

THE APHIDS (HOMOPTERA: APHIDIDAE) OF BRITISH COLUMBIA.

I. A BASIC TAXONOMIC LIST¹

A. R. FORBES, B. D. FRAZER AND H. R. MACCARTHY

Research Station, Agriculture Canada
Vancouver 8, British Columbia

ABSTRACT

A list is presented of 213 species of aphids collected from 255 hosts or in traps in British Columbia.

INTRODUCTION

This paper lists most of the aphids now known to occur in British Columbia with their host plants. A survey to assess the relative abundance and importance of aphids in the province was begun by the senior author in 1957. Extensive collecting from commercial crops, weeds, and wild hosts has been carried out each year since and Moericke yellow pan water traps were maintained at several locations in the lower Fraser Valley in some years.

Aphids occur on virtually every crop grown in the province. Some aphids damage their hosts directly by their feeding, whereas others are more important as vectors of virus diseases. Until very recently even some of our pest species have been incorrectly identified and little was known of the many species that breed on crops in small numbers. The latter are often important as virus vectors. Conversely, knowledge of the host range, including wild hosts, of vector species is often important in the epidemiology of plant diseases.

Glendenning (1924, '25, '29) listed 117 species of aphids in British Columbia. Unfortunately the nomenclature of his lists is out-of-date and the status of some of his species is in question. Work is underway to up-date his records and the results will be published as soon as possible.

The present list includes collections made in connection with the aphid survey project of the Vancouver Research Station along with the records of B.C. material published by W. R. Richards (Richards 1956-1972, see References). Most of the collections were made by the authors. About 30 collections were made and given to us by the late Prof. G. J. Spencer of the University of British Columbia. Other collectors include: H. Andison, G. V. Armstrong, F. L. Banham, S. K. Burt, E. C. Cole, R. A. Costello, W. T. Cram, H. A. Daubeny, L. Farstad, G. J. Fields, D. G. Finlayson, J. D. Fitz-Gerald, R. E. Fitzpatrick, H. G. Fulton, K. Glendenning, K. Graham, R. H. Handford,

R. Harris, J. R. Hill, R. G. Jones, R. Marlatt, F. C. Mellor, R. P. Messum, J. Moisey, C. L. Neilson, M. D. Noble, D. Ormrod, W. D. Pearson, H. S. Pepin, D. P. Pielou, J. Raine, E. Ruddock, G. G. E. Scudder, H. Severson, F. E. Skelton, M. G. Smuin, R. Stace-Smith, H. N. W. Toms, N. Tonks, W. D. Touzeau, P. Townsley, W. H. Wilde, A. T. Wilkinson and N. S. Wright.

Most of the identifications were made by W. R. Richards, Taxonomy Section, Entomology Research Institute, Ottawa, or by the senior author; some were by B. D. Frazer. Several of the *Cinara* species were identified by G. A. Bradley. All the specimens recorded are in the collection at the Research Station at Vancouver or in the Canadian National Collection at Ottawa.

The aphids were collected in 80% ethanol. Clearing and mounting were done by the method of Hille Ris Lambers (1950), which has also been reported in this Journal by Spencer (1959).

Most of the aphids are given with the host plants on which they were collected. A few species were collected only as stray alates on plants other than their normal hosts. These species are listed as "in flight". Species collected from Moericke yellow pan traps are listed only when that species has not been taken breeding on a host plant. Further collecting will undoubtedly associate the aphids in both the latter categories with their host plants.

The aphids are listed alphabetically by species. This gives a convenient and speedy method of reference and eliminates the problem of having to look in several places for a species that is placed in different genera by different authorities. Host plants are listed alphabetically by genus and species. The location of the collection sites may be determined by reference to Table 1 and the map of the province (Fig. 1).

Plant names follow Connors (1967), Toms (1964), or Henry (1915). Many of the host plants were identified by H. N. W. Toms.

¹Contribution No. 270, Research Station, 6660 N.W. Marine Drive, Vancouver 8, British Columbia.

ECOLOGICAL BACKGROUND

Since it includes 1500 kilometers or nearly 1000 miles of the Cordillera, British Columbia is predominantly mountainous, the ranges running generally northwest and southeast. Covering 948,600 sq km (366,255 sq mi), the province is roughly halved by the 54th parallel. It has boundaries of 1,046 km (650 mi) with the N W Territories and Yukon along the 60th parallel on the N, and 644 km (400 mi) with the states of Washington, Idaho and Montana along the 49th parallel on the S. From the 49th to the 60th parallel is 1,207 km (750 mi). There are 7,164 km (4,450 mi) of indented

coastline and 4,830 km (3,000 mi) of major rivers, many of which run in deep canyons. Forests cover 39% of the province and barren rock 53%; 2% is in rivers and lakes, 2% is upland range and grazing. Only 3% is arable or potentially so and most of this is essentially prairie parkland, lying to the E and N of the Rockies along the border with Alberta and N of the 55th parallel (Atlas of Resources, 1956). There are two general types of climates: maritime on the W side of the Coast Mountains, with high winter precipitation and cool summers; continental in the interior, tending to semi-arid in the S and sub-arctic in the N.

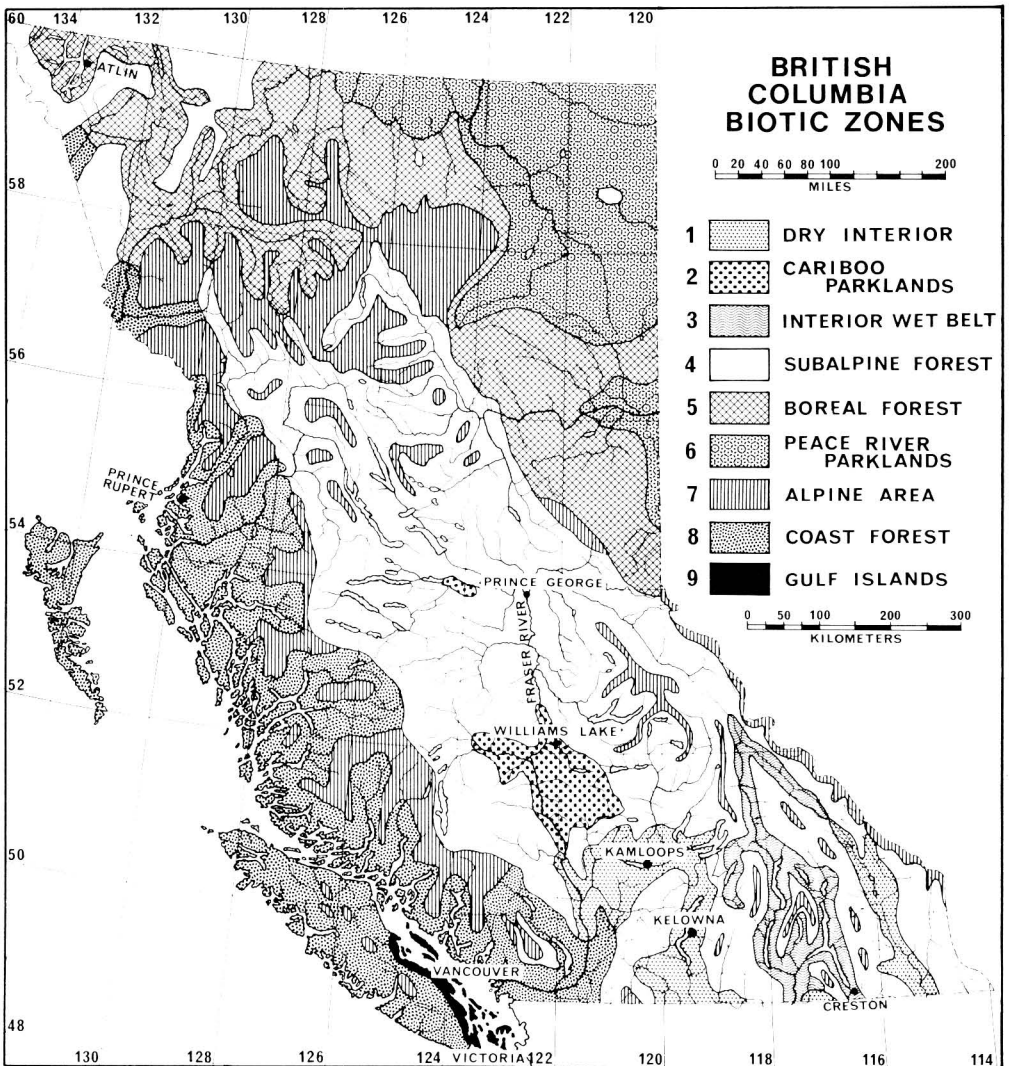


Fig. 1. Biotic zones of British Columbia, adapted from those of Munroe and Cowan (1947) by Lyons (1965).

Table 1. Localities where aphids were taken with airline distances from reference points. The 8 places used as reference points and the biotic zones appear on the map (Fig. 1). Kilometers and miles are rounded to the nearest whole number.

Locality	Biotic zone	Reference point	Dir.	Distance		Locality	Biotic zone	Reference point	Dir.	Distance	
				km	mi					km	mi
Abbotsford	8	Vancouver	SE	64	40	Lulu Island	8	Vancouver	S	16	10
Agassiz	8	Vancouver	E	97	60	Lumby	1	Kelowna	NE	53	33
Aldergrove	8	Vancouver	SE	48	30	Manning Park	7	Vancouver	E	217	135
Atlin	5	Extreme NW				Merritt	1	Kamloops	S	71	44
Barnhartvale	1	Kamloops	E	15	9	Milner	8	Vancouver	SE	35	22
Bella Coola	8	Williams Lake	W	277	190	Mission	8	Vancouver	E	58	36
Boundary Bay	8	Vancouver	S	32	20	New Westminster	8	Vancouver	SE	3	2
Bowser	9	Victoria	NW	153	95	North Vancouver	8	Vancouver	N	8	5
Bradner	8	Vancouver	SE	56	35	Oliver	1	Kelowna	S	72	45
Brentwood	9	Victoria	NW	29	18	Pavilion Lake	1	Kamloops	W	105	65
Britannia Beach	8	Vancouver	N	48	30	Pemberton	8	Vancouver	N	129	80
Burnaby	8	Vancouver	E	1	1	Penticton	1	Kelowna	S	26	16
Burns Lake	4	Prince George	W	193	120	Pitt Meadows	8	Vancouver	E	29	18
Cache Creek	1	Kamloops	W	68	42	Prince Rupert	8	Vancouver	NW	708	440
Campbell River	9	Victoria	NW	230	143	Prospect Lake	9	Victoria	N	13	8
Canyon	1	Creston	E	8	5	Pt. Atkinson	9	Vancouver	W	16	10
Chase	1	Kamloops	E	48	30	Queen Charlotte	8	Prince Rupert	SW	161	100
Chilcotin	2	Williams Lake	W	120	75	Quesnel	2	Prince George	S	84	53
Chilliwack	8	Vancouver	E	88	55	Rayleigh	1	Kamloops	N	16	10
Cloverdale	8	Vancouver	SE	32	20	Revelstoke	3	Kelowna	NE	156	97
Courtenay	9	Victoria	NW	225	140	Richmond	8	Vancouver	S	16	10
Cowichan Bay	9	Victoria	N	40	25	Rykerts	1	Creston	S	10	6
Creston	1	Vancouver	E	468	297	Saanich	9	Victoria	N	24	15
Creston Flats	1	Creston	W	1	1	Sardis	8	Vancouver	E	84	52
Duncan	9	Victoria	N	40	25	Sea Island	8	Vancouver	S	8	5
Erickson	1	Creston	E	6	4	Soda Creek	2	Williams Lake	N	27	17
Fawn	2	Williams Lake	SE	77	48	Sorrento	1	Kamloops	NE	64	40
Fort St. John	6	Prince George	NE	282	175	South Burnaby	8	Vancouver	E	1	1
Goldstream	9	Victoria	NW	24	15	Sumas	8	Vancouver	SE	69	43
Grand Forks	1	Kelowna	SE	129	80	Summerland	1	Kelowna	SW	35	22
Hat Creek	1	Kamloops	W	97	60	Summit Lake	4	Prince George	N	45	28
Kamloops	1	Vancouver	NE	249	155	Terrace	8	Prince Rupert	E	116	72
Kelowna	1	Kamloops	SE	113	70	Texas Lake	8	Vancouver	E	124	77
Ladner	8	Vancouver	S	24	15	Trail	1	Vancouver	E	396	246
Langford	9	Victoria	W	13	8	Vancouver	8	Mouth of Fraser R			
Langley	8	Vancouver	E	40	25	Victoria	9	SE tip Vancouver Is			
Lillooet	1	Kamloops	W	113	70	Westham Island	8	Vancouver	S	24	15
Lister	1	Creston	S	6	4	Williams Lake	2	Kamloops	NW	209	130

We have adopted the 9 biotic zones of Lyons (1965) (Fig. 1), which are themselves somewhat simplified from the 13 of Munro and Cowan (1947). Lyons describes the zones clearly and gives separate lists of the native common trees, shrubs and flowering plants occurring in each. Woody plants are described and keyed in more detail by Garman (1963). The grasses in the province are covered effectively and in detail by Hubbard (1955), the ferns by Taylor (1956), the mosses by Schofield (1969) and the weeds by Frankton and Mulligan (1970). The region as an environment for insects is described in general by Munroe (1956).

The biotic zones apply most directly to valley bottoms, where communications generally run and where tillage agriculture is practiced. Even in the most arid, southerly part of the Okanagan Valley it is possible within a short distance on the map, to climb into different zones and even into alpine surroundings. Thus a locality label may bear the name of a place in a given zone, but the specimen may have been taken in a different zone, hundreds

of meters higher. It follows that conventional range maps are of limited value.

During the Wisconsin glaciation the province, including even the outlying Queen Charlotte Islands, was completely buried without refugia, to depths up to 2,500 m (8,400 ft) (Atlas of Resources, 1956). In the ensuing period a fairly large number of aphid species have moved into the province but many of the 213 species recorded here are introductions, associated in some way with agriculture or horticulture.

The extent and diversity of the province suggest that its aphid fauna is unlikely to be fully known in the near future.

The name of each place where an aphid species occurred is listed in Table 1, with the number of its biotic zone (Fig. 1) and its airline distance and direction from 8 reference points.

LIST OF SPECIES

ABIETICOLA (Cholodkovsky), CINARA

Abies sp: Victoria, Jun 6 67.

ABIETINUM (Walker), ELATOBIMUM

- Picea pungens*: Vancouver, Apr 15/58.
Picea sitchensis: Prince Rupert, Apr 26/26; Richmond, May 20/64.
Picea sp: North Vancouver, May 30/60; Vancouver, Apr 27/61.
- ABIETINUS** Koch, MINDARUS
Abies grandis: Vancouver, Jun 8/67.
- AEGOPODII** (Scopoli), CAVARIELLA
Anethum graveolens: Richmond, Jul 12/65; Vancouver, Aug 9/56.
Daucus carota: Agassiz, Jul 28/59; Cloverdale, Jul 4/57, Nov 25/64; North Vancouver, Sep 8/72; Vancouver, Jul 10/62; Victoria, Aug 2/65.
Oenanthe sarmentosa: Victoria, Aug 2/65.
Sium suave: Williams Lake, Aug 7/65.
- AETHEOCORNUM** (Smith & Knowlton), MACROSIPHUM
Geranium viscosissimum: Williams Lake, Aug 4/58.
- ALBIFRONS** Essig, MACROSIPHUM
Lupinus sp: Mission, Jun 15/57; North Vancouver, Jul 15/65; Vancouver, May 26/58, May 30/57.
- ALBIPES** Richards, THELAXES
Quercus garryana: Victoria, May 7/63 (Richards 1966a), Jun 7/67.
- ALNI** (DeGeer), PTEROCALLIS
Alnus rubra: Prince Rupert, Jul 10/60 (Richards 1965); Vancouver (UBC), Aug 24/62.
Alnus sp: Oliver, Jul 4/59 (Richards 1965).
- ALPINA** (Gillette & Palmer), KAKIMIA
Moericke yellow pan water trap: Chilliwack, Aug 9/67; Richmond, Sep 2/67.
- AMBROSIAE** (Thomas), DACTYNOTUS
Aster sp: Vancouver, Jun 18/57.
- AMERICANUM** (Riley), ERIOSOMA
Ulmus sp: Kamloops, Jun 10/57.
- AMSINCKII** Richards, PLEOTRICHOPHORUS
Amsinckia intermedia: Oliver, Jul 18/65 (Richards 1968a).
- ASCALONICUS** Doncaster, MYZUS
Allium schoenoprasum: Vancouver, Sep 30/63.
Aubrieta deltoidea: Victoria, Apr 4/58.
Aucuba japonica: Vancouver, May 22/67.
Capsella bursa-pastoris: Vancouver (UBC), Apr 17/67.
Cardamine oligosperma: Vancouver (UBC), Apr 26/67.
- Erodium cicutarium*: Vancouver (UBC), Apr 26/67.
Fragaria chiloensis var *ananassa*: Abbotsford, Mar 17/61; Saanich, Jun 5/59; Sumas, Mar 4/58; Vancouver, Jan 22/68, Apr 2/58, Apr 8/58; Apr 17/59, May 17/57; Vancouver (UBC), Mar 3/67, Oct 10/69, Oct 18/69; Victoria, Mar 13/57, Apr 13/57.
Geranium molle: Vancouver (UBC), May 3/67.
Geum macrophyllum: Vancouver, Jun 9/67.
Heracleum maximum: Vancouver, Feb 4/58.
Hesperis matronalis: Vancouver, Jun 9/67.
Hypochaeris radicata: Vancouver (UBC), Apr 28/67.
Lilium speciosum: Vancouver, Mar 1/58.
Osmorhiza chilensis: North Vancouver, May 18/64.
Plantago lanceolata: Vancouver (UBC), May 3/67.
Rumex acetosella: Lulu Island, Apr 10/67; Vancouver (UBC), Apr 17/67.
Sisymbrium officinale: Vancouver, Mar 28/58.
Sonchus sp: Vancouver (UBC), Apr 26/67.
Stellaria sp: Vancouver, Jul 22/59.
Taraxacum officinale: Vancouver (UBC), Apr 26/67.
Viola tricolor: Abbotsford, Mar 17/61; Vancouver, Jan 18/58, Jun 6/67, Dec 30/57.
- ATRIPLICIS** (Linnaeus), BRACHYCOLUS
Chenopodium album: Lulu Island, Aug 2/56; Quesnel, Aug 7/67; Soda Creek, Aug 5/58; Victoria, Aug 2/65, Aug 8/56.
- AVENAE** (Fabricius), MACROSIPHUM
Agropyron sp: Creston, Aug 13/59; Vancouver, Aug 3/58.
Avena sativa: Vancouver, May 29/58, Aug 20/57.
Gramineae: Vancouver, Apr 12/58.
Hordeum vulgare: Creston, Jul 4/57.
Secale cereale: Vancouver, May 8/59; Victoria, Apr 7/58.
Triticum aestivum: Creston, Jul 20/57, Jul 24/57; Fort St. John, Aug 64; Vancouver, May 9/58, Aug 1/59, Aug 9/56; Vancouver (UBC), Jun 20/67.
Zea mays: Chilliwack, Nov 20/56.
- BAKERI** (Cownt), ROEPKEA
Malus sylvestris: Vancouver, Sep 1/57.
Trifolium sp: Vancouver, Aug 26/70.
- BERBERIDIS** (Kaltenbach), LIOSOMAPHIS

- Berberis thunbergii*: Vancouver, May 30/65, Jul 15/64.
- BETULICOLA (Kaltenbach), CALAPHIS
Betula papyrifera: Vancouver, May 12/61, Oct 4/60.
Betula sp: Summerland, Jul 7/69.
- BETULIFOLIAE Granovsky, CEPEGIL-
LETTEA
Betula occidentalis: Merritt, Aug 10/24 (Richards 1969a).
- BICOLOR BICOLOR (Oestlund), PTERO-
COMMA
Populus balsamifera: Atlin, Jun 1/55.
Populus trichocarpa: Sardis, Apr 8/26.
Salix sp: Langford, Jun 9/59; Summit Lake, July 4/59, Aug 20/59; Terrace, Jul 13/60.
All records from Richards (1967c).
- BRAGGI (Gillette), CINARA
Picea pungens: Vancouver, Jun 11/70.
- BRASSICAE (Linnaeus), BREVICORYNE
Brassica napobrassica: Cloverdale, Jul 31/56; Victoria, Aug 8/56.
Brassica oleracea var *capitata*: Creston, Sep 16/58; Vancouver (UBC), May 22/58, Aug 8/56.
Brassica oleracea var *gemmifera*: Agassiz, Jul 16/58; Vancouver (UBC), Oct 20/60.
Rhaphanus sativus: Barnhartvale, Oct 4/56.
- BREVISPINOSA (Gillette & Palmer),
CINARA
Pinus contorta: Agassiz, Jul 26/33; Fawn, Jun 23/52 (Richards 1956).
- BREVISPINOSUS Gillette & Palmer, PERI-
PHYLLUS
Acer glabrum: Kelowna, Jun 8/57.
- BULBOSA Richards, PLOCAMAPHIS
Salix sp: Oliver, Jun 29/65, Jul 17/65 (Richards 1966b).
- BURSARIUS (Linnaeus), PEMPHIGUS
Moericke yellow pan water trap: Richmond, Jul 6/64, Sep 29/64.
- CALIFORNICA (Davidson), THELAXES
Quercus garryana: Victoria, Jun 2/67.
- CALIFORNICUM (Clarke), MACRO-
SIPHUM
In flight: Ladner, Jun 7/56.
- CALIFORNIENSIS (Shinji), PERIPHYL-
LUS
Acer circinatum: Chilliwack, May 7/59.
Acer sp: Chilliwack, May 28/59.
- CANAE (Williams), APHIS
Artemisia tridentata: Kamloops, Jun 2/60, Aug 11/60; Pavilion Lake, Aug 2/60; Rayleigh, Aug 18/60.
- CARDUI (Linnaeus), BRACHYCAUDUS
Cirsium undulatum: Chase, Jul 25/67.
Prunus domestica: Sorrento, May 14/58.
- CARDUINUS (Walker), CAPITOPHORUS
In flight: Creston Flats, Aug 13/58; Soda Creek, Aug 5/58.
Moericke yellow pan water trap: Richmond, Jul 6/69.
- CARPINI (Koch), MYZOCALLIS
Carpinus betulus: Vancouver, Jun 15/64.
- CASTANICOLA Baker, MYZOCALLIS
Castanea sp: Lulu Island, Aug 8/54 (Richards 1965).
- CEANOETHI Clarke, APHIS
Ceanothus sanguineus: Mission, Jun 18/59.
- CERASI (Fabricius), MYZUS
Prunus avium: Creston, Jun 5/57, Sep 16/58; Erickson, Jul 28/58, Sep 30/58.
Prunus emarginata: Vancouver, Jun 15/64.
- CIRCUMFLEXUS (Buckton), AULACOR-
THUM
Iris sp: Vancouver, May 18/58.
Lilium longiflorum: Vancouver, May 2/61.
Pelargonium hortorum: Vancouver, Jul 7/59.
Primula sp: Vancouver, Jan 18/58.
Saintpaulia sp: Vancouver, May 26/56.
Tulipa gesneriana: Vancouver, May 24/58.
Viola tricolor: Vancouver, Jan 18/58, May 6/67.
Yucca smalliana: Vancouver, Jul 25/63.
- CIRSII (Linnaeus), DACTYNOTUS
Cirsium arvense: Chilliwack, Jul 30/65; Cloverdale, Jul 31/65; Vancouver, Jul 15/65; Victoria, Aug 2/65.
Cirsium brevistylum: Summerland, Jun 30/69.
Cirsium sp: Vancouver, Jul 20/62.
- CLAVICORNIS Richards, AULACOR-
THUM
Rosa sp: Oliver, Jul 1/65 (Richards 1972b).
- COLORADENSIS (Gillette), CINARA
Picea pungens: Vancouver, May 25/59.
- COLUMBIAE Richards, SITOMYZUS
Gramineae: Vancouver, May 7/58 (Richards 1960 b), May 19/58.
- COLUMBIAE Richards, TUBERCULATUS
Quercus garryana: Langford, Jul 14/59

- (Richards 1965, 1968b); Victoria, Jul 1/56.
- CORNI** (Fabricius), **ANOECIA**
Moericke yellow pan water trap: Richmond, Sep 2/64, Sep 23/64, Sep 26/64, Oct 12/64.
- CORNIELLA** Hille Ris Lambers, **APHIS**
Epilobium angustifolium: Richmond, Aug 4/58.
Epilobium sp.: Williams Lake, Aug 4/58.
- CORRUGATANS** (Sirrine), **PROCIPHILUS**
Amelanchiers sp.: Soda Creek, Jun 16/56.
- CORYLI** (Goeze), **MYZOCALLIS**
Corylus avellana: Vancouver, May 22/56, Jun 22/56, Aug 8/56.
Corylus sp.: Agassiz, Jun 18-24; Cowichan Bay, Jun 2/59; Creston, May/55, Jun/55; Langford, Jul 16/59; Summerland, Sep 18/57 (Richards 1965).
- COSTATA** (Zetterstedt), **CINARA**
Picea pungens: Vancouver, Jun 20/66.
- COWENI** (Hunter), **MACROSIPHUM**
Artemisia tridentata: Lillooet, Aug 3/60; Penticton, May 11/58.
- CRACCIVORA** Koch, **APHIS**
Laburnum anagyroides: Vancouver, Jun 26/61.
Spartium junceum: Vancouver (UBC), Jul 27/66.
- CRATAEGARIUS** (Walker), **OVATUS**
Mentha arvensis var. *canadensis*: Vancouver, May 8/58.
- CRATAEGIFOLIAE** (Fitch), **ROEPKEA**
Leguminosae in summer and *Crataegus* spp in winter: (Richards 1969b).
- CRYSTLEA** (Smith & Knowlton), **MASONAPHIS**
Lonicera involucrata: Quesnel, Aug 6/58.
- CURVIPES** (Patch), **CINARA**
Abies balsamea: Agassiz, Aug 7/26.
- CYPERI** (Walker), **TRICHOCALLIS**
Carex spp.: (Richards 1971).
- CYTISORUM** Hartig, **APHIS**
Cytisus demissus: Vancouver, Aug 2/63.
- DACTYLIDIS** (Hayhurst), **HYALOPTEROIDES**
Dactylis glomerata: Agassiz, Apr 22/58, May 26/59; Chilliwack, May 12/58; Vancouver, May 9/58.
Holcus lanatus: Richmond, May 24/64.
- DAVIDSONI** (Mason), **MASONAPHIS**
Rubus parviflorus: Vancouver, May 19/67, Jun 9/67, Jul 21/67; Vancouver (UBC), Aug 9/66.
- DELICATUS** Patch, **CHAITOPHORUS**
Populus spp.: (Richards 1972c).
- DIRHODUM** (Walker), **METOPOLOPHIUM**
Avena sativa: Vancouver, Jul 10/57, Aug 20/57.
Crataegus sp.: Vancouver (UBC), May 12/61.
Hordeum vulgare: Vancouver, Oct 15/65.
Rosa rugosa: Vancouver, Mar 28/58, Apr 3/58.
Rosa sp.: Vancouver, Jan 6/58, Apr 8/58, Apr 12/58, Apr 28/57.
- DORSATUM** Richards, **AULACORTHUM**
Gaultheria shallon: Duncan, Jul 27/65 (Richards 1967b); Vancouver, Jun 29/67.
- ELAEGNI** (del Guercio), **CAPITOPHORUS**
Cirsium brevistylum: Summerland, Jun 30/69.
Mentha arvensis var. *canadensis*: Williams Lake, Aug 7/58.
- ERIGERONENSIS** (Thomas), **DACTYNOTUS**
Grindelia stricta: Point Atkinson, May 5/57.
Solidago canadensis: (Richards 1972a).
- ERIOPHORI** (Walker), **CERURAPHIS**
Viburnum opulus: Vancouver, May 5/63, May 12/61; Victoria, Apr 4/58.
- ERYSIMI** (Kaltenbach), **HYADAPHIS**
Brassica campestris: Abbotsford, Aug 6/65.
- ESSIGI** (Gillette & Palmer), **KAKIMIA**
Aquilegia sp.: Vancouver, Jun 27/63.
- EUPHORBIAE** (Thomas), **MACROSIPHUM**
Brassica oleracea var. *gemmifera*: Agassiz, Jul 16/58.
Chrysanthemum morifolium: Victoria, Apr 4/58.
Cirsium arvense: Cloverdale, Jul 31/65.
Cornus nuttallii: Victoria, Jun 11/56.
Dicentra formosa: Goldstream, Aug 20/59.
Epilobium sp.: Williams Lake, Aug 4/58.
Fragaria chiloensis var. *ananassa*: Agassiz, May 5/57, May 12/56; Aldergrove, Jun 10/59; Langley, June 10/59; Richmond, May 3/57; Vancouver, Apr 8/58, May 18/61; Victoria, May 30/67.
Geum macrophyllum: Vancouver, Jun 9/67.
Gladiolus hortulanus: Vancouver, Jul 12/57; Williams Lake, Aug 12/58.
Heracleum maximum: Vancouver, Jun 14/55.

- Holodiscus discolor*: Vancouver, May 30/56.
Ilex aquifolium: Chilliwack, Apr 13/58; Vancouver, May 1/58, May 2/57; Victoria, Apr 4/58.
Lactuca pulchella: Creston, Jun 5/57.
Lactuca sativa: Vancouver, May 28/57, Sep 12/56.
Maianthemum dilatatum: Goldstream, Aug 20/59.
Malus pumila: Vancouver, May 23/58.
Matricaria matricarioides: Vancouver, May 29/59.
Medicago sativa: Kamloops, Jul 19/72.
Melilotus alba: Creston Flats, Jun 6/57.
Philadelphus gordonianus: Vancouver, May 26/59.
Rheum rhaponticum: Vancouver, Jul 20/65.
Rosa sp.: Soda Creek, Aug 4/58; Vancouver, Mar 23/59.
Rubus idaeus: Agassiz, Sep 27/66.
Senecio vulgaris: Lulu Island, Apr 7/64.
Solanum tuberosum: Agassiz, Jul 12/56; Quesnel, Aug 7/67.
Tagetes erecta: Williams Lake, Aug 7/58.
Tulipa gesneriana: Chilliwack, May 13/58; Vancouver, Apr 7/58, May 4/59, May 14/59, May 17/67, May 24/58; Victoria, Apr 4/58, Jun 4/59.
Urtica lyalli: Summerland, Jun 30/69.
Zea mays: Chilliwack, Nov 20/56.
Zinnia elegans: Vancouver, Oct 7/58.
- FABAE Scopoli, APHIS**
Beta vulgaris: Vancouver, Jul 9/62.
Capsella bursa-pastoris: Abbotsford, Jul 21/66; Vancouver, May 5/56.
Chenopodium glaucum: Penticton, Sep 2/65.
Cirsium arvense: Abbotsford, Aug 30/51; Chilliwack, Jul 30/65; Texas Lake, Jul 24/67; Vancouver, Aug 2/65.
Euonymus alatus: Kamloops, May 15/67.
Gladiolus hortulanus: Vancouver, Aug 17/57, Aug 18/56, Sep 7/57.
Ilex aquifolium: Vancouver, Jun 7/59, Aug 13/62.
Lycopersicon esculentum: Creston, Aug 14/58; Victoria, Aug 2/65.
Matricaria matricarioides: Abbotsford, Aug 6/65.
Oxalis deppei: North Vancouver, Sep 15/63.
Philadelphus gordonianus: Vancouver, Jul 3/57, Sep 5/56.
Polygonum persicaria: Richmond, Aug 8/65.
Ranunculus sp.: Abbotsford, Jul 19/65; North Vancouver, Sep 23/63.
Rheum rhaponticum: Grand Forks, Jul 20/61; Vancouver, Jul 29/65.
Solanum tuberosum: Victoria, Aug 12/53.
Sonchus asper: Saanich, Aug 21/59.
Tropaeolum majus: Vancouver, Aug 13/62.
Vicia faba: Vancouver, Aug 18/57.
Zinnia elegans: Vancouver, Oct 7/58.
- FAGI (Linnaeus), PHYLLAPHIS**
Fagus sylvatica: Vancouver, May 25/56.
- FIMBRIATA Richards, FIMBRIAPHIS**
Fragaria sp.: Agassiz, Oct 11/56; Aldergrove, Jun 10/59; Richmond, May 22/57, May 23/58, Jun 2/58, Jun 18/57, Jul 17/57, Aug 2/56; Vancouver, Apr 17/59, Apr 24/59, May 18/61; Victoria, May 30/57.
Vaccinium corymbosum: Pitt Meadows, Jul 15/58; Richmond, May 15/65; Vancouver, May 23/58, Jun 25/63.
Vaccinium sp.: Vancouver, May 11/59.
- FITCHII (Sanderson), RHOPALOSIPHUM**
Crataegus sp and *Malus* sp: (Richards 1960c).
 Moericke yellow pan water trap: Richmond, Oct 14/64.
- FLAVA (Davidson), OESTLUNDIELLA**
 Moericke yellow pan water trap: Richmond, Aug 10/67.
- FLAVA (Forbes), SIPHA**
 In flight: Oliver, no date (Richards 1972c).
- FLOCCULOSA (Weed), PLOCAMAPHIS**
Salix sp: Prospect Lake, Apr 16/57; Terrace, Jul 26/60 (Richards 1966b).
- FORBESI (Richards), AMPHOROPHORA**
Rubus spectabilis: Lulu Island, Jun 2/58.
- FORBESI Weed, APHIS**
Fragaria bracteata: Manning Park, May 25/59.
Fragaria chiloensis var *ananassa*: Vancouver, Jun 16/58, Jun 17/58, Oct 22/58.
- FORNACULA Hottes, CINARA**
 Moericke yellow pan water trap: Chilliwack, Jun 4/65.
- FRAGAEFOLII (Cockerell), CHAETOSIPHON**
Fragaria chiloensis var *ananassa*: Abbotsford, Jul 15/58; Bradner, Apr 29/57; Brentwood, Aug 17/59; Chilliwack, Oct 13/58; Lulu Island, Aug 21/59, Sep 20/56; Saanich, May 30/55, Jun 5/59, Aug 21/59; Vancouver, Mar 18/58, Apr

- 17/59, May 5/59, May 21/59; Vancouver (UBC), Jun 16/59; Victoria, May 30/57.
- Fragaria glauca*: Williams Lake, Aug 4/56.
- Fragaria virginiana*: Britannia Beach, Jul 9/65.
- Potentilla anserina*: Sea Island, Jul 14/59, Jul 23/58; Victoria, Aug 4/58.
- Rosa* sp.: Quesnel, Aug 6/58; Terrace, Jul 9/60 (Richards 1963c).
- FRAGARIAE** (Walker), **MACROSIPHUM**
- Cinna latifolia*: Vancouver, May 25/58.
- Gramineae*: Vancouver, May 19/58.
- Hordeum vulgare*: Vancouver, Jun 19/58, Jul 18/56.
- Rubus idaeus*: Vancouver, Dec 1/59.
- Rubus laciniatus*: Richmond, Apr 23/71.
- Rubus thyranthus*: Vancouver, May 23/57.
- Sisymbrium officinale*: Vancouver (UBC), Jul 13/65.
- FREQUENS** (Walker), **HOLCAPHIS**
- Moericke yellow pan water trap: Richmond, Jun 28/64, Jul 2/64.
- GERANII** Gillette & Palmer, **AMPHOROPHORA**
- Geranium viscosissimum*: Williams Lake, Aug 4/58.
- GILLETTEI** (Hottes), **ESSIGELLA**
- Pinus ponderosa*: Hat Creek, Aug 25/58.
- GILLETTEI** Davidson, **EUCERAPHIS**
- Alnus rubra*: Vancouver, Jul 13/65.
- Alnus* sp.: Revelstoke National Park, Jul 25/67.
- GRAMINUM** (Rondani), **SCHIZAPHIS**
- Moericke yellow pan water trap: Chilliwack, Jun 18/65, Jul 23/65; Richmond, Jul 4/64, Aug 13/64.
- GRAVICORNIS** (Patch), **THECABIUS**
- Populus trichocarpa*: Victoria, Aug 2/65.
- HELIANTHI** Monell, **APHIS**
- Helianthus annuus*: Kamloops, Aug 26/57.
- Helianthus* sp.: Vancouver, Sep 24/58.
- HELICHRYSI** (Kaltenbach), **BRACHYCAUDUS**
- Antirrhinum majus*: Vancouver, Jun 6/59.
- Capsella bursa-pastoris*: Richmond, Apr 7/64.
- Matricaria matricarioides*: Vancouver, Apr 26/67.
- Philadelphus gordonianus*: Vancouver, May 22/57, May 28/61.
- Prunus domestica*: Lulu Island, May 23/57; Vancouver, May 6/58.
- Senecio vulgaris*: Lulu Island, Apr 7/64; Vancouver, May 12/58.
- Tagetes tenuiflora* var *pumila*: Vancouver, Jun 23/67.
- Trifolium pratense*: Vancouver, Jul 25/56.
- Vaccinium corymbosum*: Vancouver, May 23/58.
- HERACLELLA** Davis, **APHIS**
- Heracleum lanatum*: Vancouver, Jun 22/66.
- Pastinaca sativa*: Victoria, Aug 12/53.
- Sium suave*: Williams Lake, Aug 7/58.
- HIPPOPHAES** (Walker), **CAPITOPHORUS**
- Polygonum persicaria*: Vancouver, Aug 29/57.
- HORNI** (Börner), **CAPITOPHORUS**
- Moericke yellow pan water trap: Richmond, June 21/64, Jul 6/64.
- HUMULI** (Schränk), **PHORODON**
- Humulus lupulus*: Quesnel, Aug 7/67; Sardis, May 23/58, Jun 5/58.
- Prunus cerasifera* var *pissardi*: Victoria, Aug 2/65.
- Prunus japonica*: New Westminster, Jun 14/61.
- IDAEI** van der Goot, **APHIS**
- Rubus idaeus*: Vancouver, May 16/60, Jun 3/68, Jun 30/60, Jul 31/52, Sep 7/51; Vancouver (UBC), Apr 18/58.
- Rubus loganobaccus*: Vancouver, Jun 3/68.
- INSERTUM** Walker, **RHOPALOSIPHUM**
- Malus pumila*: Vancouver, Oct 18/57.
- JUGLANDICOLA** (Kaltenbach), **CHROMAPHIS**
- Juglans* sp.: Agassiz, Jul 14/24; Creston, Aug 14/58; (Richards 1960a).
- JUGLANDIS** (Goeze), **CALAPHIS**
- Juglans regia*: Richmond, Jul 25/69.
- Moericke yellow pan water trap: Chilliwack, Jul 30/67.
- KIOWANEPHUM** (Hottes), **MACROSIPHUM**
- Zygadenus* sp.: Kamloops, Jun 27/37.
- KONOI** Takahashi, **CAVARELLA**
- Apium graveolens*: Vancouver, Aug 6/57, Oct 8/57.
- Salix lasiandra*: Vancouver, Jun 9/65.
- KURDJMOVI** Mordvilko, **SIPHA**
- Agropyron repens*: Agassiz, Sep 13/56.
- Agropyron* sp.: Creston, Aug 14/58.
- Gramineae*: Vancouver, Sep 26/57.

- LACTUCAE (Linnaeus), HYPEROMYZUS
Lactuca pulchella: Creston, Sep 16/58.
Sonchus arvensis: Richmond, Jul 8/58;
 Vancouver (UBC), Jan 7/64.
Sonchus asper: Saanich, Aug 21/59;
 Vancouver (UBC), Aug 19/65.
Sonchus oleraceus: Vancouver, Jul 16/56.
Sonchus sp.: Creston, Sep 15/58; Victoria,
 Jul 1/56.
- LAMBERSI MacGillivray, MASONAPHIS
Rhododendron sp.: North Vancouver, Jul
 6/69.
- LANIGERUM (Hausmann), ERIOSOMA
Malus pumila: Erickson, Oct 28/58;
 Vancouver, May 23/58, Aug 17/66, Nov
 19/57.
- LATYSIPHON (Davidson), RHOPALOSI-
 PHONINUS
Solanum tuberosum: Ladner, Apr 17/63.
- LONGICAUDA Richards, ASPIDAPHIS
Spiraea sp.: Terrace, Aug 27/60 (Richards
 1963b).
 Moericke yellow pan water trap:
 Chilliwack, Jun 28/65, Jul 13/65.
- LUGENTIS Williams, APHIS
Senecio jacobaea: Abbotsford, Jun 29/62;
 Vancouver, Mar 12/58, Jun 23/70.
- LYROPICTUS (Kessler), PERIPHYLLUS
Acer macrophyllum: Vancouver, May
 29/57.
Acer platanoides: Vancouver, May 14/60,
 Jun 30/60.
Acer sp.: Chilliwack, May 28/59.
- LYTHRI (Schrank), MYZUS
Prunus emarginata: Vancouver, Jun
 15/64.
- MACROSIPHUM (Wilson), ACYRTHO-
 SIPHON
Viburnum trilobum: Quesnel, Aug 6/58.
- MACROSTACHYAE (Essig), CHAITO-
 PHORUS
Salix spp.: (Richards 1972c).
- MAIDIS (Fitch), RHOPALOSIPHUM
 Moericke yellow pan water trap: Richmond,
 Sep 14/64.
- MALVAE ROGERSII (Theobald), ACYR-
 THOSIPHON
Fragaria sp.: Saanich, Jun 5/59; Van-
 couver (UBC), May 5/59.
- MAXIMA (Mason), MASONAPHIS
Rubus parviflorus: Vancouver, May
 24/56, Jun 9/58, Jun 9/67, Jun
 29/67, Jul 7/67, Jul 21/67; Vancouver
 (UBC), Mar 31/66; Victoria, May
 30/57.
- MEDISPINOSA (Gillette & Palmer), CIN-
 ARA
Pinus contorta: Burns Lake, Jun 11/56.
- MILLEFOLII (DeGeer), MACROSIPHON-
 IELLA
Chrysanthemum leucanthemum: Agassiz,
 Jul 7/66.
- MORRISONI (Swain), MASONAPHIS
 Moericke yellow pan water trap: Richmond,
 Jul 18/64.
- MURRAYANAE (Gillette & Palmer), CIN-
 ARA
Pinus contorta: Burns Lake, Jun 11/56.
- NASTURTHII Kaltenbach, APHIS
 Moericke yellow pan water trap: Richmond,
 Jul 17/64, Aug 19/64, Aug 20/64.
- NEGLECTUS Hottes & Frison, CHAITO-
 PHORUS
Populus spp.: (Richards 1972c).
- NEGUNDINIS (Thomas), PERIPHYL-
 LUS
Acer negundo: Soda Creek, Jun 16/57.
- NEOMEXICANA (Cockerell), APHIS
Ribes lacustre: Quesnel, Aug 6/58;
 Vancouver, Jun 27/56.
- NIGRAE Oestlund, CHAITOPHORUS
Salix spp.: (Richards 1972c).
- NIGROTUBERCULATUS Olive, DACTY-
 NOTUS
Solidago canadensis: Abbotsford, Aug
 13/65; Richmond, Aug 10/65.
- NEPHRELEPIDUS Davis, IDIOPTERUS
 Polypodiaceae: Vancouver, Apr 19/50.
- NERVATA (Gillette), WAHLGRENIELLA
Arbutus menziesii: Vancouver, Mar 15/61.
Pieris japonica: Vancouver, May 5/67,
 May 23/67, Jun 15/67.
Rosa sp.: Soda Creek, Aug 4/58.
- NODULUS Richards, HOLCAPHIS
 Gramineae: Summerland, Sep 6/55
 (Richards 1959).
- NORTONII Maxson, PEMPHIGUS
 Moericke yellow pan water trap: Richmond,
 Jul 6/64, Jul 21/64.
- NYMPHAEAE (Linnaeus) RHOPALOSI-
 PHUM
Caltha sp.: Vancouver, Aug 28/57.
Nuphar sp.: (Richards 1960c).
Nymphaea sp.: Vancouver, Jul 30/57, Aug,
 28/57.

- Prunus persica*: (Richards 1960c); Vancouver, Sep 19/56.
- OCCIDENTALIS (Davidson), CINARA
Abies balsamea: Unknown location in B.C., Oct 4/25.
- OCCULTA Richards, MYZOCALLIS
Quercus rubra: Vancouver, Jul 13/59 (Richards 1965, 1968d).
- ORNATUS Laing, MYZUS
Aubrieta deltoidea: Victoria, Apr 4/58.
Fragaria sp: Vancouver, Jan 3/61, Feb 7/57, Apr 17/59, May 18/61.
Fragaria vesca: Vancouver, Mar 2/58.
Fuchsia magellanica: Victoria, Aug 2/65.
Fuchsia sp: Vancouver, Feb 26/69.
Gladiolus sp: Vancouver, Apr 20/69.
Helianthemum nummularium: Vancouver, Jun 28/63.
Hypochaeris radicata: Vancouver (UBC), Jan 7/64 (in greenhouse).
Lamium amplexicaule: Vancouver (UBC), Apr 26/67.
Petroselinum crispum: Vancouver, May 18/58.
Primula sp: Burnaby, May 23/70.
Ranunculus sp: Vancouver (UBC), Jan 7/64.
Senecio vulgaris: Vancouver, May 12/58.
Viola tricolor: Vancouver, Mar 4/57, Jun 6/67, Jul 9/58.
- OSMARONIAE (Wilson), MACROSIPHUM
Osmaronia cerasiformis: Victoria, Aug 2/65.
- PADI (Linnaeus), RHOPALOSIPHUM
Avena sativa: Vancouver (UBC), May 29/58, Aug 20/57.
Cinna latifolia: Vancouver, May 25/58.
Gramineae: Vancouver (UBC), Feb 12/60.
Hordeum vulgare: Vancouver, Sep 30/66, Dec 20/60 (in greenhouse).
Secale cereale: Creston, Apr 22/59; Vancouver (UBC), May 9/58, May 8/59; Victoria, Apr 7/58.
Triticum aestivum: Creston, Oct 2/57; Vancouver (UBC), May 9/58, May 14/58.
- PADIFORMIS Richards, RHOPALOSIPHUM
Poa sp: Terrace, Aug 2/60 (Richards 1962).
- PALLIDUS Hille Ris Lambers, HYPERO-MYZUS
Sonchus arvensis: Ladner, Aug 8/56.
- PARVIFLORI Hill, AMPHOROPHORA
Rubus parviflorus: Vancouver, May 16/67, Jun 9/67, Jul 21/67.
Rubus thyranthus: Vancouver, Jun 8/67.
- PARVIFOLII Richards, MACROSIPHUM
Vaccinium parvifolium: Campbell River, Jul 22/65 (Richards 1967d).
- PASTINACAE (Linnaeus), CAVARIELLA
Heracleum maximum: Vancouver, Jun 14/65.
- PERGANDEI (Wilson), CINARA
Moericke yellow pan water trap: Chilliwack, Jun 9/67.
- PERSICAE (Sulzer), MYZUS
Brassica campestris: Lulu Island, Apr 7/64.
Brassica oleracea var *capitata*: Oliver, Jun 3/56.
Brassica sp: Agassiz, Jul 12/58, Jul 16/62.
Chrysanthemum morifolium: Vancouver, Jan 25/61, Oct 15/57.
Convolvulus arvensis: Victoria, Aug 2/65.
Cuscuta sp: Vancouver, May 25/71.
Daucus carota: Cloverdale, Nov 25/64.
Dianthus caryophyllus: Vancouver, Jun 6/63.
Fragaria sp: Abbotsford, Aug 1/58.
Fragaria vesca: Vancouver, Sep 25/64.
Hibiscus sp: Vancouver, Nov 12/70.
Matricaria matricarioides: Lulu Island, Apr 7/64.
Medicago sativa: Vancouver, Nov 20/72, Nov 22/72 (in greenhouse).
Philadelphus gordonianus: Vancouver (UBC), May 28/59, Jul/56.
Polygonum convolvulus: Vancouver, Aug/58.
Prunus persica: Summerland, May 28/58.
Senecio vulgaris: Vancouver, May 12/58.
Sisymbrium sp: Vancouver (UBC), Jul 13/65.
Solanum nigrum: Creston, Aug/58.
Solanum tuberosum: Boundary Bay, May 2/70; Courtenay, Aug 18/61; Pemberton, Sep 8/67; Quesnel, Aug 7/67; Richmond, Jul 23/57; Vancouver, Mar 25/58.
Stellaria media: Vancouver, Oct 3/67.
Ranunculus acris: Victoria, Aug 2/65.
Ranunculus sp: Abbotsford, Jul 19/65.
Raphanus raphanistrum: Lulu Island, Apr 7/64.
Rheum rhaponticum: Vancouver, Jul 20/65.
Rosa sp: Rykerts, Aug 25/58.
Tulipa gesneriana: Vancouver, Mar 10/58.
Viola tricolor: Vancouver, Jun 6/67.
Yucca smalliana: Vancouver, Jul 25/63.

- PILOSUM** Buckton, PTEROCOMMA
Salix sp: Vancouver, Oct 23 / 48.
- PINEA** (Mordvilko), CINARA
Pinus sylvestris: Abbotsford, May 3 / 68.
- PINETI** (Fabricius), SCHIZOLACHNUS
Pinus sylvestris: Abbotsford, May 3 / 68.
- PISUM** (Harris), ACYRTHOSIPHON
Cytisus scoparius: Vancouver, Jun 4 / 57.
Fragaria sp: Saanich, Jul 6 / 59.
Medicago sativa: Canyon, Jul 56; Creston, May 8 / 57, May 9 / 57, Jul / 58, Aug 13 / 58; Erickson, Jun / 58; Kamloops, Apr 30 / 72; Lister, Jun 5 / 57; Soda Creek, Aug 15 / 50, Aug 15 / 58; Vancouver, Mar 26 / 58.
Melilotus alba: Summerland, Jul 29 / 69.
Melilotus sp: Creston, Aug 13 / 58.
Trifolium sp: Cache Creek, Jul 13 / 65.
- PLANTAGINEA** (Passerini), DYSAPHIS
Malus sp: Vancouver, Sep 19 / 56.
Malus sylvestris: Creston, Jun 25 / 59; Vancouver, May 15 / 56, May 22 / 57.
- PLATANI** (Kaltenbach), TINOCALLIS
Ulmus americana: Victoria, May 20 / 28 (Richards 1965, 1967a).
- PLATANOIDES** (Schränk), DREPANOSIPHUM
Acer glabrum: Summerland, Sep 3 / 65.
Acer macrophyllum: Vancouver (UBC), May 5 / 66, May 6 / 65, May 7 / 66.
Acer negundo: Vancouver, May 14 / 43.
Acer sp: Vancouver, Aug 8 / 56.
- POAE** (Gillette), RHOPALOMYZUS
Gramineae: Vancouver, Sep 26 / 57.
Poa annua: Vancouver, Oct 25 / 61.
- POMI** DeGeer, APHIS
Chaenomeles japonica: Vancouver, Jun 3 / 58, Jul 20 / 58.
Cotoneaster henryana: Vancouver, Aug 3 / 58.
Cotoneaster sp: Vancouver, Aug 27 / 65.
Crataegus sp: Creston, Sep 16 / 58; Vancouver, Jul 3 / 61.
Malus coronaria: Vancouver, Jul 13 / 56.
Malus sp: Vancouver, May 9 / 56, Jun 27 / 69, Sep 19 / 56.
Malus sylvestris: Creston, Jun 8 / 59; Erickson, Oct 28 / 58; Vancouver, May 23 / 58, Jun 13 / 56, Jul 13 / 56, Aug 8 / 56, Aug 17 / 66, Sep 1 / 57, Oct 31 / 56.
Prunus persica: Vancouver, Sep 19 / 56.
Pyrus communis: Vancouver, Jun 6 / 57.
- POPULICOLA** (Thomas), CHAITOPHORUS
Populus sp: Creston, Aug 24 / 58.
- Populus tremuloides*: Williams Lake, Aug 4 / 58.
- POPULIFOLIAE** (Fitch), PTEROCOMMA
In flight: Burns Lake, Jun 2 / 56.
- POPULIFOLII** (Essig), CHAITOPHORUS
Populus trichocarpa: Summerland, Jul 28 / 69.
- POPULIMONILIS** (Riley), THECABIUS
Populus trichocarpa: Quesnel, Jul 27 / 48; Summerland, Jul 9 / 69.
- POPULIRAMULORUM** Riley, PEMPHIGUS
Moericke yellow pan water trap: Richmond, Jun 21 / 64, Jun 24 / 64, Jul 2 / 64, Jul 6 / 64, Jul 11 / 64, Jul 18 / 64.
- POPULIVENAE** Fitch, PEMPHIGUS
Chenopodium album: Agassiz, Jul 12 / 56.
Lactuca sativa: Agassiz, Sep 27 / 56; Vancouver, Aug 18 / 70, Oct 10 / 51.
Rumex acetosella: Lulu Island, May 20 / 60.
- POTENTILLAE** (Walker), CHAETOSIPHON
Potentilla anserina: Saanich, Aug 20 / 59; Sea Island, Jul 23 / 58.
- PRUNI** (Geoffroy),
PRUNI (Geoffroy), HYALOPTERUS
Phragmites communis: Westham Island, Jul 31 / 64.
Prunus sp: Oliver, Jun 3 / 56.
- PSEUDOHEDERAE** Theobald, APHIS
Hedera helix: Vancouver, Jul 18 / 57.
- PSEUDOTAXIFOLIAE** Palmer, CINARA
Pseudotsuga menziesii: Agassiz, Aug 3 / 33.
- PTERICOLENS** Patch, MACROSIPHUM
Polystichum munitum: Vancouver, Apr 8 / 64, Apr 29 / 58.
- PTERINIGRUM** Richards, AULACORTHUM
Pieris japonica: Vancouver, Jun 15 / 67.
Vaccinium sp: Terrace, Jul 18 / 60 (Richards 1972b).
- PUNCTIPENNIS** Zetterstedt, EUCERAPHIS
Alnus rubra: Vancouver (UBC), Oct 4 / 60.
Betula pendula: Vancouver (UBC), Apr 9 / 61, Apr 13 / 61, Apr 27 / 61, Oct 30 / 60.
Betula sp: Vancouver, May 4 / 67, Jul 7 / 70.
- PUSTULATUS** Hille Ris Lambers, CHAITOPHORUS
Salix sp: (Richards 1972c).

- QUADRITUBERCULATA (Kaltenbach),
BETULAPHIS
Betula sp: Chilliwack, Apr (Glendenning 1926); Terrace, Jul 12/60 (Richards 1961a); Vancouver, Oct. 3/60.
- RHAMNI Clarke, MACROSIPHUM
Rhamnus purshiana: North Vancouver, Jul 15/65.
- RIBIS (Linnaeus), CRYPTOMYZUS
Galeopsis tetrahit: Goldstream, Aug 20/59.
Ribes grossularia: Soda Creek, Jun 15/56.
Ribes sativum: Agassiz, Jul 12/56.
Ribes sp: Soda Creek, Jun 15/56.
- RIBIS NIGRI (Mosley), NASONOVIA
Lactuca sp: Vancouver, Aug 18/57.
Lapsana communis: Vancouver, Jun 21/61.
- RICHARDSI MacGillivray, MASONAPHIS
Moericke yellow pan water trap: Vancouver (UBC), Jul 4/66.
- RIEHMI (Borner), THERIOAPHIS
Medicago sativa: Lister, Aug 25/58; Williams Lake, Aug 20/60 (Richards 1965).
Melilotus alba: Creston Flats, Jun 6/57.
- ROBINIAE (Gillette), APPENDISETA
Robinia sp: Trail, Jul 21/59 (Richards 1965).
Moericke yellow pan water trap: Chilliwack, Aug 2/67, Aug 16/67.
- ROBINSONI Richards, KAKIMIA
Delphinium cultorum: Kamloops, Jun 14/60.
- ROSAE (Linnaeus), MACROSIPHUM
Ilex aquifolium: Saanich, Jul 6/59.
Rosa rugosa: Vancouver, Jun 27/58.
Rose sp: South Burnaby, Oct 17/67; Vancouver, Jan 6/58, Mar 31/38, Apr 8/58; Victoria, Apr 4/58.
- ROSSI Hottes & Frison, AMPHOROPHORA
Geum macrophyllum: Vancouver, Jun 9/67.
- RUBI (Kaltenbach), AMPHOROPHORA
Rubus idaeus: Agassiz, Apr 26/57, Jul 16/67; Burnaby, Jul 5/59.
Rubus occidentalis: Vancouver, May 1/56.
- RUBITOXICA (Knowlton), AMPHOROPHORA
Rubus vitifolius: Vancouver, May 28/58; Victoria, May 31/57.
- RUMEXICOLENS (Patch), BRACHYCAUDUS
Rumex acetosella: Lulu Island, Jul 6/66; Vancouver, Sep 9/65.
- RUMICIS Linnaeus, APHIS
Rumex crispus: Kelowna, Jun 8/57; Vancouver, Jun 24/66.
- RUSSELLAE Hille Ris Lambers, DACTYNOTUS
Moericke yellow pan water trap: Richmond, Jul 27/64, Sep 7/64, Sep 26/64; Vancouver, Jun 17/66, Jul 15/66.
- SALICICORNII Richards, MACROSIPHUM
Salicornia europea: Queen Charlotte City, Aug 9/60 (Richards 1963a).
- SALICIS (Linnaeus), PTEROCOMMA
Salix scouleriana: Agassiz, Aug 21/23.
Salix sp: Oliver, Jul 19/65; Summit Lake, Jun 26/59, Jul 15/59 (Richards 1967c).
In flight: Creston, May 8/67.
- SALIGNUS (Gmelin), TUBEROLACHNUS
Salix sp: Victoria, Dec 11/63.
- SAMBUCIFOLIAE Fitch, APHIS
Sambucus racemosa: Vancouver, May 24/56, May 25/60, May 29/56, Jun 18/52.
- SANBORNI Gillette, MACROSIPHONIELLA
Chrysanthemum morifolium: Vancouver, Aug 28/61, Oct 23/61, Nov 26/58.
- SCABROSUM Richards, AULACOR-THUM
Rubus spectabilis: Queen Charlotte City, Aug 9/60 (Richards 1927b).
- SCLEROSA Richards, ROEPKEA
Crataegus douglasii: Lumby, Jul 11/65 (Richards 1969b).
Crataegus sp: Victoria, Apr 17/58 (Richards 1969b).
- SEDI Kaltenbach, APHIS
Sedum anglicum: Vancouver, Jun 30/60.
- SENSORIATA (Gillette & Palmer), ROEPKEA
Amelanchier spp and *Trifolium pratense*: (Richards 1969b).
- SETOSA (Kaltenbach), CTENOCALLIS
Cytisus scoparius: Mission, Jul 29/57.
- SIPHUNCULATA Richards, PLACOAPHIS
In flight: Creston, Jun 6/55.
Unknown host: Bowser, May 28/55 (Richards 1961b).
- SMITHIAE (Monell), PTEROCOMMA
Populus trichocarpa: Summerland, Sep 19/69.
Salix babylonica: North Vancouver, Aug.

- 24/66.
Salix fragilis: Vancouver, Oct. 2/58.
Salix lasiandra: Agassiz, May 14/21 (Richards 1967c).
- SOLANI** (Kaltenbach). **AULACORTHUM**
Apium graveolens: Vancouver, Nov 11/56.
Aquilegia sp.: Vancouver, Jun 12/64.
Aucuba japonica: Vancouver, Mar 9/64, May 22/67.
Capsella bursa-pastoris: Richmond, Apr 7/64.
Erodium cicutarium: Vancouver (UBC), Apr 26/67.
Fragaria chiloensis var *ananassa*: Abbotsford, Mar 17/58, Jul 15/58; Agassiz, May 5/57; Saanich, Apr 20/59; Vancouver, Apr 2/58, Apr 8/58.
Fragaria vesca: Vancouver, Mar 2/58, Nov 13/57, Nov 20/56.
Gramineae: Vancouver, Jun 21/61.
Helleborus niger: Vancouver, May 23/58.
Ilex aquifolium: Vancouver, May 1/58.
Matricaria matricariodes: Vancouver, Apr 26/67.
Mentha arvensis var *canadensis*: Vancouver, May 11/67.
Paulownia imperialis: Vancouver, Apr 30/58.
Philadelphus gordonianus: Vancouver, May 28/61, Jul 3/57.
Polygonum cuspidatum: North Vancouver, Jul 3/63.
Primula sp.: Burnaby, May 23/70; Vancouver, Jan 13/58.
Ranunculus acris: Victoria, Aug 2/65.
Solanum tuberosum: Bella Coola, Sep 29/67; Quesnel, Aug 7/67.
Tulipa gesneriana: Richmond, May 17/67; Vancouver, May 24/58.
- SONCHI** (Linnaeus). **DACTYNOTUS**
Sonchus asper: Vancouver, Aug 19/65.
- SPENCERI** Richards. **IZIPHIA**
Unknown host: Chilcotin, Jun 9/20 (Richards 1958).
- SPIRAEA** (MacGillivray). **MASONAPHIS**
Philadelphus gordonianus: Vancouver, May 22/57.
- SPLENDENS** (Gillette & Palmer). **CINARA**
Moericke yellow pan water trap: Richmond, Jun 17/67; Vancouver (UBC), Jun 20/66.
- STANLEYI** (Wilson).
MACROSIPHUM
Sambucus racemosa: North Vancouver, Jul 15/65; Vancouver, Jun 9/67.
- STAPHYLEAE** (Koch).
RHOPALOSIPHONINUS
Tulipa gesneriana: New Westminster, Nov 20/59; Vancouver, May 24/58.
- SYMPHORICARPI** (Thomas).
APHTHARGELIA
Symphoricarpos albus: Soda Creek, Jun 16/57; Vancouver, Jul 29/65; Williams Lake, Jun 15/56.
- TANACETARIA** (Kaltenbach).
MACROSIPHONIELLA
Tanacetum vulgare: Cloverdale, Jun 16/56, Jun 26/58; Milner, Aug 2/58; Vancouver, Jun 27/56.
- TARAXACI** (Kaltenbach).
DACTYNOTUS
Taraxacum officinale: Burnaby, Jul 9/63.
- TESTUDINACEA** (Ferne).
PERIPHYLLUS
Acer circinatum: Vancouver, Jun 27/56.
Acer macrophyllum: Lulu Island, May 12/70; Vancouver, May 6/65, May 19/66, May 29/57, May 30/56, Jul 9/65; Vancouver (UBC), Apr 5/66, Apr 26/66, May 5/66; Victoria, Jun 7/67.
Acer palmatum: Vancouver, May 4/64, Jun 27/56.
Acer platanoides: Vancouver, May 14/58.
- TETRARHODUS** (Walker).
CHAETOSIPHON
Rosa rugosa: Vancouver, Jun 27/58, Sep 19/56.
Rosa spp.: Oliver, May 24/59; Terrace, Jul 9/60 (Richards 1963c).
- TILIAE** (Linnaeus).
EUCALLIPTERUS
Tilia sp.: Agassiz, Aug 7/21, Sep 9/21; Vancouver, May 17/49.
- TORTICAUDA** (Gillette).
BIPERSONA
Cirsium vulgare: Kamloops, Sep 15/54.
- TULIPAE** (Boyer de Fonscolombe).
DYSAPHIS
Tulipa gesneriana: New Westminster, Nov 20/59.
- UMBELLA** Richards. **IZIPHIA**
Carex spp.: (Richards 1968c, 1971).
- UMBELLATARUM** (Koch).
CAVARIELLA
Moericke yellow pan water trap: Chilliwack, Jul 12/67, Aug 8/67.
- ULMIFOLII** (Monell). **TINOCALLIS**
Ulmus spp.: Agassiz, Jul 7/24; Trail, Jul

- 21/59 (Richards 1965).
Moericke yellow pan water trap:
Chilliwack, Aug 3/67, Aug 15/67.
- ULMISACCULI (Patch), COLOPHA
Gramineae: Duncan, Apr 7/64.
- VARIABILIS Richards,
BORNERINA
Alnus crispa spp *sinuata*: Vancouver
(UBC), May 12/61.
Alnus spp: Terrace, Jul 10/60 (Richards
1961a).
- VERRUCOSA (Gillette), ALLAPHIS
Carex spp: (Richards 1971).
- VIMINALIS Monell, CHAITOPHORUS
Salix spp: Creston, Aug 13/58; Sum-
merland, Jul 30/69.
- WALSHII (Monell), MYZOCALLIS
Quercus borealis: Vancouver, Jun 19/59,
Jul 13/59.
Quercus rubra: Vancouver, Oct 7/60.
- XYLOSTEI (DeGeer), PROCIPHILUS
Viburnum trilobum: Quesnel, Jul 10/49.
- YAGASOGAE (Hottes), MACROSIPHUM
Smilacina stellata: Manning Park, Aug
3/58.
- YOHOENSIS (Bradley), ROEPKEA
Sorbus scopulina: (Richards 1969b).

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