THE APHIDS AND PHYLLOXERA OF BERMUDA
(HOMOPTERA: APHIDIDAE AND PHYLLOXERIDAE)

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ABSTRACT

This report brings to 48 the number of aphid species and to 1 the number of phylloxeran species now known from Bermuda. Aphids have now been collected in Bermuda on over 100 different species of plants. An alphabetical list of aphids and a phylloxeran known from Bermuda is given with information on recent collections, host range, world distribution, and pest status.

RESUMEN

Este reporte trae a 48 el número de especies de áfidos, y a uno el número de especies de filóxera conocidas de las Bermudas. En las Bermudas se han colectado áfidos en más de 100 distintas especies de plantas. Se presenta una lista de áfidos y de filóxera conocidos de las Bermudas, con información de colecciones recientes, el rango de hospederos, la distribución mundial, y el estado de la plaga.
Bermuda is a small archipelago in the North Atlantic Ocean. Seven main islands, with a total land area of 54 km², are centered at 32°18' N, 64°46' W. The climate is subtropical and frost-free, but the terrestrial fauna is depauperate due to the extreme isolation of the islands and their geologically young age. Hilburn & Gordon (1989) provide a review of entomology in Bermuda and an introduction to the insect survey initiated in 1987.

This report on the Aphididae and Phylloxeridae includes 35 previous records from Bermuda listed in Ogilvie (1927, 1928), MacGillivray (1959), Waterston (1941, 1949), Eastop (1972), Smith & Cermeli (1979), and Bennett et al. (1985). Fourteen new records are also reported; all but one of these were collected by the authors during a week of intensive collecting in March 1988. Of 47 species of aphids and 1 species of phylloxeran now known or reported to occur from Bermuda, 20 (41%) are cosmopolitan species, 8 (16%) are widespread in temperate climates, and 6 (12%) are pantropical. The rest have more limited distributions: four are widespread in the western Hemisphere only, two are known only from the northern Hemisphere, two are South American, and one each is known from North America and Europe, North America only, Bermuda only, and greenhouses throughout most of the world. Most of the established species probably arrived on imported plant material. Aphids have now been collected in Bermuda on over 100 different species of plants.

*Aphis ogilviei* Theobald is known only from Bermuda and may be endemic. It was described by Theobald (1928) from specimens collected on Easter lily, *Lilium longiflorum* var. *eximium* (Courtois) Bak., in 1928. Additional material was collected in 1930 and 1947, but there have been no recent collections. *Lilium longiflorum* var. *eximium* is not native to Bermuda; so, if this aphid is truly endemic, it must have had a different or additional primary host. The massive importation of biological control agents documented in Bennett et al. (1985) and radical changes in the natural environment due to human occupation may have caused the decline of this species.

This paper contains an alphabetical list of aphids and a phylloxeran known from Bermuda. Recent collection information, host range, world distribution, and pest status are included where possible. All collections were made by the authors, M. B. Stoetzel and D. J. Hilburn, or M. J. Mello unless otherwise noted. Common names are from the approved list of the Entomological Society of America (Stoetzel 1989). Also included is a list of the host plants and the aphids collected or reported from them.

Voucher specimens are in the Bermuda Natural History Museum (BNHM), Flatts, Bermuda, and in the U.S. National Museum of Natural History (USNMNH) Collection of Insects, Beltsville, MD, USA.

Species of Aphididae Known from Bermuda

_Acyrthosiphon (Rhodobium) porosum* (Sanderson), yellow rose aphid.


_MacGillivray* (1969) reported that apterous viviparous females were collected from *Rosa* sp. on December 3, 1956, and January 3, 1957, and from *Senecio confusus* (DC.) Britten. on December 14, 1956.

This aphid is virtually cosmopolitan on cultivated roses, especially in greenhouses. It is reported to be a vector of strawberry viruses, but not rose viruses, and is usually of little economic importance.

_Anuraphis persicae*-niger Smith. See *Brachycausus persicae*.

_Anuraphis tulipae* Boyer de Fonscolombe. See *Dysaphis tulipae*.
Aphis-armoracae Cowen. New Record.
1 alata, Lilium longiflorum var. eximium (Liliaceae), Botanical Gardens, Paget, 24-III-1988, Stoetzel, Hilburn, Mello (#22).
This aphid has a limited distribution outside North America where it is commonly found on roots of corn and other plants in the Gramineae. It also occurs on plants in the Compositae, Cruciferae, and Umbelliferae. This aphid is a known virus vector and can be of economic importance.

Aphis coreopsis (Thomae).
MacGillivray (1959) reported that apterous viviparous females were collected from Bidens pilosa L., November 30, 1956.
This aphid is known from North and South America on various Compositae. Its status as a virus vector and its economic importance are unknown.

Aphis craccivora Koch, cowpea aphid. New Record.
4 alatae, 6 apterae, 3 alatoid nymphs, 3 nymphs, Citrus sp. (Rutaceae), Leamington House, Hamilton, 25-III-1988, Stoetzel, Hilburn (#57); 1 aptera, 2 parasitized nymphs, Medicago sativa L. (Leguminosae), Spittal Pond Nature Reserve, Smith's, 25-III-1988, Stoetzel, Hilburn (#60); 2 apterae, 3 nymphs, Trifolium sp. (Leguminosae), Heydon Trust, Sandy's, 24-III-1988, Stoetzel, Hilburn, Mello (#30); 4 alatae, 9 apterae, 2 alatoid nymphs, Trifolium sp., Ferry Point Park, St. George's, 25-III-1988, Stoetzel, Hilburn (#46); 4 apterae, 2 nymphs, Vicia sp. (Leguminosae), Stokes' Point Nature Reserve, St. George's, 25-III-1988, Stoetzel, Hilburn (#54).
This aphid is a cosmopolitan and polyphagous species. It is a known virus vector and can be of economic importance.

Aphis fabae Scopoli, bean aphid.
MacGillivray (1959) reported that apterous viviparous females were collected from Tropaeolum majus L., November 23 and December 12, 1956. See additional comments under A. ogilviei.

This aphid is a polyphagous species and is common in temperate regions but not in the tropics. It is a known virus vector and can be of economic importance.

Aphis gossypii Glover, cotton or melon aphid.
3 apterae, 1 nymph, Asclepias physocarpa (E. H. Mey.) Schlechter (Asclepiadaceae), Botanical Gardens, Paget, 28-III-1988, Hilburn (#70); 8 apterae, 4 nymphs, Bidens pilosa (Compositae), Stoke's Point Nature Reserve, St. George's, 25-III-1988, Stoetzel, Hilburn (#52); 2 apterae, 2 nymphs, Bidens pilosa (Compositae), Somer's Garden, St. George's, 25-III-1988, Stoetzel and Hilburn (#56); 1 alata, Citharexylum spinosum L. (Verbenaceae), Ferry Point Park, St. George's, 25-III-1988, Stoetzel, Hilburn (#51); 5 apterae, Citrus sp. (Rutaceae), Leamington House, Hamilton, 25-III-1988, Stoetzel, Hilburn (#57); 1 aptera, Eriobotrya japonica (Thum.) Lindl. (Rosaceae), Botanical Gardens, Paget, 23-III-1988, Stoetzel, Hilburn, Mello (#11); 9 apterae, 1 intermediate, 7 nymphs, Hibiscus sp. (Rosaceae), Botanical Gardens, Paget, 23-III-1988, Stoetzel, Hilburn, Mello (#10); 1 alata, Kalanchoe wallichii Hamet & Perr. (Crassulaceae), Gibbons Nature Reserve, Sandy's, 24-III-1988, Stoetzel, Hilburn, Mello (#26); 1 alata, Lantana sp. (Verbenaceae), Gibbons Nature Reserve, Sandy's, 24-III-1988, Stoetzel, Hilburn, Mello (#27); 15 apterae, 1 intermediate, 6 nymphs, Lilium longiflorum var. eximium (Liliaceae), Botanical Gardens, Paget, 24-III-1988, Stoetzel, Hilburn, Mello (#22); 8 apterae, 11 nymphs, Lilium longiflorum var. eximium, Heydon Trust, Sandy's, 24 III 1988, Stoetzel, Hilburn, Mello (#35); 1 aptera, Lilium longi-
florum var. eximium, Locust Hall, Devonshire, 25-III-1988, Stoetzel, Hilburn (#67);
7 apterae, 25 nymphs, Lilium longiflorum var. eximium, Palmetto Club, Smith’s.
7-II-1989, D. Hilburn; 2 apterae, 3 nymphs, Plantago major L. (Plantaginaceae),
Stoke’s Point Nature Reserve, St. George’s, 25-III-1988, Stoetzel, Hilburn (#53);
5 alatae, 1 intermediate, 6 apterae, 1 nymph, Schinus terebinthifolius Raddi. (Anacardiaceae),
Ferry Point Park, St. George’s, 25 III 1988, Stoetzel, Hilburn (#49):
1 alata, Tecoma sp. (Bignoniaceae), Gibbons Nature Reserve, Sandy’s, 24-III-1988,
Stoetzel, Hilburn, Mello (#28); 4 alatae, pan trap, Botanical Gardens, Paget, 27-III-
1988, Stoetzel; 1 aptera, Vicia sp. (Leguminosae), Botanical Gardens, Paget, 22-III-
1988, Stoetzel, Hilburn, Mello (#3). Scymnus floratilis (F.) (Coccinellidae) was found
feeding on this aphid in March 1988.

Ogilvie (1927) reported this species from melons, cucumbers, and citrus; and as
Aphis lili Lichtenstein from lilies. Additionally, Ogilvie (1928) reported this species
from citrus, cucurbits, plantago, zinnia, hibiscus, Lilium longiflorum Thumb., L.
longiflorum var. eximium “Harrisii,” L. candidum L., L. speciosum Thumb., and
L. testaceum Lindl. Waterston (1941) reported it from Citrullus vulgaris Schrad.
(watermelon), Citrus spp., Cucumis melo L. (muskmocol), Cucumis sativus L.
(cucumber), Cucurbita maxima Duchesne (pumpkin, squash), Fragaria vesca L.
(stawberry), Hibiscus esculentus L. (okra), Hibiscus rosa-sinensis L., Justicia
secunda Vahl., Lilium candidum, Lilium longiflorum var. eximium (Easter lily),
Lilium speciosum, Lilium testaceum, Malotota indica (L.) All. (May lOil), Plantago
major, Solanum melongena L. (eggplant), and Zinnia elegans Jacq. MacGilliv-
ray (1959) reported it from Acalypha wilkesiana Mull., Bidens pilosa, Bougainvillea
sp., Bryophyllum sp., Cocosolobu wifera (L.) L., Duranta repens L., Echeveria sp.,
Eriobotrya japonica, Hibiscus rosa-sinensis, Lilium longiflorum varieties,
Saintpaulia ionantha H. Wendl., Sida carpinifolia L.F., Tabebuia pallida (Lindl.)
Miers., Tecoma capensis (Thunb.) Lindl. There are in the BNHM one specimen on
slide No. 705, I.B.E.Lg. 267, collected by Ogilvie on Hibiscus leaves on 25-XI-1925
and one specimen on slide No. 755, I.B.E.Lg. 460, collected by Ogilvie on Hibiscus
leaves in V-1927.

There are in the USNMNH Collection specimens of this species collected on
Easter lily from Bermuda in quarantine at Massachusetts (1925, 1932), New Jersey
(1947), New York (1931, 1947), Philadelphia (1930, 1931), and Washington, D.C.
(1930).

This aphid is the most commonly collected aphid in Bermuda. It is a cosmopolitan
and polyphagous species and a known virus vector, and it can be of economic
importance.

Aphis lili Lichtenstein, nonn nudum. See Aphis gossypii.

Aphis maidiradicis Forbes, corn root aphid. New Record.
1 alata, Brassica oleracea L. (Cruciferae), Trimmingham Hill, Paget, 24-III-1988,
Stoetzel, Hilburn, Mello (#45); 3 alatae, pan trap, Botanical Gardens, Paget, 27-III-
1988, Stoetzel.

This aphid is common on corn in North and South America and can be of economic
importance.

Aphis maidis Fitch. See Rhopalosiphum maidis.

Aphis nasturtii Kaltenbach, buckthorn aphid. New Record.
4 apterae. 5 nymphs, Solanum sp. (Solanaceae), Spittal Pond Nature Reserve,
Smith’s, 25-III-1988, Stoetzel, Hilburn (#61).

This aphid is polyphagous and is found in the Northern Hemisphere. It is a virus
vector but is of little economic importance.

Aphis nerii Boyer dc Fonsecolombe, oleander aphid.
4 apterae, 1 alate nymph, 1 nymph, Asclepias physocarpa (Asclepiadaceae), Botan-
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Ogilvie (1927, 1928) and Waterston (1941) reported this species from Nerium oleander (oleander) and Asclepias curassavica (butterfly weed, wild ipecac). Additionally, Ogilvie (1928) reported that it was parasitized and controlled by Aphidius testaceipes (Cresson) (now Lysiphlebus testaceipes (Cresson)). MacGillivray (1959) reported that apterous and alate viviparous females were collected from Asclepias sp., Nerium oleander and Pereskia aculeata Mill. between October 17 and December 18, 1956. There is in the BNHM one slide (I.B.E.Lg. 104) of this species collected by Ogilvie on Nerium oleander in IV 1924.

This aphid is found mainly on plants in the Asclepiadaceae and Apocynaceae in the tropics and subtropics. It is a known virus vector but of little economic importance.

Aphis ogilviei Theobald.

Waterston (1941) reported this species on Lilium longiflorum var. eximium (Easter lily). MacGillivray (1959) reported that J. P. Doncaster of the British Museum (Natural History) examined specimens of A. ogilviei and found them suspiciously like A. fabae and that they undoubtedly belong to the “black aphid” complex. However, in March 1989, Roger L. Blackman examined type material of A. ogilviei in the collection of the British Museum (Natural History), London, and concluded that it agrees with Theobald’s description and that A. ogilviei is a valid species.

There are in the USNM Collection specimens of this species collected from Easter lily from Bermuda in quarantine at New York, NY, Apr. 18, '47, lot #47-10191, and originally identified as A. gossypii, but which we now identify as A. ogilviei. Additionally, several broken apterous collected from lily flowers from Bermuda in Detroit, MI, April 16, 1930, Detroit No. 511 and originally identified as A. rumicis L. are probably A. ogilviei.

This aphid is known only from Bermuda on Lilium longiflorum var. eximium. There have been no recent collections of this aphid, and its not considered to be of economic importance.

Aphis pomi DeGeer, apple aphid.

Ogilvie (1927, 1928) and Waterston (1941) reported this aphid from Eriobotrya japonica (loquat). There is in the BNHM one slide (No. 611, I.B.E.Lg. 218) collected by Ogilvie on loquat leaves (Eriobotrya japonica) on 6-VI-1925 and identified as this species; however, it is misidentified and is in fact Aphis spiraeacola.

This aphid is found on Rosaceae in North America and Europe and can be of economic importance. We consider this record to be questionable, and we conclude that this species probably is not established in Bermuda at this time.

Aphis pseudobrassicae Davis. See Lipaphis erysimi.

Aphis rumicis L. New Record.

8 apterae, 4 nymphs, Nasturtium sp. (Cruciferae), Bermuda High School, Pembroke, 28-III-1988, A. E. Hilburn (#69).

This aphid is most commonly found on species of Rumex in the Northern Hemisphere. It is of little economic importance.

Aphis spiraeacola Patch, spirea aphid.

1 aptera, 1 nymph, Bidens pilosa (Compositae), St. George’s, 25-III-1988, Stoetzel, Hilburn (#52); 11 alatae, 1 intermediate, 4 apterae, 3 alatoid nymphs, 5 nymphs, Citrus sp. (Rutaceae), Leamington House, Hamilton, 25-III-1988, Stoetzel, Hilburn (#57); 1 alata, 6 apterae, 8 nymphs, Eriobotrya japonica (Rosaceae), Botanical Gardens, Paget, 22-III-1988, Stoetzel, Hilburn,
Mello (#11); 5 alatae, 4 apterae, 1 alatoid nymph, *Pittosporum* sp. (Pittosporaceae), Botanical Gardens, Paget, 22-III-1988, Stoezel, Hilburn, Mello (#5); 2 alatae, pan trap, Botanical Gardens, Paget, 27-III-1988, Stoezel.

Waterston (1940, 1941) reported that this species was intercepted in the United States on *Gerbera jamesonii* H. Bolus ex Hook.f. from Bermuda in 1936 and 1938. MacGillivray (1959) reported that alate and apterous viviparous females were collected between November 1 and December 14, 1956, from *Acalypha godseffiana* Hort. Sander ex M. T. Mast., *Fumaria muralis* Sand., *Lappasium lucidum* Ait., *Polycias balfouriana* (Hort. Sander) L. H. Bailey, *Senecio confusus*, *Solidago sempervirens* L., and *Viburnum rupestrum* Lindl. She also reported that an oviparous female was collected from *Senecio confusus*. She stated that this may be the species listed by Ogilvie (1923) as *Aphis pomi* DeGeer from *Eriobotrya japonica*. See additional comments under *Aphis pomi*.

There are in the USNMNH Collection specimens of this species collected from tiger lily from Bermuda in quarantine at New York (1958).

This aphid is a cosmopolitan and polyphagous species. It is a known virus vector and can be of economic importance.

*Aphis travaresi* Del Guercio. See *Toxoptera aurantii*.

*Aphis tulipae* Boyer de Foncolombe. See *Dysaphis tulipae*.

*Aphis* sp. #1. New Record.


*Aphis* sp. #2. New Record.

1 aptera, 1 nymph (both parasitized), *Lilium longiflorum* (Liliaceae), Loeust Hall, Devonshire, 25-III-1988, Stoezel, Hilburn (#67).

*Aphis* sp. #3. New Record.

1 alata, pan trap, Que Sera, Paget, 26-III-1988, Stoezel.

*Aspheneola dactylonii* Theobald.

Ogilvie (1927, 1928) and Waterston (1941) reported that this species caused gall-like growths and shoot proliferations on Bermuda grass, *Capriola dactylon* Kuntze (now *Cynodon dactylon* (L.) Pers.). Eastop (1958) confirmed that there was material of this species in the British Museum from "Bermuda Agr. Exp. Sta. (No. 408), 10.12.1924, coll. L. Ogilvie." There are in the BNHM 2 slides (No. 408, I.B.E.Lg. 165) of this species with the same collection data.

This aphid has a broken distribution from the Far East to northern Africa to North and South America. In China it forms galls on *Pistacia* sp. and migrates to roots of grasses; but in other areas, it is known only from roots of various grasses. It is of little economic importance.

*Aulacorthum solani* (Kaltenbach), foxglove aphid.

1 alata, *Senecio confusus* (Compositae), Paget Marsh, Paget, 24-III-1988, Stoezel, Hilburn, Mello (#44). There is in the BNHM one slide (No. 382, I.B.E.Lg. 198) collected by Ogilvie on foxglove on 24-X-1924 which contains an ovipara of *A. solani* and specimens of *Myzus persicae*, the name by which all these aphids were previously identified.

Recorded by Smith & Cermeli (1979) as occurring in Bermuda, but no specific collection data for the record was given.

This aphid is a cosmopolitan and polyphagous species. It is a known virus vector and can be of economic importance.

*Brachycausus persicae* (Passerini), black peach aphid.

Ogilvie (1928) and Waterston (1941) reported this species as *Anuraphis persicae-niger* from *Prunus persica* (L.) Ratsch (peach).

This aphid is known from North and South America, Europe, southern Africa,
Australia, and New Zealand on various species of Prunus. It is not known to be a vector of peach virus and is of little economic importance.

Brachycaudus persicaeola (Boisd.) See Brachycaudus persicae.

Brevicoryne brassicae (L.), cabbage aphid.
3 alatae, 4 apterae, 2 nymphs, Brassica oleracea (Cruciferae), Trimmingham Hill, Paget, 24-III-1988, Stoetzel, Hilburn, Mello (#45); 3 alatae, 3 apterae, 1 alatoid nymph, 1 nymph, Brassica oleracea, Trimmingham Hill, Paget, 25-III-1988, Stoetzel, Hilburn (#68A).

Ogilvie (1927, 1928) reported this species from cabbages and other cruciferous vegetables, including kale. Waterston (1941) reported this species from Brassica oleracea (broccoli, cabbage, and cauliflower) and intercepted in the United States on B. oleracea var. acephala DC. (kale) from Bermuda in 1926. There is in the BNHM one specimen of this species on slide No. 706, I.B.E.Lg. 268, collected by Ogilvie on kale on 28-IV-1925.

This aphid is common in temperate regions and is restricted to Cruciferae. It is a known virus vector and can be of economic importance.

Capitophorus elaeagni (Del Guercio).

MacGillivray (1959) reported that this is possibly the species from Cynara cardunculus L. listed by Ogilvie (1928) as new. This species is listed in Smith and Cermel (1979) as occurring in Bermuda.

This aphid is found in temperate regions on species of Elaeagnus and various thistles including the edible artichoke. It is of little economic importance.

Capitophorus sp. See Capitophorus elaeagni.

Carolinaea cyperi Ainslie.

MacGillivray (1959) reported that alate and apterous viviparous females were collected December 3, 1956, from Cyperus esculentus L. and November 29, 1956, from Lilium longiflorum.

This aphid is found in North and South America on Cyperaceae, and it is of little economic importance.

Cavariella sp. New Record.

One nymph, Daucus carota L. (Umbelliferae), Heydon Trust, Sandy's, 24-III-1988, Stoetzel, Hilburn, Mello (#32).

This is probably Cavariella aegopodii (Scopoli) which is found in temperate regions on several Umbelliferae including carrots. It is a known virus vector but is of little economic importance.

Cerataphis brusiliensis (Hempel). New Record.


This aphid is found on palms in the tropics and in greenhouses. Its economic importance, if any, is limited to aesthetics when populations are unusually large.

Cerataphis lataniae (Boisdual).

Ogilvie (1927, 1928) reported this species from leaves of Bourbon palm and palm. Waterston (1941) reported this species from Livistona chinensis (Jacq.) R. Br. ex Mart.

This aphid is found on palms in the tropics and elsewhere and in greenhouses. Populations can be large and unsightly, especially when covered with sooty mold. Otherwise, it is of little economic importance.

Chomaphis (Dysaphis) apifoliace (Theohard). See Dysaphis apifolia.

Chomaphis (Dysaphis) foeniculi (Theohard). See Dysaphis foeniculi.

Cinara fresai Blanchard. See Cinara tujaflina.

Cinara juniperi DeGeer. See Cinara tujaflina.

Cinara tujaflina (Del Guercio).

This aphid was first recorded in 1943 as *C. juniperi* DeGeer by Waterston (1949). Reported by Eastop (1972) from *Juniperus bermudiana* in Bermuda. Smith & Cermeli (1979) also reported it to occur in Bermuda, but no specific collection data for this record was given. Bennett et al. (1985) reported this aphid as *C. fresai* Blanchard. Heavy infestations cause browning and dieback on shoots of the Bermuda cedar, *Juniperus bermudiana*, especially on the lower branches. Though present year round, populations are highest in spring. Colonies are often tended by the ant, *Pheidole maggacephala* (Fabricius). An attempt to introduce parasites failed in 1976-77 (Bennett et al. 1985); but *Allograpta obliqua* (Say), *Toxomerus marginatus* (Syrphidae), *Chrysoptera rufilabris* Burmeister (Chrysopidae), and *Ezochomus jamaicensis* Sched (Coccinellidae) have been reported as predators.

This aphid is known from parts of North and South America, Europe, Africa, Nepal, and Australia on *Thuja orientalis* and various genera in Cupressaceae including *Juniperus*. It is of little economic importance; but in Bermuda, heavy infestations can cause dieback on young Bermuda cedar trees.

*Dysaphis apilifolia* (Theobald), rusty banded aphid.

MacGillivray (1959) reported that this species was collected with *C. foeniculcus* from *Foeniculum vulgare* Mill. on December 24, 1956.

This aphid is found on various Umbelliferae throughout much of the world. It is a known virus vector and can be of economic importance.

*Dysaphis foeniculcus* (Theobald).

10 apterae, 1 intermediate, 2 alatoid nymphs, 17 nymphs, *Daucus carota* (Umbelliferae), Heydon Trust, Sandy’s, 24-III-1988, Stoetzel, Hilburn, Mello (#32); 1 alata, 3 apterae, 3 nymphs, *Sinapis ramosa bermudiana* L. (Cruciferae), Horseshoe Bay, Southampton, 24-III-1988, Stoetzel, Hilburn, Mello (#40); 2 alatae, pan trap, Botanical Gardens, Paget, 27-III-1988, Stoetzel.

MacGillivray (1959) reported that this species was collected with *C. apilifoliae* from *Foeniculum vulgare* on December 24, 1956.

The one intermediate vivipara in collection #32 from *Daucus carota* was most unusual because it is devoid of cornicles while the other specimens of the lot have two normal ones. This and other anomalies in cornicles were reported by Russell & Stoetzel (1990).

This aphid is a cosmopolitan species and common on Umbelliferae. It is not reported to be a virus vector and is of little economic importance.

*Dysaphis tulipae* (Boyer de Fonscolombe), tulip bulb aphid.

Ogilvie (1927) reported this species as *Aphis tulipae* from carrots and celery. Additionally, Ogilvie (1928) reported this species as *Aphis tulipae* from parsley, carrots, turnips, celery, and marigolds. Waterston (1941) reported this species as *Anuraphis tulipae* from *Apium graveolens* L. var. dulce (Mill.) Pers. (celery), *Brassica campestris* L. (turnip), *Calendula officinalis* L. (pot marigold), *Daucus carota* (carrot), *Foeniculum vulgare* (fennel), and *Petroselinum hortense* Hoffm. (parsley) and intercepted on *Iris* sp. from Holland. There is in the BNHM one slide (No. 612, I.R.E. Lg. 219) of this species originally identified as *Anuraphis tulipae* and collected by Ogilvie on roots of parsley on 23-VI-1925.
This aphid is cosmopolitan and is found on Liliaceae, Araceae, Iridaceae, and Musaceae. It is a known virus vector and can be of economic importance.

_Eriosoma lanigerum_ (Hausmann), woolly apple aphid.

Ogilvie (1928) reported that this species was intercepted on plants from the Azores in 1924. It is not believed to be established.

This aphid is known from all apple-producing regions of the world. Besides _Malus_, it is found on _Crataegus_ and _Cotoneaster_. It is not known to be a virus vector and it is not usually of economic importance.

_?Fullawayella formosana_ Takahashi. See _Neotoxoptera violae_.

_Idioperus nephrolepidis_ Davis, fern aphid.

1 alata, 10 apterae, 3 nymphs, _Adiantum trapeziforme_ L. (Polypodiaceae) (#17); 12 alatae, 2 apterae, 1 nymph, _Blechnum occidentale_ L. (Polypodiaceae) (#13); 5 apterae, 3 nymphs, _Cyrtomium falcatum_ (F. & F.) K. Proesl (Polypodiaceae) (#15); 11 apterae, 3 nymphs, _Diplazium laffanianum_ Christens (Polypodiaceae) (#18); 8 alatae, 10 apterae, 12 nymphs, _Microlepia pyramidata_ (Wallr.) Luehtila (Polypodiaceae) (#20); 2 alatae, 13 apterae, 3 nymphs, _Nephrorapis biserrata_ 'Furcans' (Polypodiaceae) (#19); 4 alatae, 5 apterae, 2 alatoid nymphs, 1 nymph, _Nephoropis exalta_ (L.) (Polypodiaceae) (#14); 9 apterae, 4 nymphs, _Pteris cretica_ L. (Albopterygium) (Polypodiaceae) (#16); Botanical Gardens, Faget, 24-III-1988, Stoetzel, Hilburn, Mello.

Ogilvie (1928) and Waterston (1941) reported this species to be common on Polypodiaceae (greenhouse ferns). There is in the BNHM one slide (No. 675, I.B.E.Lg. 255) of this species collected by Ogilvie from a greenhouse fern on 15-IX-1925.

This aphid is found in greenhouses on ferns, especially on new tender growth. Large populations can cause browning of the fronds or can even kill the fronds resulting in unsightly plants.

_Illiniin_ (Macrocephala) _salansifoli_ (Harvey). See _Macrocephala euphorbiae_.

_Lipaphis erysimi_ (Kaltenbach), turnip aphid.

Ogilvie (1927) reported this species as _Aphis pseudobrassicae_ from stock. Additionally, Ogilvie (1928) reported this species from garden stock and wild stock, _Matthiola incana_ L.) R. Br., and that it is parasitized by _Diasenrus rapae_ Curtis (Brachiidae). Waterston (1941) reported this species as _Aphis pseudobrassicae_ on _Matthiola incana_ (stock). MacGillivray (1959) reported this aphid as _Lipaphis pseudobrassicae_ (Davis) and that only a few apteron specimens were collected from seedlings of broccoli, red cabbage, green cabbage, kale, and swiss chard on December 5, 1956. There is in the BNHM Collection one slide (I.B.E.Lg. 103) of this species collected by Ogilvie on stocks in IV-1924.

This aphid is a cosmopolitan species found on Cruciferae. It is a known virus vector and can be of economic importance.

_Lipaphis pseudobrassicae_ (Davis). See _Lipaphis erysimi_.

_Lizerius intermedius_ Quednau. New Record.

1 alata, _Lilium floribundum_ var. _eremium_ (Liliaceae), Locust Hall, Devonshire, 25-III-1988, Stoetzel, Hilburn (#67).

This unusual aphid was described by Quednau (1974) from 2 alate viviparous and 1 male collected in 1968 and 1971 in suction traps in Campinas, Sao Paulo, Brazil.

The true host of this aphid remains unknown.

_Macrocephalinella sanborni_ (Gillette), chrysanthemum aphid.

Ogilvie (1928) and Waterston (1941) reported this species from chrysanthemums (Chrysanthemum sp.) MacGillivray (1959) reported that alate and apterous viviparous females were collected from _Chrysanthemum_ sp. on October 13 and November 6, 1956. There is in the BNHM one slide (No 769) of this species collected by Ogilvie on _Chrysanthemum_ in VII-1927.
This aphid is a cosmopolitan species found on Compositae, especially *Chrysanthemum*. It is a known virus vector and can be of economic importance.

*Macrosiphum euphorbiae* (Thomas), potato aphid.


Ogilvie (1927) reported this aphid as *Illinwa* (*Macrosiphum*) *solanifolii* from potatoes, *Sonchus oleraceus* L., beets, roses, and lilies. Additionally, Ogilvie (1928) reported this species as *Macrosiphum* *geti* Gei from potatoes, lilies, ranunculus, beets, marigolds, *Sonchus oleraceus*, and *Rumex*. Waterston (1941) reported this species as *Macrosiphum* *geti* from *Beta vulgaris* L. (beet, swiss chard), *Calendula officinalis* (pot marigold), *Lactuca sativa* (lettuce), *Lilium longiflorum* var. *eximium* (Easter lily), *Ranunculus* sp., *Raphanus raphanistrum* L. (wild radish), *Raphanus sativus* L., *Rumex* sp., *Solanum tuberosum* (potato), and *Sonchus oleraceus*. McGillivray (1959) reported that apterous viviparous females were collected November 30, 1956, from *Solanum tuberosum* and December 18, 1956, from *Ipomoea batatas*.

This aphid is a cosmopolitan and polyphagous species. It is a known virus vector and can be of economic importance.

*Macrosiphum geti* Koch. See *Macrosiphum euphorbiae*.

*Myzus persicae* (Sulzer), green peach aphid.

Ogilvie (1927, 1928) reported this species from potatoes, cabbages, and a large number of wild and cultivated plants. Waterston (1941) reported it from Brassica oleracea (broccoli, cabbage, and cauliflower), Digitalis purpurea L. (foxglove), Solanum tuberosum (potato). MacGillivray (1959) reported that alate and apterous viviparous females were collected from a mixture of broccoli, red cabbage, green cabbage, kale, and swiss chard, and from Ipomoea dissecta (Jacq.) Pursh., Lilium longiflorum, Senecio confusus, and Solanum tuberosum between November 27 and December 14, 1956. There are in the BNHM one slide (I.B.E.Lg. 962, Bermuda 161) of this species collected by Ogilvie on cabbage on 16-XII-1923, one slide (I.B.E.Lg. 90, Bermuda 147) collected by Ogilvie on potato in I-1924, and one slide (No. 382, I.B.E.Lg. 163) collected by Ogilvie on foxglove on 24-X-1924. Slide (No. 382, I.B.E.Lg. 163) also contains an ovipara of Acrhyosiphon solani.

This aphid is a cosmopolitan and polyphagous species. It is the most important of all the vectors of plant viruses and is often of economic importance.

Nasonovia (Hyperomyzus) lacteae (L.), sow thistle aphid.

MacGillivray (1959) reported that alate and apterous viviparous females were collected January 8, 1957, from a heavy infestation on Sonchus sp.

This aphid is virtually a cosmopolitan species with species of Ribes as primary hosts and species of Sonchus as secondary hosts. It is a known virus vector but is of little economic importance.

Neotrozocta olivieri (Essig).

Recorded by Smith & Cermeli (1979) as occurring in Bermuda, but no specific collection data for the record was given. A common host is Calendula officinalis L.

This aphid is reported from the Mediterranean area, Africa, Korea, Australia, New Zealand, and the United States and is of little economic importance.

Neotrozocta violae (Pergande).

Ogilvie's (1927) record of ?Fullawayella formosana from lilies is probably this species. Waterston (1941) reported it from Lilium longiflorum var. eximium (Easter lily). MacGillivray (1959) reported this species from lilies. There is in the BNHM one slide (No. 747, I.B.E.Lg. 450) of this species collected by Ogilvie on lilies in 1927.

This aphid is found in North and South America, Australia, New Zealand, and Africa on Viola sp. (violets) and lilies. It is of little economic importance.

Pentatoma nigrovenosa Coquerel, banana aphid.
2 apterae, 3 nymphs, Musa cavendishii Lamb. ex Pott. (Musaceae), Heydon Trust, Sandy's, 24-III-1988, Stoetzel, Hilburn, Mello (#34); 3 nymphs, Musa cavendishii (Musaceae), Paget Marsh, Paget, 24-III-1988, Stoetzel, Hilburn, Mello (#41); 3 alatae, 13 apterae, 1 nymph, Musa sp. (Musaceae), Somer's Garden, St. George's, 25-III-1988, Stoetzel, Hilburn (#55).

Ogilvie (1927, 1928) and Waterston (1941) reported this species from Musa cavendishii (Chinese banana). There is in the BNHM one slide (No. 388, I.B.E.Lg. 162) of this species collected by Ogilvie on bananas in XI-1924.

This aphid is found in the tropics on Musaceae, Araceae, and Zingiberaceae. It is a known virus vector but of little economic importance.

Picturaphis vignaphila Blancheard. New Record.
4 alatae, Juniperus bermudiana (Cupressaceae), Ferry Point Park, St. George's, 25-III-1988, Stoetzel, Hilburn (#50).

This aphid is known from South America from various Leguminosae. It is of little economic importance.

Rhodobium porosum (Sanderson). See Acrhyosiphon (Rhodobium) porosum.

Rhopatosphum maidis (Fitch), corn leaf aphid.

7 alatae, 2 intermediates, 4 apterae, 2 alatoid nymphs, 4 nymphs, Panicum dichotomiflorum Michx. (Gramineae), Sommerset Long Bay, Sandy's, 24-III-1988, Stoet-
zel, Hilburn, Mello (#29); 12 alatae, 6 apterae, 3 alatoid nymphs, Panicum dichotomiflorum (Graminae), Paget Marsh, Paget, 24-III-1988, Stoetzel, Hilburn, Mello (#42).

Ogilvie (1928) reported this species from corn (maize) and Panicum dichotomiflorum. Waterston (1941) reported it from Hordeum vulgare L. (barley), Panicum dichotomiflorum, and Zea mays L. (corn, maize). There is in the BNHM one slide (No. 673, I.B.E.Lg. 253) of this species collected by Ogilvie on Panicum dichotomiflorum on 26-VIII-1925.

This aphid is a cosmopolitan species and is common on Gramineae. It is a known virus vector and can be of economic importance.

Rhopalosiphum nymphaeae (L.), waterlilly aphid.

Ogilvie (1928) and Waterston (1941) reported this species from Ruppia maritima L. There is in the BNHM one slide (No. 768, I.B.E.Lg. 466) of this species collected by Ogilvie on Ruppia maritima in VII-1927.

This aphid is virtually a cosmopolitan species with primary hosts being species of Prunus and secondary hosts being various species of water plants. It is of little economic importance.

Rhopalosiphum Tuckeri (Sasaki), rice root aphid. New Record.

 Intercepted June, 7, 1983, on Dieffenbachia sp. roots from Holland, but not known to be established in Bermuda at this time.

This aphid is a cosmopolitan species with primary hosts being species of Prunus and secondary hosts being various Gramineae and Cyperaceae. It can be of economic importance.

Sipha flavu (Forbes), yellow sugarcane aphid.

Ogilvie (1928) reported this species on leaves of Chaetochloa viridis Lamb. and other grasses and also on sugarcane. Waterston (1941) reported it from Chaetochloa viridis, Paspalum distichum L., and Saccharum officinarum L. (sugarcane). MacGillivray (1959) reported that alate and apterous viviparous females were collected from Stenolaphthus secundatum (Walt.) O. Kuntze on March 8, 1957. There is in the BNHM one slide (No. 676, I.B.E.Lg. 256) of this species collected by Ogilvie on Chaetochloa viridis in IX-1925.

This aphid is found in North and South America on Gramineae. It is a known virus vector and can be of economic importance.

Thoriaspis trifolii (Moncill), yellow clover aphid. New Record.

1 alata, 2 alatoid nymphs, Trifolium sp. (Leguminosae), Heydon Trust, Sandy's, 24-III-1988, Stoetzel, Hilburn, Mello (#30); 1 aptera, Trifolium sp. (Leguminosae), Ferry Point Park, St. George's, 25-III-1988, Stoetzel, Hilburn (#46).

This aphid is nearly a cosmopolitan species on Leguminosae. It is a known virus vector and can be of economic importance.

Toxoptera aurantiib Boyer de Fonsecolme, black citrus aphid.

2 apterae, 11 apterae, 1 nymph, Citrus vulgaris Risso (Rutaceae), Botanical Gardens, Paget, 22-III-1988, Stoetzel, Hilburn, Mello (#4); 2 alatae, 8 apterae, 1 alatoid nymph, 5 nymphs, Citrus spp., Leamington House, Hamilton, 25-III-1988, Stoetzel, Hilburn (#57); 8 alatae, 3 intermediates, 5 apterae, Pittosporum sp., Gibbons Nature Reserve, Sandy's, 24-III-1988, Stoetzel, Hilburn, Mello (#25).

MacGillivray (1959) reported that alate and apterous viviparous females were collected between October 15 and December 12, 1956, from Acalypha godseffiana, Bougainvillea sp., Catalpa longissima (Jacq.) Dum.-Cours., Citrus spp., Coccoloba uvifera, Gardonia thunbergia L.F., Hibiscus sp., Musa raya paniculata (L.) Jack, Pereskia aculeata, and Pittosporum sp. Eastop (1958) stated that Theobald's record of Aphis tarsresi del Guercio (= Toxoptera citricidius (Kirkaldy)) from Italian Sotailand was in error and that the species is T. aurantiib. MacGillivray (1959)
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stated that Ogilvie's (1928) record of A. taversi is possibly T. aurantii. There is in the BNHM one slide (No. 672, I.B.E. Lg. 252) of this species collected by Ogilvie on Bidens pilosa on 27-VIII-1925.

This aphid is found in the tropics and subtropics on many plant species and is damaging to Citrus and several other hosts of economic importance.

Toxoptera citricida (Kirkaldy), brown citrus aphid.

Recorded by Smith and Cermeli (1979) as occurring in Bermuda, but no specific collection data for the record were given. We consider this record to be questionable, and we conclude that this species probably is not established in Bermuda at this time.

This aphid is found in Africa, Asia, Australia, New Zealand, and parts of South America. It is the principal vector of Citrus tristeza virus as well as several other plant viruses. It can be damaging to Citrus and several other species in the Rutaceae.

Species of Phylloxeridae Known from Bermuda

Daktulosphaira vitifoliae (Fitch), grape phylloxera.

First recorded in 1935. Waterston reported this species as Phylloxera vitifoliae Fitch on leaves of Vitis vinifera L. (grape vine) in 1940 and again in 1941. Recent records from July 1986 and 1987.

This phylloxeran is found in all grape-growing areas of the world. It can be of economic importance.

List of Host Plants of the Aphididae in Bermuda

(* = a probable error in host identification, an incidental collection, or a misidentification)

Acanthaceae
Justicea secunda Vahl.
Aphis gossypii Glover

Anacardiaceae
Schinus terebinthifolius Raddi.
Aphis gossypii Glover

Apocynaceae
Nerium oleander L.
Aphis nerii Boyer de Fonscolombe

Araeaceae
Dieffenbachia sp.
Rhopalosiphum rufiabdominalis (Sasaki)

Araliaceae
Polycias balfouriana (Hort. Sander)
Aphis spiraecola Patch

Asclepiadaceae
Asclepias curassavica L.
Aphis nerii Boyer de Fonscolombe
Asclepias physocarpa (E. H. Mey.)
Schlechter
Aphis gossypii Glover
Aphis nerii Boyer de Fonscolombe

Bignoniaceae
Catalpa longissima (Jacq.) Dum.-Cours.
Toxoptera aurantii Boyer de Fonscolombe
Taenvia pallida (Lindl.) Miere.
Aphis gossypii Glover

Tecoma capensis (Thunb.) Spach.
Aphis gossypii Glover

Tecoma sp.
Aphis gossypii Glover

Myzus persicae (Sulzer)

Cactaceae
Pereskia aculeata Mill.
*Aphis nerii Boyer de Fonscolombe
*T. aurantii Boyer de Fonscolombe

Caprifoliaceae
Viburnum odoratissimum Ker-Gawl.
Aphis fabae Scopoli
Viburnum suspensum Lindl.
Aphis spiraecola Patch

Chenopodiaceae
Beta vulgaris L.
Macrosiphum euphorbiae (Thomas)

Compositae
Bidens pilosa L.
Aphis coreopsidis Thomas
Aphis gossypii Glover
Aphis spiraecola Patch
Toxoptera aurantii Boyer de Fonscolombe

Calendula officinalis L.
Dysaphis tulipae (Boyer de Fonscolombe)
Macrosiphum euphorbiae (Thomas)
*Neotoxoptera oliveri (Essig)
Chrysanthemum sp.
Macrospionella aarbnori (Gillette)
Macrospium euphorbiae (Thomas)
Cynara cardunculus L.
Capitophorus elaeagni (Del Guercio)
Gerbera jamesonii H. Boul ex Hook.f.
Aphis spiraeola Patch
Lactuca sativa L.
Macrospium euphorbiae (Thomas)
Senecio confusus (DC.) Britten.
Acrithosiphon (Rhopobium) porosum (Sanderson)
Aphis spiraeola Patch
Aulacorthum solani (Kaltenbach)
Macrospium euphorbiae (Thomas)
Myzus persicae (Sulzer)
Solidago sempervirens L.
Aphis spiraeola Patch
Sonchus oleraceus L.
Macrospium euphorbiae (Thomas)
Sonchus sp.
Nasonovia (Hyperomyzus) lactucae (L.)
Zinnia elegans Jacq.
Aphis gossypii Glover

Convolvulaceae
Ipomoea batatas (L.) Lam.
Macrospium euphorbiae (Thomas)
Ipomoea dissecta (Jaqc.) Pursh.
Myzus persicae (Sulzer)
Ipomoea violosa Meissn.
Macrospium euphorbiae (Thomas)

Crassulaceae
Bryophyllum sp. (= Kalanchoe sp.)
Aphis gossypii Glover
Echeveria sp.
Aphis gossypii Glover
Kalanchoe waldeimmi Hamet & Perr.
Aphis gossypii Glover
Myzus persicae (Sulzer)

Cruciferae
Brassica campestris L.
Dysaphis tulipae (Boyer de Fonscolombe)
Brassica oleracea L.
Aphis maidaericis Forbes
Brevicoryne brassicae (L.)
Macrospium euphorbiae (Thomas)
Myzus persicae (Sulzer)
Matthiola incana (L.) R. Br.
Lipaphis erysimi (Kaltenbach)
Nasturtium sp.
Aphis rumicis L.
Raphanus raphanistrum L.
Macrospium euphorbiae (Thomas)

Raphanus sativus L.
Macrospium euphorbiae (Thomas)
Sisymbrium bermudianum L.
Dysaphis foeniculce (Theobald)

Cucurbitaceae
Citrullus vulgaris Schrad.
Aphis gossypii Glover
Cucumis melo L.
Aphis gossypii Glover
Cucumis sativus L.
Aphis gossypii Glover
Cucurbita maxima Duchesne
Aphis gossypii Glover

Cupressaceae
Juniperus bermudiana L.
*Cinara fresai Blanchard
*Cinara juniperi DeGeer
*Cinara tuxajilina (Del Guercio)
*Pityophthora vignaphila Blanchard

Cyperaceae
Cyperus esculentus L.
Carolinaea cyperi Ainalie

Euphorbiaceae
Acalypha godseffiana Hort. Sander ex M. T.
Mast.
Aphis spiraeola Patch
Toxoptera auranti Boyer de Fonscolombe
Acalypha wilkesiana Mull.
Aphis gossypii Glover
Ricinus communis L.
Aphis fabae Scopoli
Myzus persicae (Sulzer)

Fumariaceae
Fumaria muralis Sond.
Aphis spiraeola Patch

Gesneriaceae
Saintpaulia ionantha H. Wendl.
Aphis gossypii Glover

Gramineae
Chascthloa viridis Lamb.
Sipha flav (Forbes)
Cynodon dactylon (L.) Pers.
Asiphonella dactylonii Theobald
Hordeum vulgare L.
Rhopalosiphum maidis (Fitch)
Panicum dichotomiflorum Michx.
Rhopalosiphum maidis (Fitch)
Paspalum distichum L.
Sipha flav (Forbes)
Saccharum officinarum L.
Sipha flav (Forbes)
Stenotaphrum secundatum (Walt.) O. Kuntze
Sipha flav (Forbes)
Zea mays L.
   Rhopalosiphum maidis (Fitch)
Iridaceae
   Iris sp.
      Dysaphis tulipae (Boyer de Fonscolombe)
Leguminosae
   Medicago sativa L.
      Aphis craccivora Koch
   Melilotus indica (L.) All.
      Aphis gossypii Glover
   Trifolium sp.
      Aphis craccivora Koch
      Therioaphis trifoli (Monell)
Vicia sp.
   Aphis craccivora Koch
   Aphis gossypii Glover
Liliaceae
   Lilium longiflorum var. eximium (Courtois) Bak.
      Aphis armoraciae Cowen
      Aphis fabae Scopoli
      Aphis gossypii Glover
      Aphis ogilvieti Thosbald
   Carolinaea cyperi Ainslie
* Licearia internidalis Quednau
   Macrosiphum euphorbiae (Thommas)
   Myzus persicae (Sulzer)
   Neoloxoptera violae (Pergande)
   Lilium candidum L.
      Aphis gossypii Glover
   Lilium speciosum Thumb.
      Aphis gossypii Glover
   Lilium testaceum Lindl.
      Aphis gossypii Glover
Malvaceae
   Sida carpinifolia L.F.
      Aphis gossypii Glover
Musaceae
   Musa cavendishii Lam. ex Paxt.
   Pentalonia nigronervosa Coquere
Nyctaginaceae
   Bougainvillea sp.
      Aphis gossypii Glover
      Toxoptera aurantii Boyer de Fonscolombe
Oleaceae
   Ligustrum lucidum Ait.
      Aphis spiraecola Patch
Palmae
   Livistona chinensis (Jacq.) R. Br. ex Mart.
   Cerataphis lataniae (Boisdouval)
Plantaginaceae
   Plantago major L.
      Aphis gossypii Glover
Pittosporaceae
   Pittosporum sp.
      Aphis spiraecola Patch
      Toxoptera aurantii Boyer de Fonscolombe
Polygonaceae
   Coccoclorella uvifera (L.) L.
      Aphis gossypii Glover
      Toxoptera aurantii Boyer de Fonscolombe
Polypodiaceae
   Adiantum trapeziforme L.
   Idioperus nephrolepidis Davis
   Blechnum occidentale L.
   Idioperus nephrolepidis Davis
   Cyrtomium falcatum (L.F.) K. Proel
   Idioperus nephrolepidis Davis
   Diplazium lauffianum Christens
   Idioperus nephrolepidis Davis
   Microlepa pyramidata (Wallich) Lacaita
   Idioperus nephrolepidis Davis
   Nephrlepis biserrata ‘Furcans’
   Idioperus nephrolepidis Davis
   Nephrlepis exaltata (L.)
   Idioperus nephrolepidis Davis
   Pteris cretica (‘Albo-lineata’)
   Idioperus nephrolepidis Davis
Ranunculaceae
   Ranunculus sp.
      Macrosiphum euphorbiae (Thomas)
Rosaceae
   Erinodrya japonica (Thunb.) Lindl.
      Aphis gossypii Glover
* Aphirom pomii DeCser
      Aphis spiraecola Patch
   Fragaria vesca L.
      Aphis gossypii Glover
   Hibiscus esculentus L.
      Aphis gossypii Glover
   Hibiscus rosa-sinensis L.
      Aphis gossypii Glover
Hibiscus sp.
   Aphis gossypii Glover
   Toxoptera aurantii Boyer de Fonscolombe
   Murraya paniculata (L.) Jack
   Toxoptera aurantii Boyer de Fonscolombe
   Prunus persica (L.) Batsch
   Brachyceras persicae (Passerini)
   Rosa chinensis Jacq.
   Acyrthosiphon (Rhopobium) pororum
   (Sanderson)
Rubiaceae
   Gardenia thunbergia L.F.
   Toxoptera aurantii Boyer de Fonscolombe
Ruppiaceae
Rhipsalisbrunettea (L.)

Average

Rutaceae

Citrus vulgaris Risso

Toxoptera aurantii Boyer de Fonscolomb

#Toxoptera citricida (Kirkaldy)

Citrus sp.

Aphis craccivora Koch

Aphis gossypii Glover

Aphis spiraeola Patch

Toxoptera aurantii Boyer de Fonscolomb

#Toxoptera citricida (Kirkaldy)

Scrophulariaceae

Antirrhinum majus L.

Myzus persicae (Sulzer)

Digitalis purpurea L.

Myzus persicae (Sulzer)

Solanaceae

Datura candida Pers.

Macrostemum euphorbiae (Thomas)

Myzus persicae (Sulzer)

Solanum melongena L.

Aphis gossypii Glover

Solanum tuberosum L.

Maroshium euphorbiae (Thomas)

Myzus persicae (Sulzer)

Solanum sp.

Aphis nasturtii Kaltenbach

Streitziaceae

Streitizia nicolai Regel & Korn.

Cerataphis brasiliensis (Hempel)

Tropaeolaceae

Tropaeolum majus L.

Aphis fabae Scopoli

Umbelliferae

Aptera granulosa L. var. dulce (Mill.) Pers.

Dysaphis tulipae (Boyer de Fonscolomb)

Daucus carota L.

Carniella sp.

Dysaphis aulicus (Theobald)

Dysaphis tulipae (Boyer de Fonscolomb)

Myzus persicae (Sulzer)

Foeniculum vulgare Mill.

Dysaphis aulicus (Theobald)

Dysaphis tulipae (Boyer de Fonscolomb)

Petroselinum hortense Hoffm.

Dysaphis tulipae (Boyer de Fonscolomb)

Urticaceae

Urtica sp.

Myzus persicae (Sulzer)

Verbenaceae

Citharexylum spinosum L.

Aphis gossypii Glover

Duranta repens L.

Aphis gossypii Glover

Lantana sp.

Aphis gossypii Glover

The Host Plant of the Phylloxeridae in Bermuda

Vitaceae

Vitis vinifera L.

Daktulosphaira vitifoliae (Fitch)

ADDENDUM

The following aphids collected on pecan, Hamilton, Paget, Bermuda, 13 IX 1990, K. D. Monkman, and submitted to Stoezel for identification represent additional, new records for Bermuda: Monelliopsis nigropunctata (Granovsky), 4 alates, 3 alateoid nymphs, 18 nymphs and Monellia sp. probably carpellla (Fitch), 6 nymphs.

ENDNOTE

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