

ed contact with Cordilleran species. Remington (1968) points out that significant biological interactions often occur between similar species in such suture zones.

The fact that *G. pingreensis* and *G. incognita* co-occur over such a broad area in the central interior suggests either that these species are not experiencing significant inter-specific competition despite their pronounced similarity or that competitive advantages are

shifting over space or fluctuating in time. We shall discuss these possibilities in more detail elsewhere.

ACKNOWLEDGEMENTS

This research was supported by a grant to G. G. E. Scudder from the National Research Council of Canada. We thank D. H. Spence for her meticulous care of young waterstriders.

LITERATURE CITED

- Remington, C. L. 1968. Suture zones of hybrid interaction between recently joined biotas. *Evol. Biol.* 2: 321-428.
- Scudder, G. G. E. 1977. An annotated checklist of the aquatic and semiaquatic Hemiptera (Insecta) of British Columbia. *Syesis* 10: 31-38.
- Scudder, G. G. E. 1971. The Gerridae (Hemiptera) of British Columbia. *J. Entomol. Soc. Brit. Columbia* 68: 3-10.
- Scudder, G. G. E. and G. S. Jamieson. 1972. The immature stages of Gerris (Hemiptera) in British Columbia. *J. Entomol. Soc. Brit. Columbia* 69: 72-79.

THE APHIDS (HOMOPTERA:APHIDIDAE) OF BRITISH COLUMBIA 5. NAME CHANGES¹

CHO-KAI CHAN AND A. R. FORBES

Research Station, Agriculture Canada
Vancouver, British Columbia

ABSTRACT

Name changes in accordance with current usage in aphid taxonomy are listed.

INTRODUCTION

An approach to a stable nomenclature for aphids became possible with the recent publication of a "Survey of the World's Aphids" (Eastop and Hille Ris Lambers 1976). We de-

ecided to adopt that work as a standard for all our aphid names. This has necessitated changing 72 names used in our previous lists (Forbes, Frazer and MacCarthy 1973; Forbes, Frazer and Chan 1974; Forbes and Chan 1976). All of these changes are listed here. They are arranged alphabetically by genus and species of the names used previously.

¹Contribution No. 416, Research Station, 6660 N.W. Marine Drive, Vancouver, British Columbia, V6T 1X2.

LIST OF NAME CHANGES

Previous Name

Acyrtosiphon dirhodum (Walker)
Acyrtosiphon pisum spartii (Koch)
Allaphis verrucosa (Gillette)
Aphis corniella Hille Ris Lambers
Aphis sambucifoliae Fitch
Asiphum rosettei Maxson
Aspidaphis longicauda Richards
Aulacorthum clavicornis Richards
Aulacorthum dorsatum Richards
Aulacorthum scabrosum Richards
Bipersona torticauda Gillette
Brachycolus atriplicis (Linnaeus)
Cavariella umbellatarum (Koch)
Cepigillettea betulae-foliae Granovsky
Chaitophorus delicata Patch
Chaitophorus neglectus Hottes & Frison

Current Name

Metopolophium dirhodum (Walker)
Acyrtosiphon pisum (Harris)
Thripsaphis verrucosa Gillette
Aphis salicariae Koch
Aphis sambuci Linnaeus
Asiphum tremulae (Linnaeus)
Goessigia longicauda (Richardell)
Wahlgreniella nervata (Gillette)
Sitobion dorsatum (Richards)
Aulacorthum capilanoense Robinson
Bipersona ochrocentri (Cockerell)
Hayhurstia atriplicis (Linnaeus)
Cavariella aegopodii (Scopoli)
Calaphis betulae-foliae (Granovsky)
Chaitophorus stevensis Sanborn
Chaitophorus populifolii neglectus
Hottes & Frison

- Cinara abieticola* Cholodkovsky
Colopha ulmisacculi Patch
Dactynotus ambrosiae (Thomas)
Dactynotus cirsii (Linnaeus)
Dactynotus erigeronensis (Thomas)
Dactynotus nigrotuberculatus Olive
Dactynotus pseudambrosiae Olive
Dactynotus russellae Hille Ris Lambers
Dactynotus sonchi (Linnaeus)
Dactynotus taraxaci (Kaltenbach)
Euschizaphis palustris (Theobald)
Holcaphis frequens (Walker)
Holcaphis nodulus Richards
Hyadaphis erysimi (Kaltenbach)
Kakimia canadensis Robinson
Kakimia essigi (Gillette & Palmer)
Kakimia robinsoni Richards
Macrosiphum avenae (Fabricius)
Macrosiphum coweni (Hunter)
Macrosiphum fragariae (Walker)
Macrosiphum manitobensis Robinson
Macrosiphum nigromaculosum MacDougall
Macrosiphum ptericolens Patch
Macrosiphum rhamni Clarke
Macrosiphum salicicornii Richards
Macrosiphum yagasogae (Hottes)
Masonaphis crystleae (Smith & Knowlton)
Masonaphis davidsoni (Mason)
Masonaphis lambersi MacGillivray
Masonaphis magna Hille Ris Lambers
Masonaphis maxima (Mason)
Masonaphis morrisoni (Swain)
Masonaphis patriciae Robinson
Masonaphis pseudomorrisoni MacGillivray
Masonaphis richardsi MacGillivray
Masonaphis spiraeae MacGillivray
Masonaphis spiraeicola (Patch)
Masonaphis wahnaga Hottes
Neoceruraphis viburnicola (Gillette)
Parathecabius gravicornis (Patch)
Parathecabius populimonilis (Riley)
Prociphilus alnifoliae (Williams)
Pterocomma bicolor bicolor (Oestlund)
Rhopalosiphum fitchii (Sanderson)
Roepkea bakeri (Cowen)
Roepkea crataegifoliae (Fitch)
Roepkea sclerosa Richards
Roepkea sensoriata (Gillette & Bragg)
Roepkea yohoensis (Bradley)
Sipha kurdjumovi Mordvilko
Sitomyzus columbiae Richards
Sitomyzus humboldti (Essig)
Stagona xylostei (de Geer)
Thelaxes albipes Richards
Trichocallis cyperi (Walker)
Tuberculoïdes annulatus (Hartig)
- Cinara confinis* (Koch)
Tetraneura ulmi (Linnaeus)
Uroleucon ambrosiae (Thomas)
Uroleucon cirsii (Linnaeus)
Uroleucon erigeronensis (Thomas)
Uroleucon nigrotuberculatum (Olive)
Uroleucon pseudambrosiae (Olive)
Uroleucon russellae (Hille Ris Lambers)
Uroleucon sonchi (Linnaeus)
Uroleucon taraxaci (Kaltenbach)
Schizaphis palustris (Theobald)
Diuraphis frequens (Walker)
Diuraphis nodulus (Richards)
Lipaphis erysimi (Kaltenbach)
Delphiniobium canadense (Robinson)
Kakimia aquilegiae (Essig)
Kakimia wahinkae (Hottes)
Sitobion avenae (Fabricius)
Obtusicauda artemisiae (Cowen ex Gillette & Baker)
Sitobion fragariae (Walker)
Sitobion manitobense (Robinson)
Eomacrosiphon nigromaculosum (MacDougall)
Sitobion ptericolens (Patch)
Sitobion rhamni (Clarke)
Sitobion salicicornii (Richards)
Sitobion insulare yagasogae (Hottes)
Illinoia crystleae (Smith & Knowlton)
Illinoia davidsoni (Mason)
Illinoia lambersi (MacGillivray)
Illinoia magna (Hille Ris Lambers)
Illinoia maxima (Mason)
Illinoia morrisoni (Swain)
Illinoia patriciae (Robinson)
Illinoia morrisoni (Swain)
Illinoia richardsi (MacGillivray)
Illinoia spiraeae (MacGillivray)
Illinoia spiraeicola (Patch)
Illinoia wahnaga (Hottes)
Ceruraphis viburnicola (Gillette)
Thecabius gravicornis (Patch)
Thecabius populimonilis (Riley)
Prociphilus alnifoliae (Williams)
Pterocomma bicolor (Oestlund)
Rhopalosiphum insertum (Walker)
Nearctaphis bakeri (Cowen)
Nearctaphis crataegifoliae (Fitch)
Nearctaphis sclerosa (Richards)
Nearctaphis sensoriata (Gillette & Bragg)
Nearctaphis yohoensis Bradley
Sipha elegans del Guercio
Utamphorophora humboldti (Essig)
Utamphorophora humboldti (Essig)
Prociphilus xylostei (de Geer)
Thelaxes californica (Davidson)
Thripsaphis cyperi (Walker)
Tuberculatus annulatus (Hartig)

REFERENCES

- Eastop, V. F., and D. Hille Ris Lambers. 1976. Survey of the world's aphids. Dr. W. Junk b.v., Publishers, The Hague.
- Forbes, A. R., and Cho-Kai 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., B. D. Frazer and Cho-Kai 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.

THE APHIDS (HOMOPTERA: APHIDIDAE) OF BRITISH COLUMBIA 6. FURTHER ADDITIONS¹

A. R. FORBES AND CHO-KAI CHAN

Research Station, Agriculture Canada
Vancouver, British Columbia

ABSTRACT

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

INTRODUCTION

Three previous lists of the aphids of British Columbia (Forbes, Frazer and MacCarthy 1973; Forbes, Frazer and Chan 1974; Forbes and Chan 1976) recorded 285 species, but with the deletion of 7 synonyms² (Eastop and Hille Ris Lambers 1976) the number becomes 278. This includes aphids collected from 421 hosts³ or in traps and comprises 792 aphid-host plant associations³.

The present list adds 24 species of aphids (indicated with an asterisk in the list) and 172 aphid-host plant associations to the previous lists. Ninety-three of the new aphid-host plant associations are plant species not in the previous lists. The additions bring the number of known aphid species in British Columbia to

302. Aphids have now been collected from 514 different host plants and the total number of aphid-host plant associations is 964.

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

²*Aulacorthum clavicornis* Richards,
Aulacorthum scabrosum Richards,
Cavariella umbellatarum (Koch),
Masonaphis pseudomorrisoni MacGillivray,
Rhopalosiphum fitchii (Sanderson),
Sitomyzus columbiae Richards,
Thelaxys albipes Richards.

³*Quercus borealis* and *Philadelphus lewisii* var. *gordonianus* of earlier lists being deleted as synonyms, based on Hortus Third.

¹Contribution No. 417, Research Station, 6660 N.W. Marine Drive, Vancouver, British Columbia, V6T 1X2.

TABLE 1. Localities where aphids were collected, with airline distances from reference points.

Locality	Reference Point	Dir.	Distance	
			km	mi
Botanie Valley	Kamloops	SW	94	59
Colwood	Victoria	W	16	10
Harrison Lake	Vancouver	NE	114	71
Naramata	Kelowna	S	32	20
Peachland	Kelowna	SW	22	14
Port Coquitlam	Vancouver	E	37	23
Port Washington	Victoria	N	45	28
Silver Lake	Kelowna	W	53	33
Tulameen	Kelowna	SW	102	64
White Rock	Vancouver	SE	37	23
Yarrow	Vancouver	SE	92	58