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The Aphids (Homoptera:Aphididae) of British Columbia

20. Further additions

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ABSTRACT

Five species are added to the aphid fauna of British Columbia. Fifty-four of the 88 new aphid-host plant associations of plant species are new host plants.

INTRODUCTION

Four hundred species of aphids collected from 1124 hosts or in traps, and 2233 aphid-host plant associations were recorded in fifteen previous lists of the aphids of British Columbia (Forbes, Frazer and MacCarthy 1973; Forbes, Frazer and Chan 1974; Forbes and Chan 1976, 1978, 1980, 1981, 1983, 1984, 1985, 1986a, 1986b, 1987, 1988, 1989; Forbes, Chan and Footitt 1982). The present list adds 5 aphid species (indicated with an asterisk in the list) and 88 aphid-host plant associations to the previous lists. Fifty-four of the new aphid-host plant associations of plant species have not been recorded before. The additions bring the number of known aphid species in British Columbia to 405. Aphids have now been collected from 1178 different host plants and the total number of aphid-host plant associations is 2321.

Table 1
Collection sites of aphids, with airline distances from reference points

Locality	Reference Point	Dir	Distance	
			km	mi
Allison Pass	Kamloops	SW	174	109
Bijoux Falls	Prince George	NW	159	98
Blue River	Williams Lake	E	193	122
Burns Bog	Vancouver	SE	27	17
Castlegar	Creston	NW	88	55
Cedarvale	Prince Rupert	NE	149	93
Chemainus	Victoria	NW	51	32
Chetwynd	Prince George	NE	211	132
Christian Valley	Creston	NW	178	111
Christina Lake	Creston	W	123	77
Cinema	Prince George	S	63	39
Crowsnest Pass	Creston	NE	152	95
Eighty-three Mile House	Williams Lake	SE	86	54
Greenwood	Creston	W	162	101
Heffley Creek	Kamloops	N	26	16
Hixon	Prince George	S	50	31
Houston	Prince Rupert	E	242	151
Jaffray	Creston	NE	96	60
Lakelse Lake	Prince Rupert	E	117	73
Long Beach	Victoria	NW	186	116
Lost Lake	Vancouver	NE	102	64
Mayne Island	Victoria	N	46	28
McLeese Lake	Williams Lake	NW	34	21
McLeod Lake	Prince George	N	123	77
Moricetown	Prince Rupert	NE	206	129
Mount Robson	Williams Lake	NE	221	138
Mount Robson Provincial Park	Williams Lake	NE	221	138
Moyie Lake	Creston	NE	59	37
Nakusp	Creston	NW	160	100
Nanoose	Vancouver	W	99	62
Nechako	Prince Rupert	SE	106	66
New Hazelton	Prince Rupert	NE	206	129
Okanagan Lake Park	Kelowna	SW	34	21
Pavilion	Kamloops	NW	110	69
Rossland	Creston	W	96	60
Salmo	Creston	NW	58	36
Saltspring Island	Victoria	NW	40	25
Silver Star Mountain	Kamloops	SE	93	58
South Hazelton	Prince Rupert	NE	200	125
Sparwood	Creston	NE	144	90
Squilax	Kamloops	NE	59	37
Stagleap Provincial Park	Creston	W	35	22
Taylor	Prince George	NE	282	176
Tete Jaune	Williams Lake	NE	205	128
Topley	Prince Rupert	E	264	165
Trinity Valley	Kamloops	NE	123	77
Valemount	Williams Lake	NE	211	132
Whistler	Vancouver	NE	102	64
Whistler Village	Vancouver	NE	102	64
Widgeon Creek	Vancouver	NE	30	19
Yahk	Creston	E	34	21

The aphid names are in conformity with Eastop and Hille Ris Lambers (1976) and are listed alphabetically by species, except that *Aphis citricola* van der Goot has been restored to its former name, *Aphis spiraecola* Patch, based on the findings of Eastop and Blackman (1988). Names of native host plants are based on Anonymous (1982) and Taylor and MacBryde (1977). Names of cultivated host plants are based on Anonymous (1976). Fifty-one new collection sites are given in Table 1. The reference points are the same as those shown on the map which accompanies the basic list (Forbes, Frazer and MacCarthy 1973). Most of the aphids were collected by the authors except the *Cinara* spp. were Footitt's (1987) collections.

LIST OF SPECIES

AGATHONICA Hottes 1950, AMPHOROPHORA

Rubus idaeus 'Tulameen': Abbotsford, Jul9/90.

ALBIFRONS Essig 1911, MACROSIPHUM

Lupinus 'Russell Hybrid': Pemberton, Aug9/90.

*ALNIFOLIAE SSP FITCHII Baker & Davidson 1917, PROCIPHILUS

Pinus contorta var *latifolia*: Whistler, Sep15/90.

ANNULATUS (Hartig 1841), TUBERCULATUS

Quercus robur: Vancouver (UBC), Oct16/90.

ANTIRRHINII (Macchiati 1883), MYZUS

Brassica juncea 'Florida Broadleaf': Vancouver (CDA), May15/89.

Capsella bursa-pastoris: Vancouver, Jul1/89, Aug2/89.

Chlorophytum comosum 'Variegatum': Vancouver (CDA), Jul20/89.

Chlorophytum comosum 'Vitatum': Vancouver (CDA), Jun27/89.

Draba lindensii: Vancouver (UBC), Feb24/88.

Hoya carnosa: Vancouver (CDA), Dec14/89.

ASCALONICUS Doncaster 1946, MYZUS

Daucus carota: Vancouver (CDA), Jun7/89.

Senecio eremophilus var *eremophilus*: Vancouver (CDA), May16/89.

AVELLANAE (Schrank 1801), CORYLOBIUM

Corylus cornuta var *californica*: Vancouver, May15/90.

AVENAE (Fabricius 1775), SITOBION

Avena sativa 'Clintland': Abbotsford, Jun21/90.

Phleum pratense: Vancouver (CDA), Jul7/90.

BAKERI (Cowen 1895), NEARCTAPHIS

Crataegus viridis 'Winter King': Vancouver (UBC), Oct16/90.

BRASSICAE (Linnaeus 1758), BREVICORYNE

Brassica oleracea 'Purple Sprouting': Vancouver (UBC), Nov27/90.

Brassica oleracea 'White Sprouting Late': Vancouver (UBC), Nov27/90.

Isatis tinctoria: Vancouver (UBC), Aug8/89.

BREVISPINOSA (Gillette & Palmer 1924), CINARA

Pinus contorta: Allison Pass, Jul11/82; Beaverdell, Jul19/79; Bowser, Jul7/81; Burns Lake, Aug1/80; Campbell River, Sep26/41; Cascade, May28/57; Castlegar, Jul10/82; Cedarvale, Jun28/41; Christian Valley, Jun21/80; Cowichan Lake, May25/56; Creston, Jul10/82; Eighty-three Mile House, Jul29/80; Heffley Creek, Jun26/80; Hixon, Jul31/80; Houston, Aug4/80; Lac La Hache, Jul29/80; Long Beach, May13/79; Mackenzie, Aug6/80; McLeod Lake, Aug5/80; Mount Robson Provincial Park, Aug5/77, Aug12/80; Moyie Lake, Jul10/82; Nakusp, Jun22/80; Nanaimo, May28/58, Jul7/81; Nechako, Jun4/59; New Hazelton, May22/41; Parksville, Jul7/81; Pitt Meadows, Jun27/81; Prince George, Jul31/80, Aug5/80; Princeton, Jun17/80, Jul1/81; Salmo, Jul10/82; Sayward, Jul8/81; Shuswap Lake, Jun11/59; Sparwood, Jul9/82; Stagleap Provincial Park, Jul10/82; Terrace, Aug3/80; Tofino, May26/62; Vernon, Jun16/56; Westbridge, Jun21/80, Jul27/77; Yahk, Jul10/82 (all Footitt 1987).

- CANADENSE (Robinson 1968), DELPHINIOBIUM
Lonicera involucrata: Lost Lake, Jun26/90.
- CAPILANOENSE Robinson 1969, AULACORTHUM
Rubus spectabilis: Shannon Falls, Jun26/90.
- CARAGANAE (Cholodkovsky 1907), ACYRTHOSIPHON
Caragana arborescens: Vancouver (UBC), Jul20/90.
- CARNOSUM (Buckton 1876), MICROLOPHIUM
Urtica dioica: Peace Arch Park, Jul2/90.
- CERASI (Fabricius 1775), MYZUS
Galium odoratum: Vancouver (UBC), May16/89.
Prunus emarginata: Vancouver (UBC), Jul20/90.
- CHANI Robinson 1985, UROLEUCON
Grindelia nana: Vancouver (UBC), Aug16/89.
- CIRCUMFLEXUM (Buckton 1876), AULACORTHUM
Heliotropium arborescens: Vancouver (UBC), Aug20/89.
Pernettya mucronata 'Coccinea': Vancouver (UBC), Oct16/90.
- *CONTORTAE Hottes 1958, CINARA
Pinus contorta: Bowser, Jul7/81; Burns Bog, Aug6/81 Oct2/81; Burns Lake, Aug4/80;
 Castlegar, Jul10/82; Christian Valley, Jun21/80, Jul1/81; Christina Lake, Jul29/59;
 Fraser Lake, Aug1/80; Houston, Aug4/80; Jaffray, Jul9/82; Lumby, Jun12/59;
 Mackenzie, Aug6/80; McLeese Lake, Jul29/80; Moricetown, Aug3/80; Moyie
 Lake, Jul10/82; Nanaimo, Jul7/81; Pitt Meadows, Jun27/81, Aug7/81; Port
 Coquitlam, Sep9/82, Oct11/82; Princeton, Jun17/80; Quesnel, Jul30/80, Jul31/80;
 Silver Star Mountain, Jun16/59; South Hazelton, Aug3/80; Summit Lake, Aug5/80;
 Terrace, Aug3/80; Westbridge, Jun21/80, Jul23/79 (all Footitt 1987).
- CORYLI (Goeze 1778), MYZOCALLIS
Corylus cornuta: Vancouver (UBC), Oct24/88.
- COWENI (Cockerell 1905), TAMALIA
Arctostaphylos uva-ursi: Vancouver, Jul20/90.
- CRYSTLEAE (Smith & Knowlton 1939), ILLINOIA
Lonicera involucrata: Cinema, Jul2/66.
- CYPERI (Walker 1848), THRIPSAPHIS
Carex retrorsa: Vancouver (UBC), Aug25/89.
Scirpus americanus: Vancouver (UBC), Aug25/89.
- DAPHNIDIS Börner 1950, MACROSIPHUM
Daphne laureola: Vancouver, Feb1/90; Vancouver (UBC), Nov22/89.
- DIRHODUM (Walker 1849), METOPOLOPHIUM
Phleum pratense: Vancouver (CDA), Jul7/90.
Triticum x aestivum: Vancouver (CDA), Jun21/90.
- ELEGANS del Guercio 1905, SIPHA
Triticum x aestivum: Creston, Nov28/88.
- ERIPHORI (Walker 1848), CERURAPHIS
Carex retrorsa: Vancouver (UBC), Aug25/89.
Catalpa speciosa: Vancouver, Oct25/88.
Viburnum carlesii: Vancouver, Jun2/88.
- FABAE Scopoli 1763, APHIS
Dahlia sp: Victoria, Jul27/88.
Gleditsia triacanthos: Richmond, Jul14/88.
- FAGI (Linnaeus 1767), PHYLLAPHIS
Fagus sylvatica: Vancouver (UBC), Nov22/89.
- *FILIFOLIAE (Gillette & Palmer 1928), OBTUSICAUDA
Artemisia tridentata: Pavilion, May21/89.

FIMBRIATA Richards 1959, FIMBRIAPHIS

Capsella bursa-pastoris: Vancouver (CDA), Oct15/89.*Rosa 'Red Minimo'*: Vancouver (CDA), Oct15/89.*Rosa 'Rosy Minimo'*: Vancouver (CDA), Oct15/89

FOENICULI (Passerini 1860), HYADAPHIS

Lonicera tragophylla: Vancouver (UBC), Jul3/90, Sep13/89.

FRAGAEFOLII (Cockerell 1901), CHAETOSIPHON

Fragaria x ananassa 'Totem': Vancouver (UBC), Nov27/90.

FRAXINIFOLII (Riley 1879), PROCIPHILUS

Fraxinus excelsior: Vancouver (UBC), May31/89, Jun8/89.

GLYCERIAE (Kaltenbach 1843), SIPHA

Hordeum vulgare: Vancouver (CDA), Sep26/88.

GOSSYPHII Glover 1877, APHIS

Capsella bursa-pastoris: Vancouver (CDA), Jun14/89.*Capsicum frutescens*: Vancouver (UBC), Sep20/90.*Citrus limon*: Vancouver, Mar16/90.*Cucumis sativus*: Surrey, May29/89.*Solanum tuberosum*: Vancouver (UBC), Sep10/90; Westham Island, Sep26/90.

HEDERAE Kaltenbach 1843, APHIS

Hedera helix: Mayne Island, Aug13/90; Saltspring Island, Aug14/90.

HELICHRYSI (Kaltenbach 1843), BRACHYCAUDUS

Myosotis rehsteineri: Vancouver (UBC), Jul27/88.*Spiraea douglasii* ssp *douglasii*: Vancouver, Jun27/88.

JUGLANDIS (Goeze 1778), CALLAPHIS

Juglans regia: Langley, Jul27/90.

KIOWANEPUS (Hottes 1933), MACROSIPHUM

Zigadenus venenosus var *gramineus*: Kootenay Park, Jul12/88.

LACTUCAE (Passerini 1860), ACYRTHOSIPHON

Lactuca sativa 'Ithaca': Vancouver (UBC), Oct15/90.*Lactuca serriola*: Saltspring Island, Aug14/90.

LONGICAUDA (Richards 1963), EOESSIGIA

Spiraea douglasii ssp *douglasii*: Vancouver, Jun9/90.

LONICERAE (Siebold 1839), RHOPALOMYZUS

Lonicera 'Dropmore Scarlet': Vancouver (UBC), Oct5/90.

LYTHRI (Schrank 1801), MYZUS

Prunus emarginata: Vancouver (UBC), May8/89, Jun9/90, Jul20/90.

MAXIMA (Mason 1925), ILLINOIA

Rubus parviflorus: Vancouver (UBC), Jun25/90.

MEDISPINOSA (Gillette & Palmer 1929), CINARA

Pinus contorta: Blue River, Aug13/80; Bowser, Jul7/81; Cascade, May23/57, Jul29/54; Chemainus, May24/62; Chetwynd, Aug6/80; Christina Lake, Jul29/59; Crowsnest Pass, Jul9/82; Duncan, Jul8/81; Grand Forks, May28/59; Greenwood, Jun3/59; Heffley Creek, Jun26/80; Hixon, Jul31/80; Houston, Aug4/80; Jaffray, Jul9/82; Lumby, Jun12/59, Jun16/62; McLeese Lake, Jul29/80; Mount Robson, Aug12/80; Moyie Lake, Jul10/82; Nanoose, May25/62; Princeton, Jun17/80, Jul1/81, Jul3/81; Qualicum Beach, May25/62; Quesnel, Jul30/80, Jul31/80; Rossland, May29/59; Shuswap Falls, Jun10/59; Squilax, Jun11/59; Stagleap Provincial Park, Jul10/82; Taylor, Aug7/80; Terrace, Aug3/80; Tofino, May26/62; Topley, Jul3/41; Trinity Valley, May14/59; Vernon, Jun16/56; Westbridge, Jul27/77; Williams Lake, Jul29/80 (all Footitt 1987).

MENZIESIAE (Robinson 1969), ILLINOIA

Menziesia ferruginea ssp *glabella*: Shannon Falls, Jun26/90.

MURRAYANAE (Gillette & Palmer 1924), CINARA

Pinus contorta: Burns Bog, Jul29/82, Aug6/81, Oct2/81; Castlegar, Jul10/82; Chemainus, May24/62; Christian Valley, Jun21/80; Englishman River Falls Park, May20/62; Grand Forks, May28/62; Hixon, Jul31/80; Jaffray, Jul9/82; Mackenzie, Aug6/80; Mount Robson, Aug12/80; Moyie Lake, Jul10/82; Naramata, Jun17/79; Pitt Meadows, May29/79, Jun27/81, Aug7/81, Sep18/81, Oct4/81; Qualicum Beach, May25/62; Salmon Arm, Jun14/55; Sparwood, Jul9/82; Valemount, Aug13/80 (all Footitt 1987).

NERVATA (Gillette 1908), WAHLGRENIELLA

Arbutus menziesii: Mayne Island, Aug13/90; Saltspring Island, Aug14/90.

NICOTIANAE Blackman 1987, MYZUS

Capsicum frutescens 'Midway': Sidney, Apr29/89.

Cynara scolymus: Sidney, Apr29/89.

NIGRA (Wilson 1919), CINARA

Pinus contorta: Chetwynd, Aug6/80; Eighty-three Mile House, Jul29/80; Fort St. John, Aug8/80; Heffley Creek, Jun26/80; Hixon, Aug31/80; Lakelse Lake, Aug3/80; Mackenzie, Aug6/80; Mount Robson Provincial Park, Aug12/80; Prince George, Jul31/80, Aug5/80; Quesnel, Jul30/80, Jul31/80; Smithers, Aug3/80; Sparwood, Jul9/82; Taylor, Aug7/80; Tete Jaune, Aug12/80; Valemount, Aug13/80 (all Footitt 1987).

NODULUS (Richards 1959), DIURAPHIS

Bromus tectorum: Summerland, Sep5/90.

Dactylis glomerata: Summerland, Sep6/55 (Richards 1959).

NOXIA (Mordvilko ex Kurdjumov 1913), DIURAPHIS

Hordeum vulgare: Creston, Oct17/89; Oliver, Oct18/89; Osoyoos, Oct18/89.

Triticum x aestivum: Creston, Oct17/89.

NYMPHAEAE (Linnaeus 1761), RHOPALOSIPHUM

Callitriche stagnalis: Vancouver (UBC), Jul18/90.

Nymphaea 'Gonnere': Vancouver, Aug15/90.

OBLIQUUS (Cholodkovsky 1896), MINDARUS

Picea glauca: Prince George, Sep18/87.

Picea sitchensis: Vancouver (UBC), Jun13/89.

*OENOTHERAE Oestlund 1887, APHIS

Epilobium ciliatum: Vancouver, Sep12/88.

ORNATUS Laing 1932, MYZUS

Anchusa azurea: Vancouver (UBC), Aug22/89.

Arctostaphylos uva-ursi: Vancouver (UBC), Jul2/90.

Callistemon viridiflorus: Vancouver (UBC), Jul3/90.

Cynara cardunculus: Vancouver (UBC), Aug8/89.

Euonymus hamiltoniana var *yedoensis*: Vancouver (UBC), May24/89.

Fragaria vesca var *semperflorens*: Vancouver (UBC), Nov3/90.

Gaultheria shallon: Vancouver (UBC), Sep28/90.

Gazania 'Mini Star Yellow': Vancouver (UBC), Aug8/89.

Liquidambar styraciflua: Vancouver (UBC), Jun21/90.

Lithodora diffusa: Vancouver (UBC), Aug8/89.

Rosa 'Beauty Secret': Vancouver (CDA), Feb15/90.

Salix lanata 'Stuartii': Vancouver (UBC), Aug8/89, Aug24/88.

Vaccinium corymbosum 'Bluecrop': Vancouver (UBC), Mar26/90.

PADI (Linnaeus 1758), RHOPALOSIPHUM

Bromus tectorum: Summerland, Sep5/90.

Zea mays: Chilliwack, Aug19/90.

*PARVICORNIS Hottes 1958, CINARA

Pinus contorta: Chetwynd, Aug6/80; Mount Robson, Aug12/80 (all Footitt 1987).

PASTINACAE (Linnaeus 1758), CAVARIELLA

Salix lasiandra: Widgeon Creek, Sep5/88.

PENDERUM Robinson 1986, UROLEUCON

Grindelia chiloensis: Vancouver (UBC), Oct16/90.*Grindelia nana*: Vancouver (UBC), Aug16/89.

PERGANDEI (Wilson 1919), CINARA

Pinus contorta: Blue River, Aug13/80; Castlegar, Jul10/82; Christian Valley, Jun21/80; Mackenzie, Jul6/80; Nakusp, Jun22/80; Princeton, Jun17/80, Jul1/81; Quesnel, Jul30/80, Jul31/80; Vancouver, Jun23/75 (all Footitt 1987).

PERSICAE (Sulzer 1776), MYZUS

Euonymus hamiltoniana: Vancouver (UBC), May24/89.*Ilex macropoda*: Vancouver (UBC), May24/89.*Phoenicaulis cherianthoides*: Vancouver (UBC), May24/89.*Solanum tuberosum*: Westham Island, Sep26/90.

PISUM (Harris 1776), ACYRTHOSIPHON

Lathyrus odorata: Vancouver, Sep20/89.*Lotus pedunculatus*: Vancouver (UBC), Aug22/89.

POMI de Geer 1773, APHIS

Cotoneaster gambeli: Vancouver (UBC), Jul3/90.

POPULIMONILIS (Riley 1879), THECABIUS

Populus trichocarpa: Lost Lake, Aug17/90.

PRUNI (Geoffroy 1762), HYALOPTERUS

Glyceria striata: Vancouver, Aug15/90.

PTERINIGRUM Richards 1972, AULACORTHUM

Vaccinium alaskaense: Mount Seymour, Jul9/88.

RIBISNIGRI (Mosley 1841), NASONOVIA

Lactuca sativa 'Ithaca': Vancouver (UBC), Oct15/90.

ROSAE (Linnaeus 1758), MACROSIPHUM

Lactuca sativa: Vancouver (UBC), Jul9/90.*Rosa spinosissima*: Vancouver (UBC), Jul3/90.

ROSARUM (Kaltenbach 1843), MYZAPHIS

Potentilla fruticosa: Whistler Village, Jun26/90.*Rosa pendulina*: Vancouver (UBC), Jul3/90.*Rosa rubrifolia*: Vancouver (UBC), Jun16/89.

SOLANI (Kaltenbach 1843), AULACORTHUM

Citrus reticulata: Kamloops, Aug6/89.*Hypericum olympicum*: Vancouver (UBC), May31/89.*Malva neglecta*: Vancouver, May17/90.*Oxalis regnellii*: Vancouver, Jan20/90.*Spiraea douglasii* ssp *douglasii*: Vancouver, Jun27/88.*Taraxacum officinale*: Vancouver, Apr26/90.

SPIRAEAE (MacGillivray 1958), ILLINOIA

Spiraea douglasii ssp *douglasii*: Vancouver, Jun27/88.

SPIRAECOLA Patch 1914, APHIS

Caragana arborescens var *crasseaculeata*: Vancouver (UBC), Aug24/88.

SPYROTHECAE Passerini 1856, PEMPHIGUS

Populus nigra 'Italica': Langley, Jul27/90; Saltspring Island, Aug14/90.

STANLEYI Wilson 1915, MACROSIPHUM

Sambucus racemosa ssp *pubens* var *arborescens*: Bijoux Falls, Aug26/90; Smithers, Aug26/90.

STELLARIAE Theobald 1913, MACROSIPHUM

Silene armeria: Vancouver, Jul2/90.

SYMPHORICARPI (Thomas 1878), APHTHARGELIA

Symphoricarpos x chenaultii: Vancouver (UBC), May24/90, Jun21/90.

TENUICAUDA Bartholomew 1932, MACROSIPHUM

Urtica dioica: Peace Arch Park, Jul2/90.

TESTUDINACEUS (Ferne 1852), PERIPHYLLUS

Acer saccharinum: Pemberton, Jun2/89.

TILIAE (Linnaeus 1758), EUCALLIPTERUS

Tilia cordata: Vancouver, Aug15/90.

TREMULAE (Linnaeus 1761), ASIPHUM

Picea engelmannii: Nelson, Nov20/87.*Picea glauca*: Quesnel, Oct6/87.

ULMIFOLII (Monell 1879), TINOCALLIS

Ulmus americana: Okanagan Lake Park, Aug25/89.

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