypii  
     » solanella  
*Polygonum persicaria* L.  
   Aulacorthum solani  
   Capitophorus hippophaes  
*Poncirus trifoliata* (L.) Raf.  
   Aphis gossypii  
     » spiraeicola  
   Toxoptera aurantii  
*Populus deltoides* Marsh.  
   Chaitophorus versicolor  
*Populus nigra* L.  
   Chaitophorus versicolor  
   Pterocomma populeum  
*Populus ? tremula* L.  
   Chaitophorus versicolor  
   Pemphigus populitransversus  
*Populus yunnanensis* Dode  
   Chaitophorus versicolor  
*Prunus amygdalus* Batsch  
   Aphis gossypii  
     » spiraeicola  
   Brachycaudus prunicola  
   Toxoptera aurantii  
*Prunus armeniaca* L.  
   Aphis gossypii  
     » spiraeicola  
   Brachycaudus prunicola  
*Prunus avium* (L.) L.  
   Aulacorthum solani  
   Brachycaudus prunicola  
   Myzus cerasi  
*Prunus domestica* L.  
   Brachycaudus prunicola  
*Prunus persica* (L.) Batsch  
   Brachycaudus prunicola  
   Myzus persicae  
*Prunus* sp.  
   Aulacorthum solani  
   Brachycaudus prunicola  
   Myzus persicae  
*Punica granatum* L.  
   Aphis gossypii  
     » punicae  
     » spiraeicola  
*Pyrus communis* L.  
   Aphis gossypii  
     » pomi  
     » spiraeicola

- Dysaphis pyri  
 ? Eriosoma lanigerum  
*Quercus borealis* Michx. f.  
 Aulacorthum solani  
 Myzocallis castanicola  
 Toxoptera aurantii  
*Quercus ilex* L.  
 Thelaxes suberi  
*Quercus robur* L.  
 Myzocallis castanicola  
 Tuberculoides annulatus  
*Quercus suber* L.  
 Myzocallis castanicola  
 » komareki  
 Thelaxes suberi  
*Ranunculus repens* L.  
 Tubaphis ranunculina  
*Raphanus raphanistrum* L.  
 Brevicoryne brassicae  
 Myzus persicae  
*Rosa* sp.  
 Aphis gossypii  
 Macrosiphum rosae  
 Myzaphis rosarum  
 Myzus persicae  
 Rhodobium porosum  
 Wahigreniella arbuti  
*Rubus* sp.  
 Amphorophora rubi  
 Aphis ruborum  
*Rumex* sp.  
 Aphis fabae  
 » gossypii  
 » nasturtii  
 » solanella  
 Brachycaudus rumexicolens  
 Macrosiphum euphorbiae  
 Myzus ornatus  
 » persicae  
*Salix alba* × *viminalis*  
 Aphis farinosa  
 » gossypii  
 » spiraeicola  
 Cavariella theobaldi  
 Toxoptera aurantii  
 Tuberculachnus salignus  
*Salix* ? *babylonica* L.  
 Aphis farinosa  
 Cavariella aegopodii  
 » theobaldi  
*Salix canariensis* Ch. Smith  
 Aphis farinosa  
 Tuberculachnus salignus  
*Salix* sp.  
 Aphis fabae  
 » farinosa  
 Cavariella aegopodii  
*Salvia splendens* Ker-Gawl.  
 Aphis gossypii  
 Myzus ornatus  
*Sanguisorba maderensis* (Bornm.) Nordb.  
 Aphis gossypii  
 » spiraeicola  
 Aulacorthum solani  
 Myzus ornatus  
 Neomyzus circumflexus  
 Schizaphis fritzmuelleri  
*Sarothamnus scoparius* (L.) Wimmer.  
 ex Koch  
 Acyrthosiphon spartii  
 Aphis sarothamni  
 Scrophulariaceae  
 Aphis spiraeicola  
 Myzus persicae  
*Sedum japonicum* Sieb.  
 Aphis sedi  
*Sinapidendron rupestre* Lowe  
 Brevicoryne brassicae  
*Solanum jasminoides* Paxt.  
 ? Aulacorthum solani  
*Solanum nigrum* L.  
 Aphis fabae  
 » gossypii  
 » solanella  
 Macrosiphum euphorbiae  
 Myzus ornatus  
 » persicae  
*Solanum tuberosum* L.  
 Aphis fabae  
 » gossypii  
 » spiraeicola  
 Macrosiphum euphorbiae  
 Myzus ornatus  
 » persicae  
 Neomyzus circumflexus  
*Sonchus oleraceus* L.  
 Hyperomyzus lactucae  
 Macrosiphum euphorbiae  
 Myzus persicae  
 Uroleucon sonchi  
*Sonchus squarrosus* DC.  
 Aphis gossypii  
 Hyperomyzus lactucae  
 Macrosiphum euphorbiae  
 Myzus ornatus  
 Uroleucon picridis  
*Sonchus* sp.  
 Aphis gossypii  
 Hyperomyzus lactucae  
 Uroleucon picridis  
 » sonchi  
*Spiraea cantoniensis* Lour.  
 Aphis spiraeicola

- «Stock»  
*Brevicoryne brassicae*  
*Strelitzia augusta* Thunb.  
 ? *Cerataphis lataniae*  
*Strelitzia nicolai* Regel & Koernicke  
*Rhopalosiphum padi*  
 «Thistle»  
*Brachycaudus cardui*  
*Capitophorus elaeagni*  
*Uroleucon jaceae*  
 ? *Thuya* sp.  
*Cinara tujafilina*  
*Tilia tomentosa* Moench  
*Eucallipterus tiliae*  
*Toxoptera aurantii*  
*Trifolium campestre* Schreb.  
*Acyrtosiphon pisum*  
*Triticum vulgare* Host  
*Metopolophium dirhodum*  
*Rhopalosiphum padi*  
*Tulipa* sp.  
*Dysaphis tulipae*  
*Ulex europaeus* L.  
*Aphis ulicis*  
 Vagrants  
*Aphis euphorbiae*  
 » *pomi*  
 » *umbrella*  
*Aulacorthum solani*  
*Cavariella aegopodii*  
*Dysaphis emicis*  
 » *plantaginea*  
*Hyperomyzus lactucae*  
 » *picridis*  
*Melanaphis bambusae*  
*Myzocallis castanicola*  
*Pemphigus populitransversus*  
*Rhopalosiphum padi*  
 » *rufiabdominalis*  
*Sitobion avenae*  
*Vicia faba* L.  
*Aphis craccivora*  
 » *fabae*  
*Vicia sativa* L.  
*Acyrtosiphon pisum*  
*Aphis craccivora*  
*Visnea mocanera* L. f.  
*Toxoptera aurantii*  
*Vitis vinifera* L.  
*Aphis fabae*  
*Viteus vitifolii*  
*Vitis* sp.  
*Viteus vitifolii*  
*Zea mays* L.  
*Rhopalosiphum maidis*  
 » *padi*  
 Unknown host plant  
*Acyrtosiphon pisum*  
*Aphis gossypii*  
*Myzus ornatus*  
 » *persicae*  
*Ovatus crataegarius*

## Index of localities

The numbers refer to the ordering of the species

- Arco da Calheta — 18, 24, 32, 47, 50, 60, 63, 71, 96  
 Boaventura — 8, 11, 12, 15, 23, 27, 28, 29, 30, 36, 42, 58, 60, 63, 70, 71, 72, 84, 87,  
 88, 90, 93  
 Cabo Girão — 18, 66  
 Calheta — 12, 23  
 Camacha — 14, 28, 29, 35, 46, 50, 53, 54, 58, 61, 62, 65, 77, 79, 93, 96, 98  
 Camacha, Achadinha — 8, 18, 24, 25, 92  
 Camacha, Águas Mansas — 28, 30, 69, 70  
 Camacha, Pedras do Rochão — 27, 30, 57, 70  
 Câmara de Lobos — ?37, ?38  
 Caniçal — 6, 13, 20, 23, 28, 33, 60, 95  
 Caniço — 5, 11, 13, 20, 21, 24, 30, 66, 92, 95  
 Choupana — 6, 20, 57, 66, 95  
 Curral das Freiras — 8, 11, 12, 13, 18, 24, 28, 30, 32, 91, 93  
 Eira do Serrado — 1, 27, 42, 64, 69  
 Estreito de Câmara de Lobos — 77  
 Estreito da Calheta — 27, 36  
 Faial — 93

- Faial, Lombo de Cima — 12, 32, 36, 90  
 Fajã da Ovelha — 28, 33, 60, 66, 71, 92  
 Feiteiras — 84  
 Funchal — 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 16, 18, 19, 20, 23, 24, 26, 27, 28, 30, 31,  
 32, 37, 38, 39, 40, 42, 43, 47, 48, 49, 50, 51, 52, 53, 54, 56, 59, 60, 61, 62, 64, 66,  
 67, 70, 71, 72, 74, 75, 76, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 92, 93, 96, 97, 98  
 Gaula — 18, 22, 42, 52, 63  
 Levada da Ribeira da Janela — 42  
 Lombo da Ponta do Pargo — 6, 20, 95, 96  
 Lugar de Baixo — 71, 82  
 Machico — ?37, ?38  
 Machico, Ladeiros — 23, 30, 54, 70, 95, 96  
 Montado do Barreiro — 42, 78  
 Paul da Serra — 42  
 Pico do Arrieiro — 42  
 Pico dos Barcelos — 42  
 Poiso — 26, 29, 30, 60, 70, 71  
 Poiso, Feiteira de Baixo — 6, 20, 27, 70  
 Poiso, Feiteira de Cima — 11, 24  
 Ponta Delgada — 60, 71  
 Ponta do Pargo — 11, 64, 71, 84, 87  
 Ponta do Pargo, Pedregal — 54, 60, 95, 96  
 Ponta de S. Lourenço — 28, 47  
 Portela — 20, 25, 42, 66  
 Porto da Cruz — 21, 32, 39, 61, 65, 71, 74, 90  
 Porto Novo — 10, 17, 94  
 Porto do Moniz — 11, 13, 28, 29, 31, 54, 58, 60, 61, 63, 71, 81, 96  
 Pousada dos Vinháticos — 28, 42, 64, 84, 90  
 Prazeres, Carreira — 85  
 Queimadas — 47  
 Rabaçal — 73  
 Ribeira Brava — 2, 11, 12, 13, 18, 23, 24, 27, 30, 34, 36, 39, 54, 55, 61, 63, 80, 87, 88,  
 93, 96  
 Ribeira da Janela — 10, 29, 44, 54, 59  
 Ribeira da Lapa — 45  
 Ribeiro Frio — 11, 12, 35, 36, 41, 49, 60, 66, 70, 91  
 Santa — 42  
 Santa Cruz — 66, 92  
 Santana — 13, 18, 24, 47, 51, 70, 72, 82, 90, 93  
 Santo da Serra — 21, 50, 66, 68  
 Santo da Serra, Cova do Castanheiro — 18, 20  
 Santo da Serra, Margaçã — 27, 66  
 Seixal — 11, 23, 42  
 Seixal, Ribeira da Fajã da Eira — 11, 60  
 S. Gongalo — 13, 60, 71  
 S. Jorge — 12, 14, 66, 92, 93  
 S. Martinho — 18, 47  
 S. Vicente — 12, 36  
 Terreiro da Luta — 14

## RESUMO

## Lista dos Afídeos da Ilha da Madeira

O autor e um seu colaborador passaram dois meses no Arquipélago da Madeira colhendo afídeos. Este artigo divulga os resultados

das colheitas efectuadas na Ilha da Madeira, revendo também as citações anteriormente feitas por outros autores, que englobam 35 espécies. São ainda divulgadas algumas notas com interesse existentes nos registos da Estação Agrária da Madeira, entre elas referências a 3 espécies novas para a Ilha que não foram encontradas pela expedição. A respeito de cada espécie é comentada a sua distribuição na Macaronésia e em Portugal Continental.

A expedição fez na Ilha da Madeira 292 amostras, que originaram 515 registos e 90 espécies diferentes das quais 60 são neste trabalho pela primeira vez apontadas para a Ilha. Ao todo, são enumeradas 98 espécies para a Ilha da Madeira e, considerando Porto Santo, 102 para todo o Arquipélago.

Como notas importantes salienta-se: *Aphis paralius* é uma espécie nova a ser descrita por Hille Ris Lambers com material jugoslavo; *Dysaphis lappae* é suprimida da lista de afídeos da Madeira; *Eulachnus tauricus* é considerado sinónimo de *Eulachnus rileyi*; sugere-se que *Macrosiphum ? centranthi* poderá ser uma espécie heteróica facultativa; a espécie americana *Pemphigus populitransversus* é pela primeira vez encontrada na Europa; *Wahlgreniella arbuti* é encontrada sobre *Rosa* e *Arbutus*, sugerindo-se polifagia derivada do condicionalismo climático de preferência a migração.

É apresentada uma lista geral de hospedeiros com a respectiva afidofauna encontrada em associação na Ilha da Madeira.

Finalmente indicificam-se as localidades onde têm sido feitas colheitas de afídeos na Ilha.

#### SUMMARY

##### List of the aphids of Madeira Island

The author and a collaborator spent two months in the Archipelago of Madeira collecting aphids. This paper publishes the collections made in Madeira Island, and also revises previous records by other authors which involve 35 species. Some notes of interest from the registers of the Agricultural Station of Madeira are also presented including references to 3 species new to the Island and not found by the expedition.

The distribution in Macaronesia and Continental Portugal of each species is commented on.

An amount of 292 samples and 515 find records were the work of the expedition in Madeira Island. Among those records there were 90 different species of which 60 are now for the first time reported from the Island. In all, the Archipelago of Madeira contains 102 aphid species of which 98 are listed from the main island.

The following notes may be of interest: *Aphis paralius* is a new species to be described from Yugoslavia by Hille Ris Lambers; *Dysaphis*



*lappae* is deleted from the aphid list of Madeira; *Eulachnus tauricus* is considered a synonym of *Eulachnus rileyi*; *Macrosiphum* ? *centranthi* may be a facultativ heteroecious species; the American *Pemphigus populitransversus* is for the first time recorded from Europe; *Wahlgreniella arbuti* is found on *Rosa* and *Arbutus* and it is suggested that this aphid is polyphagous rather than a migrating species.

A list of host plants is also presented as well as an index of the localities where the aphid collectings have been made.

## BIBLIOGRAPHY

- Baeta Neves, C. M. :  
 1953. Nota sobre três espécies florestais de Aphidoidea novas para a entomofauna da Ilha da Madeira. *Agros, Lisb.* 36: 223-226.
- Baptista, A. & Suspiro, E. :  
 1955. *O problema filoxérico em Portugal*. Direcção-Geral dos Serviços Agrícolas, Lisboa.
- Börner, C. :  
 1952. Europae centralis aphides. *Mitt. thuring. bot. Ges.* 3: 1-484.
- Brito, F. Almeida :  
 1883.\* *Relatório da inspecção do distrito do Funchal e instalações dos serviços na Ilha da Madeira*. Comissão Central Anti-Phylloxérica do Sul do Reino, n.º 2, Lisboa.
- Doncaster, J. P. :  
 1956. The rice root aphid. *Bull. ent. Res.* 47: 741-747.
- Eastop, V. F. :  
 1966. A taxonomic study of Australian Aphidoidea. *Aust. J. Zool.* 14: 399-592.  
 1971. Keys for the identification of *Acyrtosiphon*. *Bull. Br. Mus. nat. Hist. (Ent.)* 26: 1-115.  
 1972. A taxonomic review of the species of *Cinara* Curtis occurring in Britain. *Bull. Br. Mus. nat. Hist. (Ent.)* 27: 103-186.
- Ghosh, A. K., Ghosh, M. R. & Raychaudhuri, D. N. :  
 1971. Studies on the aphids from Eastern India. VII. New species and new records from West Bengal. *Oriental Insects* 5: 209-222.
- Gomez-Menor, J. :  
 1960. Aphidoidea de las Islas Canarias. 1.ª Parte. *An. de Est. Atlant.* 6: 237-316.  
 1963. Aphidoidea de las Islas Canarias. 2.ª Parte. *An. de Est. Atlant.* 9: 519-605.
- Goot, P. van der :  
 1912. Über einige wahrscheinlich neue Blattlausarten aus der Sammlung des Naturhistorischen Museums in Hamburg. *Mitt. Naturh. Mus.* 9: 273-284.  
 1917. Zur Kenntnis der Blattläuse Java's. *Contr. Faune Indes néerl.* 3: 1-301.
- Gouveia, M. A. T. :  
 1972. *Contribuição para o estudo dos homópteros do milho em Moçambique*. Relat. Actividade aluno estag. Curso Agronomia. Univ. L. Marques (mimeogr.)
- Granate, M. J. B. S. :  
 1971. *Contribuição para o estudo dos afídeos das Musáceas*. Relat. Actividade aluno estag. Curso Agronomia. Univ. L. Marques (mimeogr.).

\* Not seen directly by the-author

1972. Contribuição para o estudo dos afídeos das Musáceas. *Rev. Ciênc. Agronômicas* 4: (B): 69-106 (1971).
- Hille Ris Lambers, D. :  
 1949. Contributions to a monograph of the Aphididae of Europe. IV. *Temminckia* 8: 182-324.  
 1953. Contributions to a monograph of the Aphididae of Europe. V. *Temminckia* 9: 1-76.  
 1967. New and little known members of the aphid fauna of Italy. *Boll. Zool. agr. Bachic.* 8: 1-32.
- Ilharco, F. A. :  
 1967. *Thelexes suberi* (Del Guercio) in Madeira Island. *Agronomia lusit.* 27: 97-101 (1965).  
 1968. a *Rhodobium porosum* (Sanderson) em Portugal. *Agronomia lusit.* 28: 133-142 (1966).  
 1968. b Algumas correcções e adições à lista de afídeos de Portugal Continental. I Parte. *Agronomia lusit.* 29: 117-139 (1967).  
 1968. c *Pentalonia nigronervosa* na Ilha da Madeira. Contribuição para o conhecimento da sua bibliografia. *Bocagiana* 17: 1-26.  
 1968. d Algumas correcções e adições à lista de afídeos de Portugal Continental. II Parte. *Agronomia lusit.* 29: 221-245 (1967).  
 1973. Afídeos da Ilha de Porto Santo. *Agronomia lusit.* 34: 219-254 (1972).
- Leclant, F. :  
 1967. Un *Schizaphis* nouveau du Sud de la France. *Ann. Soc. entomol. Fr. (N. S.)*. 3: 451-457.  
 1968. Contribution à l'étude des Aphidoidea du Languedoc Meridional. Troisième note. *Ann. Soc. Hort. Hist. nat. Hérault* 108: 138-143.
- Meier, W. :  
 1961. Beiträge zur Kenntnis der grünstreifigen Kartoffelblattlaus, *Macrosiphum euphorbiae* Thomas 1870, und verwandter Arten. *Mitt. schweiz. ent. Ges.* 34: 127-186.
- Müller, F. P. :  
 1965. Blattläuse von den Azoren und von Madeira. *Bol. Mus. Mun. Funchal* 19: 5-15.
- Müller, F. P. & Schöll, S. E. :  
 21: 382-414.  
 1958. Some notes on the aphid fauna of South Africa. *J. ent. Soc. sth. Afr.*
- Narzikulov, M. N. & Umarov, Sh. A. :  
 1969. Aphids of Tadzhikistan and contiguous regions of central Asia. *Aphidinae, Macrosiphonini. Fauna of Tadzhik SSR* 9: (2): 1-229. (In Russian).
- Neves, M. :  
 1966. Inquérito sobre *Toxoptera citricidus* (Kirkaldy), vector da grave doença dos citrinos denominada «Tristeza». *Agricultura, Lisb.* 23: 14-27 (1965).
- Palmer, M. A. :  
 1952. Aphids of the Rocky Mountain region. *Thomas Say Foundation* 5: 1-452.
- Quednau, F. W. :  
 1962. A list of aphids so far unrecorded from South Africa, with descriptions of two new species. *S. Afr. J. Agr. Sci.* 5: 253-264.
- Remaudière, G. :  
 1952. Contribution à l'étude des Aphidoidea de la faune française. Description de quelques Aphidinae nouveaux et addition à la liste des Myzinae et Dactynotinae. *Revue Path. vég. Ent. agric. Fr.* 31: 232-264.

- Sousa, Rodrigues de :  
 1942. \* *Indicações para o combate às pragas das nossas árvores de fruto.* Funchal.
- Sary, P., Remaudière, G. & Leclant, F. :  
 1971. Les *Aphididae* de France et leurs hôtes. *Entomophaga Mem. H. S.* 5: 1-73.
- Stroyan, H. L. G. :  
 1963. The British species of *Dysaphis* Börner. Part II. Ministry of Agriculture, Fisheries and Food, London.
- Tambs-Lyche, H. :  
 1971. Aphids from the Canary Islands. *Ent. scand.* 2: 125-131.
- Tavares, J. S. :  
 1903. Primeira contribuição para o estudo das zoocecidias da Ilha da Madeira. *Brotéria* 2: 179-186.  
 1905. Segunda contribuição para o estudo das zoocecidias da Ilha da Madeira. *Brotéria* 3: 221-227.  
 1914. Terceira contribuição para o estudo das zoocecidias da Ilha da Madeira. *Brotéria (Sér. zool.)* 12: 193-197.
- Theobald, F. V. :  
 1915. \* Notes on new and little known British aphides. *Entomologist* 43: 258-263.  
 1920. African Aphididae. Part IV. *Bull. ent. Res.* 11: 65-72.
- Tuatay, N. & Remaudière, G. :  
 1964. Première contribution au catalogue des *Aphididae* de la Turquie. *Revue Path. vég. Ent. agric. Fr.* 43: 243-278.
- Vieira, R. M. S. :  
 1951. a O «pulgão negro» das orquídeas, *Cerataphis lataniae* Boisduval. *Frutas da Madeira* 11: 129-130, 132.  
 1951. b Os insectos nocivos à videira no Arquipélago da Madeira. *Anais Jta nac. Vinho* 3: 115-141.

#### POSTSCRIPT

Dr. Hille Ris Lambers, Bennekom, has informed me (*in litt.*) that in his collection there is a slide received from the British Museum containing *Brachycaudus bicolor* (Nevsky) from Madeira, a species not collected during my expedition. He kindly allowed me to publish the complete record:

#### **Brachycaudus bicolor** (Nevsky)

Funchal (21.3.1929, *Echium nervosum*, leg. H. Scott.).

With this record, the number of aphid species in the Archipelago of Madeira becomes 103.

\* Not seen directly by the-author

