

THE APHIDS (HOMOPTERA:APHIDIDAE) OF BRITISH COLUMBIA

14. FURTHER ADDITIONS

A.R. FORBES and C.K. CHAN

Research Station, Agriculture Canada
Vancouver, British Columbia, V6T 1X2

ABSTRACT

Twelve species of aphids and new host records are added to the taxonomic list of the aphids of British Columbia.

INTRODUCTION

Ten 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; Forbes, Chan and Footitt 1982) recorded 368 species of aphids collected from 810 hosts or in traps and comprises 1529 aphid-host plant association. The present list adds 12 aphid species (indicated with an asterisk in the list) and 56 aphid-host plant associations to the previous lists. Twenty-six of the new aphid-host plant associations are plant species not re-

corded before. The additions bring the number of known aphid species in British Columbia to 380. Aphids have now been collected from 836 different host plants and the total number of aphid-host plant associations is 1585.

The names of aphids are in conformity with Eastop and Hille Ris Lambers (1976) and are arranged alphabetically by species. Eleven new collection sites are tabulated in Table 1. The location of each collection site can be determined from Table 1 or from the tables of localities in the previous lists. The reference points are the same as those shown on the map which accompanies the basic list.

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

Locality	Reference Point	Distance		
		Dir	km	mi
Apex Mountain	Kelowna	SW	70	44
Buckley Bay	Vancouver	W	135	84
Chuwheels Mountain	Kamloops	SW	22	14
Falkland	Kamloops	SE	59	37
Mill Bay	Victoria	NW	27	17
Port Alberni	Victoria	NW	139	87
Qualicum Beach	Vancouver	W	96	60
Silver Star Prov. Park	Kelowna	NE	64	40
Tamarac Park	Kelowna	E	40	25
Westwold	Kamloops	SE	48	30
Whonnock	Vancouver	SE	53	33

LIST OF SPECIES

*ACERIS (Linnaeus), PERIPHYLLUS

Acer sp.: Agassiz, Jul 13/13 (Wilson 1915).

ADIANTI (Oestlund), SITOBION

Matteuccia struthiopteris: Vancouver (UBC), Apr30/84.

Polypodium glycyrrhiza: Vancouver (UBC), Apr30/84.

AETHEOCORNUM Smith & Knowlton,

MACROSIPHUM

Geranium viscosissimum var. *viscosissimum*: 108 Mile House, Jul26/83.

ALBIFRONS Essig, MACROSIPHUM

Lupinus arcticus: Apex Mountain, Jul2/83, Jul10/84; Chuwheels Mountain, Jun29/83, Jul7/84; Cowichan Lake, May 21/84, Jul12/83, Jul16/84; Diamond Head, Jul20/83, Jul30/84; Mill Bay, Jul 12/83; Nanaimo, May 21/84, Jul12/83, Jul16/84; Port Alberni, Jul16/84; Princeton, Jul2/83; Silver Star Provincial Park, Jun30/83; Vancouver (UBC), Aug14/84.

Lupinus polyphyllus: Buckley Bay, Jul16/84; Burnaby, May 24/84, Sep5/84; Burnaby (SFU), Mar8/84, Jun13/83, Aug28/84, Nov28/83; Cloverdale, Jul12/83, Jul16/84; Qualicum Beach, Jul16/84; Tamarac Park, Jul1/83, Jul10/84; West Vancouver, May 12/84, Jun12/83, Sep13/84, Oct4/83.

- Lupinus sericeus*: Falkland, Jun30/83; Westwold, Jun30/83.
Lupinus sp.: Burnaby, May31/84, Sep13/84; Manning Park, Jul2/83, Jul10/84; Pender Island, Aug3/84.
- ALNIFOLIAE (Williams), PROCIPHILUS**
Amelanchier canadensis: Vancouver (UBC), Jun14/85.
- ALPINA (Gillette & Palmer), KAKIMIA**
Mimulus cardinalis: Vancouver (UBC), Aug20/84.
- ASCALONICUS Doncaster, MYZUS**
Potentilla pensylvanica: Vancouver (UBC), May11/83.
- AVENAE (Fabricius), SITOBION**
Hordeum jubatum: Vancouver, Jun25/84.
Luzula nivea: Vancouver (UBC), Jun29/84.
Malus domestica: Vernon, Jul16/13 (Wilson 1915).
- BERBERIDIS (Kaltenbach), LIOSOMAPHIS**
Mahonia aquifolium: Vancouver, Jun14/85.
- CARDUI (Linnaeus), BRACHYCAUDUS**
Carduus sp.: Vernon, Jul16/13 (Wilson 1915).
- *CARNOSUM (Buckton), MICROLOPHIUM**
Urtica dioica: Vernon, Jul16/13 (Wilson 1915).
- CERASI (Fabricius), MYZUS**
Galium aparine: Vancouver (UBC), Jun15/84.
Prunus sp.: Vancouver, Jul12/13 (Wilson 1915).
- CERASIFOLIAE (Fitch), RHOPALOSIPHUM**
Prunus virginiana: Vernon, Jul16/13 (Wilson 1915).
- CERTUS (Walker), MYZUS**
Catharanthus roseus: Vancouver (CDA), May 16/85.
Dianthus barbatus: Vancouver (CDA), May 16/85.
Dianthus 'Scarlet Luminette': Vancouver (UBC), Aug 20/84.
- *CHANI Robinson, UROLEUCON**
Grindelia nana: Vancouver (UBC), Oct1/82 (Robinson 1985).
- CIRCUMFLEXUM (Buckton), AULACORTHUM**
Matteuccia struthiopteris: Vancouver (UBC), Apr30/84.
- CITRICOLA van der Goot, APHIS**
Stranvaesia davidiana: Vancouver (UBC), Jul10/84.
- COWENI (Cockerell), TAMALIA**
Arctostaphylos uva-ursi: Vancouver (UBC), Jul18/85, Aug23/84.
- CREELII Davis, MACROSIPHUM**
Medicago sativa: Kamloops, Jun 10/85, Jul3/84, Jul8/85.
- DAPHNIDIS Borner, MACROSIPHUM**
Daphne laureola: Vancouver (UBC), Jul10/84.
- DORSATUM (Richards), SITOBION**
Gaultheria shallon: Vancouver (UBC), May 15/85.
- EQUISETI Holman, SITOBION**
Equisetum arvense: Vancouver, Jun19/85.
- FAGI (Linnaeus), PHYLLAPHIS**
Fagus sp.: Agassiz, Jul13/13 (Wilson 1915).
- FIMBRIATA Richards, FIMBRIAPHIS**
Fragaria virginiana ssp. glauca: Vancouver (CDA), Aug1/85.
Rosa 'Zéphirine Drouhin': Vancouver (UBC), May9/85.
- FOENICULI (Passerini), HYADAPHIS**
Lonicera etrusca: Vancouver (UBC), Jul25/85.
Oenanthe sarmentosa: Pender Island, Aug2/84.
- FRAGAEFOLII (Cockerell), CHAETOSIPHON.**
Fragaria virginiana ssp. glauca: Vancouver (CDA), Aug1/85.
- FRAGARIAE (Walker), SITOBION**
Hordeum jubatum: Vancouver, Jun25/84.
Rubus discolor: Whonnock, May10/84.
- *FRIGIDAE (Oestlund), OBTUSICAUDA**
Artemisia sp.: Vernon, Jul16/13 (Wilson 1915).
- GERANII Gillette & Palmer, AMPHOROPHORA**
Geranium viscosissimum var. *viscosissimum*; 108 Mile House, Jul26/83.
- *GROSSULARIAE (Schule), ERIOSOMA**
Ulmus americana: Burnaby, Jul7/84.
- HELICHRYSI (Kaltenbach), BRACHYCAUDUS**
Cotula australis: Vancouver (UBC), Jun4/85.
Prunus domestica: Vancouver, May31/85.
- HUMULI (Schränk), PHORODON**
Prunus domestica: Vancouver, Jul25/84.
- LACTUCAE (Linnaeus), HYPEROMYZUS**
Ribes nigrum 'Wellington XXX': Vancouver (UBC), Nov16/84.
- LUDOVICIANAE (Oestlund), MACROSIPHONIELLA**
Artemisia ludoviciana: Vernon, Jul16/13 (Wilson 1915).
- LYTHRI (Schränk), MYZUS**
Prunus emarginata: Vancouver (UBC), Aug8/85.
- MACROSIPHUM (Wilson), ACYRTHOSIPHON**
Amelanchier laevis: Vancouver (UBC), Jul10/84.
- MILLEFOLII (de Geer), MACROSIPHONIELLA**
Achillea millefolium 'Cerise Queen': Vancouver (UBC), Jun21/85.
Achillea millefolium var. *lanulosa*: Vancouver (UBC), Jun21/85, Jul26/85.
- NEGUNDINIS (Thomas), PERIPHYLLUS**
Acer negundo: Agassiz, Jul13/13 (Wilson 1915).
- NYMPHAEAE (Linnaeus), RHOPALOSIPHUM**
Capsella bursa-pastoris: Vancouver (CDA), Jun7/85.
Catharanthus roseus: Vancouver (CDA), Jun7/85.
- OBLIQUUS (Cholodkovsky), MINDARUS**
Picea sp.: Prince George, Sep18/84.
- ORNATUS Laing, MYZUS**
Ratibida columnifera: Vancouver (UBC), Nov16/84.
- *PALLIDUM (Oestlund), MACROSIPHUM**
Aster sp.: 108 Mile House, Jul27/83.
Erodium cicutarium ssp. cicutarium: Vancouver (UBC), Jun4/85.

PLATANI (Kaltenbach), TINOCALLIS*Ulmus americana*: Vancouver, Jul13/84.***POPULUM (Kaltenbach), PTEROCOMMA***Populus* sp.: Vernon, Jul16/13 (Wilson 1915).**POPULIFOLII (Essig), CHAITOPHORUS***Populus* sp. Vernon, Jul16/13 (Wilson 1915).**POPULIFOLII NEGLECTUS Hottes & Frison, CHAITOPHORUS***Populus nigra* 'Italica': Vancouver (UBC), Jun11/85, Jun20/85, Jun25/85.**PRUNI (Geoffroy), HYALOPTERUS***Prunus* sp.: Vernon, Jul16/13 (Wilson 1915).*Typha latifolia*: Pender Island, Aug3/84.**PTERICOLENS (Patch), SITOBION***Pteridium aquilinum*: Pender Island, Aug3/84.**PTERIDIS (Wilson), SITOBION***Pteridium aquilinum*: Pender Island, Aug3/84.**PUNCTIPENNIS (Zetterstedt), EUCERAPHIS***Betula* sp.: Agassiz, Jul13/13 (Wilson 1915).**RIBISNIGRI (Mosley), NASONOVIA***Lapsana communis*: Vancouver, Jun25/85.**ROSAE (Linnaeus), MACROSIPHUM***Rosa centifolia* 'Cristata': Vancouver (UBC), Aug7/85.*Rosa* sp.: Vancouver, Jul12/13 (Wilson 1915).**ROSARUM (Kaltenbach), MYZAPHIS***Potentilla fruticosa*: Vancouver (UBC), Oct31/84.*Potentilla fruticosa* ssp. *floribunda*: Vancouver (UBC), Jul26/85.**RUBICOLA (Oestlund), ILLINOIA***Rubus* sp.: Vancouver, Jul12/13 (Wilson 1915).***RUDBECKIAE (Fitch), UROLEUCON***Solidago* sp.: Vernon, Jul16/13 (Wilson 1915).**RUSSELLAE (Hille Ris Lambers), UROLEUCON***Helichrysum virgineum*: Vancouver (UBC), Sep2/83.***SANDILANDICUS (Robinson), HYPEROMYZUS***Crepis* sp.: 108 Mile House, Jul26/83.**SANGUICEPS Richards, PTEROCOMMA***Salix exigua*: Vancouver (UBC), Apr16/85, May16/85.**SMITHIAE (Monell), PTEROCOMMA***Populus* sp.: Vernon, Jul16/13 (Wilson 1915).**SOLANI (Kaltenbach), AULACORTHUM***Pleione formosana*: Vancouver (UBC), Apr16/85.***SOLIDAGINIS (Fabricius), UROLEUCON***Solidago* sp.: Agassiz (Glendenning 1929).**SONCHI (Linnaeus), UROLEUCON***Sonchus arvensis*: Abbotsford, Jul25/85.***SORBI (Kaltenbach), DYSAPHIS***Malus domestica*: Agassiz, Jul13/13 (Wilson 1915).**SPYROTHECAE Passerini, PEMPHIGUS***Populus nigra* 'Italica': Vancouver (UBC), May 22/85.**STANLEYI Wilson, MACROSIPHUM***Sambucus cerulea*: Vancouver, Jul14/13 (Wilson 1915).*Sambucus racemosa* sp. *pubens* var. *melanocarpa*: Vancouver (Glendenning 1929).**TANACETARIA (Kaltenbach), MACROSIPHONIELLA***Tanacetum vulgare*: Cloverdale, Aug24/84.**TILIAE (Linnaeus), EUCALLIPTERUS***Tilia americana*: Vancouver (UBC), Jun14/85.**TRIRHODUS (Walker), LONGICAUDUS***Aquilegia vulgaris*: Vancouver, Jul24/85.**ULMI (Linnaeus), ERIOSOMA***Ulmus americana*: Burnaby, Jul17/84.***VANCOUVERENSE Robinson, UROLEUCON***Solidago canadensis* var. *salesbroxa*: Vancouver (UBC), Sep13/78 (Robinson 1985).**VARIANS Patch, APHIS***Epilobium angustifolium*: 108 Mile House, Jul26/83.*Ribes nigrum* 'Wellington XXX': Vancouver (UBC), Aug20/84, Sep11/84.**WAKIBAE (Hottes), FIMBRIAPHIS***Rosa* 'Agnes': Vancouver (UBC), May9/85, May28/85.

*Aphid species not in the previous lists.

ACKNOWLEDGEMENTS

The authors gratefully acknowledge the following for valuable aid and advice in identifications: R.L. Blackman and V.F. Eastop, British Museum (Natural History), London, England; R. Danielsson, Dept. of Systematics, Zoological Institute, Lund, Sweden; and A.G. Robinson, Dept. of Entomology, University of Manitoba, Manitoba; and M. Cohen of Simon Fraser University providing us with his collection data for *M. albifrons*.

REFERENCES

- Eastop, V.F., and D. Hille Ris Lambers. 1976. Survey of the world's aphids. Dr. W. Junk b.v., Publisher, The Hague.
- Forbes, A.R., and C.K. Chan. 1985. The aphids (Homoptera:Aphididae) of British Columbia. 13. Further additions. J. ent. Soc. Brit. Columbia 82: 56-58.
- Forbes, A.R., and C.K. Chan. 1984. The aphids (Homoptera:Aphididae) of British Columbia. 12. Further additions. J. ent. Soc. Brit. Columbia 81: 72-75.
- Forbes, A.R., and C.K. Chan. 1983. The aphids (Homoptera:Aphididae) of British Columbia. 11. Further additions. J. ent. Soc. Brit. Columbia 80: 51-53.
- Forbes, A.R., and C.K. Chan. 1981. The aphids (Homoptera:Aphididae) of British Columbia. 9. Further additions. J. ent. Soc. Brit. Columbia 78: 53-54.
- Forbes, A.R., and C.K. Chan. 1980. The aphids (Homoptera:Aphididae) of British Columbia. 8. Further additions and corrections. J. ent. Soc. Brit. Columbia 77: 38-42.
- Forbes, A.R., and C.K. Chan. 1978. The aphids (Homoptera:Aphididae) of British Columbia. 6. Further additions. J. ent. Soc. Brit. Columbia 75: 47-52.
- Forbes, A.R., and C.K. Chan. 1976. The aphids (Homoptera:Aphididae) of British Columbia. 4. Further additions and corrections. J. ent. Soc. Brit. Columbia 73: 57-63.
- Forbes, A.R., C.K. Chan and R. Foottit. 1982. The aphids (Homoptera:Aphididae) of British Columbia. 10. Further additions. J. ent. Soc. Brit. Columbia 79: 75-78
- Forbes, A.R., B.D. Frazer and C.K. Chan. 1974. The aphids (Homoptera:Aphididae) of British Columbia. 3. Additions and corrections. J. ent. Soc. Brit. Columbia 71: 43-49.
- Forbes, A.R., B.D. Frazer and H.R. MacCarthy. 1973. The aphids (Homoptera:Aphididae) of British Columbia. 1. A basic taxonomic list. J. ent. Soc. Brit. Columbia 70: 43-57.
- Glendenning, R. 1929. Further additions to the list of aphids of British Columbia. Proc. Entomol. Soc. Brit. Columbia 26: 54-57.
- Robinson, A.G. 1985. Annotated list of *Uroleucon* (*Uroleucon*, *Uromelan*, *Satula*) (Homoptera:Aphididae) of America north of Mexico, with keys and descriptions of new species. Canad. Ent. 117: 1029-1054.
- Wilson, H.F. 1915. Aphid notes from British Columbia. Proc. Entomol. Soc. Brit. Columbia 5:82-85.