

APHID PARASITOIDS (HYMENOPTERA: BRACONIDAE: APHIDIINAE) OF NORTHWEST USA

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Abstract.—A comprehensive assessment is provided of the Northwest USA aphid-parasitoid species (Hymenoptera, Braconidae, Aphidiinae). Eighty-one species of parasitoids in 19 genera are recognized; 35 species are new to the region; 7 species are newly described: *Aphidius segmentatus* Pike and Starý [hosts: *Hyperomyzus* on *Hieracium*, *Lactuca*, *Senecio*, and other Compositae, and on *Uroleucon* on *Achillea*]; *Betuloxys alnicolus* Pike & Starý [host: uncertain, possibly *Boernerina variabilis* Richards on *Alnus*]; *Monoctonus campbellianus* Pike & Starý [hosts: *Brachycaudus*, *Hyalopterus*, and *Phorodon* on *Prunus*]; *Monoctonus pacificus* Pike & Starý [host: *Macrosiphum tuberculiceps* (Esig) on *Achlys triphylla*]; *Praon coniforme* Pike & Starý [host: *Aphthargelia symphoricarpi* (Thomas) on *Symphoricarpos*]; *Praon fulvum* Pike & Starý [hosts: *Macrosiphum* spp. on *Achlys*, *Crepis*, *Lupinus*, *Spiraea*]; *Trioxys setaceus* Pike & Starý [host: *Acyrtosiphon macrosiphum* (Wilson) on *Amelanchier*]. Seventy genera of aphids (200+ spp.) were attacked by aphidiine parasitoids. Some 400+ parasitoid-aphid associations, and hundreds more tritrophic (parasitoid-aphid-plant) combinations are reported for the first time in North America.

Key Words: aphid, parasitoid, systematics, Northwest USA

The aphidiine parasitoids of Northwest USA were previously understood to include about 54 species in 13 genera; these were linked with about 100 species of aphids (Pike et al. 1996, 1997, 1999). Based on new environmental studies, the parasitoid guilds are recognized now to be much larger. Presented here is a comprehensive review of Northwest species, including an abridgment of previously published records.

Eighty-one species of aphidiine parasitoids in 19 genera are now recognized in

Northwest USA; 35 species are new to the region; 7 species are newly described. Collectively, these parasitoids attacked more than 200 species in 71 genera of aphids. Some 400+ parasitoid-aphid associations, and hundreds more tritrophic (parasitoid-aphid-plant) combinations are reported for the first time in North America.

The work is a foundation study of the Northwest aphidiine fauna. It provides background documentation for possible future studies on a variety of fronts, such as

Table 1. Legend for listings.

[Example]						
PARASITOID						
<i>Praon americanum</i> (Ashmead)						
<i>Aphis coweni</i> Palmer: WA, KITTITAS [*] – Stampede Pass, 8-VIII-96 on <i>Veratrum viride</i> (96K147†‡).						
APHID HOST	STATE	COUNTY	SPECIFIC COLLECTION SITE	DATE COLLECTED	APHID PLANT HOST	WSU CODE

[*] indicates previous published record, see Pike et al. 1996, 1997, 1999.
[†] indicates collection contained more than one species of aphid.
[‡] indicates parasitoid-aphid association shown is not certain.
Abbreviations: ALE, Arid Lands Ecology Reserve; CA, California; CG, Campground; Cr, Creek; det., determined; E, east; FR, forest road; G&P, Gillette & Palmer; HRL, Hille Ris Lambers; HMU, Habitat Management Unit; ID, Idaho; Lk, Lake; mi, mile; MT, Montana; Mt, Mount; Mtn, Mountain; N, north; nr, near; OR, Oregon; RNP, Mount Rainier National Park; Pk, Park; Rd, Road; S, south; sp., species; SP, State Park; W, west; WA, Washington; WLA, Wildlife Area or Refuge; WSU, Washington State University; YIR, Yakama Indian Reservation.

biosystematics, including new species descriptions; parasitoid guilds; population genetics; host adaptation, switching, and cross habitat movement; geographic spread of exotic species; interspecies population development; ecosystem relationships and effects on parasitoid and predator complexes, and target pests; application and advantages of aphid-plant biodiversity for maintaining, stabilizing, and/or increasing parasitoids of merit; and uses and possible export of Northwest parasitoids to other global areas.

MATERIALS AND METHODS

Aphidiine parasitoids were obtained from aphid rearings, with the aphids collected from a wide range of host plants from Northwestern USA, principally Washington. In total, more than 5,300 aphid collections were taken, of which 2,940 were parasitized. The aphid populations sampled varied in size. Where possible 50 to >200 aphids were taken per sample; a subsample of 5 to 30 aphids were preserved in 70% ethanol for later identification. For the parasitoid rearings, aphids were held in-labo-

ratory at 20 ± 3°C for 25–30 days in screen-covered semi-transparent plastic containers (two sizes used: 300 ml, 10 cm dia × 4 cm ht; and 3500 ml, 19 cm dia × 13 cm ht) or occasionally in paper lunch bags. After emergence, the parasitoids were placed in 70% ethanol for subsequent determination. Voucher specimens of both aphids and parasitoids are in Washington State University-Prosser collections, Prosser, WA.

Descriptions of new species were based on whole dry and dissected slide-mounted specimens examined under 40–400× magnification. Body lengths were measured and recorded in millimeters. Holotypes were dry-mounted on paper tabs and pinned. Descriptive terminology is after Huber and Sharkey (1993). Holotypes are deposited in the National Museum of Natural History, Smithsonian Institution, Washington, DC (USNM).

For cross reference and other information on aphid parasitoids of North America, see Gahan 1911; Smith 1944; Liu 1977; Marsh 1979; Johnson 1987; Pike et al. 1996, 1997,

1999; for world information, see Mackauer and Starý 1967.

Aphid nomenclature follows Remaudière and Remaudière 1997.

RESULTS

Aphidiine parasitoid genera and species.—Parasitoid genera and species are listed alphabetically, as are aphid hosts under each species. Locations are indicated by

state (large caps), county (small caps), and nearest city or identifiable site. Numbers in parentheses represent authors' codes of specimens (aphid-parasitoid vouchers) in Washington State University–Prosser collections (Table 1). Collections and determinations were by authors unless otherwise specified. Aphids collected by A. Jensen were determined by A. Jensen. Authorship of new species is attributed to K. S. Pike and P. Starý.

APHIDIINE PARASITOIDS OF NORTHWEST USA

Genus *ACANTHOCAUDUS* Smith

Acanthocaudus caudacanthus (Smith)

Uroleucon sp.: WA, PEND OREILLE—Le Clerc WLA, 3-VIII-95 on *Aster* sp. (95T400); SPOKANE—nr Peone, 24-VIII-95 on *Centaurea pratensis* (95T473†).

Acanthocaudus sp.?

Undetermined sp.: WA, GARFIELD—Pataha Cr, nr FR160 & FR40, 21-IX-95 on *Chimaphila umbellata* (95T597).

Genus *ADIALYTUS* Foerster

Adialytus ambiguus (Haliday)

Sipha elegans del Guercio: MT, SANDERS [on *Agropyron intermedium**].

Sipha sp.: WA, ASOTIN [on unknown Gramineae*].

Adialytus fuscicornis (Ashmead)

Aphis armoraciae Cowen: OR, UMATILLA—Hermiston, 17-VI-90 on unknown plant (90J002); WA, YAKIMA—Wenas Lk, 30-V-96 on *Erysimum arenicola* (96G120), & 11-VI-97 on *Lomatium* sp. (97G051†).

Aphis helianthi Monell: WA, YAKIMA—Wenas Lk, 11-VI-97 on *Lomatium* sp. (97G051†‡).

Forda marginata Koch: WA, GARFIELD—Dye Seed Airfield, 5-IX-95 on *Bromus* sp. (95G542); Kirby, 1-IX-95 on *Bromus inermis* (95K160).

Undetermined sp.: WA, ASOTIN [on *Populus trichocarpa**].

Adialytus salicaphis (Fitch)

Chaitophorus populicola Thomas [on *Populus trichocarpa* unless otherwise indicated]: ID, BOUNDARY [*]; WA, ASOTIN—Asotin WLA, 31-VII-96 & 15-VIII-96 (96T355, 96T454); BENTON—Grandview, 10-X-95 (95G694); WHITMAN—Pullman, 9-X-96 on *Populus tremuloides* (96T582); YAKIMA—YIR, Lucy Canyon, 25-IV-96 & 16-V-96 (96G021, 96G061) & nr Satus, 1-VI-96 (96K062).

Chaitophorus populifolii (Essig) [on *Populus trichocarpa*]: WA, KITTITAS—Manastash Cr, 16-VIII-96 (96G485); Ellensburg, 13-VI-97 (97G083); YAKIMA—Naches, 27-IX-96 (96G600).

Chaitophorus utahensis (Knowlton) [on *Salix* sp.]: WA, ASOTIN—Chief Timothy HMU, 16-VIII-95 (95T442); BENTON—nr Grandview, 24-VIII-95 (95G514); YAKIMA [*]—Grandview, 22-V-95 & 15-V-96 (95G078, 96G047).

Chaitophorus viminalis Monell [or nr *viminalis*] [on *Salix* sp.]: WA, OKANOGAN—Alta Lk, 10-IX-97 (97K026, 97K028); YAKIMA—Wenas Cr, 13-VIII-96, (96G459).

Chaitophorus sp. [nr *nigrae* Oestlund & *pallipes* Richards]: WA, ASOTIN—Heller's Bar, 11-VII-95 on *Salix* sp. (95T210†).

Chaitophorus sp. [on *Salix* sp. unless otherwise indicated]: WA, ASOTIN [*]; BENTON [*]—Prosser, 10-X-95 on *Populus trichocarpa* (95G693); GRANT—Potholes Reservoir, 13-VI-97 (97G101).

Periphyllus nr *brevispinosus* G&P: WA, PEND OREILLE—Sullivan Lk Rd, Harvey Cr, 3-VIII-95 on *Acer* sp. (95T395); SPOKANE—Mt Spokane SP, 24-VIII-95 on *Acer* sp. (95T487).

Periphyllus sp.: WA, ASOTIN [on *Acer* sp. *].

Genus *APHIDIUS* Nees*Aphidius avenaphis* (Fitch)

- Acyrtosiphon lactucae* (Passerini): WA, WHITMAN—Pullman, 13-VI-96 on *Lactuca serriola* (96T032†‡).
Diuraphis noxia (Kurdjumov): WA, ASOTIN—Anatone, 24-VII-96 & 22-VII-97 on *Hordeum vulgare* (96T596, 97J005–97J023); KLINKITAT—Bickleton, 29-VII-97 & 6-VIII-97 on *Triticum aestivum* (97G300, 97G354).
Rhopalosiphum padi (L.): WA, GRANT—Ephrata, 8-VII-97 on *Zea mays*, K. Volker collector (97K058).
Sitobion avenae (F.) [on *Triticum aestivum* unless otherwise indicated]: ID, LATAH—Moscow Mtn, 3-VIII-96 on unknown Gramineae (96T396†); SHOSHONE—Thompson Pass, 29-VII-95 on *Agropyron caninum* (95G478), *Arabis* sp. (95G475†), & *Poa nervosa* (95G470); OR, UMATILLA—Harris Pk, 11-VI-96, on *Dactylis glomerata* (96G230†); WA, ADAMS—Bruce, I-VII-96 (96B004, 96B007); Othello, 26-VI-95, 1-VII-96 (95B009, 96B009); ASOTIN—Anatone, 24-VII-96 on *Hordeum vulgare* (96T337); BENTON—Prosser, 2, 28 & 30-VI-95, 17-VII-95, 24-VI-96, 1 & 8-VII-96, 3-VII-97, (95G103, 95G276, 95G279, 95G285, 95G352, 95G354, 95G357†, 95G358, 96G271, 96G312, 96G328, 96G330, 97F201); Richland, 21-VI-95 (95G221†); West Richland, 28-VI-95 (95G279); WSU-Prosser, 18-VII-97 on *Setaria lutescens* (97G243); DOUGLAS—Waterville, 24-VII-96 (96B025); FRANKLIN—Kahlotus, 6-VII-95 (95G290, 95G308†); Star School, 6-VII-95 (96G289); GRANT—WSU-Royal Slope, 26-VI-95 (95B007); KITTITAS—S. Fork Manastash Cr, 24-VII-95 on *Agropyron repens* (95G375), *Agropyron caninum* (95G383), & *T. aestivum* (95G372); 11-IX-95 on *Bromus* sp. (95G384); Manastash Rd, 11-IX-95, on *D. glomerata* (95G565); Stampede Pass, 8-VIII-96 on *Phleum* sp. (96K142); KLINKITAT [on *H. vulgare* & *Triticosecale rimpani**]—Bickleton, 9 & 17-VII-95 (95G317†–95G319†, 95G362), 7-VII-97 (97G224); Trout Lk, 29-VI-97 on *D. glomerata* (97G160); LINCOLN—Harrington, 19-VII-96 (96B023); Davenport, 16 & 19 -VII-96 (96B011, 96B020, 96B023); Reardan, 16-VII-96 (96B014); PIERCE—Graham, 25-V-96 on unknown grass (96T001); WHITMAN—Colton, 31-VII-96 on *H. vulgare* (96T358A); Hay, 6-VII-95 (95G307); Pullman, 5-VII-94, 19-VII-96 (94T022, 96T320A); Ridpath, 6-VII-95 (95G299†, 95G300†); Rosalia, 16-VII-96 (96T294); YAKIMA—Sunnyside, 28-VI-95 & 5-VII-95 (95G272, 95G286); Zillah, 28-VI-95 (95G270); 25-VI-95 on *D. glomerata* (95G250); YIR, nr Signal Peak, 25-VII-95, on *Agropyron spicatum* (95G416); Chinook Pass, 24-VII-97, on *Poa gracillima* (97G260); 24-VII-97, on *Poa nervosa* (97G268).
Undetermined spp.: WA, GARFIELD—Ruckert Rd & Fitzgerald Rd, 15-VII-96 on *Hordeum* sp., W. Turner & J. Rumph collectors (96J069A); KING—Stampede Pass, 8-VIII-96 on *Caltha biflora* (96G447); PEND OREILLE—Le Clerc WLA, 3-VIII-95 on unknown grass (95T401).

Aphidius colemani Viereck

- Aphis nerii* Boyer de Fonscolombe: WA, YAKIMA—Union Gap, 23-X-95 on *Asclepias speciosa* (95G725).
Brachycaudus helichrysi (Kaltenbach): WA, WHITMAN—Pullman, 28-VI-96 on *Anthemis arvensis* (96T162).
Hyadaphis foeniculi (Passerini): WA, ISLAND—Clinton, 4-VI-96 on *Lonicera* sp. (96G156).
Lipaphis erysimi (Kaltenbach): WA, WHITMAN—Pullman, 3-VII-96 on unknown plant (96T163†).
Macrosiphum euphorbiae (Thomas): WA, WHITMAN—Pullman, 3-VII-96 on unknown plant (96T163†).
Myzus persicae (Sulzer): WA, SNOHOMISH—Monroe, 24-VII-96 on *Pisum sativum* (96T594†).
Myzus sp.: WA, SPOKANE—Spokane, 11-VII-96 on *Antirrhinum majus* (96T258); WHITMAN—Pullman, 14-IX-93, on *Forsythia* (93T019).
Undetermined sp.: WA, KING [on *Hibiscus* sp.*].

Aphidius ervi Haliday

- Acyrtosiphon kondoi* Shinji: ID, SHOSHONE—Thompson Pass, 29-VII-95 on *Melilotus alba* (95G466†); WA, KLINKITAT, Hwy 14 nr Alderdale, 14-V-96 on *Melilotus* sp. (96G033†).
Acyrtosiphon lactucae (Passerini) [on *Lactuca serriola*]: ID, BENEWAH—McCroskey SP, 31-VIII-95 (95T514†); WA, ASOTIN—Anatone, 28-VI-96 (96T088); Asotin, 28-VI-96 (96T068); Asotin Cr WLA, 5-VII-96 & 8-VIII-96 (96T144, 96T419); Couse Cr, 10-VIII-95 (95T422); Snake River Rd, 18-VII-95 & 28-VI-96 (95T249†, 96T072); South Fork Asotin Cr, 22-VIII-95 & 11-VII-96 (95T468, 96T230); BENTON—Prosser, 17-VII-95 (95G359†); 24-VI-96 & 8-VIII-96 (96G270, 96G434); ALE, 19-V-95 (95G071); CHELAN—Chelan SP, 11-IX-97 (97K038); SPOKANE—Plaza, 16-IV-96 (96T279); WHITMAN—Pullman, 16, 30-VII-96 & 1, 8-VIII-96 (96T304, 96T362, 96T382, 96T436); Ridpath, 6-VII-95 (95G296); YAKIMA—Mabton, 28-VI-95 (95G265); Sunnyside, 22-V-95 (95G076); Wenas Lk, 11-VI-97 (97G055).
Acyrtosiphon pisum (Harris) [on *Medicago sativa* unless otherwise indicated]: ID, SHOSHONE—Thompson Pass, 29-VII-95 on *Melilotus alba* (95G466†); MT, SANDERS [on *Lathyrus odoratus**]; WA, ADAMS—Macmaranon Rd, 2-VIII-96 (96B026); WSU-Othello, 26-VI-95 (95B008); ASOTIN—Couse Cr & Snake River Rds, 18-VII-95 on *Helianthus annuus* (95T252); BENTON [on *M. sativa* & *Trifolium pratense**]—28-VI-95 (95G277†); Prosser, 27-VI-96 on *Vicia angustifolia* (96A009); 23-VII-9, on *T. pratense* (96G391); WSU-Prosser, 26, 28-IV-97 & 14-V-97 (97G014, 97G015, 97G030); Whitstran, 1-V-97 (97G019);

- COLUMBIA—Hwy 124 & Tucannon Rd, 5-X-95 (95G678†); GRANT—WSU-Royal Slope, 26-VI-95 (95B003); ISLAND—South Whidbey, 4-VI-96 on *Trifolium* sp. (96G161); KLUCKITAT—Hwy 14 nr Alderdale, 14-V-96 on *Melilotus* sp. (96G033†); Roosevelt, 24-IV-96, on *Melilotus* sp. (96G014†); LINCOLN—Lk Roosevelt, 31-VII-97 on *M. lupulina* (97G304); SNOHOMISH—Monroe, 24-VII-96 on *Pisum sativum* (96T594†); SPOKANE—Four Lk, 25-VII-97 on *Allium* sp. (97K005); WHITMAN—Pullman, 16, 30-VII-96 on *P. sativum* (96T303, 96T359); 14-IV-96 on *Trifolium* sp. (96T272); 26-VI-96 on *Vicia* sp. (96T063) & unknown legume (96T064), & 5-VII-96 on *Lathyrus oderata* (96T178); Ridpath, 6-VII-95 on *Lactuca serriola* (95G296), *Medicago sativa* (95G297), & *Vicia* sp. (95G302); YAKIMA—Outlook, 1-VI-96 (96K059); Rimrock Lk, 23-VII-96 on *Melilotus* sp. (96G383); Wenas Valley, 30-V-96 (96G111); YIR, Signal Peak, 25-VII-95 on *Vicia* sp. (95G408) & 19-IX-95 on *Melilotus* sp. (95G625†).
- Aphis craccivora* Koch: WA, WHITMAN—Pullman, 25-VII-95 on *Capsella bursa-pastoris* (95T331); 14-IV-96, on *Trifolium* sp. (96T271).
- Aphis* sp.: ID, LATAH [on *Solanum lycopersicon* *]; WA, ASOTIN—De Spain Springs, 11-VI-96 on *Umbelliferae* sp. (96T254).
- Aspidophorodon longicauda* (Richards): WA, SKAMANIA—South Prairie, 11-VII-95 on *Spiraea* sp. (95G343).
- Brachycaudus helichrysi* (Kaltenbach) [on *Amsinckia* sp.]: WA, ASOTIN—Anatone, 28-VI-96 (96T089); FRANKLIN—Eureka, 14-V-96 (96G041); SKAGIT—Campbell Lk, 4-VI-96 on *Prunus* sp. (96G165†).
- Brevicoryne brassicae* (L.): WA, BENTON [on *Brassica napus**].
- Chaetosiphon* nr *hottesi* Stroyan: WA, CLARK—Vancouver, 14-IX-95 on *Fragaria* sp. (95V002).
- Diuraphis noxia* (Kurdjumov) [on *Triticum aestivum* unless otherwise indicated]: WA, ASOTIN [on *Avena fatua**] ASOTIN—Anatone, 22-VII-97 on *Hordeum vulgare* (97J007–97J026); BENTON [on *H. vulgare* & *T. aestivum**]—WSU-Prosser, 28-V-96 (on *H. vulgare*, 96G087, 96G088), 24-VII-97 (97G274); KLUCKITAT—Rock Cr, 30-VI-95 (95G283); Bickleton, 7-VII-97 (97G223, 97G238); Cleveland, 7-VII-97 (97G232, 97G234); WALLA WALLA—Hadley, 11-VI-96 on *H. vulgare* (96G240); WHITMAN—Pullman, 9-VII-96 on *H. vulgare*, W. Turner & J. Rumph collectors (96J053–96J055); YAKIMA [*].
- Hayhurstia atriplicis* (L.) [on *Chenopodium alba*]: WA, BENTON—WSU-Prosser, 18 & 25-VII-97 (97F238, 97F262); WHITMAN—Pullman, 16-VII-96 (96T302).
- Hyalopteroides humilis* (Walker) [on *Dactylis glomerata*]: WA, SKAGIT—Bow, 5-V-96 (96K026); Edison, 5-V-96 (96K027).
- Hyalopterus pruni* (Geoffroy): WA, SKAGIT—Campbell Lk, 4-VI-96 on *Prunus* sp. (96G165††).
- Hyperomyzus lactucae* (L.): WA, YAKIMA—Yakima Arboretum, 26-IX-95 on *Sonchus oleraceus* (95G658†).
- Hyperomyzus nigricornis* (Knowlton): ID, BENEWAH—McCroskey SP, 31-VIII-95 on *Lactuca serriola* (95T514†); WA, GARFIELD—Stentz Springs, 22-VIII-95 on *Senecio* sp. (95T456); YAKIMA—YIR, Cedar Cr, 19-IX-95 on *Agoseris* sp. (95G622).
- Illinoia davidsoni* (Mason): WA, KLUCKITAT—Trout Lk, 11-VII-95 on *Rubus parviflorus* (95K069).
- Illinoia* spp.: WA, KITTITAS—Quartz Mtn, 25-VII-96 on *Rhododendron albiflorum* (96G405); PIERCE—RNP, Tipsoo Lk, 16-VIII-95 on *Spiraea densiflora* (95A037); SKAGIT—La Conner, 5-VI-96 on *Rhododendron* sp. (96G193); SNOHOMISH—Monroe, 5-VI-96 on *Chaenomeles* sp. (96G201).
- Macrosiphum albifrons* Essig: WA, PIERCE—RNP, Tipsoo Lk, 11-IX-96 on *Lupinus* sp. (96G547).
- Macrosiphum euphorbiae* (Thomas): ID, LATAH—Moscow, 7-X-96 on *Solanum* sp. (96T577); WA, ASOTIN—De Spain Springs 11-VII-96 on *Potentilla* sp. (96T250), 1-VIII-95 on *Senecio* sp. (95T381), 5 & 11-VII-96 on *Compositae* (96T159, 96T249†); BENTON—Prosser, 15-V-96 on *Tulipa* sp. (96G045); 24-X-96 on *Medicago sativa* (96G651); WSU-Prosser, 27-X-95 on *Lamium amplexicaule* (95K213†), 18-XI-95 on *Brassica napus* (95G751†), & 1-X-97 on *Malva neglecta* (97G471†); GARFIELD—nr FR40 & FR44, 22-VIII-95 on *Osmorhiza chilensis* (95T464†); SKAMANIA—Twin Falls CG, 4-VIII-95 on *Potentilla* sp. (95K098†); YAKIMA—Bird Cr Meadows, 26-VI-95, on *Castilleja* (95A017†); YIR, Old Maid Canyon, 25-VI-95 on *Cynoglossum grande* (95G440).
- Macrosiphum gaurae* (Williams): WA, ASOTIN—Anatone, 28-VI-96 on *Oenothera* sp. (96T073).
- Macrosiphum* nr *pallidum* (Oestlund): WA, SKAMANIA—Twin Falls CG, 4-VIII-95 on *Potentilla* sp. (95K098††).
- Macrosiphum rosae* (L.): WA, SNOHOMISH—Snohomish, 5-VI-96 on cultivated *Rosa* sp. (96G198).
- Metopolophium dirhodum* (Walker): OR, UMATILLA—Harris Pk, 11-VI-96 on *Elymus glaucus* (96G221); WA, KLUCKITAT—John Day Dam, 14-V-96 on *Phalaris arundinacea* (96G036†); LINCOLN—Lk Roosevelt, Goldsmith CG, 31-VII-97 on *P. arundinacea* (97G305).
- Myzus* nr *ornatus* Laing: WA, SKAGIT—La Conner, 5-VI-96 on *Trifolium pratense* (96G195††).
- Myzus persicae* (Sulzer): WA, SKAGIT—La Conner, 5-VI-96 on *Trifolium pratense* (96G195†); BENTON—WSU-Prosser, 1-X-97 on *Solanum tuberosum* (97G477†); WHITMAN—Pullman, 16-VII-95 on *Raphanus sativum* (95T248); 8-VIII-95, on *Solanum nigrum* (95T412); 31-VII-96 on *Beta vulgaris* (96T366).

- Myzus* sp.: WA, WHITMAN—Pullman, 14-IX-93 on *Forsythia* sp. (93T019).
Ovatus crataegarius (Walker): WA, GRANT—Othello, 12-VII-95 on *Mentha piperita* (95B010).
Phorodon humuli (Schrank): WA, SKAGIT—Campbell Lk, 4-VI-96 on *Prunus* sp. (96G165†‡).
Rhopalosiphum maidis (Fitch): WA, BENTON—WSU-Prosser, 18-XI-95 on *Capsella bursa-pastoris* (95G750†).
Rhopalosiphum padi (L.): WA, ASOTIN—De Spain Springs, 25-VII-96 on *Aquilegia* sp. (96T347†); BENTON [on *Triticum aestivum**]; DOUGLAS—Waterville, 12-VIII-95 on *T. aestivum* (95B016); FRANKLIN—nr Kahlottus, 26-X-95 on *T. aestivum* (95K207†); GRANT—Ephrata, 8-VII-97 on *Zea mays* (97K058); WALLA WALLA—Prescott, 30-X-97 on *Phalaris arundinacea* (97G516).
Sitobion avenae (F.) [on *Triticum aestivum* unless otherwise indicated]: ID, BOUNDARY—Moyie Springs, 29-VII-95, on *Avena sativa* (95G445); SHOSHONE—Thompson Pass, 29-VII-95 on *Poa nervosa* (95G470) & *Arabis* sp. (95G475†); WA, ADAMS—Othello, 1-VII-96 (96B004, 96B007), WSU-Othello, 26-VI-95, 1-VI-96 (95B009, 96B009); ASOTIN [*]—Clarkston, 18-VII-95 on Gramineae (95T255); Field Springs SP, 5-VIII-93 on Gramineae (93T013); Couse Cr, 18-VII-95 on *Setaria* sp. (95T259); Anatone, 12-VII-94 (94T023); BENTON [on *Hordeum vulgare* & *T. aestivum**]—Prosser, 25, 28 & 30-VI-95, (95G253, 95G274, 95G276, 95G285); 17-VII-95 (95G352, 95G354, 95G355, 95G358); 24-VI-96 (96G271); 1 & 8-VII-96 (96G312 & 96G328); WSU-Prosser, 20-I-96 on *Capsella bursa-pastoris* (96G003†); 18-VII-97 on *Setaria lutescens* (97G243); Richland, 28-VI-95 (95G279); COLUMBIA—Dayton, 16-VI-94 (94T020); GRANT—WSU-Royal Slope, 26-VI-95 (95B007); FRANKLIN—Pasco, Star School, 6-VII-95 (95G289); KICKITAT—Bickleton, 9-VII-95 (95G318); Cemetery Rd nr Bickleton, 7-VII-97 on *Hordeum vulgare* (97G226†); KITTITAS—S. Fork Manastash Cr, 24-VII-9, on *Agropyron caninum* (95G383); Ellensburg, 9-VII-96 (96G331); Buck Meadows, 9-VII-96 on *Dactylis glomerata* (96G346); Stampede Pass, 8-VII-96 on *Phleum* sp. (96K142); LINCOLN—Almira, 26-VI-95 (95B002); Davenport, 16 & 19-VII-96 (96B011, 96B020); Harrington, 19-VII-96 (96B023); Reardan, 16-VII-96 (96B014); Wilbur, 19-VII-96 (96B019); PIERCE—Graham, 25-V-96 on Gramineae (96T001); RNP, Tipsoo Lk, 11-IX-96 on *Poa* sp. (96G543); WHITMAN [*]—Hay, 6-VII-95 (95G307); Pullman, 5-VII-94 (94T022); Colton, 31-VII-96 on *H. vulgare* (96T358A); Rosalia, 16-VII-96 (96T294); YAKIMA—Grandview, 5-VII-95 (95G286); 23-V-96 on *D. glomerata* (96G074); Zillah, 28-VI-95 (95G270, 95G272); 28-VI-95 on *Avena sativa* (95G271).
Uroleucon (Lambertius) sp.: WA, KITTITAS—Lost Lk Trailhead, 6-VIII-97 on *Achillea millefolium* (97G318).
Undetermined spp.: WA, BENTON—Prosser, 25-X-95 on *Berberis aquifolium* (95G732); 29-X-95 on *Senecio vulgaris* (95G735); CHELAN—Stevens Pass, 16-IX-95 on Gramineae (95K137); KICKITAT—Cleveland, 7-VII-97 on *Lotus pinnatus* (97G233); WHITMAN—Pullman, 1-VII-96 on *Penstemon* sp. (96T125), 5 & 9-VII-96 on *Geranium viscosissimum* (96T171, 96T228); 9-VII-96 on *Vicia* sp. (96T229).

Aphidius nr *hortensis* Marshall

- Ericaphis gentneri* (Mason): WA, CHELAN—Stevens Pass, 16-IX-95 on *Spiraea densiflora* (95K138).
Liosomaphis berberidis (Kaltenbach): OR MULTNOMAH & WA, YAKIMA [on *Berberis* sp.*].

Aphidius kakimiaphidis Smith

- Nasonovia alpina* (G&P): WA, YAKIMA [on *Mimulus lewisii**].
Nasonovia aquilegiae (Essig) [on *Aquilegia formosa* or sp.]: WA, BENTON—Prosser, 24-VI-96 (96G278); KITTITAS [†*]—Buck Meadows, 16-VIII-96 (96G501); YAKIMA—Yakima Arboretum, 3-VI-96 (96G249); YIR, Old Mead Canyon, 25-VII-95 (95GG441).
Nasonovia cynosbati (Oestlund): WA, KITTITAS—Lost Lk, 7-VII-94 on *Ribes* sp. (94K026).
Nasonovia nr *cynosbati* (Oestlund): WA, YAKIMA—YIR, nr Mt. Adams Lk, 4-VIII-95 on *Ribes viscosissimum* (95K089).
Nasonovia nr *houghtonensis* (Palmer): WA, YAKIMA—Nile, 28-VII-97 on *Collomia linearis* (97G282).
Nasonovia wahinkae (Hottes): WA, KITTITAS—Buck Meadows, 11-IX-95 on *Aconitum columbianum* (95G557).
Nasonovia sp.: MT, SANDERS [on *Castilleja* sp.*]; WA, LEWIS—RNP, Stevens Canyon, 23-VII-96 on *Pedicularis* sp. (96G372†).

Aphidius lupini Liu

- Macrosiphum albifrons* Essig [on *Lupinus* sp.]: WA, BENTON—Prosser 22-VI-95 & 24-VI-96 (95G249, 96G276); KITTITAS—S. Fork Manastash Cr, 24-VII-95 (95G390); Quartz Mtn 25-VII-96 (96G408); PIERCE—RNP, Tipsoo Lk, 11-IX-96, 5-IX-97 (96G547, 97G362); WHITMAN—Pullman, 1-VII-96 (96T129); YAKIMA [*]—YIR, nr Howard Lk, 19-IX-95 (95G638) & nr Mt Adams Lk, 25-VII-95 (95G419); Little Naches River, nr Timothy Meadows, 9-IX-97 (97G389).

Aphidius matricariae Haliday

- Aphis fabae* Scopoli [on *Cirsium arvense*]: WA, ASOTIN—Sangster Rd, 22-VII-97 (97J003†‡, Turner & Rumph collectors); KITTITAS—Buck Meadows, 11-IX-95 (95G580).

- Aphis helianthi* Monell: WA, YAKIMA—Chinook Pass Hwy & Bald Mt Rd, 23-X-97 on *Cirsium arvense* (97G499).
- Aphthargelia symphoricarpi* (Thomas): WA, KITTITAS—Lost Lk, 6-VIII-97 on *Silene douglasii* (97G345).
- Brachycaudus cardui* (L.): WA, ASOTIN—Sangster Rd, 22-VII-97 on *Cirsium arvense*, Turner & Rumph collectors (97J003†).
- Brachycaudus helichrysi* (Kaltenbach): WA, BENTON—WSU-Prosser, 1-X-97 on *Solanum tuberosum* (97G478); KING [on *Senecio vulgaris**]; KCLICKITAT—Bickleton, 30-VI-95 on *Chrysanthemum* sp. (95G282); WHITMAN—Pullman, 26-VI-96, on *Achillea millefolium* (96T065).
- Brevicoryne brassicae* (L.): WA, BENTON—WSU-Prosser, 6-VII-95 on *Brassica napus* (95A024).
- Capitophorus elaeagni* (del Guercio) [on *Cirsium arvense* or sp.]: WA, KITTITAS—Buck Meadows, 11-IX-97 (97G437†); YAKIMA—Mabton, Morgan Lk, 28-VI-95 (95G266); Little Naches River (FR 789 & FR 1914), 9-IX-97 (97G409); 9-IX-97 (97G408); Little Naches River, nr Timothy Meadows, 9-IX-97 (97G394).
- Diuraphis noxia* (Kurdjumov) [on *Triticum aestivum*]: WA, BENTON—Rattlesnake Hills, 17-VII-95 (95G357†); WSU-Prosser, 30-IX-97 (97F457†, 97F463†); YAKIMA—Mabton Grade, 31-X-97 (97G517†).
- Dysaphis plantaginea* (Passerini): WA, CHELAN—WSU-Wenatchee, 30-V-96 on *Pyrus malus* (96R011†).
- Hyalopterus pruni* (Geoffroy): WA, SKAGIT—Campbell Lk, 4-VI-96 on *Prunus* sp. (96G165†).
- Illinoia corylina* (Davidson) [det. by A. Jensen]: WA, WHITMAN—Pullman, 14-VIII-96 on *Aquilegia* sp. (96T442).
- Macrosiphum euphorbiae* (Thomas): WA, BENTON—WSU-Prosser, 1-X-97 on *Malva neglecta* (97G471†).
- Myzus persicae* (Sulzer): ID, BONNER—Sandpoint, 30-IV-97 on *Viola tricolor* (97T006); OR, UMATILLA—Hermiston, 23-VII-93 on unknown plant, A. Jensen collector (93J005); WA, BENTON—WSU-Prosser, 27-X-95 on *Malva neglecta* (95K212†), 1-X-97 on *Chenopodium album* (97G470†), *Solanum sarrachoides* (97G472†), & *S. tuberosum* (97G476); KCLICKITAT—John Day Dam, 28-IV-95 on *Veronica anagallis-aquatica* (95G009†); SPOKANE—Spokane, Manito Pk, 19-IX-96 on *Syngonium* sp. (96T538); WHITMAN—Pullman, 22-VII-95 on *Solanum lycopersicon* (95T299†).
- Myzus* sp.: WA, WHITMAN—Pullman, 14-IX-93 on *Forsythia* sp. (93T019).
- Ovatus crataegarius* (Walker): ID, BONNER—Sandpoint, 10-IV-97 on *Origanum* sp. (97T003); WA, ADAMS—Othello, 19-VI-96 & 16-VII-96 on *Mentha piperita* (96B006, 96B010).
- Phorodon humuli* (Schrank) [on *Humulus lupulus*]: WA, BENTON [*]—WSU-Prosser, 9-IX-95 (95K154).
- Rhopalosiphum insertum* (Walker): WA, CHELAN—WSU-Wenatchee, 30-V-96 on *Pyrus malus* (96R011†).
- Rhopalosiphum padi* (L.) [on *Triticum aestivum*]: WA, BENTON—Rattlesnake Hills, 17-VII-95 (95G357†); WSU-Prosser, 30-IX-97 (97F457†, 97F463†); YAKIMA—Mabton Grade, 31-X-97 (97G517†).
- Sitobion avenae* (F.): WA, BENTON—WSU-Prosser, 11 & 18-VII-97 on *Triticum aestivum* (97F225, 97F243).
- Undetermined sp.: WA, BENTON—WSU-Prosser, 29-X-95 on *Senecio vulgaris* (95G735).
- Aphidius nigripes* Ashmead**
- Macrosiphum euphorbiae* (Thomas): WA, KITTITAS—Manastash Rd & FR112, 9-VII-96 on *Agoseris elata* (96G341) & *Arnica cordifolia* (96G332); Lost Lk, 2-IX-95 on *Aster* sp. (95G528) & *Castilleja* sp. (95G527), & 11-IX-95 on *Arabis* sp. (95G568) & *Monardella odoratissima* (95G569†).
- Macrosiphum clydesmithi* Robinson: WA, YAKIMA—Clear Lk, 15-VI-96 on *Holodiscus discolor* (96K081).
- Aphidius ohioensis* Smith**
- Macrosiphoniella ludoviciana* (Oestlund) [on *Artemisia ludoviciana*]: CA. SHASTA [*]; WA, ASOTIN—Asotin Cr WLA, 5-VII-96, (96T138); YAKIMA—Wenas Lk, 17-VI-97 (97G090).
- Macrosiphoniella tanacetaria* (Kaltenbach): WA, PIERCE—RNP, Tipsoo Lk, 5-IX-97 on *Tanacetum vulgare* (97G369).
- Macrosiphum creelii* Davis: WA, KITTITAS—Manastash Cr Rd, mi marker 8, 16-VIII-96 on *Vicia* sp. (96G492).
- Macrosiphum* sp.?: ID, LATAH—Moscow Mtn, 6-VII-96 on *Holodiscus discolor* (96T182).
- Macrosiphum valerianae* (Clarke) [on *Epilobium angustifolium*]: WA, KITTITAS—Lost Lk, 24-VII-95 (95G399†); S. Fork Manastash Cr, 24-VII-95 (95G381); YAKIMA—YIR, Signal Peak, 11-VII-95 (95G322†).
- Microsiphoniella artemisiae* (Gillette): WA, ASOTIN—Asotin Cr HMU, 5-VII-96 on *Artemisia ludoviciana* (96T141).
- Uroleucon adenocaulonae* (Essig): WA, KCLICKITAT—Trout Lk, 29-VI-97 on *Adenocaulon bicolor* (97G163).
- Uroleucon* nr *arnesense* Robinson: MT, SANDERS—18 mi E of Thompson Pass, 29-VII-95 on *Solidago*, sp. (95G457).
- Uroleucon* nr *epilobii* (Pergande): WA, SPOKANE—Mt Spokane SP, 27-VII-95 on *Epilobium angustifolium* (95T358).
- Uroleucon erigeronense* (Thomas) [on *Conyza canadensis* unless otherwise indicated]: WA, CHELAN—Leavenworth, 16-IX-95 (95K141); KITTITAS—Lost Lk, 6-VIII-97 on *Haplopappus hirtus* (97G340†), &

11-IX-95 on *Achillea millefolium* (95G574); Manastash Rd & Rd 112, 11-IX-95 on *Cirsium arvense* (95G564†); S. Fork Manastash Cr, 11-IX-95 on *Achillea millefolium* (95G563), & 24-VII-95 on *Crepis* sp. (95G386†); LINCOLN—Lk Roosevelt, Goldsmith CG, 31-VII-97 (97G302); PIERCE—RNP, 8-IX-95 on *Aster* sp. (95K106) & on *Senecio* sp. (95K120†), Tipsoo Lk, 5-IX-97 on *Aster* sp. (97G364†, 97G366), & 24-VII-97 on *Compositae* (97G252); YAKIMA—Grandview, 9-VII-95 (95G314); Pleasant Valley CG, 24-VII-97 on *Crepis rucinata* (97G258); Sunnyside, 23-X-95 & 13-X-96 (95G707, 96G645); YIR, nr Mt Adams Lk, 4-VIII-95 on *Eriophyllum lanatum* (95K092), Signal Peak, 11-VII-95 on *Aster* sp. (95K049†), Cedar Cr, 19-IX-95 on *Achillea millefolium* (95G620†), Klickitat Canyon (95G628†), & White Deer Cr, 11-VII-95 on *Crepis modocensis* (95K048†).

Uroleucon nr *erigeronense* (Thomas): WA, LINCOLN—Lk Roosevelt, Goldsmith CG, 31-VII-97, on *Aster* sp. (97G307); SPOKANE—Peone, 20-VII-95 on *Solidago* sp. (95T278); YAKIMA—Mabton Grade, 23-V-96, on *Balsamorhiza careyana* (96G069); YIR, nr Mt Adams Lk, 4-VIII-95 on *Hieracium* sp. (95K083†).

Uroleucon escalantii (Knowlton): WA, BENTON—ALE, 8-VI-95 on *Chrysothamnus viscidiflorus* (95G148).

Uroleucon nr *escalantii* (Knowlton): WA, KLICKITAT—Box Springs, nr Bickleton, 29-VI-97 on *Chrysothamnus* sp. (97G178).

Uroleucon gigantiphagum Moran: WA, YAKIMA—YIR, Signal Peak, 11-VII-95 on *Solidago* sp. (95G329).

Uroleucon ivae Robinson [on *Iva xanthifolia*]: WA, BENTON [*]—ALE, Lower Snively Spring, 12-VIII-95 (95K104); YAKIMA [*]—Grandview, 7,9 & 22-VII-95, & 30-VII-96, (95G309, 95G313, 95G366 & 96G431); Harrah, 29-IX-97 (97G465); Selah, 10-VIII-95 (95G500); Wenas-Ellensburg Rd, Ellensburg Pass, 7-VII-96 (96G317).

Uroleucon katonkae (Hottes) [on *Aster* sp.]: WA, YAKIMA—Wenas Lk, 17-VI-97 (97G099); YIR, Lost Springs, 11-VII-95 (95K049†).

Uroleucon olivei Moran: WA, BENTON—WSU-Prosser, 21-VII-94 on *Iva xanthifolia* (94R012).

Uroleucon russellae (HRL) [on *Anaphalis margaritacea* unless otherwise indicated]: WA, LEWIS—RNP, 8-IX-95 on *Senecio* sp. (95K120†); SKAMANIA—June Lk, 4-VIII-95 (95K101); SPOKANE—Mt Spokane SP, 20-VII-95 & 24-VIII-95 (95T294, 95T494); YAKIMA—YIR, Lost Springs (95G412) & Soda Springs (95G423), 25-VII-95.

Uroleucon sonchi (L.): WA, YAKIMA—Grandview, 17-VII-95, 8-VII-96 on *Sonchus oleraceus* (95G348, 96G326); Sunnyside, 23-X-95 on *Sonchus* sp. (95G703); Satus, 1-VI-96 on *Sonchus* sp. (96K064).

Uroleucon suzannae ROBINSON: WA, KITTITAS—Lost Lk, 6-VIII-97 on *Haplopappus hirtus* (97G340†‡).

Uroleucon spp.: ID, BENEWAH—McCroskey SP, 31-VIII-95 on *Adenocaulon bicolor* (95T527, 95T536); WA, CHELAN—Chiwawa Canyon, 3-VIII-96 on *Adenocaulon bicolor* (96R044); KITTITAS—Lost Lk, 11-IX-95 & 6-VII-97 on *Aster* sp. (95G579); Lost Lk Trailhead, 6-VIII-97 on *Agoseris retrorsa* (97G319); S. Fork Manastash Cr, 24-VII-95 on *Hieracium* sp. (95G389); LINCOLN—Lk Roosevelt, Goldsmith CG, 31-VII-97 on *Tragopogon dubius* (97G303); PIERCE—RNP, Tipsoo Lk, 5-IX-97 on *Anaphalis margaritacea* (97G367); SPOKANE—Mt Spokane SP, 24-VIII-95 on *Centaurea pratensis* (95T477); YAKIMA [on *Iva xanthifolia* *]—Hwy 410, Fife Peak Viewpoint, 24-VII-97 on *Senecio serra* (97G270†); Raven's Roost, 28-VII-97 on *Hieracium gracile* (97G298†); Sawmill Flats CG, 26-VII-97 on *Aster* sp. (97G287); Union Gap, 23-X-95 on *Centaurea maculosa* (95G720); YIR, Big Spring, 4-VIII-95 on *Agoseris elata* (95K090†), Lost Spring, 25-VII-95 on *Cichorium intybus* (95G413), Signal Peak, 11-VII-95 on *Eriophyllum lanatum* (95K055), 25-VII-95 on *Achillea millefolium* (95G410, 95G417); 19-IX-95 on *Grindelia* sp. (95G618), Signal Peak Guard Station, 19-IX-95 on *Antennaria* sp. (95G616), & Windy Point, 19-IX-95 on *Aster* sp. (95G629).

***Aphidius* nr *pisivorus* Smith**

Acyrtosiphon pisum (Harris): WA, BENTON—WSU-Prosser, 11-VII-97 on *Melilotus officinalis* (97F218†).

***Aphidius polygonaphis* (Fitch)**

Acyrtosiphon lactucae (Passerini) [on *Lactuca serriola*]: WA, WHITMAN—Kamiak Butte, 12-IX-95 (95T550); YAKIMA—Sunnyside, 28-VI-95 (95G257).

Amphorophora parviflora Hill: WA, YAKIMA—N. Fork Tieton River & Rd 820, 27-VI-96 on *Rubus parviflorus* (96G304).

Amphorophora sp.?: WA, LEWIS—RNP, Stevens Canyon, 23-VII-96 on *Arnica* sp. (96G359†).

Aphis ceanothi Clarke: WA, YAKIMA—Windy Point CG, 3-VI-95 on *Ceanothus integerrimus* (95G107).

Aphis helianthi Monell: WA, YAKIMA—YIR, nr. Mt. Adams Lk., 25-VII-95 on *Epilobium angustifolium* (95G402†‡).

Aphis nr *oenotherae* Oestlund: WA, GARFIELD—Stentz Springs, 14-IX-95 on *Epilobium* sp. (95T565).

Brachycaudus cardui (L.): MT, SANDERS—Thompson Pass, 17-VI-95 on *Senecio* sp. (95G191†‡).

Capitophorus elaeagni (del Guercio): WA, KITTITAS—Frost Meadows, 11-IX-95 on *Cirsium arvense* (95G583†).

Ericaphis wakibae (Hottes): WA, YAKIMA—Clear Lk, 15-VI-96 on native *Rosa* sp. (96K084, 96K085†).

- Hyperomyzus nigricornis* (Knowlton): WA, YAKIMA—Bird Cr Meadows, 26-VI-95 on *Hieracium* sp. (95A016†).
- Hyperomyzus* sp. [nr *nigricornis* (Knowlton) & *sandilandicus* (Robinson)] WA, KITTITAS—S. Fork Manastash Cr, 24-VII-95 on *Hieracium albiflorum* (95G388).
- Illinoia* nr *azaleae* (Mason): WA, YAKIMA—Raven's Roost, 28-VII-97 on *Rhododendron albiflorum* (97G297).
- Illinoia davidsoni* (Mason): WA, LEWIS—RNP, Stevens Canyon, 23-VII-96 on *Arnica* sp. (96G359†); YAKIMA—Bird Cr Meadows, 26-VI-95 on *Rubus parviflorus* (95A019).
- Illinoia* sp. [on *Vaccinium* sp.]: ID, SHOSHONE—Thompson Pass, 29-VII-95 (95G472); WA, SKAMANIA—Keenes Horse Camp, 11-VII-95 (95G337).
- Macrosiphoniella ludoviciana* (Oestlund) [on *Artemisia ludoviciana*]: WA, YAKIMA [on *Artemisia ludoviciana**]—YIR, Bedground Springs, 16-V-96 (96G053†).
- Macrosiphum clydesmithi* (Robinson): WA, YAKIMA—YIR, Piscoe Meadows, 5-VII-95 on *Pteridium aquilinum* (95G433†).
- Macrosiphum clydesmithi* (Robinson): WA, SPOKANE—Mt Spokane SP, 20-VII-95 on unknown Polypodiaceae (95T298); YAKIMA—Clear Lk, 15-VI-96 on *Holodiscus discolor* (96K081).
- Macrosiphum euphorbiae* (Thomas): MT, SANDERS—Thompson Pass, 17-VI-95 on *Senecio* sp. (95G191†); WA, ASOTIN—De Spain Spring, 11-VII-96 on *Potentilla* sp. (96T250); 11-VII-96, on unknown plant (96T252); KITTITAS [on *Rosa* sp.*]—Manastash Canyon, 2-IX-95 on *Lactuca serriola* (95G544); Lost Lk Trail, 6-VIII-97 on *Luina nardosmia* (97G327); WHITMAN—Pullman, 22-VII-95 on *L. serriola* (95T300) & 18-VI-96 on cultivated *Rosa* sp. (96T037); YAKIMA—Clear Lk, 15-VI-96 on native *Rosa* sp. (96K085†); Bird Cr Meadows, 26-VI-95 on *Hieracium* sp. (95A016†).
- Macrosiphum* nr *euphorbiae* (Thomas): WA, YAKIMA—YIR, Klickitat Canyon, 25-VII-95 on *Cynoglossum grande* (95G418); Mill Cr Guard Station, 6-VI-95 on *Lomatium nudicaule* (95G115).
- Macrosiphum pteridis* (Wilson): OR, BENTON—McDonald Forest, 14-IV-94 on *Holodiscus discolor*, A. Jensen collector (94J001).
- Macrosiphum rosae* (L.): OR, BENTON—Corvallis, 18-V-93 on unknown plant, A. Jensen collector (93J003).
- Macrosiphum valerianae* (Clarke): WA, YAKIMA—YIR, nr. Mt. Adams Lk., 25-VII-95 on *Epilobium angustifolium* (95G402†).
- Macrosiphum* sp.: ID, BENEWAH—McCroskey SP, 7-VI-96 on native *Rosa* sp. 96T005); WA, GARFIELD—FR160 & FR40, 21-IX-95, on *Streptopus* sp. (95T601); KITTITAS—Manastash Cr, mi marker 12, 6-VIII-97 on *Holodiscus discolor* (97G314); YAKIMA—YIR, Piscoe Meadows, 25-VII-95 on *Pteridium aquilinum* (95G433†); Howard Lk, 19-IX-95 on *P. aquilinum* (95G640).
- Nasonovia crenicorna* (Smith & Knowlton): WA, WHITMAN—Pullman, 27-V-97 on *Geranium viscosissimum* (97T035).
- Nasonovia houghtonensis* (G&P): WA, WHATCOM—Birch Bay, 29-V-93 on *Oemleria cerasiformis*, A. Jensen collector (93J004).
- Sitobion* sp.: CANADA, B.C.—Vancouver, Univ. of British Columbia, 29-V-93 on *Dicentra formosa*, A. Jensen collector (93J003).
- Uroleucon* nr *arnesense* Robinson: WA, CHELAN—Leavenworth, Icicle Cr, 1-VIII-95, on *Solidago canadensis* (95G490).
- Uroleucon* nr *erigeronense* (Thomas): WA, KITTITAS—Manastash Rd & Rd112, 9-VII-96 on *Hieracium albiflorum* (96G340).
- Uroleucon ivae* Robinson: WA, YAKIMA—Sunnyside, 13-VII-94 & 11-VII-97, on *Iva xanthifolia* (94G009, 97G242).
- Wahlgreniella nervata* (Gillette): ID, SHOSHONE—Thompson Pass, 29-VII-95 on *Pachistima myrsinites* (95G471).
- Aphidius* nr *polygonaphis*** (Fitch)
Macrosiphum walkeri Robinson: OR, BENTON—Corvallis, 17-III-90 on *Polypodium* sp. (90J001).
- Aphidius pulcher*** Baker
Acyrtosiphon pisum (Harris): WA, BENTON—WSU-Prosser, 1-VII-96 on *Melilotus officinalis* (96G311†).
- Aphidius rhopalosiphi*** DeStefani
Metopolophium dirhodum (Walker): WA, BENTON—WSU-Prosser, 6-VIII-97 on *Triticum aestivum* (97F226†).
Sitobion avenae (F.): WA, BENTON—WSU-Prosser, 11, 18 & 25-VII-97 on *Triticum aestivum* (assorted collections between 97F204–97F277).
- Aphidius* nr *rosae*** Haliday
Macrosiphum pallidum (Oestlund): WA, SPOKANE—nr Cheney, 23-V-95 on native *Rosa* sp. (95K006).

Aphidius salicis Haliday

Cavariella aegopodii (Scopoli): WA, BENTON—WSU-Prosser, 21-VII-97 on *Anethum graveolens* (97G247+); KITTITAS—Reecer Cr, nr Ellensburg, 20-VI-95 on *Angelica canbyi* (95G203); Manastash Cr Rd, mi marker 12, 25-VI-97, on *Osmorhiza occidentalis* (97G132); Lost Lk, 6-VIII-97 on *Osmorhiza chilensis* (97G331); Quilomene WLA, Crossover Rd & Colockum Ridge, 2-VII-97 on *Osmorhiza purpurea* (97G207); PEND OREILLE—Tiger Meadows, 9-VII-96 on unknown Umbelliferae (96T219+); YAKIMA—Hwy 410, Fife Peak Viewpoint, 24-VII-97 on *Osmorhiza chilensis* (97G271+); YIR, Signal Peak, 19-IX-95 on *Salix* sp. (95G623).

Cavariella pastinacae (L.) [on *Heracleum lanatum* unless otherwise indicated]: WA, ASOTIN—De Spain Springs, 5-VII-96 & 25-VII-96 (96T156, 96T350); ISLAND—N. Whidby Island, 5-VI-96 (96G171); KING—Tinkham exit, 4-VI-96 (96G137); KITTITAS—Reecer Cr, nr Ellensburg, & S. Fork Manastash Cr, & Manastash Rd, 20-VI-95, 24-VII-95, & 25-VII-96 (95G217, 95G393, 96G417); Taneum Lk, 11-IX-97 on *Angelica* sp. (97G413); PIERCE—RNP, Ipsut Pass, 25-IX-97 (97G447); Mowich Lk, 25-IX-97 (97G450); YAKIMA—Yakima, 28-VI-95 on *Heracleum lanatum* (95G269+); YIR, Klickitat Canyon, 23-VI-95 (95G235), & Signal Peak, 11-VII-95 (95G335).

Aphidius segmentatus Pike and Starý, new species

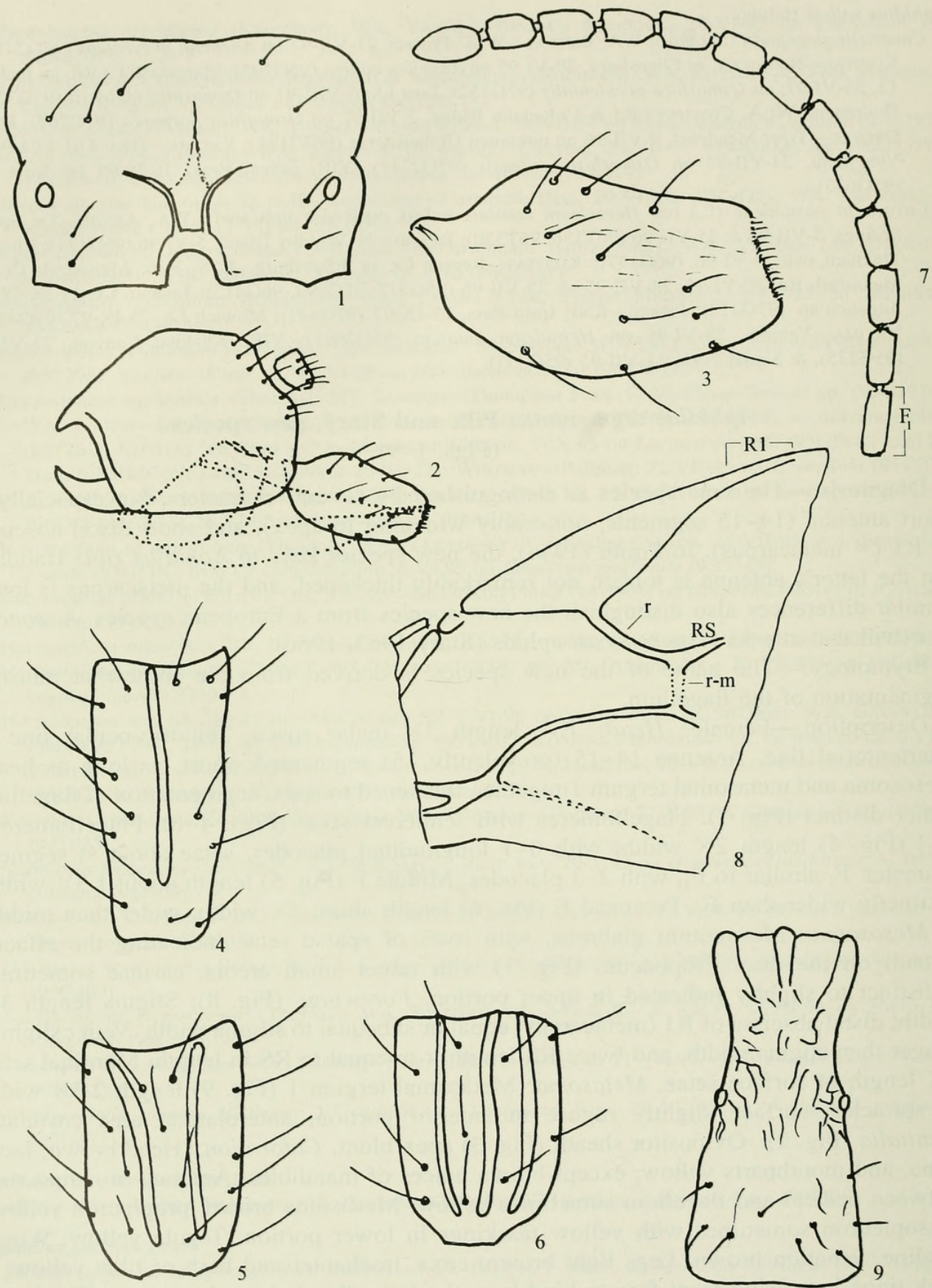
(Figs. 1–9)

Diagnosis.—The new species is distinguished by several characters, but especially a short antenna (14–15 segments, noticeably widening to apex), and short distal abscissa of R1 (= metacarpus). In Smith (1944), the new species keys to *Aphidius ribis* Haliday, but the latter's antenna is longer, not remarkably thickened, and the metacarpus is long. Similar differences also distinguish the new species from a European species, *A. sonchi* Marshall that attacks *Hyperomyzus* aphids (Starý 1963, 1966).

Etymology.—The name of the new species is derived from the somewhat unusual segmentation of the flagellum.

Description.—Female. *Head*: Eye length $3\times$ malar space. Tentorio-ocular line $\frac{1}{2}$ intertentorial line. Antenna 14–15 (prevalently 15) segmented, short, as long as head, mesosoma and metasomal tergum 1 together, thickened to apex, segmentation of flagellum rather distinct (Fig. 7). Flagellomeres with semierect setae (Figs. 4–6). Flagellomere 1 [F_1] (Fig. 4) length $2\times$ width, with 0–1 longitudinal placodes, setae about $\frac{2}{3}$ segment diameter. F_2 similar to F_1 , with 2–3 placodes. Middle F (Fig. 5) length about $1.3\times$ width, distinctly wider than F_2 . Preapical F (Fig. 6) length about $2\times$ width, wider than middle F. *Mesosoma*: Mesonotum glabrous, with rows of sparse setae indicating the effaced notauli on the disc. Propodeum (Fig. 1) with rather small areola, carinae sometimes indistinct to slightly indicated in upper portion. *Forewing*: (Fig. 8): Stigma length $3\times$ width; distal abscissa of R1 (metacarpus) equal or subequal to stigma width. Vein r slightly longer than stigma width, and twice RS length; r-m equal to RS in length. Marginal setae $3\times$ length of surface setae. *Metasoma*: Metasomal tergum 1 (Fig. 9) length $2.5\times$ width at spiracles; surface slightly rugose in anterior portion; anterolateral area costulate. *Genitalia* (Fig. 2): Ovipositor sheath (Fig. 3) apex blunt. *Coloration*: Head brown; face, gena, and mouthparts yellow, except brown apices of mandibles. Antenna brown; a ring between pedicel and flagellum sometimes yellow. Mesosoma brown, propleuron yellow; mesopleuron sometimes with yellow markings in lower portion. Tegula yellow. Wings hyaline, venation brown. Legs light brown; coxa, trochanter and base of tibia yellow; a dark tinge increasing from fore to hind legs, the latter the darkest. Metasoma: Tergum 1 and apical half of metasoma yellow, terga 2 and 3 and some times 4, with brown banding. Ovipositor sheath brown. *Length of body*: about 2.2–2.7 mm.

Male.—Antenna 17–18 segmented. *Coloration*: head brown; mouthparts mainly (apices of mandibles brown, palpi light brown). Mesosoma brown. Legs brown, base of tibia yellow to light brown. Metasoma brown, tergum 1 yellow to light brown.



Figs. 1-9. *Aphidius segmentatus*, ♀ [illustrations not to equal scale]. 1, Propodeum. 2, Genitalia. 3, Ovipositor sheath. 4, Flagellomere 1 [F₁]. 5, Middle flagellomere. 6, Preapical flagellomere. 7, Antenna [flagellum]. 8, Fore wing, in part. 9, Metasomal tergum 1. Abbreviations: R1, distal abscissa of postmarginal vein [= metacarpus]; RS, r, and r-m, wing veins.

Holotype.—♀, USA, WA, YAKIMA Co., Yakama Indian Reservation, 25-VII-1995, G. Graf collector, (collection code, 95G406). Host aphid: *Hyperomyzus nigricornis* (Knowlton) on *Hieracium cynoglossoides*. Deposited in USNM.

Paratypes.—16 specimens, collection data same as holotype, deposited in part in collections of WSU-Prosser (10 ♀, 4 ♂) and P. Starý, České Budejovice, Czech Republic (1 ♀, 1 ♂); 11 specimens, USA, WA, KITTITAS Co., L.T. Murray WLA, S. Fork Manastash Creek, 24-VII-1996, on *Hyperomyzus* sp. (nr *nigricornus* or *sandilandicus*) on *Hieracium albiflorum* (96G388), deposited in part in collections of WSU-Prosser (6 ♀) and P. Starý, České Budejovice, Czech Republic (3 ♀, 2 ♂).

Other material reared from.—

Hyperomyzus lactucae (L.): WA, WHITMAN—Pullman, 12-IX-95, on *Lactuca serriola* (95T559).

Hyperomyzus nigricornis (Knowlton) [on *Hieracium* sp. unless otherwise indicated]: ID, LATAH—Moscow Mtn, 3-VII-96 on Compositae (96T399); WA, GARFIELD—FR40 nr Teal Springs, 1-VIII-95 on *Senecio* sp. (95T378†); Pataha Cr Rd, 25-VII-95 (95T323‡); Wickiup CG, 29-VIII-95 (95T508); KITTITAS—Lost Lk, 6-VIII-97 (97G317†, 97G344); KLINKITAT—Cleveland, 7-VII-97 (97G229); PIERCE—RNP, Paradise, 8-IX-95 on *Senecio* sp. (95K119), & Tipsoo Lk, 5-IX-97 (97G359); SPOKANE—Mt Spokane SP, 24-VIII-95 on Compositae (95T486); YAKIMA—Little Naches River, 5 mi W of Timothy Meadows, 9-IX-97 (97G388, 1 specimen); Hwy 410, Ravens's Roost, 28-VII-97 (97G298†); Pleasant Valley CG, 24-VII-97 (97G259†); Sawmill Flats, 28-VII-97 (97G288†); Wenas Lk, 17-VI-97 on Compositae (97G087); R, Signal Peak, 11-VII-95 (95K056).

Hyperomyzus sp. [*nigricornis* (Knowlton) or *sandilandicus* (Robinson)]: WA, KITTITAS—Manastash Rd & FR112, 11-IX-95 on *Hieracium* sp. (95G559†); L. T. Murray Wildlife Reserve, South Fork Manastash Cr, 24-VII-95 on *Hieracium albiflorum* (95G388).

Uroleucon erigeronense (Thomas): WA, KITTITAS—Manastash Ridge, nr Lost Lk, 2-IX-95 on *Achillea millefolium* (95G533‡).

Aphidius smithi Sharma & Subba Rao

Acyrtosiphon pisum (Harris): WA, BENTON [on *Medicago sativa*†*].

***Aphidius* spp.**

Acyrtosiphon lactucae (Passerini) [on *Lactuca serriola*]: ID, BENEWAH—McCroskey SP, 31-VIII-95 (95T534); WA, ASOTIN—Asotin, 10-VII-95 (95T419); CHELAN—Chelan SP, 11-IX-97 (97K038); SPOKANE—nr Peone, 24-VIII-95 (95T470).

Acyrtosiphon macrosiphum (Wilson) [on *Amelanchier alnifolia*]: MT, LINCOLN—Libby, 6-VII-96 (96G322); WA, PEND OREILLE—Le Clerc WLA, Panhandle CG, 3-VIII-95 (95T402).

Acyrtosiphon pisum (Harris): WA, BENTON [on *Medicago sativa**]; KITTITAS [on *Rhododendron albiflorum**].

Amphorophora geranii G&P: WA, SPOKANE—Turnbull National WLA, 25-V-95 on *Geranium* sp. (95T030†).

Amphorophora nr *rubitoxi* Knowlton: WA, ISLAND—South Whidbey Island, 4-VI-96 on *Rubus* sp. (96G163).

Aphis armoraciae Cowen: WA, KITTITAS [on *Mertensia paniculata**].

Aphis craccivora Koch: WA, WHITMAN—Pullman, 5-VII-97 on *Trifolium* sp. (96T170).

Aphis fabae Scopoli: WA, ASOTIN—Field Springs SP, 18-VII-95 on *Cirsium arvense* (95T272).

Aphis helianthi McTell: WA, BENTON—WSU-Prosser, 21-VII-97 on *Anethum graveolens* (97G247†).

Aphis holodisci Robinson: WA, ASOTIN—nr FR40 & FR44, 26-VI-96 on *Holodiscus discolor* (96T052).

Aphis nigratibialis Robinson: WA, YAKIMA—Nile, 28-VII-97 on *Cornus stolonifera* (97G280).

Aphis varians Patch: WA, PIERCE [on *Epilobium angustifolium**].

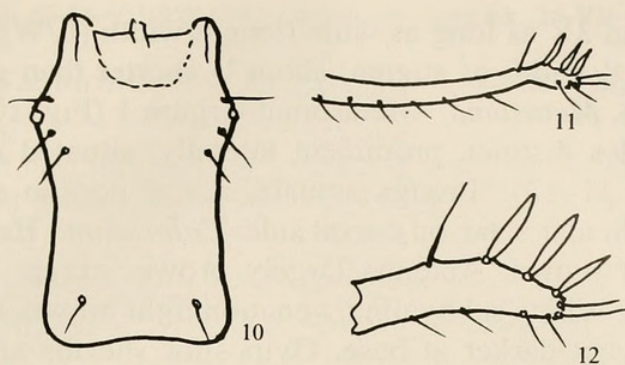
Aphis (*Zyaphis*) sp.: WA, KLINKITAT—Frost Meadows, 11-IX-97 on *Artemisia tridentata* (97G435).

Aspidophorodon longicauda (Richards): WA, SKAMANIA—South Prairie, 8-IX-94 on *Spiraea douglasii* (94R192).

Brachycaudus helichrysi (Kaltenbach): WA, SPOKANE—Plaza, 16-VII-96 on unknown plant (96T278).

Brachycaudus tragopogonis (Kaltenbach): WA, BENTON—WSU-Prosser, 25-VII-97 on *Tragopogon dubius* (97F266).

- Capitophorus elaeagni* (del Guercio): WA, YAKIMA—Rimrock Lk, 14-IX-95 on *Cirsium vulgare* (95G589).
- Carolinaia howardii* (Wilson): WA, WHITMAN—Pullman, 1-VII-96 on unknown plant (96T123).
- Chaetosiphon fragaefolii* (Cockerell): WA, PEND OREILLE—Le Clerc WLA, 3-VIII-95 on native *Rosa* sp. (95T398); STEVENS—Little Pend Oreille National WLA, 9-VII-96 on native *Rosa* sp. (96T209†).
- Chaetosiphon* nr *hottesii* Stroyan: WA, SPOKANE—Mt Spokane SP, 24-VIII-95 on native *Rosa* sp. (95T491†‡).
- Chaetosiphon tetrarhodum* (Walker): WA, SPOKANE—Mt Spokane SP, 24-VIII-95 on native *Rosa* sp. (95T491†‡).
- Diuraphis noxia* (Kurdjumov) [on *Triticum aestivum*]: WA, ASOTIN—Field Springs SP, 20-VI-95 (95T158); BENTON [*].
- Ericaphis gentneri* (Mason) [on *Crataegus* sp.]: WA, CHELAN—Stevens Pass, 16-IX-95 on *Spiraea densiflora* (95K138); KITTITAS—Coleman Canyon, 2-VII-97 (97G214); SPOKANE—Chapman Lk, 16-VII-96 (96T282).
- Ericaphis* nr *gentneri* (Mason): WA, WHITMAN—Pullman, 6-VIII-96 on *Crataegus* (96T409).
- Ericaphis scammelli* (Mason): WA, STEVENS—Little Pend Oreille National WLA, 9-VII-96 on native *Rosa* sp. (96T209†).
- Ericaphis wakibae* (Hottes): WA, YAKIMA—N Fork Tieton River, 15-VI-96 on native *Rosa* sp. (96K090†).
- Euceraphis gillettei* Davidson: WA, KITTITAS—L.T. Murray WLA, S Fork Manastash Cr, 24-VII-95 on *Alnus* sp. (95G394†‡).
- Hyperomyzus nigricornis* (Knowlton): WA, KITTITAS—Lost Lk, 6-VIII-97 on *Hieracium* sp. (97G344).
- Hyperomyzus* sp.: WA, BENTON [on *Sonchus oleraceus**].
- Illinoia crystleae bartholomewi* (Essig) [det. by A. Jensen]: WA, KITTITAS—Lost Lk, on *Lonicera involucrata* (97G336).
- Illinoia* nr *crystleae* (Smith & Knowlton): WA, KITTITAS—Lost Lk, 7-VII-94 on *Lonicera involucrata* (94K028).
- Illinoia davidsoni* (Mason): WA, GARFIELD—Alder Thicket, 22-VIII-95 on *Arnica latifolia* (95T450).
- Illinoia rhododendri* (Wilson): WA, KITTITAS [on *Rhododendron albiflorum**].
- Illinoia* spp.: WA, GARFIELD—Stentz Springs, 1-VIII-95 on *Aquilegia formosa* (95T362†); SKAGIT—La Conner, 6-VI-96 on *Rhododendron* sp. (96G193); SKAMANIA [on *Vaccinium* sp.*].
- Liosomaphis berberidis* (Kaltenbach): WA, SKAGIT—La Conner, 5-VI-96 on *Berberis* sp. (96G192).
- Macrosiphoniella ludoviciana* (Oestlund): WA, ASOTIN—Anatone, 18-VII-95 on *Artemisia ludoviciana* (95T257).
- Macrosiphum californicum* (Clarke) [on *Salix* sp.]: WA, KITTITAS [†*]; YAKIMA—YIR, Lost Springs, 11-VII-95 (95K052).
- Macrosiphum clydesmithi* (Robinson): WA, CHELAN—Chiwawa Canyon, 5-IX-95 on *Pteridium aquilinum* (95R026†).
- Macrosiphum euphorbiae* (Thomas): ID, LATAH—Moscow Mtn, 6-VII-96 on unknown plant (96T187); 6-VII-96 on Compositae (96T185); MT, SANDERS—Thompson Pass, 17-VI-95 on *Hieracium* sp. (95G185), & *Arabis* sp. (95G190†); WA, GARFIELD—Stentz Springs, 1-VIII-95 on *Arnica latifolia* (95T370); Spruce Springs, 22-VIII-9, on *Ranunculus* sp. (95T459); KITTITAS—Manastash Rd 25-VII-96 on *Ranunculus* sp. (96G416); Taneum Lk, 11-IX-97 on *Silene* sp. (97G415); Lost Lk, 6-VIII-97 on *Angelica canbyi* (97G330†); KICKITAT—Cleveland Pk, 7-VII-97 on *Lupinus* sp. (97G230); SPOKANE—Mt Spokane SP, 29-VI-95 on *Ranunculus* sp. (95T190); WHITMAN—Pullman, 5-VII-96 on cultivated *Rosa* sp. (96T172†); YAKIMA—N. Fork Tieton River, 27-VI-96 on *Hieracium scouleri* (96G297); Buckhorn Meadows, 14-IX-95 on *Trautvetteria caroliniensis* (95G597).
- Macrosiphum pallidum* (Oestlund): MT, SANDERS—Thompson Pass, 17-VI-95 on *Arabis* sp. (95G190†‡).
- Macrosiphum rhamni* (Clarke) [det. by A. Jensen]: WA, KING—Stampede Pass, 8-VIII-96, on *Pteridium aquilinum* (96G441); KICKITAT—Trout Lk, 29-VI-97 on *Pteridium aquilinum* (97G169).
- Macrosiphum rosae* (L.): WHITMAN—Pullman, 5-VII-96 on cultivated *Rosa* sp. (96T172†).
- Macrosiphum tuberculiceps* (Essig): WA, YAKIMA—Hell Crossing CG, 11-IX-96 on *Achlys triphylla* (96G517); N. Fork Tieton River, 15-VI-96 on *A. triphylla* (96K096).
- Macrosiphum* sp.: WA, KING—KITTITAS—Waptus Lk, 27-VII-95 on *Spiraea douglasii menziesii* (95K075); Manastash Cr, mi marker 12, 25-VI-97 on *Holodiscus discolor* (97G128); SPOKANE—Turnbull National WLA, 25-V-95 on *Geranium* sp. (95T030†); YAKIMA—Nile, 28-VII-97 on *Clematis ligusticifolia* (97G278).
- Metopolophium dirhodum* (Walker): WA, KITTITAS [on *Rhododendron albiflorum**]; SNOHOMISH—Monroe, 5-VI-96 on *Phalaris arundinaceae* (96G202†); YAKIMA—N Fork Tieton River, 15-VI-96 on native *Rosa* sp. (96K090†).
- Myzus cerasi* (F.): WA, SKAGIT—Campbell Lk, 5-VI-96 on *Prunus emarginata* (96G170).
- Nasonovia aquilegiae* (Essig): WA, GARFIELD—Stentz Springs, 1-VIII-95 on *Aquilegia formosa* (95T362†).
- Nasonovia* nr *aquilegiae* (Essig): WA, SPOKANE—Manito Pk, 11-VII-96 on *Aquilegia* sp. (96T262†).



Figs. 10–12. *Betuloxys alnicolus*, ♀ [illustrations not to equal scale]. 10, Metasomal tergum 1. 11–12, Prong.

Nasonovia polemonii (G&P): WA, KITTITAS—Buck Meadows, 9-VII-96 on *Polemonium pulcherrimum* (96G347).

Nasonovia sp.: MT SANDERS [on *Castilleja* sp.*].

Oestlundiella flava (Davidson): WA, KITTITAS—L.T. Murray WLA, S Fork Manastash Cr, 24-VII-95 on *Alnus* sp. (95G394†‡).

Ovatus crataegarius (Walker): ID, BONNER—Sandpoint, 10-IV-97 on *Origanum* sp. (97T003); WA, ADAMS—Othello, 1-VII-96 on *Mentha piperita* (96B003).

Prociphilus sp.: WA, YAKIMA—Clear Lk, 15-VI-96 on *Lonicera* sp. (96K083).

Rhopalosiphum padi (L.): WA, SNOHOMISH—Monroe, 5-VI-96 on *Phalaris arundinaceae* (96G202†).

Sitobion avenae (F.): WA, BENTON—WSU-Prosser, 18-VII-97 on *Setaria lutescens* (97G243).

Sitobion fragariae (Walker): WA, ISLAND—Whidbey Island, 5-VI-96 on *Dactylis glomerata* (96G177).

Uroleucon erigeronense (Thomas): WA, YAKIMA—Buckhorn Meadows, 14-IX-95 on *Achillea millefolium* (95G598).

Uroleucon ivae Robinson [on *Iva xanthifolia*]: WA, BENTON [*]; YAKIMA [*]—Grandview, 21-VIII-95 (95G503).

Uroleucon russellae (HRL): WA, SKAMANIA—Council Lk, 4-VIII-95 on *Anaphalis margaritacea* (95K095).

Uroleucon sonchi (L.): WA, BENTON [on *Sonchus oleraceus*†*].

Uroleucon sp.: WA, PEND OREILLE—Sullivan Lk, 3-VIII-95 on *Adenocaulon bicolor* (95T391); Tiger Meadows, 9-VII-96 on *Senecio* sp. (96T220).

Utamphorophora humboldti (Essig): OR. MULTNOMAH [on *Physocarpus* sp.*].

Undetermined spp.: WA, ASOTIN [on *Chrysothamnus nauseosus**]; DOUGLAS—Waterville, 13-VII-95 on *Triticum aestivum* (95B013, 95B014); KITTITAS—Quartz Mtn 25-VII-96 on *Rubus lasiococcus* (96G407); Taneum Lk, 11-IX-97 on *Pedicularis bracteosa* (97G425); LEWIS—RNP, Louise Lk, 1-VII-95 on *Luetkea pectinata* (95K042); SPOKANE—Mt Spokane SP, 22-VIII-96 on *Vaccinium* sp. (96T492); YAKIMA—Clear Lk, 15-VI-96 on *Holodiscus discolor* (96K080); YIR, Mabton Rd, 16-V-96 on *Grindelia* sp. (96G051).

Genus *BETULOXYS* Mackauer

Betuloxys alnicolus Pike & Starý, new species

(Figs. 10–12)

Diagnosis.—The new species is easily distinguished from *B. compressicornis* (Ruthe) by its distinctly smaller size, generally brown coloration, and characters on prongs (distal portion less differentiated and bearing three lanceolate setae). The new species was collected near colonizing aphids [*Boernerina variabilis* (Richards)] on *Alnus* in Washington. By comparison, *B. compressicornis* is generally yellow (exception, flagellum mostly brown, and brown areas on mesonotum, scutellum, apices of legs and prongs), distal portion of prong with five lanceolate setae, known as a parasitoid of *Eucерaphis punctipennis* (Zett.) on *Betula*, from E. Canada and Europe.

Etymology.—The name of the new species is derived from its association with *Alnus*.

Description.—Female. *Head*: Eyes medium sized; antenna 12-segmented, filiform, reaching to half of metasoma. *Mesosoma*: Mesonotum smooth, with sparse setae, notauli indicated anteriorly. Propodeum feebly granulate rugose, with sparse setae. *Forewing*:

Stigma slightly more than $3\times$ as long as wide (length/width [L/W] = 3.2); distal abscissa of R1 (= metacarpus) $2\times$ width of stigma, about $\frac{1}{3}$ shorter than stigma length; RS vein long, $1.2\times$ stigma length. *Metasoma*: Metasomal tergum 1 (Fig. 10) smooth, length $1.6\times$ width, spiracular tubercles distinct, prominent laterally, situated at end of first third of tergite. *Genitalia* (Figs. 11–12): Prongs arcuate, apical portion somewhat dilated with three lanceolate, perpendicular setae on dorsal side. *Coloration*: Head and mesosoma dark brown. Mouthparts light brown. Antenna largely brown, except scape, pedicel, and F_1 yellow, F_2 yellow brown. Wings subhyaline, venation light brown. Legs brown. Metasoma brown, tergum 1 somewhat darker at base. Ovipositor sheaths and prongs brown, concolorous with metasoma. *Length of body*: about 1.8 mm.

Male.—Unknown.

Holotype.—♀, USA, WA, YAKIMA CO., N. Fork of Tieton River, 15-VI-1996, K. S. Pike collector (collection code, 96K089). Host aphid uncertain, collected near colonizing aphids, *Boernerina variabilis* Richards on *Alnus*. Deposited in USNM.

Genus *BINODOXYS* Mackauer

Binodoxys carolinensis (Smith)

Aphis ceanothi Clarke: WA, KITTITAS—S. Fork Manastash Cr, 25-IV-97 on *Ceanothus velutinus* (97G137).

Aphis helianthi Monell: WA, CHELAN—Johnny Cr, 1-VIII-95 on *Epilobium angustifolium* (95G482†); PEND OREILLE—Le Clerc WLA, 3-VIII-95 on *Cornus stolonifera* (95T399†), YAKIMA—YIR, Signal Peak, 11-VII-95 on *Lomatium* sp. (95G334†).

Aphis nigratibialis Robinson [on *Cornus stolonifera*]: WA, KLINKITAT—Trout Lk, 28-VI-97 (97G156); YAKIMA—Nile, 28-VII-97 (97G280); YIR, Miller Point, 11-VII-95 (95K062).

Aphis nr *oenotherae* Oestlund: WA, YAKIMA—Pleasant Valley CG, 24-VII-97 on *Epilobium minutum* (97G267†).

Aphis salicariae Koch: WA, PEND OREILLE—Le Clerc WLA, 3-VIII-95 on *Cornus stolonifera* (95T399†‡).

Aphis varians Patch [on *Epilobium angustifolium*]: ID, SHOSHONE—Thompson Pass, 29-VII-95 (95G468†); MT, SANDERS [*].

Aphis nr *variens* Patch: WA, LEWIS—RNP, Stevens Canyon, 23-VII-96 on *Epilobium angustifolium* (96G380).

Aphis sp. n.: WA, YAKIMA—YIR, Miller Point, 11-VII-95 on *Ceanothus* sp. (95K061).

Aphis sp.: WA, YAKIMA—Pleasant Valley CG, 24-VII-97 on *Epilobium minutum* (97G267†).

Cavariella nr *aegopodii* (Scopoli): WA, KITTITAS—nr Ellensburg, Reecer Cr, 20-VI-95 on *Salix* sp. (95G207‡).

Binodoxys clydesmithi Pike & Starý

Aphis canae Williams: WA, FRANKLIN—Kahlotus Hwy, 11-VI-96 on *Artemisia tridentata* (96G242†‡).

Artemisaphis artemisicola (Williams) [on *Artemisia tridentata*]: WA, FRANKLIN—Kahlotus Hwy, 28-V-96 & 11-VI-96 (96G096, 96G242†‡).

Obtusicauda coweni (Hunter): WA, KITTITAS [on *Artemisia tridentata**].

Binodoxys coneii Pike & Starý

Phorodon humuli (Schrank): WA, BENTON [on *Humulus lupulus**].

Binodoxys coruscanigrans (Gahan)

Obtusicauda coweni (Hunter): WA, YAKIMA [on *Artemisia tridentata**]—Wenas Lk, 30-V-96, (96G115).

Binodoxys grafi Pike & Starý

Aphis fabae Scopoli: WA, Yakima—American River, 5-IX-97 on *Epilobium angustifolium* (97G377†).

Aphis helianthi Monell [on *Epilobium angustifolium*]: WA, CHELAN—Stevens Pass, 16-IX-95 (95K134†); KITTITAS [*]—Lost Lk, 24-VII-95 (95G399†); SPOKANE—Mt Spokane SP, 27-VII-95 on unknown Umbelliferae (95T335†).

Aphis holodisci Robinson: WA, KITTITAS—Manastash Cr, mi marker 12, 25-VI-97 on *Holodiscus discolor* (97G133).

Aphis salicariae Koch: ID, KOOTENAI—Rathdrum, 29-VII-95 on *Epilobium angustifolium* (95G443†).

Aphis nr *salicariae* Koch: WA, CHELAN—Swauk Pass, 1-VIII-95 on *Epilobium angustifolium* (95G492†).

Aphis nr *triglochinis* Theobald: WA, SPOKANE—Mt Spokane SP, 29-VI-95 on native *Ribes* sp. (95T189).

Aphis varians Patch [on *Epilobium angustifolium*]: ID, KOOTENAI—Rathdrum, 29-VII-95 (95G443†); WA,

CHELAN—Stevens Pass, 16-IX-95 (95K134†); KITTITAS—Lost Lk, 24-VII-95 (95G399†); Stampede Pass, 8-VIII-96 (96K139).

Aphis nr *varians* Patch: WA, KITTITAS—Lost Lk, 24-VII-95 on *Epilobium angustifolium* (95G399†).

***Binodoxys rhagii* (Ashmead)**

Uroleucon russellae (HRL) [on *Anaphalis margaritacea*]: WA, CHELAN—Chatter Cr, 1-VIII-95 (95G484); YAKIMA—YIR, Delaney Springs (95G412) & Panther Butte (95G423), 25-VII-95.

***Binodoxys* spp.**

Aphis salicariae Koch: WA, YAKIMA [on *Cornus stolonifera**].

Chaetosiphon fragaefolii (Cockerell): WA, PEND OREILLE—Le Clerc WLA, 3-VIII-95 on native *Rosa* sp. (95T398).

Illinoia rhododendri (Wilson): WA, KITTITAS [on *Rhododendri albiflorum**].

Genus *DIAERETELLUS* Starý

***Diaeretellus palustris* Starý**

Rhopalosiphum nymphaeae (L.): WA, YAKIMA—Outlook, 23-X-95 on *Typha latifolia* (95G709).

Genus *DIAERETIELLA* Starý

***Diaeretiella rapae* (M'Intosh)**

Acyrtosiphon lactucae (Passerini) [on *Lactuca serriola*]: WA, ASOTIN—Asotin, 10-VIII-95 (95T419); S. Fork Asotin Cr, 22-VIII-95 (95T468); BENTON—WSU-Prosser, 17-VII-95 (95G353); Whitstran, 18-IX-97 (97G439); WHITMAN—Pullman, 16 & 30-VII-96, 1,6 & 19-VIII-96, 9 & 12-IX-96 (96T304, 96T362, 96T382, 96T407, 96T408, 96T468, 96T528, 96T532).

Acyrtosiphon pisum (Harris): MT, RAVALLI—Stevensville, 25-V-96 on *Melilotus* sp. (96G083); WA, BENTON—WSU-Prosser, 18 & 25-VII-97, on *Melilotus officinalis* (97F254†, 97F274†).

Aphis craccivora Koch: WA, WHITMAN—Pullman, 25-VII-95 on *Capsella bursa-pastoris* (95T331).

Aphis fabae Scopoli: ID, LATAH—Moscow Mtn, Paradise Cr, 25-IX-96 on *Cirsium arvense* (96T542).

Aphis nr *fabae* Scopoli: WA, PIERCE—RNP, Paradise, 8-IX-95 on *Spiranthes romanzoffiana* (95K118).

Aphis helianthi Monell: WA, GARFIELD—Stentz Springs, 1-VIII-95 on *Ranunculus* sp. (95T363†).

Brachycaudus cardui (L.): WA, ASOTIN—De Spain Springs, 5-IX-96 on *Onopordum acanthium* (96T518).

Brachycaudus helichrysi (Kaltenbach): ID, BENEWAH—McCroskey SP, 31-VIII-95 on *Conyza canadensis* (95T516†); WA, ASOTIN—Anatone, 28-VI-96 on *Amsinckia* sp. (96T089); Wickiup CG, 29-VIII-95 on *Sonchus* sp. (95T505); BENTON—WSU-Prosser, 1-X-97 on *S. tuberosum* (97G478); WHITMAN—Pullman, 28-VI-96 on *Anthemis arvensis* (96T162); 16-VII-96 on *Anthemis cotula* (96T298).

Brachycaudus tragopogonis (Kaltenbach) [on *Tragopogon dubius*]: WA, BENTON—WSU-Prosser, 3, 18, 25-VII-97 (97F194, 97F242, 97F266); KLINKITAT—Bickleton, 8-X-96 (96G628); YAKIMA—Grandview, 24-V-96, 25-VI-96 (96G080, 96G273).

Brachycorynella asparagi (Mordvilko) [on *Asparagus officinalis*]: WA, BENTON [*]—WSU-Prosser, 6 & 25-IX-95 (95K144, 95G548†, 95G649); YAKIMA—Harrah, 29-IX-97 (97G462, 97G468, 97G469).

Braggia sp.[det. by G. Remaudière]: WA, YAKIMA [on *Eriogonum elatum**].

Brevicoryne brassicae (L.): WA, BENTON [on *Brassica napus*, *B. oleracea* & *Descurainia sophia**]—WSU-Prosser, 6-VII-95, 24-VIII-95, 5-VIII-96, 30-IX-96, 17-I-97, 23-V-97, & 1-X-97 on *B. napus* (95A024, 95G508, 96G438, 96G622, 97G004, 97G039, 97G475); 9-IX-95 on *B. oleracea capitata* (95K155); 11-VII-97 on *Sisymbrium altissimum* (97G241); 1-X-97, on *Malva neglecta* (97G471†); West Richland 12-VII-95 on *B. oleracea acephala* (95K074); CHELAN—Chelan SP, 11-IX-97 on *Erysimum* sp. (97K045); CLARK—WSU-Vancouver, 21-IX-95 on *B. oleracea capitata* (95K179); SKAGIT—Mt Vernon, 16-X-95 on *B. sp.* (95K190); PIERCE—Graham, 8-IX-96 on Cruciferae (96T525); WALLA WALLA—Hwy 124, 10 mi E of Burbank, 28-V-96 on *B. napus* (96G099); 28-V-96 on *Sisymbrium altissimum* (96G098); WHITMAN [on *B. napus**]—Pullman, 2-VIII-96 on *B. napus* (96T390); YAKIMA— nr Bickleton 7-VII-97 on *B. napus* (97G235); on *Sisymbrium altissimum* (97G237).

Diuraphis noxia (Kurdjumov) [on *Hordeum vulgare* unless otherwise indicated]: OR, UMATILLA—Hermiston, 17-VI-90 on unknown plant (90J003); WA, ASOTIN—Columbia Center, Pataha Cr Rd, 10-VIII-95 on *Agropyron cristatum* (95T431); Anatone, 24-VII-96, 1,8 & 15-VIII-96 (96T596 to 96T600); Anatone, 22 & 31-VII-97 (97J011 to 97J025); BENTON [*]—WSU-Prosser, 28-V-96 & 24-X-96 (96G087 to 96G090, 96G654); [KLINKITAT, on *Aegilops cylindrica**]—Cemetery Rd nr Bickleton, 7-VII-97 (97G226†); WALLA WALLA—Valley Grove, 11-VI-96 (96G240); Waitsburg, 11-VII-96 (96J056, W. Turner & J. Rumph collectors); WHITMAN—Pullman, 9-VII-96 (96J053 to 96J055, W. Turner & J. Rumph collectors); YAKIMA

- [*]; [Following on *Triticum aestivum* unless otherwise indicated] ADAMS [*]; ASOTIN [*]—Couse Cr Rd, 10-VIII-95 (95T421); Field Springs SP, 10-VIII-95 (95T427); Asotin WLA, 15 & 29-VIII-96, 24-IX-96, 3-X-96 (96T455, 96T457, 96T503, 96T555, 96T569); De Spain Spring, 5-IX-96, 3-X-96 (96T516, 96T571); BENTON [*]—WSU-Prosser, 15-V-95, 24-V-96, 3-VI-96, 24, 28-VII-97 (95G065, 96G081, 96G132, 97G274, 97G301); 29-IV-97 thru 24-IX-97, (97F001–97F004, 97F042–97F455); 1-IV-97, 6-VI-97 (97G005, 97G040, 97G041); 3 mi S of Prosser, 6-VI-97 (97G045); Sellards & Travis Rds, 25-VI-95 (95G252); Rotha Rd 17-VII-97 (97G245); DOUGLAS—Waterville, 12-VIII-95 (95B019); FRANKLIN [*]—Star School, 6-VII-95 (95G287); Kahlotus, 6-VII-95 (95G291); GARFIELD—Columbia Center, 10-VIII-95, 7-IX-95 (95T435, 95T538, 95T539); Spruce Springs, 14-IX-95 (95T574); KLICKITAT [*]—Bickleton, 31-X-95, 7-VII-97 (95G743, 97G223); nr Bickleton, 18-VI-97 & 7 & 29-VII-97, 6-VIII-97 (97G119, 97G238, 97G300, 97G354); Brannon Rd nr Cleveland, 7-VII-97 (97G234); Cleveland, 18-VI-97, 27-VI-97, 7-VII-97 (97G114 to 97G117, 97G145, 97G232); SPOKANE—Mt Spokane SP, 22-VII-95 (95T495); WHITMAN [*]—Hole in the Ground, 8-VI-95 (95T085); Dusty, 9-VII-96 on *Triticum* sp. (96J065, W. Turner & J. Rumph collectors); YAKIMA [*]—nr Bickleton, 23-V-96, 17-VI-96 (96G073, 96G250, 96G251, 96G252); Sunnyside, 24-VII-97 (97G273).
- Dysaphis plantaginea* (Passerini): WA, BENTON—Prosser, 24-VI-96 on *Pyrus malus* (96G279+).
- Hayhurstia atriplicis* (L.) [on *Chenopodium album*]: ID, LATAH—Moscow, 28-IX-96 (96T561); WA, ASOTIN—Anatone 28-VI-96 (96T091); De Spain Springs, 31-VII-96 (96T358); BENTON—WSU-Prosser, 20-VIII-96, & 3,18,25-VII-97 (96G509, 97F190, 97F238, 97F262); KLICKITAT—Bickleton 18-VI-97, 7-VII-97 (97G111, 97G118, 97G239); nr Cleveland, Dot & Brannon Rds, 27-VI-97, 7-VII-97 (97G143, 97G231); WHITMAN—Pullman, 16 & 30-VII-96, 7-VIII-96 (96T302, 96T360, 96T361+, 96T417); YAKIMA [*]—Grandview, 22-VII-95, 17-V-96, 3-VI-96, 8 & 30-VII-96, 29-VI-97 (95G367, 96G067, 96G131, 96G327, 96G430, 97G181); nr Bickleton, 29-VIII-95 (95G524); Glade Cr, 7-VII-97 (97G218); Bickleton Hwy & County Line Rd, 7-VII-97 (97G236); Wenas Cr & Maloy Rd, 11-VI-97 (97G065); Wenas Lk, 17-VI-97 (97G091); YIR, Signal Peak Guard Station, 19-IX-96 (96G578).
- Illinoia corylina* (Davidson): WA, WHITMAN—Pullman, 14-VIII-96 on *Aquilegia* sp. (96T442).
- Lipaphis erysimi* (Kaltenbach): WA, BENTON—WSU-Prosser, 30-IX-96, on *Brassica napus* (96G621+); WHITMAN—Pullman, 3-VII-96 on *Capsella bursa-pastoris* (96T166+).
- Macrosiphum euphorbiae* (Thomas): ID, LATAH—Moscow, 7-X-96, on *Solanum* sp. (96T577); WA, PIERCE [on *Epilobium angustifolium**].
- Macrosiphum* nr *euphorbiae*: WA, YAKIMA—YIR, Mill Cr Guard Station, 6-VI-95 on *Lomatium nudicaule* (95G115).
- Macrosiphum* sp.: WA, ASOTIN [on *Triticum aestivum**].
- Myzus persicae* (Sulzer): WA, BENTON [on *Raphanus sativum**]—23-VII-96 on *Chrysanthemum* sp. (96G388+); WSU-Prosser, 29-VII-96 on *Carthamus tinctorius* (96G428); 31-VIII-95, 1-X-97 on *Chenopodium album* (97G476); 27-X-95 on *Malva neglecta* (95K212+); 1-IX-95 on *Solanum tuberosum* (95G525, 95G526); 6-VII-95 on *Sonchus oleraceus* (95A026+); Prosser, 23-VII-96 on *Chrysanthemum* sp. (96G388); SKAGIT [on *Brassica oleracea**]; SNOHOMISH—Monroe, 24-VII-96 on *Pisum sativum* (96T594+); WHITMAN—Pullman, 16-VII-95, 3-VIII-95 on *Raphanus sativum* (95T248, 95T407), 22-VII-95 on *Solanum lycopersicon* (95T299+), & 3-VIII-95 on *Spinacia oleracea* (95T408); Ridpath, 6 & 22-VII-95 on *Amsinckia retrorsa* (95G295+).
- Myzus* sp.: WA, WHITMAN [on *Forsythia* sp.*].
- Phorodon humuli* (Schrank) [on *Humulus lupulus* unless otherwise indicated]: WA, BENTON [*]—WSU-Prosser, 9-IX-95 (95K154), & 27-X-95 on *Lamium amplexicaule* (95K213+); YAKIMA—Grandview, 8-VI-95 (95G145).
- Rhopalosiphum insertum* (Walker): WA, DOUGLAS—Orondo, 28-V-96 on *Pyrus malus* (96R003).
- Rhopalosiphum maidis* (Fitch): WA, BENTON [on *Panicum milliaceum**]—WSU-Prosser, 18-XI-95 & 20-I-96 on *Capsella bursa-pastoris* (95G750+, 96G003+), & 2-IX-96 on *Hordeum vulgare* (96G655).
- Rhopalosiphum padi* (L.) [on *Triticum aestivum* unless otherwise indicated]: WA, BENTON [on *Hordeum vulgare* & *Triticum aestivum**]—Prosser, 20-VIII-96 on *Zea mays* (96G510); WSU-Prosser, 1-X-95, 24-VI-96 (95G668, 96G272); Cemetery Rd & Hwy 241, 12-X-95 (95G690); DOUGLAS—Waterville, 12-VIII-95 (95B016, 95B018); YAKIMA [*]—Grandview, 22-X-97 (97G490).
- Sitobion avenae* (F.) [on *Triticum aestivum* unless otherwise indicated]: WA, BENTON [*]—Sellards & Travis Rds, 25-VI-95 (95G253); Prosser, 30-VI-95, 17-VII-95, 24-VI-96, 1 & 8-VII-96, (95G285, 95G352, 95G354, 95G356, 95G358, 96G271, 96G312, 96G330); WSU-Prosser, 22,30-VI-97, 3,11,18,25-VII-97 (assorted collections between 97F183 & 97F277), & 18-VII-97 on *Setaria lutescens* (97G243); nr Whitstran, 17-VII-95, 8-VII-96 (95G355, 96G328); FRANKLIN—Star School, 6-VII-95 (95G289); Kahlotus,

6-VII-95 (95G290); KLINKITAT [*]—Bickleton, 9-VII-95 (95G318); WHITMAN [*]—Rosalia, 16-VII-96 (96T294); YAKIMA—Grandview, 5-VII-95 (95G286).

Uroleucon ivae (Robinson): WA, YAKIMA—Grandview, 9-VII-95, on *Iva xanthifolia* (95G313).

Uroleucon sp. YAKIMA—Grandview, 18-I-96, on *Brassica oleracea* (96G001).

Genus *EPHEDRUS* Haliday

Ephedrus californicus Baker

Acyrtosiphon lactucae (Passerini) [on *Lactuca serriola*]: WA, Asotin [*]; CHELAN—Chelan SP, 11-IX-97 (97K038); YAKIMA—YIR, Signal Peak Guard Station, 19-IX-95 (95G621).

Aphis fabae Scopoli: WA, ASOTIN—Field Springs SP, 18-VII-95 on *Cirsium arvense* (95T272).

Aphis helianthi Monell: MT, SANDERS—nr Thompson Pass, 29-VII-95 on *Ligusticum verticillatum* (95G460); WA, CHELAN—Stevens Pass, 16-IX-95 on *Epilobium angustifolium* (95K134†); GARFIELD—Stentz Springs, 22-VIII-95 (95T452); KITTITAS—Lost Lk, 24-VII-95 on *Epilobium angustifolium* (95G399†), & 11-IX-95 on *Heracleum lanatum* (95G572); 2-IX-95 on *Lomatium* sp. (95G535†); LEWIS—RNP, Bench Lk, 8-IX-95 on *Ligusticum* sp. (95K113); PIERCE—RNP, Tipsoo Lk, 11-IX-96 on *Osmorhiza* sp. (96G535†); YAKIMA—RNP, Dewey Lk Trail, 11-IX-96 on *Ligusticum* sp. (96G552†); YIR, 25-V-96 on *Lomatium dissectum* (96K052), Mt Adams Lk, 25-VII-95 on *Osmorhiza occidentalis* (95G428), & Windy Point, 19-IX-95 on *Xerophyllum tenax* (95G635).

Aphis holodisci Robinson [on *Holodiscus discolor* unless otherwise indicated]: WA, SPOKANE—Mt Spokane SP, 27-VII-95 (95T338); Manito Pk, 11-VII-96 (96T260); YAKIMA—Clear Lk, 15-VI-96 (96K082); Bird Cr Meadows Rd & FR822, 26-VI-95 on *Physocarpus malvaceus* (95A020, 95A021).

Aphis nr *oenotherae* Oestlund: WA, GARFIELD—Pataha Cr Rd, 7-IX-95 on *Epilobium* sp. (95T541).

Aphis varians Patch [on *Epilobium angustifolium*]: ID, SHOSHONE—Thompson Pass, 29-VII-95 (95G468†); WA, CHELAN—Stevens Pass, 16-IX-95 (95K134†); KITTITAS—Lost Lk, 24-VII-95 (95G399†); PIERCE—Naches Pass, 25-IX-97 (97G460); RNP, Bench Lk, 8-IX-95 (95K114).

Aphis nr *variens* Patch: WA, KITTITAS—Lost Lk, 24-VII-95 on *Epilobium angustifolium* (95G399†).

Aphthargelia symphoricarpi (Thomas) [on *Symphoricarpos* sp.]: WA, KITTITAS [*]; SPOKANE—nr Peone, Cooper Rd & Hwy 206, 29-VI-95 (95T178); YAKIMA—nr Rimrock Lk, 9-VI-95 (95A004).

Brachycaudus helichrysi (Kaltenbach): WA, ASOTIN—nr FR 40 & FR44, 1-VIII-95 on *Achillea millefolium* (95T382††).

Braggia eriogoni (Cowen): WA, KITTITAS—Taneum Lk, 11-IX-97 on *Epilobium umbellatum* (97G428).

Brevicoryne brassicae (L.): WA, FRANKLIN—Eureka, 14-V-96 on *Brassica napus* (96G040).

Capitophorus elaeagni (del Guercio): WA, YAKIMA—FR 1010, 8 mi S of Tieton River, 14-IX-95 on *Cirsium vulgare* (95G596).

Cavariella aegopodii (Scopoli) [on *Ligusticum grayi*]: WA, PIERCE—RNP, Tipsoo Lk, 5-IX-97 (97G363†); YAKIMA, YIR, Windy Point, 19-IX-95 (95G642††).

Cavariella pastinacae (L.): WA, ASOTIN—Asotin Cr Rd, 11-VII-95 on *Oenothera* sp. (95T196).

Chaetosiphon fragaefolii (Cockerell) [*Rosa* sp.]: ID, BOUNDARY [†*]; WA, PEND OREILLE—Le Clerc WLA, 3-VIII-95 (95T398).

Diuraphis noxia (Kurdjumov): WA, ASOTIN—Anatone, 8-VIII-96 on *Hordeum vulgare* (96T598); Asotin Cr WLA, 3-X-96 on *Triticum aestivum* (96T565).

Ericaphis wakibae (Hottes): WA, YAKIMA—Clear Lk, 15-VI-96 on native *Rosa* sp. (96K085††).

Hyperomyzus lactucae (L.): WA, KLINKITAT—Rock Cr & Columbia River, 28-IV-95 on *Sonchus oleraceus* (95G011†).

Hyperomyzus nigricornis (Knowlton) [on *Hieracium* sp. unless otherwise indicated]: ID, LATAH—Moscow Mtn 13-VII-96 on unknown plant (96T264); 3,15-VIII-96, on Compositae (96T399, 96T446); MT, SANDERS—nr Thompson Pass, 29-VII-95 (95G462†); WA, GARFIELD—Alder Thicket, 21-IX-95 (95T587); KITTITAS—Manastash Rd, 25-VII-96, 16-VII-96 (96G415, 96G490); Manastash Cr & FR125, 16-VIII-96 (96G493); Ellensburg, 23-VI-96 on *Ribes* sp. (96G267); Lost Lk, 6-VIII-97 (97G344); Klickitat—Cleveland, 16-VI-96 on *Madia minima* (96K109); 7-VII-97 (97G229); PIERCE—RNP, Tipsoo Lk, 11-IX-96 (96G541), & 5-IX-97 on *Agoseris aurantica* (97G384†); SPOKANE—Mt Spokane SP, 24-VIII-95 on Compositae (95T486); Mt Spokane Hwy, mi marker 18.5, 22-VIII-96, on Compositae (96T487, 96T488); WHITMAN—Kamiak Butte, 7-VII-96, on unknown plant (96T205); Pullman, 10-VIII-95 on *Lapsana communis* (95T436†); YAKIMA—Ravens Roost, 28-VII-97 on *Hieracium albertinum* (97G296); Wenas Lk, 30-V-96 on *Ribes aureum* (96G123); YIR, Signal Peak, 19-IX-95 (95G622) & Fish Lk (95G637) on *Agoseris aurantica*, Delaney Springs, 25-VII-95 on *Hieracium cynoglossoides* (95G406), & Goat Butt, 19-IX-96 (96G585);

Hyperomyzus sp.: WA, KITTITAS—S. Fork Manastash Cr, 24-VII-95 on *Hieracium albiflorum* (95G388).

- Illinoia* sp.: WA, GARFIELD—FR 160 & FR 40, 21-IX-95 on *Vaccinium* sp. (95T596).
- Macrosiphoniella ludoviciana* (Oestlund) [on *Artemisia ludoviciana*]: WA, YAKIMA [*]; YIR, Randell Springs, 16-V-96 (96G049†).
- Macrosiphoniella tanacetaria* (Kaltenbach): WA, CHELAN—Stevens Pass, 16-IX-95 on *Tanacetum vulgare* (95K133).
- Macrosiphum albifrons* Essig [on *Lupinus* sp.]: WA, KITTITAS—Buck Meadows, 9-VII-96 (96G338); KLINKITAT—Trout Lk, 11-VII-95 (95K068); LEWIS—RNP, Stevens Canyon, 23-VII-96 (96G364); PIERCE—RNP, Tipsoo Lk, 11-IX-96 (96G547) & 5-IX-97 (97G362); SPOKANE—Manito Pk, 11-VI-96 (96T033); nr Peone, 2-VII-96 (96T098); YAKIMA—American River, 5-IX-97 (97G376).
- Macrosiphum californicum* (Clarke): WA, KITTITAS—Murray WLA, S Fork Manastash River, 11-IX-95 on *Salix* sp. (95G391†).
- Macrosiphum creelii* Davis: WA, KITTITAS—Manastash Cr Rd, mi marker 8, 16-VIII-96 on *Vicia* sp. (96G492).
- Macrosiphum euphorbiae* (Thomas): ID, LATAH—Moscow Mtn, 6-VII-96 on unknown plant (96T181); 6-VII-96 on Compositae (96T185, 96T192); MT, SANDERS—nr Thompson Pass, 29-VII-95 on *Hieracium* sp. (95G462†); WA, ASOTIN—De Spain Springs, 11-VII-96 on unknown plant (96T252); nr FR 40 & FR44, 1-VIII-95 on *Achillea millefolium* (95T382†); BENTON—WSU-Prosser, 27-X-95 on cultivated *Rosa* sp. (95K220†); GARFIELD—Stentz Springs, 1-VIII-95 on *Arnica latifolia* (95T370); KING—Issaquah, 4-VI-96 on native *Rosa* sp. (96G145†); KITTITAS [on *Rosa* sp.*]—Buck Meadows, 9-VII-96 on native *Rosa* sp. (96G335) & 16-VIII-96 on *Silene* sp. (96G497); Lost Lk Trail, 6-VIII-97 on *Luina nardosmia* (97G327); Stampede Pass, 8-VIII-96 on *Castilleja* sp. (96K140†); KLINKITAT—Cleveland, 7-VII-97 on *Lupinus* sp. (97G230); LEWIS—RNP, Stevens Canyon, 23-VII-96 on *Crepis* sp. (96G357); PEND OREILLE—Cusick, 9-VII-96 on native *Rosa* sp. (96T223); SKAMANIA—Twin Falls CG, 4-VIII-95 on *Potentilla* sp. (95K098†); WHITMAN—Kamiak Butte, 7-VII-96 on Compositae (96T200); Pullman, 10-VIII-95 on *Lapsana communis* (95T436†) & 18-VI-96 on cultivated *Rosa* sp. (96T037); YAKIMA [on *Ligusticum grayi*†*]—Clear Lk, 15-VI-96 on native *Rosa* sp. (96K085†); N. Fork Tieton River, 15-VI-96, on *Hieracium albertinum* (96K094); Buckhorn Meadows, 14-IX-95 on *Trautvetteria caroliniensis* (95G597); YIR, Bird Cr Meadows, 26-VI-95, on *Osmorhiza chilensis* (95A014).
- Macrosiphum* nr *euphorbiae* (Thomas): WA, YAKIMA—N. Fork Wenas Cr, 30-V-96 on *Arabis* sp. (96G129).
- Macrosiphum gaurae* (Williams): WA, WHITMAN—Colton, 19-IX-95 on *Gaura parviflora* (95T585).
- Macrosiphum pallidum* (Oestlund): WA, SKAMANIA—Twin Falls CG, 4-VIII-95 on *Potentilla* sp. (95K098††).
- Macrosiphum rosae* (L.) [on *Rosa* sp. unless otherwise indicated]: OR, BENTON—Corvallis, 18-V-93 on unknown plant, A. Jensen collector (93J002); WA, BENTON—WSU-Prosser, 27-X-95 (95K220†); KING—Issaquah, 4-VI-96 (96G145†); SPOKANE—Manito Pk, 19-IX-96 (96T540); YAKIMA [*]—Grandview, 13 & 21-V-97 (97G021†, 97G037).
- Macrosiphum valerianae* (Clarke): WA, KITTITAS—Lost Lk, 24-VII-95 on *Epilobium angustifolium* (95G399††).
- Metopolophium dirhodum* (Walker): WA, BENTON—WSU-Prosser, 27-X-95 on *Conyza canadensis* (95K216††).
- Myzus cerasi* (F.): WA, BENTON—Prosser, 28-V-96 on *Prunus* sp. (96G091); WHITMAN—Pullman, 5-VII-96 on *P. avium* (96T173).
- Myzus persicae* (Sulzer): WA, YAKIMA—Cliffdell, 23-X-97 on *Linaria dalmatica* (97G496).
- Nasonovia ribisnigri* (Mosley): WA, WHITMAN—Pullman, 5-VII-96 on unknown plant (96T177).
- Nasonovia* (*Kakimia*) sp.: WA, WHITMAN—Pullman, 10-VIII-95 on *Lapsana communis* (95T436†).
- Obtusicauda artemisiphila* (Knowlton & Allen): WA, KLINKITAT [on *Artemisia tridentata**].
- Obtusicauda coweni* (Hunter): WA, YAKIMA [on *Artemisia tridentata**].
- Obtusicauda* sp.: WA, KLINKITAT [on *Artemisia tridentata**].
- Pleotrichophorus* nr *amsinckii* Richards: WA, GARFIELD—Alder Thicket CG, 14-IX-95 on *Amsinckia* sp. (95T562).
- Pleotrichophorus pseudoglandulosus* (Palmer): WA, YAKIMA—YIR, Randell Springs, 16-V-96 on *Artemisia ludoviciana* (96G049††).
- Rhopalosiphum insertum* (Walker): WA, KITTITAS—Ellensburg, 17-V-96 on *Crataegus columbiana* (96G066).
- Rhopalosiphum maidis* (Fitch): WA, BENTON—WSU-Prosser, 18-XI-95 on *Capsella bursa-pastoris* (95G750††).
- Rhopalosiphum padi* (L.): WA, BENTON—WSU-Prosser, 18-XI-95 on *Capsella bursa-pastoris* (95G750††).
- Sitobion avenae* (F.): WA, KING—Stampede Pass on *Dactylis glomerata* (96G442); KITTITAS—Manastash Rd & FR 112, 9-VII-96 on *D. glomerata* (96G346); PIERCE—Graham, 25-V-96, on Gramineae (96T001); RNP, Tipsoo Lk, 5-IX-97 on *Agoseris aurantica* (97G384†); YAKIMA—Blowout Mtn, 9-IX-97 on *D. glomerata* (97G401).

Uroleucon nr *arnesense* Robinson: MT, SANDERS—18 mi E of Thompson Pass, 29-VII-95 on *Solidago* sp. (95G457).

Uroleucon erigeronense (Thomas): WA, BENTON—WSU-Prosser, 27-X-95 on *Conyza canadensis* (95K216†); CHELAN—Leavenworth, 16-IX-95 on *Conyza canadensis* (95K141); KITTITAS—Lost Lk, 2-IX-95, on *Anaphalis margaritacea* (95G532) & 6-VIII-97 on *Aster* sp. (97G346); Manastash Rd & FR 112, 11-IX-95 on *Achillea millefolium* (95G563), on *Anaphalis margaritacea* (95G561†) & *Cirsium arvense* (95G564†); PIERCE—RNP, Tipsoo Lk, 5-IX-95 (95K106) & 8-IX-97 (97G364†) on *Aster* sp.; WHITMAN—Pullman, 10-IX-96 on unknown plant (96T530); YAKIMA—Hells Crossing CG, 11-IX-96 on *Aster* sp. (96G524†); YIR, White Deer Cr, 11-VII-95 on *Anaphalis margaritacea* (95G326), & Signal Peak, 19-IX-95 on *Achillea millefolium* (95G620†).

Uroleucon nr *erigeronense* (Thomas): WA, OKANOGAN—Bridgeport SP, 9-IX-97 on *Conyza canadensis* (97K023).

Uroleucon ivae Robinson: WA, YAKIMA—Grandview, on *Iva xanthifolia* (96G431).

Uroleucon katonkae (Hottes): WA, YAKIMA—Hells Crossing CG, 11-IX-96 on *Aster* sp. (96G524†).

Uroleucon russellae (HRL) [on *Anaphalis margaritacea*]: MT, SANDERS [*]; WA, CHELAN—Chatter Cr, 1-VIII-95 (95G484); KITTITAS—Manastash Rd & FR112, 11-IX-95, on *Anaphalis margaritacea* (95G561†); SKAMANIA—June Lk, 4-VIII-95 (95K101); SPOKANE—Mt Spokane SP, 24-VIII-95 (95T494).

Uroleucon sonchi (L.) [on *Sonchus oleraceus* unless otherwise indicated]: WA, CLARK—WSU-Vancouver, 21-IX-95 (95K172); KLINKITAT—Rock Cr & Columbia River, 28-IV-95 (95G011†); PIERCE—Graham, 8-IX-96, on *Lactuca* sp. (96T527); WHITMAN—Pullman, 9-IX-96 on *Lactuca* sp. (96T529); YAKIMA—Yakima Arboretum, 26-IX-95 (95G658†); YIR, Satus, 1-VI-96, on *Sonchus* sp. (96K064).

Uroleucon spp.: ID, BENEWAH—McCroskey SP, 31-VIII-95 on *Adenocaulon bicolor* (95T518, 95T527, 95T536); WA, ASOTIN [on *Dipsacus sylvestris**]; CHELAN—Chiwawa Canyon, 3-VIII-96 on *A. bicolor* (96R044); KITTITAS—Lost Lk, 6-VIII-97 on *Achillea millefolium* (97G318); S. Fork Manastash Cr, 24-VII-95 on *Hieracium* sp. (95G389); KLINKITAT—nr Bickleton, Box Springs, 27-VI-97 on *Balsamorhiza sagittata* (97G154); PEND OREILLE—Sullivan Lk, 3-VIII-95 (95T391); Tiger Meadows, 9-VII-96 on *Senecio* sp. (96T220); PIERCE—RNP, Tipsoo Lk, 5-IX-97 on *Anaphalis margaritacea* (97G367); SPOKANE—Mt Spokane SP, 24-VIII-95 on *Centaurea pratensis* (95T477); WHITMAN [on *Lactuca serriola**]; YAKIMA [on *Aster* sp.*]—Union Gap, 23-X-95 on *Centaurea maculosa* (95G720); YIR, Signal Peak, 19-IX-95 on *Grindelia* sp. (95G618).

Wahlgreniella nervata (Gillette): WA, YAKIMA—Grandview, 13-V-97 on cultivated *Rosa* sp. (97G021†‡).

Undetermined spp.: WA, Spokane—Mt Spokane SP, 24-VIII-95 on *Epilobium* sp. (95T490); WHITMAN—Pullman, 25-VII-95 on *Lapsana communis* (95T332); YAKIMA—YIR, Mabton Rd, 16-V-96 on *Crepis atrabarba* (96G050).

Ephedrus chaitophori Gärdenfors

Chaitophorus populifolii (Essig) [on *Populus trichocarpa*]: WA, KITTITAS—Manastash Cr Rd, 5 mi marker, 16-VIII-96 (96G485); YAKIMA—Wenas Lk, 11-VI-97 (97G062).

Ephedrus clavicornis Pike & Stary

Aphis helianthi Monell: WA, PEND OREILLE [on unknown Umbelliferae†*]; WHITMAN [on *Helianthus annuus**].

Aphis nr *oenotherae*: WA, GARFIELD, KITTITAS, & LEWIS [on *E. angustifolium**]; YAKIMA [on *E. spp.* & *E. minutum**]—Wenas Cr, 13-VIII-96 (96G467) on *Epilobium* sp.

Aphis varians Patch [on *Epilobium angustifolium*]: MT, SANDERS, W. Fork Thompson River, 26-VII-94 (94R029); WA, LEWIS [*] & YAKIMA [*].

Aphthargelia symphoricarpi (Thomas): WA, YAKIMA [on *Symphoricarpos* sp.*].

Dysaphis plantaginea (Passerini): WA, DOUGLAS [on *Pyrus malus**].

Illinoia maxima (Mason): WA, SPOKANE [on *Rubus parviflorus**].

Prociphilus sp.: WA, YAKIMA [on *Amelanchier alnifolia**].

Sitobion avenae (F.): WA, LEWIS [on *Agropyron caninum**].

Undetermined spp. [on *Epilobium* sp. unless otherwise indicated]: CANADA, BRITISH COLUMBIA [from sweepings*]; WA, GARFIELD [*], KITTITAS [*], & YAKIMA [*].

Ephedrus incompletus (Provancher)

Ovatus crataegarius (Walker): ID, BONNER—Sandpoint, 10-IV-97 on *Origanum* sp. (97T003).

Ephedrus lacertosus (Haliday)

Aspidophorodon nr *longicauda* (Richards): WA, SKAMANIA—nr Keenes Horse Camp, 11-VII-95 on *Lupinus* sp. (95K065†‡).

Ericaphis gentneri (Mason): WA, CHELAN—Stevens Pass, 16-IX-95 on *Spiraea densiflora* (95K138).

Macrosiphum albifrons Essig: WA, SKAMANIA—nr Keenes Horse Camp, 11-VII-95 on *Lupinus* sp. (95K066).

Macrosiphum euphorbiae (Thomas): WA, YAKIMA—YIR, Old Maid Canyon, 25-VII-95 on *Cynoglossum grande* (95G440).

Macrosiphum sp.: WA, CHELAN—Chatter Cr, 1-VIII-95 on *Oplopanax horridum* (95G488+).

Macrosiphini aphids [immatures]: WA, YAKIMA—Morse Cr, 24-VII-97 on *Achlys triphylla* (97G255).

Metopolophium sp.: WA, SKAMANIA—nr Keenes Horse Camp, 11-VII-95 on *Lupinus* sp. (95K065+‡).

Sitobion sp.: OR, BENTON—Mary's Peak, 14-IX-93 on *Dicentra formosa*, A. Jensen collector (93J006).

Ephedrus persicae Froggatt

Brachycaudus cardui (L.): WA, SKAGIT—La Conner, 5-VI-96 on *Cirsium vulgare* (96G189).

Brachycaudus helichrysi (Kaltenbach): WA, SKAGIT—La Conner, 5-VI-96 on *Prunus salicina* (96G196).

Undetermined sp.: WA, WHITMAN—Pullman, 3-VIII-96 on *Pyrus malus* (96T042).

Ephedrus spp.

Aphis coweni Palmer: WA, KITTITAS [on *Veratrum viride**].

Aphis varians Patch: MT, SANDERS, Thompson Pass, 27-VII-94 on *Epilobium angustifolium* (94R040).

Chaetosiphon fragaefolii (Cockerell): WA, STEVENS—Little Pend Oreille National WLA, 9-VII-96 on native *Rosa* sp. (96T209+‡).

Diuraphis noxia (Kurdjumov): WA, BENTON—WSU-Prosser, 15-V-97 on *Triticum aestivum* (97F045).

Ericaphis scammelli (Mason): WA, STEVENS—Little Pend Oreille National WLA, 9-VII-96 on native *Rosa* sp. (96T209+‡).

Hyperomyzus nigricornis (Knowlton): ID, LATAH—Moscow Mtn, 3-VIII-96 on Compositae (96T402).

Macrosiphum nr *euphorbiae* (Thomas): WA, YAKIMA—N. Fork Tieton River, 27-VI-96 on *Lilium columbianum* (96G299).

Macrosiphum rhamni (Clarke): ID, SHOSHONE—Murray, 17-VI-95 on *Rhamnus purshiana* (95G192).

Prociphilus sp.: WA, WHITMAN—Pullman, 13-VI-96 on unknown plant (96T029).

Undetermined sp.: WA, GARFIELD—Spruce Springs, 14-IX-95 on *Cirsium vulgare* (95T571).

Genus *EUAPHIDIUS* Mackauer

Euaphidius cingulatus (Ruthe)

Pterocomma beulahense (Cockerell): WA, KING—Stampede Pass, 8-VIII-96 on *Populus trichocarpa* (96G445+); WHITMAN—Pullman, 9-X-96 on *Populus* sp. (96T584).

Pterocomma bicolor (Oestlund) [on *Salix* sp. unless otherwise indicated]: WA, KING—Stampede Pass, 8-VIII-96 on *Populus trichocarpa* (96G445+); KICKITAT—nr Bickleton, Pine Cr, 18-VI-97, on *P. trichocarpa* (97G113); PIERCE [*]; SKAMANIA—Council Lk, 4-VIII-95, (95K096); WHITMAN—Pullman, 12-IX-95 (95T558+); YAKIMA—Wenas Lk, 17-VI-97 (97G093).

Pterocomma sanguiceps Richards: WA, KITTITAS—Ellensburg, 10-IV-95 on *Salix* (95G004+).

Pterocomma smithiae (Monell) [on *Salix* sp.]: WA, KITTITAS—Ellensburg, 10-IV-95 (95G004+); WHITMAN—Pullman, 12-IX-95 (95T558+).

Pterocomma sp.: OR, MULTNOMAH [on *Salix* sp.*]; WA, YAKIMA—YIR, Signal Peak, 19-IX-95 on *Salix* sp. (95G619).

Undetermined sp.: WA, ASOTIN—De Spain Springs, 26-VI-96 on *Salix* sp. (96T057).

Euaphidius setiger Mackauer

Periphyllus californiensis (Shinji): OR, BENTON—Corvallis, McDonald State Forest, 1-V-93 on unknown plant, A. Jensen collector (93J001).

Periphyllus lyropictus (Kessler): WA, BENTON [on *Acer platanoides* *]; GRANT—Sun Lakes SP, 8-IX-97 on *A. sp.* (97K010); YAKIMA—Grandview, 13-VI-96 on *A. sp.* (96G243).

Periphyllus sp.: WA, SPOKANE—Spokane, Manito Pk, 19-IX-96 on *Acer* sp. (96T539).

Genus *HARKERIA* Cameron

Harkeria rufa Cameron

Nasonovia houghtonensis (Troop): OR, BENTON—Corvallis, McDonald State Forest, 15-IV-94 on *Oemleria cerasiformis*, A. Jensen collector (94J002).

Genus *LYSAPHIDUS* Smith

Lysaphidus adelocarinus (Smith)

Aphis canae Williamis: WA, ASOTIN—Asotin Cr Rd, 13-VI-95 on *Artemisia tridentata* (95T089).

- Aphis* (*Zyaphis*) sp.: WA, KITTITAS—Frost Meadows, Manastash Rd, 11-IX-97 on *Artemisia tridentata* (97G435).
- Artemisaphis artemisicola* (Williams): WA, FRANKLIN—Kahlotus Hwy, 28-V-96 on *Artemisia tridentata* (96G096).
- Epameibaphis atricornis* G&P [on *Artemisaphis tridentata*]: WA, BENTON [†*]—ALE, 19-V-95 (95G072†); YAKIMA [†*]—nr Mabton, 9-V-95 (95G031†); Selah Cr & Hwy 821, 15-V-95 (95G067†).
- Flabellomicrosiphum knowltoni* Smith [on *Artemisaphis tridentata*]: WA, BENTON [†*]; YAKIMA—YIR, Ft. Simcoe, 30-V-96 (95G091†).
- Flabellomicrosiphum tridentatae* (Wilson): WA, KCLICKITAT—Alderdale Cr & Columbia River, 28-IV-95 on *Artemisaphis tridentata* (95G013††).
- Flabellomicrosiphum* sp.: WA, KCLICKITAT [on *Artemisaphis tridentata*†*].
- Microsiphoniella artemisiae* (Gillette): WA, ASOTIN—Asotin Cr HMU, 5-VII-96 on *Artemisia ludoviciana* (96T141).
- Obtusicauda coweni* (Hunter): WA, ASOTIN—Asotin Cr HMU, 7-V-96 on *Artemisia tridentata* (96T142†).
- Obtusicauda* sp. [on *Artemisia tridentata*]: WA, KCLICKITAT [*] & YAKIMA [*].
- Pleotrichophorus* nr *amsinckii* Richards: WA, BENTON [*]—ALE, 8-VI-95 on *Cryptantha* sp. (95G147†).
- Pleotrichophorus palmerae* (Knowlton): WA, KCLICKITAT—nr Alderdale, 9-V-95 on *Chrysothamnus* sp. (95G026†).
- Pleotrichophorus* sp.: WA, GARFIELD—Alder Thicket, 21-IX-96 on *Amsinckia* sp. (95T592†); KITTITAS [on *Artemisia tridentata*†*]; KCLICKITAT—nr Alderdale, 9-V-95 on *Chrysothamnus nauseosus* (95G026†).
- Pseudoepameibaphis essigi* Knowlton & Smith: WA, KCLICKITAT [on *Artemisia tridentata*†*].
- Pseudoepameibaphis glauca* G&P [on *Artemisia tridentata*]: WA, KITTITAS [†*]—Taneum Rd, 11-IX-95 (95G586†); YAKIMA—YIR, Goat Butte, 9-X-96 (96K169).
- Pseudoepameibaphis tridentatae* (Wilson) [on *Artemisia tridentata*]: WA, BENTON [*]—ALE, 19-V-95 (95G072†); KITTITAS [*]; KCLICKITAT [†*]—Alderdale Cr & Columbia River, 28-IV-95 (95G013†); YAKIMA [†*]—Naught Rd, 18-VI-97 (97G120); nr Mabton, 9-V-95 (95G031†); Selah Cr & Hwy 821, 15-V-95 (95G067†); YIR, Ft. Simcoe, 30-V-96 (95G091†).

***Lysaphidus ramithyrus* (Smith)**

- Pleotrichophorus* nr *wasatchii* (Knowlton): WA, KITTITAS—Yakima Canyon, 11-IX-95 on *Chrysothamnus* sp. (95G549†).
- Pleotrichophorus elongatus* (Knowlton): WA, LINCOLN—Lake Roosevelt, Goldsmith CG, 31-VII-97 on *Chrysothamnus* sp. (97G306).

***Lysaphidus rosaphidis* (Smith)**

- Aphis* (*Zyaphis*) sp.: WA, KITTITAS—Taneum Rd, 11-IX-95 on *Artemisia tridentata* (95G585††).
- Chaetosiphon fragaefolii* (Cockerell) [on cultivated *Fragaria* sp.]: WA, CLARK—Vancouver, 30-VIII-95 (95K124); WSU-Vancouver, 21-IX-95 (95K166, 95K170).
- Chaetosiphon* nr *thomasi* HRL: WA, Clark—WSU-Vancouver, Greenhouse, 15-V-97 on *Fragaria* sp. (97X020).
- Pleotrichophorus* sp.: KITTITAS—Taneum Rd, 11-IX-95 on *Artemisia tridentata* (95G585††).

***Lysaphidus* spp.**

- Aphthargelia symphoricarpi* (Thomas): WA, SPOKANE—Mt Spokane SP, 14-VI-95 on *Symphoricarpos* sp. (95T116).
- Chaetosiphon fragaefolii* (Cockerell): WA, STEVENS—Little Pend Oreille National WLA, 9-VII-96 on native *Rosa* sp. (96T209††).
- Ericaphis gentneri* (Mason): WA, CHELAN—Stevens Pass, 16-IX-95 on *Spiraea densiflora* (95K138).
- Ericaphis scammelli* (Mason): WA, STEVENS—Little Pend Oreille National WLA, 9-VII-96 on native *Rosa* sp. (96T209††).
- Macrosiphum euphorbiae* (Thomas): WA, GARFIELD—FR40 nr Teal Springs, 1-VIII-95 on *Penstemon* sp. (95T379†).
- Nasonovia* (*Kakimia*) sp.: WA, SPOKANE—Mt Spokane, Scribner Rd, 29-VI-95 on *Phlox* sp.? (95T176).

Genus *LYSIPHLEBUS* Foerster

***Lysiphlebus flavidus* Gahan**

- Cedoaphis incognita* Hottes & Frison: WA, YAKIMA [on *Symphoricarpos* sp.*].

***Lysiphlebus testaceipes* (Cresson)**

- Acyrthosiphon lactucae* (Passerini) [on *Lactuca serriola*]: ID, LATAH—Moscow Mtn, 15-VIII-96 (96T447);

- WA, ASOTIN [*]; BENTON—WSU-Prosser, 5-VIII-96 (96G434); CHELAN—Chelan SP, 11-IX-97 (97K038); KITTITAS [*]; WHITMAN—Pullman, 17-VIII-95 (95T446); YAKIMA—YIR, Signal Peak, 19-IX-95 (95G621).
- Acyrtosiphon macrosiphum* (Wilson): WA, SPOKANE—nr Peone, 13-VII-95 on *Ribes* sp.? (95T227).
- Acyrtosiphon pisum* (Harris): WA, BENTON—WSU-Prosser, 26-IV-97 on *Medicago sativa* (97G014).
- Anoecia corni* (F.): WA, YAKIMA—Ahtanum Mission, 26-IX-95 on *Cornus stolonifera* (95G662††).
- Aphis armoraciae* Cowen: MT, LINCOLN—Libby, 16-VI-95 on *Centaurea maculosa* (95G172); WA, ASOTIN—Anatone, 24-VII-96 on unknown plant (96T330); KITTITAS [on *Mertensia paniculata* *]—Reecer Cr., 20-VI-95 on *Centaurea diffusa* (95G205†); KLINKITAT—Bickleton, 7-VII-97 on *Tragopogon dubius* (97G225); WALLA WALLA—Prescott, 30-X-97 on *Taraxacum officinale* (97G509); YAKIMA—nr Hause CG, 15-VI-96 on *Achillea millefolium* (96K104†); Wenas Lk, 11-VI-97 on *A. millefolium* (97G053).
- Aphis* nr *armoraciae* Cowen: WA, YAKIMA—nr Parker, 28-IX-95 on *Centaurea* sp. (95G664).
- Aphis canae* Williams: WA, ASOTIN—Asotin Cr Rd, 30-V-95 on *Artemisia tridentata* (95T045††).
- Aphis ceanothi* Clarke [on *Ceanothus velutinus* unless otherwise indicated]: MT SANDERS—13 mi E of Thompson Pass, 29-VII-95 (95G459); WA, KITTITAS—Manastash Cr Rd, mi marker 7, 16-VIII-96 on *C.* sp. (96G487); Manastash Cr, 25-VI-9 (97G137); Quilomene WLA, 2-VII-97 (97G213); Lost Lk, 6-VIII-97 (97G332); KLINKITAT—Trout Lk, 29-VI-97 on *C. sanguineus* (97G161); YAKIMA—YIR, nr. Mt. Adams Lk., 25-VII-95, 4-VIII-95 on *C. sanguineus* (95G409, 95K078†), Miller Point, 19-IX-95 (95G627† on)], Howard Lk Rd 19-IX-95 (95G641).
- Aphis* nr *ceanothi* Clarke: WA, YAKIMA—YIR, Signal Peak, 23-VI-95 on *Ceanothus* sp. (95G231†), & nr. Mt. Adams Lk., 19-IX-95 on *C. velutinus* (95G607).
- Aphis* nr *chrysothamni* Wilson: WA, ASOTIN—Asotin Cr Rd, 13-VI-95 on *Chrysothamnus* sp. (95T088).
- Aphis coweni* Palmer [on *Veratrum viride* unless otherwise indicated]: WA, ASOTIN—De Spain Springs, 5-VII-96 (96T155); CHELAN—Chatter Cr, 1-VIII-85 on *Pyrola asarifolia* (95G485†); KITTITAS—Wells Meadow, 25-VII-96 (96G413).
- Aphis craccivora* Koch: WA, BENTON—WSU-Prosser, 3-X-95 & 8-XI-95 on *Asparagus officinalis* (95G672, 95G747); Crow Butte, 24-VI-96, on *Astragalus* sp. (96G013); KITTITAS—Indian John Hill, 11-X-96 on *Kochia scoparia* (96G639); KLINKITAT—Alderdale Rd & Hwy 14, 9-V-95 on *Astragalus* sp. (95G025); Hwy 14, 4 mi W of Alderdale Rd, 14-V-96 on *Medicago sativa* (96G030); WHITMAN—Pullman, 25-VII-95 on *Capsella bursa-pastoris* (95T331); 2-VIII-96 on *Melilotus alba* (96T391); 3, 7, 16 & 31-VII-96, 2, 7, 16, 19 & 29-VIII-96, 9-X-96 on *Robinia pseudo-acacia* (96T133, 96T199, 96T301, 96T364, 96T393, 96T415, 96T462, 96T469, 96T511 & 96T580); YAKIMA—Grandview, 30-IX-96 & 3-VIII-96 on *Robinia pseudo-acacia* (95G666, 96G433); nr Union Gap, 23-X-95 on *Medicago sativa* (95G721†); YIR, Yakima Chief & Pioneer Rds, 16-V-96 on *Astragalus* sp. (96G059).
- Aphis* nr *epilobiaris* Theobald: WA, OKANOGAN—Bridgeport SP, 9-IX-97 on *Epilobium minutum* (97K017†).
- Aphis fabae* Scopoli [on *Cirsium arvense* unless otherwise indicated]: ID, LATAH—Moscow Mtn, 15-VIII-96 (96T448); 13-VII-96 on *Holodiscus discolor* (96T267); Moscow Mtn, nr start of Paradise Cr, 21-IX-96 (96T542); WA, ASOTIN—Field Springs SP, 18-VII-95 (95T272); Wickiup CG, 29-VIII-95 (95T504); Anatone, 28-VI-96 (96T083); GARFIELD—Pataha Cr Rd, 5.6 mi S of Columbia Center, 7-IX-95 (95T544); Columbia Center, on *Philadelphus lewisii* (95T430); GRANT—Sun Lakes SP, 8-IX-97 on *C.* sp. (97K008); KITTITAS—Buck Meadows, 11-IX-95 (95G590), & on *C. vulgare* (95G580); Frost Meadows, 11-IX-95 (95G583†); Lost Lk, 11-IX-95 (95G556†, 95G564†, 95G571†) & on *C. vulgare* (95G577); 6-VIII-97, on *Senecio* sp. (97G335); Manastash Rd, 11-IX-95, 25-VII-96, & 16-VIII-96 (95G556†, 96G424, 96G478, [96G481 on *C. vulgare*]); Lost Lk Trailhead, 6-VIII-97 (97G320); LEWIS—RNP, Bench Lk, 23-VII-96 on native *C.* sp. (96G375); KLINKITAT—nr Bickleton, Cemetery Rd 1 mi N of Hwy, 18-VI-97, 7-VII-97 (97G107, 97G227); Klickitat River Hwy 142, 28-VI-97 on *C. vulgare* (97G155); OKANOGAN—Winthrop, 10-IX-97 on *Arctium minus* (97K031); SPOKANE—Mt Spokane SP, 20 & 27-VII-95, 24-VIII-95, (95T293, 95T340, 95T349, 95T474); 13-VII-95, on Umbelliferae (95T241); 24-VIII-95 on *C. ochrocentrum* (95T476, 95T481); WHITMAN—Pullman, 1-VIII-95, & 7, 18-VII-96 (95T387, 96T198, 96T323); YAKIMA—Buckhorn Meadows, 14-IX-95 on *C. vulgare* (95G600); American River, 5-IX-97 (97G373) & on *Epilobium angustifolium* (97G377†); Blowout Mtn, end of Little River Rd, 9-IX-97 (97G390); YIR, Piscose Cr 25-VII-95, on *Rumex crispus* (95G437); Signal Peak, 19-IX-96 on *C. vulgare* (96G563).
- Aphis* nr *fabae* Scopoli: ID, LATAH—Moscow Mtn, 15-VIII-96 on *Rumex crispus* (96T450); WA, PEND OREILLE—Sullivan Lk Rd & Harvey Cr, on *Chrysanthemum leucanthemum* (95T394); PIERCE—RNP, Tipsoo Lk, 11-IX-96 on *Osmorhiza* sp. (96G531).
- Aphis filifoliae* (G&P): WA, ASOTIN—Asotin Cr Rd, 11-VII-95 on *Artemisia tridentata* (95T202).
- Aphis* nr *frangulae* Kaltenbach [on *Nepeta cataria*]: WA, ASOTIN—Couse Cr Rd, 10-VIII-95 (95T424); nr FR40 & FR44, 5 & 19-VII-96 (96T161, 96T242, 96T243); De Spain Spring, 11-VII-96 (96T242, 96T243).
- Aphis gossypii* Glover: WA, ASOTIN—Heller's Bar, 30V-95 on unknown plant (95T039).

- Aphis hederæ* Kaltenbach: OR, BENTON—Corvallis, 21-V-91 on unknown plant (91J001).
- Aphis helianthi* Monell: ID, KOOTENAI—Fernan Lk, on *Rumex* sp. (95K030); SHOSHONE—Marble Cr 9-VI-96 on *Philadelphus lewisii* (96T012); MT, SANDERS—Thompson Pass, 17-VI-95 on *Heracleum lanatum* (95G179†); 13 mi E of Thompson Pass, 29-VII-95 on *Ligusticum verticillatum* (95G460); WA, ASOTIN—Asotin Cr HMU, 29-VIII-95 on *Helianthus annuus* (95T496); Bracken Point, 7-IX-95 on *H. annuus* (95T548); Anatone, 11-VII-95 on *Lomatium* sp. (95T217); De Spain Springs, 11-VII-96 on *Lomatium* sp. (96T245); CHELAN—Chatter Cr, 1-VIII-95 on *Oplopanax horridum* (95G488†); Stevens Pass, 16-IX-95 (95K134†); GARFIELD—Stentz Springs, 22-VIII-96 on *Osmorhiza chilensis* (95T452); KITTITAS [on *Heracleum lanatum**]—S Fork Manastash Cr, 24-VII-95 on *Angelica* sp. (95G392); Buck Meadows, 24-VII-95 on native *Cirsium* sp. (95G396); Manastash Rd, 24-VII-95 & 11-IX-95 on *Heracleum lanatum* (95G378, 95G560†); 24-VII-95 on *Penstemon* sp. (95G379); Lost Lk, 11-IX-95 on *Heracleum lanatum* (95G572), 2-IX-95 on *Epilobium angustifolium* (95G530†), & 6-VIII-97 on *Angelica arguta* (97G333†); Manastash Cr, mi marker 5, 16-VIII-96 on *Heracleum lanatum* (96G483); Reecer Cr, 20-VI-95 on *Ligusticum* sp. (95G201) & 20-VI-95 on *Lomatium nudicaule* (95G209); Quartz Mtn, 25-VII-96 on *Penstemon procerus* (96G399) & *Ligusticum grayi* (96G398†); Colockum Ridge, 2-VII-97 on *Camassia quamash* (97G196); Colockum Ridge, 1 & 2-VII-97 on *Lomatium nudicaule* (97G189) & *Lomatium triternatum* (97G191†); Quilomene WLA, 2-VII-97, on *Lomatium* sp. (97G212); LEWIS—RNP, Stevens Canyon, 23-VII-96 on native *Cirsium* sp. (96G355) & 8-IX-95 on *Ligusticum* sp. (95K113); OKANOGAN—Bridgeport SP, 9-IX-97 on *Helianthus annuus* (97K016); PIERCE [on *Cirsium* sp. & *Heracleum lanatum**]—RNP, nr Paradise, 8-IX-95 on native *Cirsium* sp. (95K122) & *Xerophyllum tenax* (95K121); Tipsoo Lk, 5-IX-97 on *Ligusticum grayi* (97G363†); SKAMANIA [on *Ligusticum apiifolium**]; SPOKANE—nr Peone, 13-VII-95 on *Cornus stolonifera* (95T236); Turnbull National WLA on *Cornus stolonifera* (95T009); Mt Spokane SP, 29-VI-95 on *Cornus stolonifera* (95T186); nr Mt Spokane, 29-VI-95 on *Heracleum lanatum* (95T171); nr Peone, 13-VII-95 on *Heracleum lanatum* (95T229); WHITMAN—nr Colton, Steptoe Canyon Rd, 19-IX-95 on *Helianthus annuus* (95T586); Pullman, I-VIII-95 on *Coriandrum sativum* (95T386†); YAKIMA [on *Cirsium* sp.*]—Mabton & Alderdale Rds, 23-V-96 on *Lomatium* sp. (96G071); Wenas Lk, 30-V-96 & 11-VI-97 on *Lomatium* sp. (96G118, 97G063†) & 17-VI-97 on unknown Umbelliferae (97G088); American River, 5-IX-97 on *Cirsium* sp. (97G379), 5-IX-97 on *Heracleum lanatum* (97G382); Blowout Mtn, end of Little Naches River Rd, 9-IX-97 on *Cirsium* sp. (97G399) & on *Xerophyllum tenax* (97G395, 97G398); Sawmill Flats CG, 28-VII-97 on *Cornus stolonifera* (97G286); YIR, Lower Mill Cr, 25-V-96 on *Lomatium dissectum* (96K052) & *Lomatium triternatum* (96K053); Piscoe Cr, 25-VII-95 on *Ligusticum grayi* (95G432); Potato Hill Guard Station, 25-VII-95 on *Xerophyllum tenax* (95G429);
- Aphis* nr *helianthi* Monell: ID, BENEWAH—McCroskey SP, 31-VIII-95 on *Lomatium* sp. (95T517†); WA, KITTITAS—Manastash Cr Rd, mi marker 4, 16-VIII-96 on *Cornus stolonifera* (96G474); YAKIMA—Chinook Pass, 27-IX-96 on *Ligusticum* sp. (96G604).
- Aphis hermistonii* Wilson: WA, GRANT—Sun Lakes SP, 8-IX-97 on *Chrysothamnus nauseosus* (97K009).
- Aphis holodisci* Robinson [on *Holodiscus discolor* unless otherwise indicated]: MT, SANDERS—Bull River Valley, 16-VI-95 on *Physocarpus malvaceus* (95G176); WA, ASOTIN—De Spain Springs, 26-VI-96, 5-VII-96 (96T059, 96T150); KITTITAS—Manastash Cr, mi marker 12, 25-VI-97 (97G133); KLINKITAT—Trout Lk, 11-VII-95 (95G340†); SPOKANE—Mt Spokane SP, 27-VII-95 (95T338); Spokane, Manito Pk, 11-VII-96 (96T260); YAKIMA [*]—Clear Lk, 15-VI-96 (96K079, 96K082); Bird Cr Meadows Rd, FR 82 & FR 822, 26-V-95 on *Physocarpus malvaceus* (95A020, 95A021); YIR, White Deer Cr, 11-VII-95 (95G324) & Signal Peak (95G333), & nr Mill Cr Guard Station, 25-V-96 (96K047).
- Aphis lugentis* Williams: WA, YAKIMA [on *Senecio triangularis* & *Arnica* sp.*].
- Aphis lupini* G&P [on *Lupinus* sp.]: WA, GARFIELD—Pataha Cr, 7-IX-95 (95T546); STEVENS—Little Pend Oreille Nat. WLA, 9-VII-96 (96T212).
- Aphis neogillettei* Palmer [on *Cornus stolonifera*]: WA, KLINKITAT [*]; YAKIMA—Sawmill Flats CG, 28-VII-97 (97G285).
- Aphis nerii* Boyer de Fonscolombe [on *Asclepias speciosa*]: WA, BENTON [*]; CHELAN—WSU-Wenatchee, 25-VIII-95 (95R025); YAKIMA [*]—Sunnyside, 24-VIII-95, 1-X-95, 23-X-95, 13-VIII-96, 29-IX-96, 4, 22-X-97 (95G517, 95G670, 95G704, 96G452, 96G618, 97G486, 97G489); Union Gap, 23-X-95 (95G725); Mabton, 30-VIII-96 (96G513).
- Aphis nigratibialis* Robinson [on *Cornus stolonifera*]: WA, KITTITAS—Manastash Cr, mi marker 12, 6-VIII-97 (97G312); KLINKITAT—Trout Lk, 28-VI-97 (97G156); SPOKANE—Mt Spokane SP, 13-VII-95 (95T239); YAKIMA—Chinook Pass, 28-VII-97 (97G280).
- Aphis oenotherae* Oestlund: WA, OKANOGAN—Bridgeport SP, 9-IX-97 on *Epilobium minutum* (97K017†); PIERCE—RNP, nr Chinook & Cayuse Passes, 16-VIII-95 on *Ribes viscosissimum* (95A039).
- Aphis* nr *oenotherae* Oestlund [on *Epilobium* sp. unless otherwise indicated]: WA, BENTON—Kennewick, 28-

- IX-96 (96G597); GARFIELD—Pataha Cr Rd, 7-IX-95 (95T541, 95T545); Spruce Springs, 22-VIII-95 on *Physostegia parviflora* (95T462†); OKANOGAN—Bridgeport SP, 9-IX-97 on *Oenothera strigosa* (97K020); YAKIMA—American River, 5-IX-97 on *Epilobium minutum* (97G375†); Fifes Peak Viewpoint, 27-IX-96 (96G603); Nile, 5-IX-97 (97G358); nr Rimrock, 14-IX-95 (95G594).
- Aphis pomi* de Geer: WA, DOUGLAS—Bridgeport, 17-VI-96 on *Pyrus malus* (96X007†‡).
- Aphis rumicis* L. [on *Rumex crispus*]: WA, BENTON [*]; YAKIMA—YIR, Satus, 1-VI-95 (96K065).
- Aphis salicariae* Koch [on *Epilobium angustifolium*]: ID, KOOTENAI—Rathdrum, 29-VII-95 (95G443†); WA, ASOTIN—Anatone, 24-VII-96 (96T336); CHELAN—1-VIII-95 (95G481†); KITTITAS—Lost Lk, 2-IX-95 (95G530†); OKANOGAN—Washington Pass, 10-IX-97 (97K033); SPOKANE—nr Cheney, 23-V-95 on *Cornus stolonifera* (95K007); YAKIMA—YIR, nr. Mt. Adams Lk., 19-IX-95 (95G610†).
- Aphis* nr *salicariae* Koch: WA, CHELAN—Swauk Pass, 1-VIII-95 on *Epilobium angustifolium* (95G492†).
- Aphis sambuci* L: WA, PIERCE, [on *Sambucus racemosa**].
- Aphis spiraeola* Patch: WA, BENTON [on *Lactuca serriola**]; CHELAN—WSU-Wenatchee, 7-VII-95 on *Pyrus malus* (95R018†); KITTITAS—Lost Lk, 6-VIII-97 on *Angelica arguta* (97G333†); YAKIMA—Sunnyside, 3-VI-95, on cultivated *Spiraea* sp. (95G109); nr Sunnyside, 28-VI-95 (95G259†).
- Aphis* nr *triglochinis* Theobald: WA, SPOKANE—Mt Spokane SP, 29-VI-95 on native *Ribes* sp. (95T189).
- Aphis* nr *valerianae* Cowen: WA, PIERCE—RNP, Mowich Lk, 25-IX-97 on *Valeriana sitchensis* (97G446).
- Aphis varians* Patch [on *Epilobium angustifolium* unless otherwise indicated]: MT, SANDERS [*]; ID, KOOTENAI—Rathdrum, 29-VII-95 (95G443†); WA, CHELAN—Stevens Pass, 16-IX-95 (95K134†); PIERCE [*]—RNP, nr Paradise, 8-IX-95 (95K114, 95K117), Tipsoo Lk, 5-IX-97 (97G368), & Mowich Lk, 25-IX-97 (97G442); Naches Pass, 25-IX-97 (97G460); SPOKANE—Mt Spokane SP, 24-VIII-95 (95T483); YAKIMA [*]—Green Lk, 31-VIII-94 on *E. latifolium* (94R140); Blowout Mtn, end of Little Naches River Rd, 9-IX-97 (97G404); YIR, Hussen Meadows, 19-IX-95 (95G643) & Howard Lk, 19-IX-95 on *Lupinus* sp. (95G639);
- Aphis* nr *variens* Patch [on *Epilobium angustifolium*]: WA, CHELAN—Dryden, 1-VIII-95 (95G481†); LEWIS—RNP, Bench Lk, 23-VII-96 (96G376); Stevens Cr, 23-VII-96 (96G380).
- Aphis* (*Zyzaenia*) sp.: WA, ASOTIN—Asotin Cr Rd, 22-VIII-95 on *Chrysothamnus* sp. (95T469).
- Aphis* sp. n.: WA, YAKIMA—YIR, Klickitat River nr Miller Point, 23-VI-95 & 11-VII-95 on *Ceanothus* sp. (95K061, 95G230) & 19-IX-95 & 19-IX-96 on *C. velutinus* (95G627†, 96G580).
- Aphis* sp.: ID, BENEWAH—McCroskey SP, 31-VIII-95 on *Cirsium vulgare* (95T531); LATAH—Moscow, 15-IX-93 on *Solanum lycopersicon* (93T020); WA, ASOTIN—Anatone, 28-VI-96, on *Lamium* sp. (96T086); Schumaker Rd mi marker 1, 10-VIII-95 on *Cirsium arvense* (95T428); 28-VI-96, on *Holodiscus discolor* (96T085); De Spain Spring, 5-VII-96, on *Nepeta cataria* (96T161); 11, 24-VII-96 on unknown Umbelliferae (96T254, 96T341); CHELAN—Chelan SP, 11-IX-97, on *Salix* sp. (97K042†); GARFIELD—Alder Thicket (FR 40), 22-VIII-95 on native *Cirsium* sp. (95T448); KITTITAS [on *Pedicularis bracteosa*† & *Senecio triangularis**]—Lost Lk, 6-VIII-97 on *Symphoricarpos* sp. (97G341†); Taneum Lk, 11-IX-97 on *Pedicularis racemosa* (97G411†); [Klickitat, on *Rheum rhabarbarum**]—Trout Lk, 29-VI-97 on *Amsinckia* sp. (97G172); PEND OREILLE—Cusick, 9-VII-96 on *Ceanothus sanguineus* (96T225); PIERCE—RNP, Tipsoo Lk, 5-IX-97 on *Valeriana sitchensis* (97G360); SPOKANE—Mt Spokane SP, 14-VI-95 on *Philadelphus lewisii* (95T117); 24-VIII-95 on *Salix* sp. (95T484), 29-VI-95 on unknown Umbelliferae (95T183); Hwy 206 mi marker 16.3, 8-VI-95 on unknown Umbelliferae (95T070); WHITMAN—Pullman, 1-VIII-95 on *Coriandrum sativum* (95T386); YAKIMA [on Umbelliferae*]—nr Chinook Pass, 11-IX-96 on *Cryptantha* sp. (96G519) & on *Epilobium angustifolium* (96G555); Little Naches River Rd, 28-VII-97 on *Cryptantha thompsonii* (97G291); Wenas Cr & Maloy Rd, 11-VI-97 on *Heracleum lanatum* (97G070); YIR, Delaney Springs, 25-VII-95 on *Holodiscus discolor* (95G404), Windy Point, 19-IX-95 on *Cimicifuga laciniata* (95G631), & Signal Peak Guard Station, 19-IX-95 on *Cornus stolonifera* (95G617).
- Aphthargelia symphoricarpi* (Thomas) [on *Symphoricarpos* sp. unless otherwise indicated]: WA, KITTITAS [*]—Colockum Rd, mi marker 4, 1-VII-97 (97G183); Lost Lk, 6-VIII-97 (97G334); KICKITAT [on *S. albus**]; SPOKANE—Mt Spokane SP, 14-VI-95, 13-VII-95 (95T116, 95T242); Turnbull Nat. WLA, 16-VII-96 on unknown plant (96T287); Fish Lk, 14-VI-97 on *S. occidentalis* (97K004); YAKIMA—Wenas Cr & Maloy Rd, 11-VI-97 (97G066); YIR, Signal Peak, 11-VII-95 (95K057).
- Boernerina variabilis* Richards: WA, KITTITAS—Buck Meadows, 9-VII-96 on *Alnus* sp. (96G336).
- Brachycaudus cardui* (L.) [on *Cirsium vulgare* unless indicated otherwise]: ID, LATAH—Moscow Mtn, 3 & 15-VIII-96 (96T401, 96T449); Nez Perce—Hwy 95 & Hwy 195, 22-VII-97 on *C. arvense* (97J004); WA, ASOTIN—Heller's Bar, 11-VII-95 on *C. arvense* (95T212); Anatone, 24-VII-96 (96T333) & on *Onopordum acanthium* (96T329); Asotin, 28-VI-96 on *O. acanthium* (96T066); Weisenfels Ridge Rd nr Snake River Rd) 28-VI-96 on *O. acanthium* (96T070); BENTON [*]—Prosser, Rotha Rd, 24-VIII-95 (95G512); GARFIELD—Spruce Springs, 22-VIII-95 on *C. arvense* (95T457); Pataha Cr Rd, 7-IX-95 (95T542);

- KLICKITAT—Bickleton, 18-VI-96 & 7-VII-97 on *C. sp.* (96K112) & *C. vulgare* (97G228); Brooks Memorial SP, 21-IX-95 on *C. sp.* (95K162†); SPOKANE—Mt Spokane SP 24-VIII-95 (95T475, 95T482, 95T488); Whitman—Pullman, 1,13-VIII-96, 3-IX-96 (96T369, 96T383, 96T439, 96T514); YAKIMA—nr Naches Pass, FR 789 & FR 1914, 9-IX-97 (97G410); YIR, nr. Mt. Adams Lk., 25-VII-95 (95G405), Signal Peak, 19-IX-95 (95G624), Satus, 1-VI-96 on native *C. sp.* (96K066), & Snow Cr, 19-IX-95 (95G608).
- Brachycaudus helichrysi* (Kaltenbach): WA, FRANKLIN—Ice Harbor Dam, 28-V-97 on *Amsinckia sp.* (96G097); KITTITAS [on *Rudbeckia hirta**]; WHITMAN—Pullman, 19-VII-96 on *Tragopogon dubius* (96T320); YAKIMA—YIR, nr. Mt. Adams Lk., 4-VIII-95 on native *Cirsium sp.* (95K077).
- Brachycaudus tragopogonis* (Kaltenbach) [on *Tragopogon dubius*]: ID, SHOSHONE—Kingston, 29-VII-95 (95G479); OR, UMATILLA—Milton-Freewater, 11-VI-96 (96G239); WA, BENTON—WSU-Prosser, 27-VI-96, 15-VII-96, 30-V-96, 14-V-97 (96A003, 96A014, 96G100, 97G028); Rotha Rd, 18-VI-96 (96G256); Badger Springs, 28-IX-96 (96G595); West Richland, 27-V-96 (96K056); CHELAN—Chelan SP, 11-IX-97 (97K040); KITTITAS—Ellensburg Pass, Wenas-Ellensburg Rd, 9-VI-96 (96G209); Indian John Hill, 11-X-96 (96G638); KLICKITAT [*]—Bickleton, 17,18-VI-96, 27-VIII-96, 8-X-96 (96G254, 96K113, 96G512, 96G628); Box Springs, 27-VI-97 (97G147); WHITMAN—Pullman, 1,2,7,12-VII-96, 2,9-VIII-96, 3-X-96 (96T126, 96T132, 96T197, 96T325, 96T387, 96T427, 96T574); YAKIMA—Grandview, 24-V-96, 2 & 26-VI-96, 13-X-96, 14-V-97 (96G080, 96G130, 96G273, 96G283, 96G646, 97G022); Halfway Flat CG, 27-IX-96 (96G616); Hause CG, 15-VI-96 (96K106); nr Bickleton, 18-VI-97 & 7-VII-97 (97G102, 97G222); Sunnyside, 1-VI-96 (96K058); Wenas Lk, 30-V-96 (96G124); YIR, Signal Peak, 19-IX-96 (96G560) & Goat Butte, 19-IX-96, 9-X-96 (96G583, 96G631).
- Brachycorynella asparagi* (Mordvilko) [on *Asparagus officinalis*]: WA, BENTON [*]—WSU-Prosser, 6,25-IX-95 (95K144, 95G649).
- Braggia eriogoni* (Cowen): MT, GALLATIN—Big Sky, Gallatin Rd, 26-VI-96 on *Eriogonum sp.* (96K119); WA, ASOTIN—De Spain Springs, 11,19-VII-96 on *E. sp.* (96T246, 96T317); Round Prairie Springs, 18-VII-96 on *E. sp.* (96T311); KING—Stampede Pass, 8-VIII-96 on *E. compositum* (96G446); KITTITAS—Colockum Ridge Rd, 2-VII-97 on *E. compositum* (97G190, 97G193); Taneum Lk Trail, 11-IX-97 on *E. umbellatum* (97G428); KLICKITAT [on *E. heracleoides**]—Bickleton (Pine Cr Rd), 3-V-95 on *E. heracleoides* (95G099); Cemetery Rd 1 mi from Hwy, 18-VI-97 on *E. sp.* (97G106); Cleveland, 18-VI-96 on *E. heracleoides* (96K111).
- Braggia nr eriogoni* (Cowen) [on *Eriogonum compositum* unless otherwise indicated]: OR, UMATILLA—Harris Pk, 11-VI-96 (96G234); WA, KITTITAS—Lost Lk, 6-VIII-97 (97G350); KLICKITAT—Roosevelt, 14-V-96 (96G035); Bickleton, 18-VI-97 (97G110); 18-VI-97, on *E. sp.* (97G109); YAKIMA—Little Naches River Rd, 28-VII-97, on *E. strictum* (97G290).
- Braggia sp.*: WA, KLICKITAT—nr Bickleton, Pine Cr Rd, 31-V-95 on *Eriogonum umbellatum* (95G100); Box Springs, 29-VI-97 on *E. compositum* (97G176); YAKIMA [on *E. compositum* & *E. elatum* (aphid det. by G. Remaudière*)]—Hause CG, 15-VI-96 on *E. elatum* (96K105); Wenas Lk, 11-VI-97 on *E. sp.* (97G060); YIR, Klickitat River, 7-VI-95 on *E. compositum* (95G126).
- Braggia sp. n.* [on *Eriogonum elatum* unless otherwise indicated]: WA, DOUGLAS—Orondo, 28-V-96 (96R002); KITTITAS—Lost Lk, 2-IX-95 on *E. compositum* (95G529); Reecer Cr, 20-VI-95 (95G213); YAKIMA—Bear Cr nr Rimrock Lk, 9-VI-95 (95A006); Naught Rd, 18-VI-97 (97G104) & 7-VII-97 on *E. compositum* (97G220); Naches, Hwy 410 & Hwy 12, 28-VII-97 (97G276); Naches River, Horseshoe Bend, 5-IX-97 (97G357); nr Rimrock Lk, 14-IX-95 on *E. sp.* (95G595); Wenas Lk, 30-V-96, 11-VI-97 (96G114, 97G061); Windy Point CG, 3-VI-95, 1-VII-95, 26-VI-96 (95G105, 95K040, 96G305), & 16-VIII-95 on *E. compositum* (95A031); YIR, Fort Simcoe, 6-VI-95 (95G117), Mill Cr, 19-IX-95 (95G605), Signal Peak, 19-IX-95 (95G626), & 20 mi S of Satus Pass, 7-VI-95 on *E. sp.* (95G142).
- Brevicoryne brassicae* (L.): WA, BENTON—WSU-Prosser, 6-VII-95 on *Brassica napus* (95A024).
- Capitophorus elaeagni* (del Guercio): WA, YAKIMA—Buckhorn Meadows, 14-IX-95 on *Cirsium vulgare* (95G596); nr Naches Pass, FR 789 & FR 1914, 9-IX-97 on *Cirsium sp.* (97G408).
- Cavariella aegopodii* (Scopoli): WA, KITTITAS—nr Lost Lk, 6-VIII-97 on *Osmorhiza chilensis* (97G331) & 2-IX-95 on *Lomatium sp.* (95G535†); YAKIMA—nr Wenas Lk, 17-VI-97 on *Lomatium sp.* (97G095†).
- Cavariella pastinacae* (L.): MT, SANDERS—Thompson Pass, 17-VI-95 on *Heracleum lanatum* (95G179†‡); WA, ASOTIN—Asotin Cr Rd, 11-VII-95 on *Oenothera sp.* (95T196); YAKIMA—YIR, Klickitat Canyon, 23-VI-95 on *Heracleum lanatum* (95G235).
- Ceruraphis viburnicola* (Gillette): WA, YAKIMA—Yakima Arboretum, 26-IV-95 on *Viburnum sp.* (95G008).
- Chaetosiphon fragaefolii* (Cockerell): WA, PEND OREILLE—Le Clerc WLA, 3-VIII-95 on native *Rosa sp.* (95T398).
- Chaitophorus populicola* Thomas: WA, ASOTIN—Asotin Cr Rd, 23-V-95 on *Populus trichocarpa* (95T013).

- Chaitophorus viminalis* Monell: WA, YAKIMA—Naches, 27-IX-96 on *Salix* sp. (96G601).
- Cinara chinookiana* Hottes: WA, YAKIMA—Darland Mtn, 31-VIII-94 on *Abies lasiocarpa* (94R138).
- Cinara* sp.: WA, ASOTIN—FR44 8mi S of WLA, 18-VII-96 on *Pinus ponderosa* (96T308).
- Diuraphis noxia* (Kurdjumov) [on *Triticum aestivum*]: WA, ASOTIN—Anatone, 10-VIII-95 (95T427); Pataha Cr Rd, 5.6 mi S of Columbia Center, 10-VIII-95 (95T435); BENTON [*]—WSU-Prosser, 1-IV-97, 24-VII-97 (97G005, 97G274); KLINKITAT—nr Cleveland, 7-VII-97 (97G232, 97G234); Bickleton, 29-VII-97 (97G300); SPOKANE—Mt Spokane SP, 22-VII-95 (95T495); YAKIMA [*]—Ridge Rd, 17-VI-96 (96G250, 96G251); Sunnyside, 24-VII-97 (97G273).
- Dysaphis plantaginea* (Passerini) [on *Pyrus malus* unless otherwise indicated]: WA, BENTON—Prosser, 22-VI-97 (97G123); CHELAN—WSU-Wenatchee, 7-VII-95 & 30-V-96 (95R018†, 96R009, 96R011†); WHITMAN—Pullman, 30-VI-96, on unknown plant (96T119); YAKIMA—Grandview 26,28-VI-96 (96G282, 96G308); nr Sunnyside, 28-VI-95 (95G259†).
- Ericaphis* nr *gentneri* (Mason): WA, SPOKANE—nr Peone, 13-VII-95 on *Crataegus* sp. (95T223).
- Eriosoma americanum* (Riley): WA, CHELAN—Swakane WLA, 3-VI-96 on *Ulmus americanus* (96R018‡).
- Eriosoma lanigerum* (Hausmann): WA, CHELAN—WSU-Wenatchee, 7-VII-95 on *Pyrus malus* (95R019‡).
- Hyadaphis foeniculi* (Passerini): ID, BENEWAH—McCroskey SP, 31-VIII-95 on *Lomatium* sp. (95T517‡).
- Hyperomyzus nigricornis* (Knowlton): WA, YAKIMA—Wenas Lk, 30-V-96, on *Ribes aureum* (96G123); YIR, 19-IX-95 on *Agoseris* sp. (95G622).
- Illinoia spiraeae* (MacGillivray): WA, GARFIELD—Teal Springs, 1-VIII-95 on *Holodiscus discolor* (95T376).
- Macrosiphum euphorbiae* (Thomas): ID, KOOTENAI—Rathdrum, 29-VII-95 on *Epilobium angustifolium* (95G443†); LATAH—Moscow, 29-VIII-96 on *Solanum* sp. (96T512†); WA, ASOTIN—De Spain Springs 5-VII-96 on Compositae (96T159); BENTON—Prosser, 24-X-96 on *Medicago sativa* (96G651); KLINKITAT—Trout Lk, 11-VII-95 on *Holodiscus discolor* (95G340†); PIERCE [on *Epilobium angustifolium**].
- Macrosiphum gaurae* (Williams): WA, ASOTIN—nr Weissenfels Ridge & Snake River Rds, 28-VI-96 on *Oenothera* sp. (96T073).
- Macrosiphum* nr *pallidum* (Oestlund): WA, YAKIMA—American River, 5-IX-97 on *Epilobium minutum* (97G375‡).
- Macrosiphum* sp. [nr *fuscicornis* MacDougall & *pallidum* (Oestlund)]: WA, CHELAN—Swauk Pass, 1-VIII-95 on *Epilobium angustifolium* (95G492†).
- Myzus ascalonicus* Doncaster: WA, YAKIMA [on moss*].
- Myzus cerasi* (F.) [on *Prunus* sp. unless otherwise indicated]: WA, BENTON—WSU-Prosser, 28-V-96 (96G091); CHELAN—Wood Reservoir, 6-VI-96 (96R019); Chelan SP, 11-IX-97 (97K041); WHITMAN—Pullman, 5-VII-96, on *P. avium* (96T173).
- Myzus* nr *cerasi* (F.): WA, WHITMAN—Pullman, 6-VII-96 on unknown plant (96T411).
- Myzus persicae* (Sulzer): ID, LATAH—Moscow, 29-VIII-96 on *Solanum* sp. (96T512†).
- Nasonovia* (*Kakimia*) sp.: WA, SPOKANE—nr Peone, 13-VII-95 on native *Ribes* sp. (95T235).
- Nearctaphis bakeri* (Cowen): WA, BENTON—WSU-Prosser, 5-V-95 on *Crataegus* sp. (95G023); KLINKITAT—Trout Lk, 29-VI-97 on *Trifolium pratense* (97G170).
- Nearctaphis californica* HRL: WA, KLINKITAT—Brooks Memorial SP, 8VI-94 on *Crataegus douglasii* (94-100).
- Nearctaphis kachena* (Hottes): WA, KITTITAS—Taneum Lk, 11-IX-97 on *Pedicularis racemosa* (97G411‡).
- Nearctaphis yohoensis* Bradley: WA, YAKIMA—YIR, White Deer Cr, 11-VII-95 on *Sorbus* sp. (95K051).
- Nearctaphis* sp. ID, LATAH—Moscow, 13-VI-97 on unknown plant (97T050).
- Phorodon humuli* (Schrank): WA, BENTON [on *Humulus lupulus* & *Prunus salicina**]—WSU-Prosser, 19,25-IV-95, 23-V-96, 15-IV-97, on *P. salicina* (95G005, 95G006, 95G007, 96G075, 97G006).
- Pseudoepameibaphis tridentatae* (Wilson): WA, ASOTIN—Asotin Cr Rd, 30-V-95 on *Artemisia tridentata* (95T045‡).
- Pterocomma* sp.: WA, YAKIMA—YIR, Signal Peak, 19-IX-95, on *Salix* sp. (95G619).
- Rhopalosiphum cerasifoliae* (Fitch) [on *Prunus virginiana* unless otherwise indicated]: MT, LINCOLN—Libby, 29-VII-95 (95G451); SANDERS — 20mi E of Thompson Pass, 29-VII-95 (95G454); WA, KITTITAS—Reecer Cr, 20-VI-95 (95G202); KLINKITAT—E end of Colockum Pass Rd, 2-VII-97, 97G215); WHITMAN—Pullman, 19-VI-96, 16-VII-96 on unknown plant (96T046, 96T300); YAKIMA—Wenas Lk, Wenas Cr & Maloy Rd, 11-VI-97 (97G069).
- Rhopalosiphum enigmae* Hottes & Frison: WA, YAKIMA—Buena, 23-X-95 on *Typha latifolia* (95G715).
- Rhopalosiphum insertum* (Walker) [on *Pyrus malus* unless otherwise indicated]: WA, CHELAN—Chelan, 11-VI-96 (96X001, 96X002); WSU-Wenatchee, 30-V-96 (96R011†); DOUGLAS—Bridgeport, 17-VI-96

- (96X007†); Orondo, 25-V-95 (95R010); 11-VI-96 (96X003, 96X004, 96X005); Bridgeport, 12,17-VI-96 (96X006, 96X008); KITTITAS—Ellensburg, 17-V-96 on *Crataegus columbiana* (96G066).
- Rhopalosiphum maidis* (Fitch): WA, BENTON [on *Echinochloa crus-galli*†, *P. milliaceum*, & *Triticum aestivum**]—WSU-Prosser 23-XI-94 on *Panicum milliaceum* (94G113), 2-XI-96 on *Hordeum vulgare* (96G655), 18-XI-95 & 20-I-96 on *Capsella bursa-pastoris* (96G003†, 95G750†).
- Rhopalosiphum nymphaeae* (L.): WA, YAKIMA—Outlook, 23-X-95 on *Typha latifolia* (95G709).
- Rhopalosiphum padi* (L.) [on *Triticum aestivum* unless otherwise indicated]: WA, BENTON [on *Echinochloa crus-galli*†, *T. aestivum*, & *ZEa MAYS**]—WSU-Prosser, 1-X-95 (95G668); nr Paterson, 12-X-95 (95G688); Cemetery Rd (3 mi east of Hwy 221), 12-X-95 (95G690); DOUGLAS—Waterville, 12-VIII-95 (95B016, 95B017, 95B018); YAKIMA [*]. [Following collections on *Zea mays*]: ASOTIN—Chief Timothy HMU, 16-VIII-95 (95T439); BENTON [on *Echinochloa crus-galli* & *Zea mays* *]; BENTON—WSU-Prosser, 24-VII-95, 18-IX-95, 6-X-95, 28-IX-96, 3-XI-97 (95G511, 95G601, 95G683, 95G684, 96G591, 97G518); Prosser, 21-IX-96 (96G626); Grandview, 24-VIII-95 (95G513); GRANT—Ephrata, 8-VII-97 (97K058); WALLA WALLA—Hwy 124 (nr Ice Harbor Dam), 5-IX-95, 5,18-X-95 (95G543, 95G675, 95G699); Eureka, 5-X-95 (95G681, 95G698); Prescott, 30-X-97 on *Phalaris arundinacea* (97G516); YAKIMA—Grandview, 25-VIII-95, 18-IX-95, 24-X-95, (95G520, 95G602, 95G702); Harrah, 19-IX-95 (95G604); nr Toppenish, 19-IX-95, 16-X-95, 5-XI-95 (95G603, 95G695, 95G745).
- Schizaphis graminum* (Rondani): WA, BENTON—15-VI-82, (82K001).
- Sitobion avenae* (F.) [on *Triticum aestivum* unless otherwise indicated]: WA, ASOTIN [*]; BENTON—WSU-Prosser, 3,11,18 & 25-VII-97 (97F192, 97F193, 97F199, 97F200, 97F209, 97F215, 97F223, 97F231,97F249, 97F252, 97F260, 97F263, 97F264, 97F265, 97F273), & 18-VII-97 on *Setaria lutescens* (97G243); KLINKITAT—Bickleton Hwy & County Line Rd, 7-VII-97 (97G224).
- Sitobion* sp.: WA, KLINKITAT—Trout Lk, 11-VII-95 on *Holodiscus discolor* (95G340†‡).
- Tuberculatus columbiae* Richards: WA, YAKIMA—YIR, Mill Cr Guard Station, 6-VI-95 on *Quercus garryana* (95G112, 95G113), & on *Salix* sp. (95G114).
- Uroleucon cirsii* (L.): WA, KLINKITAT—Brooks Memorial SP, 21-IX-95 on *Cirsium* sp. (95K162†); PIERCE [on *Cirsium arvense**].
- Uroleucon* sp.: ID, KOOTENAI—Rathdrum, 29-VII-95 (95G443†).
- Undetermined spp.: ID, LATAH—Moscow, 29-VIII-96 on *Coriandrum sativum* (96T513); BENTON—Prosser, 1-VIII-95 on *Portulaca oleracea* (95A028); KITTITAS—Stampede Pass, 8-VIII-96 on *Epilobium angustifolium* (96K146); LEWIS—RNP, 8-IX-95 on *Luetkea pectinata* (95K115); WHITMAN [on *Lupinus* sp.*]—Pullman, 19-VI-96, 3-VII-96 on *P. malus* (96T042); YAKIMA—Grandview, 12-X-96 on *Sonchus* sp. (96G647).

Lysiphlebus utahensis (Smith)

- Aphis canae* Williams: WA, FRANKLIN—Kahlotus Hwy, 11-VI-96 on *Artemisia tridentata* (96G242†‡).
- Artemisaphis artemisicola* (Williams) [on *Artemisia tridentata*]: WA, FRANKLIN—Kahlotus Hwy, 28-V-96 & 11-VI-96 on *Artemisia tridentata* (96G096, 96G242†‡); OKANOGAN—Bridgeport SP, 9-IX-97 (97K018); YAKIMA—Naught Rd, 18-VI-97 (97G103†‡).
- Epameibaphis atricornis* G&P: WA, BENTON—Byron Rd, 14-V-97 on *Artemisia tridentata* (97G024†‡).
- Flabellomicrosiphum tridentatae* (Wilson): WA, KLINKITAT—nr Roosevelt, 16-IV-96 on *Artemisia tridentata* (96G012†‡).
- Obtusicauda artemisiphila* (Knowlton & Allen): WA, KLINKITAT—nr Roosevelt, 16-IV-96 on *Artemisia tridentata* (96G012†‡).
- Obtusicauda coweni* (Hunter) [on *Artemisia tridentata*]: WA, ASOTIN—Asotin Cr HMU, 7-V-96 (96T142†); YAKIMA [*].
- Obtusicauda filifoliae* (G&P) [on *Artemisia tridentata*]: WA, BENTON—Byron Rd, 14-V-97 (97G024†‡); KLINKITAT [*]—nr Roosevelt, 16-IV-96 (97G012†‡).
- Obtusicauda* sp.: WA, KLINKITAT [on *Artemisia tridentata**].
- Pseudoepameibaphis tridentatae* (Wilson) [on *Artemisia tridentata*]: WA, BENTON—Byron Rd, 14-V-97 (97G024†‡); KLINKITAT—nr Roosevelt, 16-IV-96 (96G012†‡); YAKIMA—Naught Rd, 18-VI-97 (97G103†‡).

Lysiphlebus sp.

- Aphis helianthi* Monell: WA, PIERCE [on *Heracleum lanatum**].
- Aphis* sp.: WA, PIERCE [on *Heracleum lanatum**]; YAKIMA [on unknown *Umbelliferae**].
- Brachycaudus tragopogonis* (Kaltenbach): WA, KLINKITAT [on *Tragopogon dubius**].

Genus *MONOCTONUS* Haliday*Monoctonus campbellianus* Pike & Starý, new species

(Figs. 13–24)

Diagnosis.—The new species does not key to any of the North American species because of its reduced wing venation. According to the classification by van Achterberg (1989), it is part of the *M. cerasi* (Marshall) group. [Note, a part of the specimens of some species classified by Starý & Smith (1976) as European species, but distributed in N. America, are probably this new species].

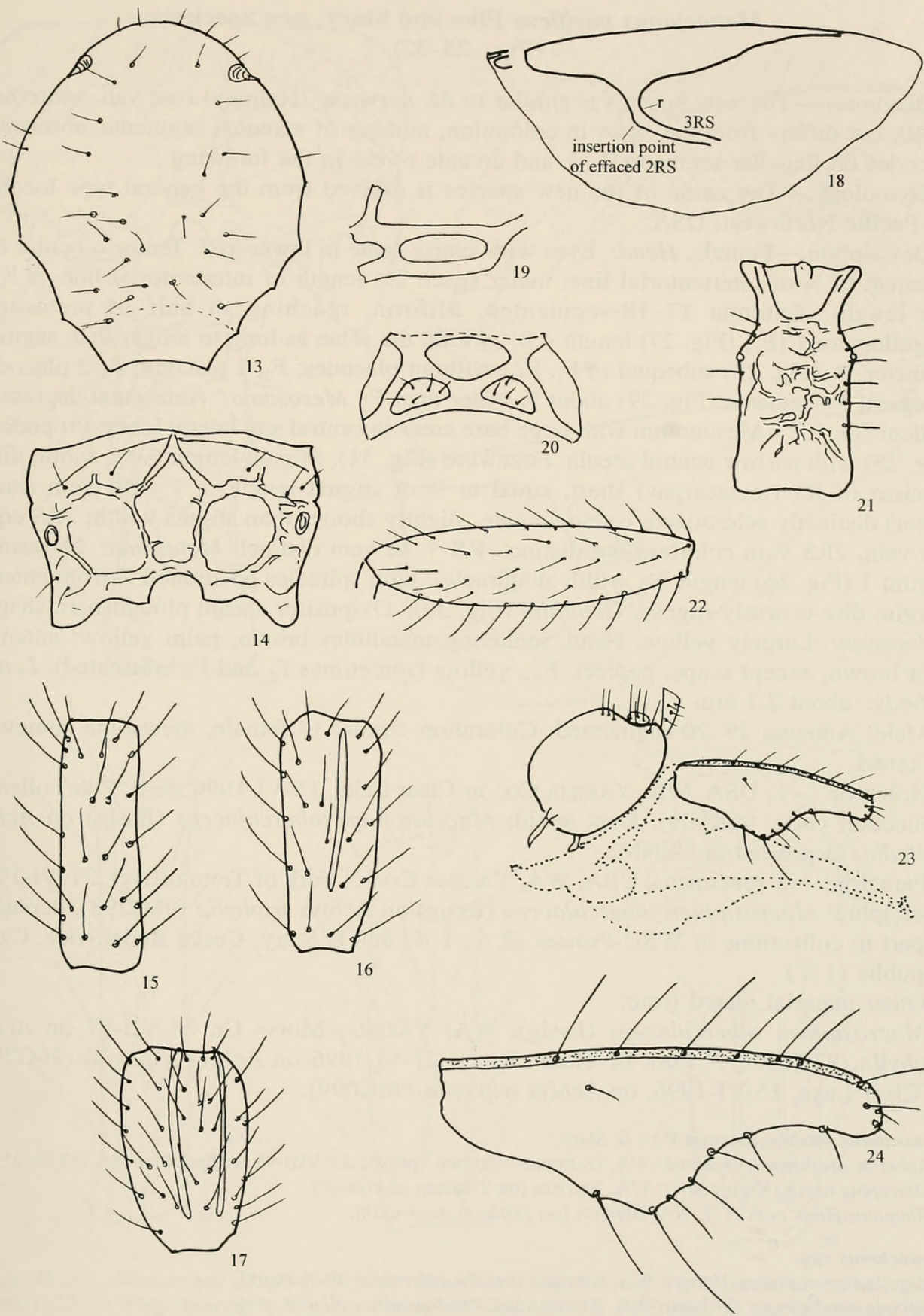
Etymology.—The name of the new species is derived from the type locality, Campbell Lake, Skagit Co., Washington.

Description.—Female. *Head*: Eyes with sparse setae in lower half. Tentorio-ocular line subequal to $\frac{1}{3}$ of intertentorial line; malar space somewhat longer than $\frac{1}{5}$ of eye length, equal to half of intertentorial line. Antenna 13-segmented, short, as long as head, mesosoma and metasomal tergum 1 together, thickened to apex. Flagellomere 1 [F_1] (Fig. 15) length $3.5 \times$ width, without placodes, setae equal to segment diameter; F_2 (Fig. 16) slightly shorter than F_1 , about $\frac{1}{3}$ wider than F_1 , with 3 placodes; preapical F-segments (Fig. 17) (length/width = 1.7) $\frac{1}{4}$ wider than F_2 . *Mesosoma*: Antescutal depression evident (Fig. 20). Mesonotum with notauli distinct anteriorly, smooth except for sparse setae tracing effaced notauli on the disc (Fig. 13). Propodeum (Fig. 14) with narrow central pentagonal areola. *Forewing* (Fig. 18): Stigma length about $3.5 \times$ width; distal abscissa of R1 (= metacarpus) short, about $\frac{1}{5}$ of stigma length; r + 3RS vein (radial sector) distinctly sclerotized (insertion point for completely effaced 2RS vein defines separation between r and 3RS veins). Stigma width $2 \times$ length of r-vein; 3RS vein $2\text{--}3 \times$ length of r-vein. Cubital cell narrow, distinctly complete or closed (Fig. 19). *Legs*: Femora (Fig. 22). *Metasoma*: Metasomal tergum 1 (Fig. 21) length nearly $2 \times$ width at spiracles, disc coarsely rugose; spiracular tubercles positioned $\frac{1}{3}$ from anterior margin; distance between spiracles and apex greater than width at spiracles. *Genitalia* (Fig. 23): Ovipositor sheath (Fig. 24) distinctly ploughshare-shaped. *Coloration*: Head dark brown; lower part of gena and mandibles yellow brown, palpi yellow. Antennae brown, except scape, pedicel and F_1 yellow. Mesosoma brown, sometimes propleurae, and part of mesopleurae and propodeum yellow brown. Wings subhyaline, venation light brown. Legs yellow, apices of tarsi darkened. Metasomal tergum 1 and central part of tergum 2 yellow to yellow brown, otherwise metasoma brown, the apex yellow brown to light brown. Ovipositor sheaths concolorous with the apex of metasoma, upper portion darker. *Length of body*: about 2.0–2.3 mm.

Male.—Antenna 16-segmented. Head brown. Antennae brown, articulation between pedicel and F_1 lighter. Mandibles yellow brown, palpi yellow. Mesosoma brown. Legs yellow brown, coxae darkened. Metasoma brown, tergum 1 yellow brown.

Holotype.—♀, USA, WA, SKAGIT CO., Campbell Lake, 04-VI-1996, G. Graf & P. Starý collectors (collection code, 96G165). Host aphid (reared from a mixed collection): *Brachycaudus helichrysi* (Kaltenbach), *Hyalopterus pruni* (Geoffroy), and *Phorodon humuli* (Schrank) on *Prunus* sp. Deposited in USNM.

Paratypes.—31 specimens, collection data same as holotype; deposited in part in collections of WSU-Prosser (16 ♀, 6 ♂) and P. Starý, České Budejovice, Czech Republic (7 ♀, 2 ♂).



Figs. 13–24. *Monoctonus campbellianus*, ♀ [illustrations not to equal scale]. 13, Mesonotum. 14, Propodeum. 15–17, Flagellomeres 1, 2, and preapical. 18, Fore wing, in part. 19, Cubital cell. 20, Mesosoma—pronotum with antescutal depression. 21, Metasomal tergum 1. 22, Femora. 23, Genitalia. 24, Ovipositor sheath. Abbreviations: 2RS, 3RS, and r, wing veins.

***Monoctonus pacificus* Pike and Starý, new species**

(Figs. 25–32)

Diagnosis.—The new species is similar to *M. nervosus* (Haliday) (see van Achterberg 1989), but differs from the latter in coloration, number of antennal segments, absence of placodes on flagellar segments 1–4, and arcuate r-vein in the forewing.

Etymology.—The name of the new species is derived from the general type locality, the Pacific Northwest, USA.

Description.—Female. *Head*: Eyes with sparse setae in lower half. Tentorio-ocular line subequal to $\frac{1}{4}$ of intertentorial line; malar space $2\times$ length of intertentorial line or $\frac{1}{5}$ of eye length. Antenna 17–18-segmented, filiform, reaching to half of metasoma. Flagellomere 1 [F_1] (Fig. 27) length $4.0\times$ width, the setae as long to longer than segment diameter. F_2 (Fig. 28) subequal to F_1 . F_{1-4} without placodes; F_5 , 1 placode; F_6 , 3 placodes. Preapical F-segments (Fig. 29) about $\frac{1}{7}$ wider than F_2 . *Mesosoma*: Antescutal depression evident (Fig. 32). Mesonotum with large bare areas in central and lateral lobes. Propodeum (Fig. 25) with narrow central areola. FOREWING (Fig. 31): Stigma length $6.0\times$ width; distal abscissa of R1 (metacarpus) short, equal to $\frac{1}{7}$ of stigma length; r + 3RS vein (radial sector) distinctly sclerotized; r-vein arcuate, slightly shorter than stigma width; 3RS equal to r-vein. 2RS vein colorless but distinct. RS + M vein distinct. *Metasoma*: Metasomal tergum 1 (Fig. 26) length $2\times$ width at spiracles, with spiracles positioned $\frac{1}{3}$ from anterior margin; disc coarsely rugose. *Genitalia* (Fig. 30): Ovipositor sheath ploughshare-shaped. *Coloration*: Largely yellow. Head, including mandibles brown; palpi yellow; antennae light brown, except scape, pedicel, F_{1-4} yellow (sometimes F_3 and F_4 infuscated). *Length of body*: about 2.3 mm.

Male. Antenna 19–20-segmented. Coloration similar to female, metasoma somewhat darkened.

Holotype.—♀, USA, WA, YAKIMA CO., nr Clear Lake, 15-VI-1996, K. S. Pike collector, (collection code, 96K099). Host aphid: *Macrosiphum tuberculiceps* (Essig) on *Achlys triphylla*. Deposited in USNM.

Paratypes.—5 specimens, USA, WA, YAKIMA CO., N Fork of Tieton River, 27-VI-1996. Host aphid: *Macrosiphum tuberculiceps* (Essig) on *Achlys triphylla* (96G298), deposited in part in collections of WSU-Prosser (3 ♀, 1 ♂) and P. Starý, České Budejovice, Czech Republic (1 ♀).

Other material reared from:

Macrosiphum tuberculiceps (Essig): WA, YAKIMA, Morse Cr, 24-VII-97 on *Achlys triphylla* (97G255), N Fork of Tieton River, 27-VI-1996 on *Achlys triphylla* (96G298); nr Clear Lake, 15-VI-1996, on *Achlys triphylla* (96K099).

***Monoctonus washingtonensis* Pike & Starý**

Aphis nr *oenotherae* Oestlund: WA, GARFIELD—Spruce Springs, 22-VIII-95 on *Epilobium* sp. (95T462†).

Diuraphis noxia (Kurdjumov): WA, BENTON [on *Triticum aestivum**].

Rhopalosiphum padi (L.): WA, BENTON [on *Triticum aestivum**].

***Monoctonus* spp.**

Acyrtosiphon pisum (Harris): WA, KITTITAS [on *Rhododendron albiflorum**].

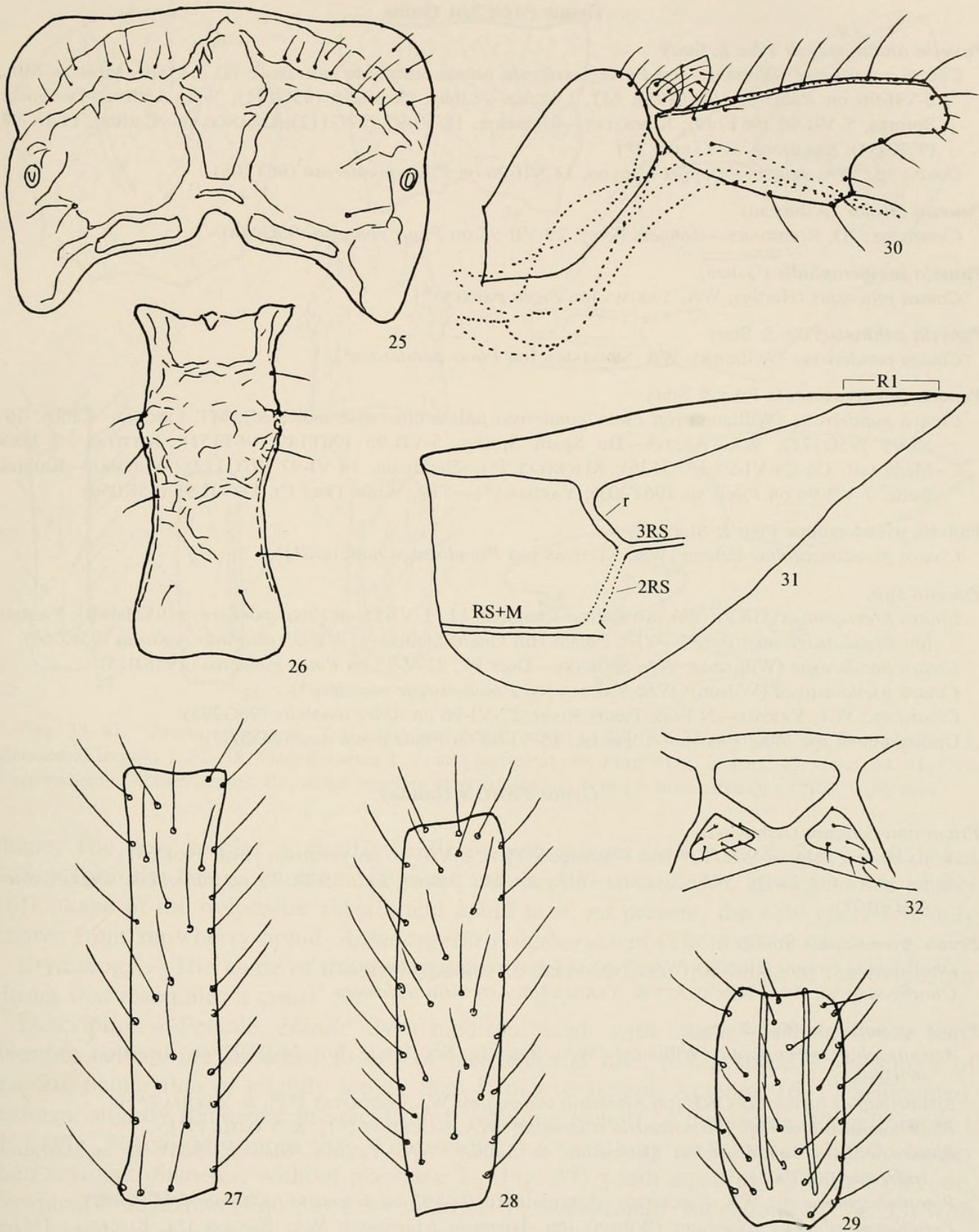
Illinoia rhododendri (Wilson): WA, KITTITAS [on *Rhododendron albiflorum**].

Illinoia sp.: WA, YAKIMA [on *Rhododendron albiflorum**].

Macrosiphum euphorbiae (Thomas): WA, SKAMANIA—Twin Falls CG, 4-VIII-95 on *Pteridium aquilinum* (95K099).

Macrosiphum walkeri Robinson: OR, BENTON—McDonald State Forest, 21-V-91 on *Polypodium* sp. (91J003).

Metopolophium dirhodum (Walker): WA, KITTITAS [on *Rhododendron albiflorum**].



Figs. 25–32. *Monoctonus pacificus*, ♀ [illustrations not to equal scale]. 25, Propodeum. 26, Metasomal tergum 1. 27–29, Flagellomeres 1, 2, and preapical. 30, Genitalia. 31, Fore wing, in part. 32, Mesosoma—pronotum with antescutal depression. Abbreviations: R1, distal abscissa of postmarginal vein [= metacarpus]; 2RS, 3RS, RS+M, and r, wing veins.

Genus *PAUESIA* Quilis*Pauesia ahtanumensis* Pike & Starý

Cinara ponderosae (Williams) [on *Pinus ponderosa* unless otherwise indicated]: ID, LATAH—Moscow Mtn, 6-VII-96 on *Pinus* sp. (96T195); MT, LINCOLN—Libby, 16-VI-95 (95G171); WA, ASOTIN—De Spain Springs, 5-VII-96 (96T149); KLINKITAT—Bickleton, 18-VI-97 (97G112); OKANOGAN—Carlton, 11-IX-97 (97K034); SKAMANIA & YAKIMA [*].

Cinara sp.: WA, ASOTIN—Copper Canyon, 18-VII-96 on *Pinus ponderosa* (96T308).

Pauesia bicolor (Ashmead)

Cinara sp.: ID, BOUNDARY—Bonners Ferry, 29-VII-95 on *Pinus contorta* (95G444).

Pauesia juniperaphidis (Gahan)

Cinara pilicornis (Hartig): WA, YAKIMA [on *Picea pungens**].

Pauesia pahtonis Pike & Starý

Cinara ponderosae (Williams): WA, SKAMANIA [on *Pinus ponderosa**].

Pauesia ponderosaecola Pike & Starý

Cinara ponderosae (Williams) [on *Pinus ponderosa* unless otherwise indicated]: MT, LINCOLN—Libby, 16-VI-95 (95G171); WA, ASOTIN—De Spain Spring, 5-VII-96 (96T149, 96T151); KITTITAS—S Fork Manastash Cr, 25-VI-97 (97G136); KLINKITAT [*]—Bickleton, 18-VI-97 (97G112); WHITMAN—Kamiak Butte, 7-VII-96 on *Pinus* sp. (96T203); YAKIMA [*]—YIR, White Deer Cr, 11-VII-95 (95K050).

Pauesia pseudotsugae Pike & Starý

Cinara pseudotaxifoliae Palmer: WA, KITTITAS [on *Pseudotsuga menziesii**].

Pauesia spp.

Cinara brevispinosa (G&P): WA, SPOKANE—Chapman Lk, 1-VI-95 on *Pinus ponderosa* (95T046B); YAKIMA [on *Pseudotsuga menziesii**]—YIR, Potato Hill Guard Station, 11-VII-95 on *Pinus contorta* (95K063).

Cinara ponderosae (Williams): WA, SPOKANE—Deer Pk, 23-V-95 on *Pinus ponderosa* (95K015).

Cinara pseudotsugae (Wilson): WA, YAKIMA [on *Pseudotsuga menziesii**].

Cinara sp.: WA, YAKIMA—N Fork Tieton River, 27-VI-96 on *Abies amabilis* (96G293).

Undetermined sp.: WA, YAKIMA—Clear Lk, 15-VI-96 on *Pinus ponderosa* (96K087).

Genus *PRAON* Haliday*Praon americanum* (Ashmead)

Aphis coweni Palmer: WA, KITTITAS—Stampede Pass, 8-VIII-96 on *Veratrum viride* (96K147).

Aphis salicariae Koch: WA, YAKIMA—YIR, nr. Mt. Adams Lk., 19-IX-95 on *Epilobium angustifolium* (95G610†).

Praon artemisaphis Smith

Obtusicauda coweni (Hunter): WA, YAKIMA [on *Artemisia tridentata**].

Obtusicauda sp.: WA, KLINKITAT† & YAKIMA [on *Artemisia tridentata**].

Praon artemisicola Pike & Starý

Artemisaphis artemisicola (Williams): WA, BENTON—Six Prong Rd, 24-IV-97 on *Artemisia tridentata* (97G008†).

Epameibaphis atricornis G&P [on *Artemisia tridentata*]: WA, KLINKITAT [*†], & YAKIMA [*†].

Flabellomicrosiphum sp. [on *Artemisia tridentata*]: WA, KLINKITAT [*†], & YAKIMA [*†].

Pleotrichophorus quadritrichus (Knowlton & Smith): WA, YAKIMA—Mabton, 24-IV-97 on *Artemisia tridentata* (97G007†).

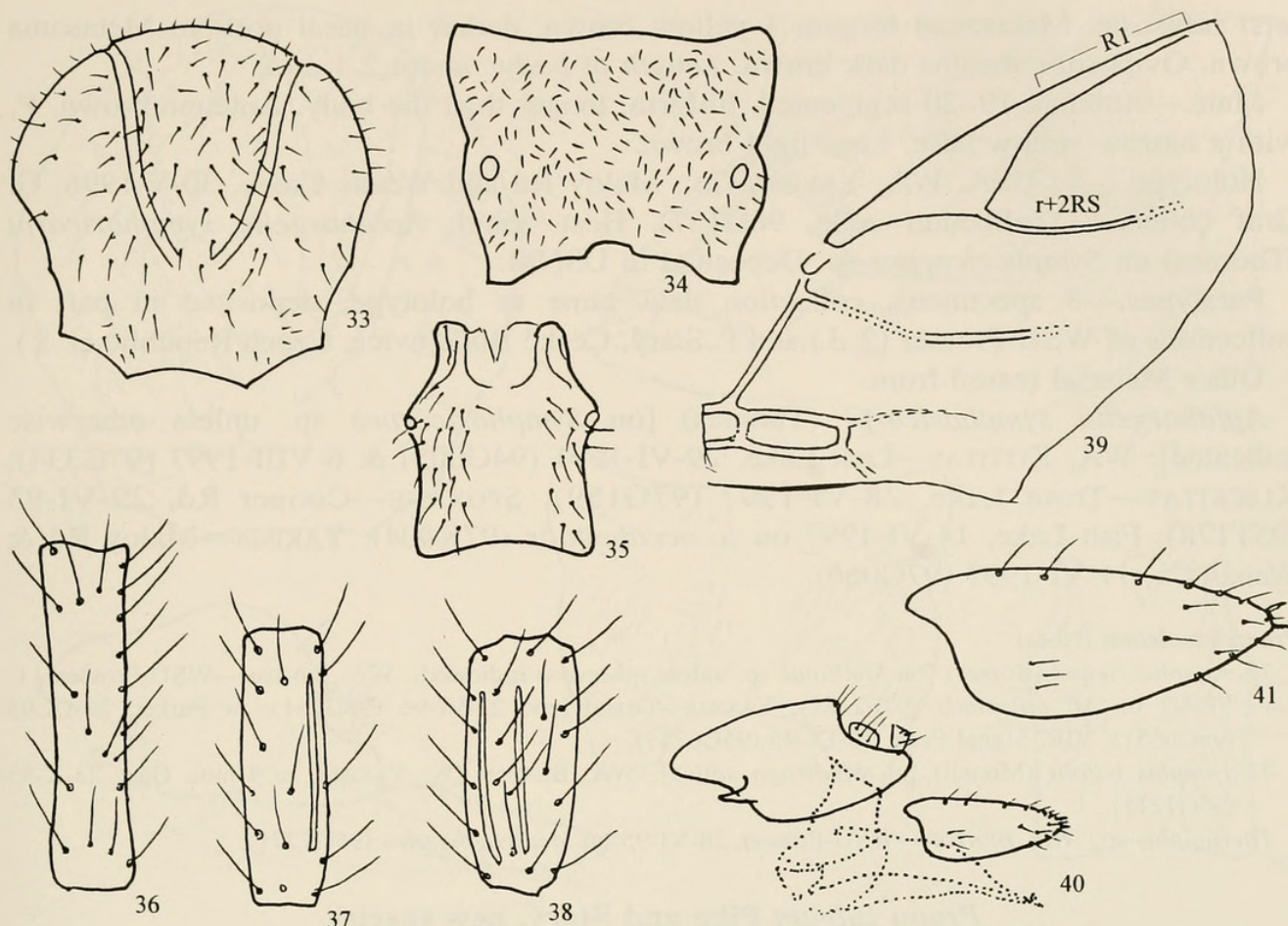
Pleotrichophorus sp.: WA, KLINKITAT—Alderdale Rd, 9-V-95 on *Artemisia tridentata* (95G028†‡).

Pseudoepameibaphis tridentata (Wilson) [on *Artemisia tridentata*]: WA, BENTON [*], KLINKITAT [*†]—Alderdale Rd, 9-V-95 (95G028†); YAKIMA [*].

Praon coniforme Pike and Starý, new species

(Figs. 33–41)

Diagnosis.—The new species belongs to a species group characterized by the absence of an m-cu vein in the forewing. Other distinguishing characters are antenna 16–17 segmented (in female), flagellomere 1 (F₁) yellow, and ovipositor sheath coniform in



Figs. 33–41. *Praon coniforme*, ♀ [illustrations not to equal scale]. 33, Mesonotum. 34, Propodeum. 35, Metasomal tergum 1. 36–38, Flagellomeres 1, 2, and preapical. 39, Fore wing, in part. 40, Genitalia. 41, Ovipositor sheath. Abbreviations: R1, distal abscissa of postmarginal vein [= metacarpus]; r+2RS, wing vein.

shape. The new species is similar to *Praon yakimanum* (see Pike & Starý 1995), but differs from the latter in antennal segment number (*P. yakimanum*, 15-segmented [rarely 16]), shape of the ovipositor sheath, and aphid host. At present, the new species is only known from snowberry aphid, *Aphthargelia symphoricarpi* (Thomas).

Etymology.—The name of the new species is derived from the shape of the ovipositor sheath that resembles a cone.

Description.—Female. *Head*: Eyes medium sized, with sparse setae in lower half. Tentorio-ocular line subequal to $1/4$ of intertentorial line; malar space $1.5\times$ length of tentorio-ocular line or slightly longer than $1/6$ of eye length. Antenna 16–17 segmented, filiform, slightly thickened in apical third, reaching to half of metasoma. Flagellomere 1 [F_1] (Fig. 36) slightly more than $4.0\times$ width; $1.6\times$ as long as F_2 ; setae slightly longer than segment diameter; without placodes. F_2 (Fig. 37) width equal to F_1 , with 1 placode. Preapical F-segments (Fig. 38) $1.3\times$ width of F_2 . *Mesosoma*: Mesonotum (Fig. 33) with bare areas on the lateral lobes. Propodeum (Fig. 34) pubescent. FOREWING (Fig. 39): Stigma length $3.5\times$ width; distal abscissa of R1 (metacarpus) longer than half stigma length; r + 3RS vein (radial sector) slightly longer than distal abscissa of R1; m-cu vein absent. *Metasoma*: Metasomal tergum 1 (Fig. 35) somewhat longer than width at spiracles (7:6); distance between spiracles and anterior margin $1/4$ shorter than width at spiracles. *Genitalia* (Fig. 40): Ovipositor sheath (Fig. 41) cone-like in shape. *Coloration*: Head dark brown, mouthparts bright yellow. Antenna brown; apex of pedicel and F_1 yellow. Mesosoma dark brown. Wings subhyaline, venation light brown. Legs yellow, apices of

tarsi infusate. Metasomal tergum 1 yellow brown, darker in basal portion. Metasoma brown. Ovipositor sheaths dark brown. *Length of body*: about 2.4 mm.

Male.—Antenna 19–20-segmented, filiform, longer than the body. Antenna brown, F_1 with a narrow yellow base. Legs light brown.

Holotype.—♀, USA, WA, YAKIMA CO., Maloy Rd and Wenas Creek, 30-V-1996, G. Graf collector, (collection code, 96G127). Host aphid: *Aphthargelia symphoricarpi* (Thomas) on *Symphoricarpos* sp. Deposited in USNM.

Paratypes.—3 specimens, collection data same as holotype, deposited in part in collections of WSU-Prosser (2 ♂) and P. Starý, České Budejovice, Czech Republic (1 ♀).

Other Material reared from:

Aphthargelia symphoricarpi (Thomas) [on *Symphoricarpos* sp. unless otherwise indicated]: WA, KITTITAS—Lost Lake, 29-VI-1994 (94G005) & 6-VIII-1997 (97G334); KLINKITAT—Trout Lake, 28-VI-1997 (97G159); SPOKANE—Cooper Rd, 29-VI-95 (95T178); Fish Lake, 14-VI-1997 on *S. occidentalis* (97K004); YAKIMA—Maloy Rd & Wenas Cr., 11-VI-1997 (97G066).

***Praon exsoletum* (Nees)**

Therioaphis riehi (Börner) [on *Melilotus* sp. unless otherwise indicated]: WA, BENTON—WSU-Prosser, 11-VII-97 on *M. officinalis* (97F218†); YAKIMA—Grandview, 22-VI-96 (96G261); nr Parker, 29-IX-95 (95G665†); YIR, Signal Peak, 19-IX-95 (95G625†).

Therioaphis trifolii (Monell) [on *Medicago sativa*]: WA, BENTON [*]; YAKIMA, nr Union Gap, 23-X-95 (95G721†).

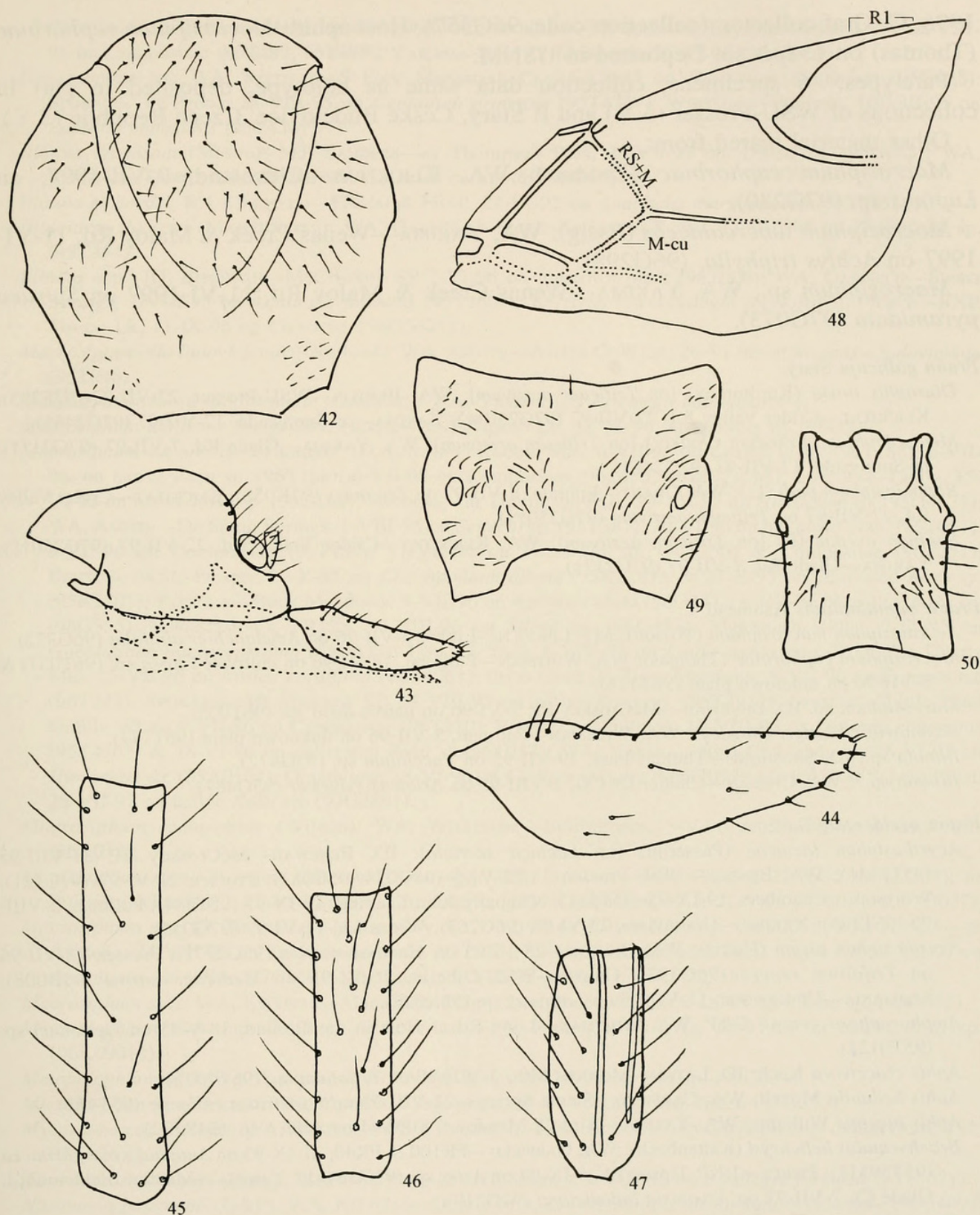
Therioaphis sp.: WA, BENTON—WSU-Prosser, 28-VI-95 on *Medicago sativa* (95G277†).

***Praon fulvum* Pike and Starý, new species**
(Figs. 42–50)

Diagnosis.—Yellow coloration of F_1 (flagellomere 1) and F_2 keys the new species to *P. gallicum* Starý (see key by Johnson 1987), but it differs from the latter in the number of antennal segments [*P. fulvum* with 18–19 (rarely 20) vs. *P. gallicum* with 15–16 (rarely 17)], the presence of the m-cu vein in the forewing (absent with *P. gallicum*), and the mesonotum pubescence on the lateral lobes of the mesonotum (large bare areas with *P. gallicum*).

Etymology.—The name of the new species is derived from its prevailing body coloration.

Description.—Female. *Head*: Eyes medium sized, with sparse setae in lower half. Tentorio-ocular line $\frac{1}{3}$ of intertentorial line or $\frac{1}{4}$ of malar space. Antenna 18–19 (rarely 20) segmented, filiform, slightly thickened towards apex, subequal to body length. Flagellomere 1 [F_1] (Fig. 45) long, length nearly $5\times$ width, setae slightly longer than segment diameter, without placodes. F_2 (Fig. 46) $\frac{1}{3}$ shorter than F_1 , without placodes. Preapical F-segments (Fig. 47) $\frac{1}{8}$ wider than F_2 . *Mesosoma*: Mesonotum (Fig. 42) with very small to no areas on the lateral lobes without setae. Propodeum (Fig. 49) pubescent, somewhat bare in center. FOREWING (Fig. 48): Stigma length $3.5\times$ width; distal abscissa of R1 (metacarpus) slightly longer than half stigma length; RS + M vein distinct, subcolored in basal $\frac{1}{4}$ – $\frac{1}{3}$, remaining portion colorless; m-cu vein complete, subcolored. *Metasoma*: Metasomal tergum 1 (Fig. 50) longitudinal, length $\frac{1}{4}$ longer than width at spiracles; width at spiracles $\frac{1}{5}$ longer than the distance from spiracles to anterior margin. *Genitalia* (Fig. 43): Ovipositor sheath (Fig. 44) long, subarcuate. *Coloration*: Body almost completely yellow. Head yellow, frons more or less brown. Apices of mandibles brown. Antenna brown; scape, pedicel, F_1 and F_2 yellow. F_2 sometimes infuscated at apex.



Figs. 42–50. *Praon fulvum*, ♀ [illustrations not to equal scale]. 42, Mesonotum. 43, Genitalia. 44, Ovipositor sheath. 45–47, Flagellomeres 1, 2, and preapical. 48, Fore wing, in part. 49, Propodeum. 50, Metasomal tergum 1. Abbreviations: R1, distal abscissa of postmarginal vein [= metacarpus]; RS+M and M-cu, wing vein.

Mesosoma yellow. Wings subhyaline, venation light brown. Legs yellow. Metasoma yellow. Ovipositor sheaths light brown. *Length of body*: about 2.0–2.6 mm.

Male.—Unknown.

Holotype.—♀, USA, WA, LEWIS Co., Mt. Rainier Nat. Park, Stevens Canyon, 23-VII-

1996, G. Graf collector, (collection code, 96G357). Host aphid: *Macrosiphum euphorbiae* (Thomas) on *Crepis* sp. Deposited in USNM.

Paratypes.—6 specimens, collection data same as holotype, deposited in part in collections of WSU-Prosser (3 ♀) and P. Starý, České Budejovice, Czech Republic (3 ♀).

Other material reared from:

Macrosiphum euphorbiae (Thomas): WA, KLINKITAT—Cleveland, 7-VII-1997, on *Lupinus* sp. (97G230).

Macrosiphum tuberculiceps (Essig): WA, YAKIMA—Wenas Creek & Maloy Rd, 11-VI-1997 on *Achlys triphylla*, (96G298).

Macrosiphum sp.: WA, YAKIMA—Wenas Creek & Maloy Rd, 11-VI-1997 on *Spiraea pyramidata* (97G073).

Praon gallicum Starý

Diuraphis noxia (Kurdjumov) [on *Triticum aestivum*]: WA, BENTON—WSU-Prosser, 22-VII-97 (97F295); KLINKITAT—Crider Valley Rd, 22-VII-97 (97G250†‡); YAKIMA—nr Sunnyside, 17-VII-97 (97G246†).

Metopolophium dirhodum (Walker) [on *Triticum aestivum*]: WA, YAKIMA—Glade Rd, 7-VII-97 (97G217†); nr Sunnyside, 17-VII-97 (97G246†).

Rhopalosiphum padi (L.): WA, GRANT—Ephrata, 8-VII-97 on *Zea mays* (97K058); KLINKITAT—Crider Valley Rd, 22-VII-97 on *Triticum aestivum* (97G250†‡).

Sitobion avenae (F.) [on *Triticum aestivum*]: WA, KLINKITAT—Crider Valley Rd, 22-VII-97 (97G250†‡); YAKIMA—Glade Rd, 7-VII-97 (97G217†).

Praon humulaphidis Ashmead

Acyrtosiphon macrosiphum (Wilson): MT, LINCOLN—Libby, 6-VII-96 on *Amelanchier alnifolia* (96G322).

Macrosiphum euphorbiae (Thomas): WA, WHITMAN—Pullman, 18-VI-96 on cultivated *Rosa* sp. (96T037) & 5-VII-96 on unknown plant (96T176).

Macrosiphum sp. ID, BENEWAH—McCroskey SP, 7-VI-96 on native *Rosa* sp. (96T005).

Nasonovia ribisnigri (Mosley): WA, WHITMAN—Pullman, 5-VII-96 on unknown plant (96T177).

Illinoia sp.: ID, SHOSHONE—Thomas Pass, 29-VII-95 on *Vaccinium* sp. (95G472).

Illinoia sp.?: WA, CHELAN—Chatter Cr CG, 1-VIII-95 on *Aruncus sylvestris* (95G487).

Praon occidentale Baker

Acyrtosiphon lactucae (Passerini) [on *Lactuca serriola*]: ID, BENEWAH—McCroskey SP, 31-VIII-95 (95T514†); WA, BENTON—WSU-Prosser, 11,22-V-95 (95G034, 95G081); Prosser, 22-VI-97 (97G121); WHITMAN—Chambers, 19-IX-95 (95T581); Nisqually John Landing, 19-IX-95 (95T584); Pullman, 2-VIII-96 (96T386); YAKIMA—Grandview, 23-VI-96 (96G263); Wenas Lk, 11-VI-97 (97G055).

Acyrtosiphon pisum (Harris): WA, BENTON—28-VI-95 on *Medicago sativa* (95G277†); Prosser, 23-VII-96 on *Trifolium repens* (96G393); GRANT—WSU-Othello, 26-VI-95 on *Medicago sativa* (95B008); SKAMANIA—Underwood, 11-VII-95 on *Lathyrus* sp. (95K072).

Amphorophora geranii G&P: WA, WHITMAN—Long Rd nr Hole in the Ground, 18-V-95 on *Geranium* sp. (95T012†).

Aphis craccivora Koch: ID, LATAH—Moscow Mtn, 3-VIII-96 on *Trifolium* sp. (96T400†‡).

Aphis helianthi Monell: WA, GARFIELD—Stentz Springs, 22-VIII-95 on *Osmorhiza chilensis* (95T452).

Aphis lugentis Williams: WA, YAKIMA—Bird Cr Meadows, 8-IX-94 on *Arnica* sp. (94R172).

Brachycaudus helichrysi (Kaltenbach): WA, GARFIELD—FR160 & FR40, 21-IX-95 on *Anaphalis margaritacea* (95T595†‡); PIERCE—RNP, Tipsoo Lk, 5-IX-97 on *Aster* sp. (97G364†‡); YAKIMA—Mabton-Bickleton Rd, Glade Cr, 7-VII-97 on *Artemisia ludoviciana* (97G219).

Capitophorus elaeagni (del Guercio): WA, YAKIMA—Grandview, 28-VI-96 on *Cirsium vulgare* (96G309†‡).

Chaetosiphon thomasi HRL: WA, PIERCE—WSU-Puyallup, 10-VI-96 on cultivated *Fragaria* sp. (96T022).

Diuraphis noxia (Kurdjumov) [on *Triticum aestivum*]: WA, BENTON [*]; KLINKITAT—Bickleton, 29-VII-97 (97G300).

Dysaphis plantaginea (Passerini): WA, YAKIMA—Grandview, 10-VI-96 on *Pyrus malus* (96G214).

Ericaphis wakibae (Hottes): WA, YAKIMA—N Fork Tieton River, 15-VI-96 on native *Rosa* sp. (96K090†‡).

Hyperomyzus nigricornis (Knowlton) [on *Hieracium* sp. unless otherwise indicated]: ID, BENEWAH—McCroskey SP, 31-VIII-95 (95T514†); LATAH—Moscow Mtn, 15-VIII-96 on Compositae (96T446); MT, SANDERS—nr Thompson Pass, 29-VII-95 (95G462†); WA, GARFIELD—Alder Thicket, 21-IX-95 (95T587); KITTITAS—Buck Meadows, 16-VIII-96 (96G493); Manastash Rd, 25-VII-96 (96G415); KLINKITAT—

- Cleveland, 18-VI-96 on *Madia minima* (96K109); SPOKANE—Mt Spokane Hwy (mi marker 18.5), 22-VIII-96 on Compositae (96T487, 96T488); YAKIMA—Bird Cr Meadows, 26-VI-95 (95A016†).
- Hyperomyzus* sp.: WA, KITTITAS—S Fork Manastash Cr, 24-VII-95 on *Hieracium albiflorum* (95G388); SPOKANE—nr Peone, 24-VIII-95 on *Centaurea pratensis* (95T473†); WHITMAN—Pullman, 10-VIII-95 on *Lapsana communis* (95T436†).
- Illinoia davidsoni* (Mason): MT, SANDERS—nr Thompson Pass, 29-VII-95 on *Arnica* sp. (95G463); WA, KITTITAS—Quartz Mtn, 25-VII-96 on *Arnica cordifolia* (96G406†‡).
- Illinoia richardsi*: WA, GARFIELD—FR160 & FR40, 21-IX-95 on *Anaphalis margaritacea* (95T595†‡).
- Illinoia* nr *thalictri* (MacGillivray): WA, GARFIELD—Stentz Springs (FR 40), 22-VIII-95 on *Thalictrum* sp. (95T454).
- Illinoia* spp.: ID, BENEWAH—McCroskey SP 7-VI-96 on unknown plant (96T006); WA, GARFIELD—Stentz Springs, 1-VIII-95 on *Aquilegia formosa* (95T362†); KITTITAS [on *Aquilegia formosa*†*]; PIERCE—RNP, Tipsoo Lk, 11-IX-96 on *Carex* sp. (96G542†‡).
- Macrosiphoniella ludoviciana* (Oestlund): WA, ASOTIN—Asotin Cr WLA, 26-VI-96 on *Artemisia ludoviciana* (96T048).
- Macrosiphoniella* nr *ludoviciana* (Oestlund): WA, YAKIMA [on *Artemisia ludoviciana**].
- Macrosiphum albifrons* Essig: WA, PIERCE—RNP, Tipsoo Lk, 11-IX-96 on *Lupinus* sp. (96G547).
- Macrosiphum euphorbiae* (Thomas): ID, LATAH—Moscow Mtn, 6-VII-96 on *Castilleja* sp. (96T188); 6-VII-96, on native *Rosa* sp. (96T184); 6-VII-96 on Compositae (96T185, 96T192); MT, LINCOLN—Libby, 15-VI-95 on native *Rosa* sp. (95G168); SANDERS—nr Thompson Pass, 29-VII-95 on *Hieracium* sp. (95G462†); WA, ASOTIN—De Spain Springs, 1-VIII-95 on *Senecio* sp. (95T381), 26-VI-96 on unknown plant (96T051), 5-VII-96 on Compositae (96T159), 11-VII-96 on *Potentilla* sp. (96T250) & Compositae (96T251); BENTON—WSU-Prosser, 27-X-95 on *Chenopodium album* (95K218†), & 27-X-95 on cultivated *Rosa* sp. (95K220†); KITTITAS—Buck Meadows, 9-VII-96 on *Agoseris elata* (96G341), 9-VII-96 on native *Rosa* sp. (96G335); Manastash Cr, FR125, 16-VIII-96 on *Silene* sp. (96G497); Manastash Ridge, 2-IX-95 on *Gnaphalium microcephalum* (95G537); Lost Lk Trail, 6-VIII-97 on *Luina nardosmia* (97G327); Quartz Mtn, 25-VII-96 on *Arnica cordifolia* (96G406†); PEND OREILLE, Tiger Meadows, 9-VII-96 on Compositae (96T221); SPOKANE—Mt Spokane SP, 24-VIII-95 on native *Rosa* sp. (95T491†); STEVENS—Little Pend Oreille WLA, 9-VII-96 on Compositae (96T210); WHITMAN—Pullman, 10-VIII-95 on *Lapsana communis* (95T436†) & 18-VI-96 on cultivated *Rosa* sp. (96T037); WA, YAKIMA—Bird Cr Meadows, 26-VI-95 on *Hieracium* sp. (95A016†); Grandview, 28-VI-96 on *Cirsium vulgare* (96G309†); Hwy 410 & Sawmill Flat, 28-VII-97 on native *Rosa* sp. (97G289†).
- Macrosiphum osmaroniae* (Wilson): WA, WHATCOM—Bellingham, 3-V-96 on *Oemleria cerasiformis* (96K013);
- Macrosiphum rosae* (L.) [on cultivated *Rosa* sp.]: WA, BENTON—WSU-Prosser, 27-X-95 (95K220†); nr Prosser, Richards Rd, 22-VI-97 (97G122); YAKIMA [†*]—Grandview, 13 & 21-V-97 (97G021†‡, 97G037).
- Macrosiphum* sp.: ID, BENEWAH—McCroskey SP, 7-VI-96 on native *Rosa* sp. (96T005); WA, ASOTIN—nr Anatone, 24-VIII-93 on *Triticum aestivum* (93T015); YAKIMA—nr Chinook Pass, Morse Cr, 24-VII-97 on *Oplopanax horridum* (97G256); Sunnyside, 24-VIII-95 on *Zea mays* (95G519†).
- Macrosiphum* sp.?: WA, KITTITAS—Manastash Ridge, 2 mi E of Lost Lk, 2-IX-95 on *Silene* sp. (95G545).
- Metopolophium dirhodum* (Walker): WA, YAKIMA—N Fork Tieton River, 15-VI-96 on native *Rosa* sp. (96K090†‡).
- Metopolophium* sp.?: WA, YAKIMA—YIR, Windy Point, 19-IX-95 on *Poa* sp. (95G634).
- Microlophium* nr *sibiricum*: WA, YAKIMA—Sunnyside, 28-VI-95 on *Urtica dioica* (95G255).
- Myzus persicae* (Sulzer): WA, BENTON—WSU-Prosser, 27-X-95 & 1-X-97 on *Chenopodium album* (95K218†, 97G476).
- Nasonovia aquilegiae* (Essig): WA, GARFIELD—Stentz Springs, 1-VIII-95 on *Aquilegia formosa* (95T362†).
- Nasonovia polemonii* (G&P): WA, KITTITAS—Quartz Mtn, 25-VII-96 on *Polemonium occidentale* (96G409).
- Nasonovia* (*Kakimia*) sp.: WA, WHITMAN—Pullman, 10-VIII-95 on *Lapsana communis* (95T436†‡).
- Nearctaphis bakeri* (Cowen): ID, LATAH—Moscow Mtn, 3-VIII-96 on *Trifolium* sp. (96T400†‡).
- Nearctaphis kachena* (Hottes): WA, SPOKANE—nr Mt Spokane SP, 24-VIII-95 on *Castilleja* (95T485).
- Phorodon humuli* (Schrank): WA, BENTON—WSU-Prosser, 9-IX-95 on *Humulus lupulus* (95K154).
- Rhopalosiphum insertum* (Walker): WA, DOUGLAS—Orondo, 28-V-96 on *Pyrus malus* (96R004).
- Rhopalosiphum padi* (L.): WA, BENTON [on *Triticum aestivum**]; GRANT—Ephrata 8-VII-97 on *Zea mays* (97K058); YAKIMA—Sunnyside, 24-VIII-95 on *Zea mays* (95G519†).
- Sitobion avenae* (F.): WA, BENTON—WSU-Prosser, 3 & 11-VII-97 on *Triticum aestivum* (97F192, 97F211); KITTITAS—Buck Meadows, 9-VII-96 on *Dactylis glomerata* (96G346); PIERCE—RNP, Tipsoo Lk, 11-IX-96 on *Carex* sp. (96G542†‡).

- Uroleucon erigeronense* (Thomas): WA, KITTITAS—Lost Lk, 6-VIII-97 on *Aster* sp. (97G346); LEWIS—PIERCE—RNP, Tipsoo Lk, 8-IX-95 & 5-IX-97 on *Aster* sp. (95K106, 97G364†).
- Uroleucon sonchi* (L.): WA, FRANKLIN—Mesa, 8-IX-97 on *Lactuca serriola* (97K006).
- Uroleucon zymozionense* (Knowlton): WA, CHELAN—Swauk Pass, 1-VIII-95, on *Aster* sp. (95G491).
- Uroleucon* sp.: ID, BENEWAH—McCroskey SP, 31-VIII-95 on Compositae (95T528); WA, PEND OREILLE—Tiger Meadows, 9-VII-96 on *Achillea millefolium* (96T222); PIERCE—RNP, Tipsoo Lk, 5-IX-97 on *Anaphalis margaritacea* (97G367); SKAMANIA [on *Aster* sp.*]; SPOKANE—nr Peone, 24-VIII-95 on *Centaurea pratensis* (95T473†).
- Wahlgreniella nervata* (Gillette): WA, BENTON—Grandview, 13-V-97 on cultivated *Rosa* sp. (97G021††); YAKIMA—Hwy 410 & Sawmill Flat, 28-VII-97 on native *Rosa* sp. (97G289††).
- Undetermined spp.: WA, BENTON—Prosser, 23-VII-96 on *Sonchus oleraceus* (96G389); KITTITAS—S Fork Manastash Cr, 24-VII-95 on *Potentilla* sp. (95G395); WHITMAN—Pullman, 5-VII-96, on *Geranium viscosissimum* (96T171).

***Praon nr occidentale* Baker**

- Illinoia* sp.: WA, YAKIMA—Blowout Mtn, end of Little Naches River Rd, 9-IX-97 on *Rhododendron albiflorum* (97G400).
- Uroleucon erigeronense* (Thomas): WA, KITTITAS—Lost Lk, 6-VIII-97 on *Haplopappus hirtus* (97G340†).
- Uroleucon nr ivae* Robinson: WA, YAKIMA—Harrah, 29-IX-97 on *Iva xanthifolia* (97G465).
- Uroleucon suzannae* Robinson: WA, KITTITAS—Lost Lk, 6-VIII-97 on *Haplopappus hirtus* (97G340††).

***Praon pequodorum* Viereck**

- Acyrtosiphon macrosiphum* (Wilson): WA, ASOTIN—nr Anatone, 18-VII-95, on *Amelanchier alnifolia* (95T266).
- Acyrtosiphon pisum* (Harris) [on *Medicago sativa* unless otherwise indicated]: WA, ADAMS—WSU-Othello, 26-VI-95 (95B008); BENTON [†*]—WSU-Prosser, 27-VI-96 on *Vicia angustifolia* (96A009), 30-VI-97, & 11-VII-97 (97F186, 97F202); GRANT—WSU-Royal City, 26-VI-95 (95B003, 95B006); Mattawa, 26-VI-95 (95B005); YAKIMA—Wenas Valley, 5 mi N of Selah, 30-V-96 on *Melilotus* sp. (96G109).
- Amphorophora rubi* (Kaltenbach): WA, KLUCKITAT—Trout Lk, 29-VI-97 on *Rubus* sp. (97G168).
- Illinoia* sp.: WA, SPOKANE—Mt Spokane SP, 20-VII-95 on *Vaccinium* sp. (95T297).
- Therioaphis riehmi* (Börner): WA, BENTON—WSU-Prosser, 18 & 25-VII-97, on *Melilotus officinalis* (97F254††).
- Uroleucon ivae* Robinson [on *Iva xanthifolia*]: WA, YAKIMA [*]—Grandview, 17,22, 30-VII-95 (95G313, 95G349, 95G366).
- Uroleucon sonchi* (L.): WA, YAKIMA—Grandview, 17-VII-95 on *Sonchus oleraceus* (95G348).

***Praon simulans* (Provancher)**

- Macrosiphum rhamni* (Clarke) [det. by A. Jensen]: WA, KING—Stampede Pass, 8-VIII-96 on *Pteridium aquilinum* (96G441).

***Praon unicum* Smith**

- Acyrtosiphon lactucae* (Passerini) [on *Lactuca serriola*]: WA, ASOTIN—Asotin Cr WLA, 7-IX-95 (95T547); BENTON—Prosser, 22-V-95 (95G079); CHELAN—Chelan SP, 11-IX-97 (97K038); KITTITAS [*].
- Aphis coweni* Palmer [on *Veratrum viride*]: WA, SKAMANIA [*]; YAKIMA [*]—Pleasant Valley CG, 24-VII-97 (97G266).
- Aphis craccivora* Koch: WA, WHITMAN—Pullman, 7-VII-96, 2-VIII-96 on *Robinia pseudo-acacia* (96T199, 96T393).
- Aphis nr fabae* Scopoli: WA, YAKIMA—YIR, Windy Point, 19-IX-95 on *Cimicifuga laciniata* (95G630).
- Aphis helianthi* Monell: WA, CHELAN—Stevens Pass, 16-IX-95 on *Epilobium angustifolium* (95K134††); KITTITAS—Lost Lk, 24-VII-95 on *E. angustifolium* (95G399††); S. Fork Manastash Cr, 24-VII-95 on *Heracleum lanatum* (95G378); WHITMAN—Pullman, 1-VIII-95 on *Coriandrum sativum* (95T386†); YAKIMA—American River, 5-IX-97 on *Heracleum lanatum* (97G382); nr Wenas Lk, 17-VI-97 on *Lomatium* sp. (97G095†); YIR, Piscoe Cr, 25-VII-95 on *Ligusticum grayi* (95G432) & *Osmorhiza occidentalis* (95G428).
- Aphis nigratibialis* Robinson: WA, KITTITAS—S. Fork Manastash Cr, mi marker 12, 25-VI-97 on *Cornus stolonifera* (97G129).
- Aphis oenotherae* (Oestlund): ID, BENEWAH—McCroskey SP, 31-VIII-95 on *Epilobium angustifolium* (95T533).
- Aphis nr oenotherae* (Oestlund) [on *Epilobium* sp. unless otherwise indicated]: WA, BENTON—Kennewick, 28-IX-96 (96G597); GARFIELD—FR 160 & FR 40, 21-IX-95 (95T594); Spruce Springs, 22-VIII-95 (95T462†); Stentz Springs, 14-IX-95 (95T565); YAKIMA—American River, 5-IX-97 on *Epilobium minutum*

- (97G375+); Pleasant Valley CG, 24-VII-97 on *Epilobium minutum* (97G267+); Wenas Cr, 13-VIII-96 (96G467).
- Aphis pomi* de Geer: WA, DOUGLAS—Bridgeport, 17-VI-96 on *Pyrus malus* (96X007+).
- Aphis rumicis* L.: WA, BENTON, on [*Rumex crispus**].
- Aphis salicariae* Koch [on *Epilobium angustifolium*]: ID, KOOTENAI—Rathdrum, 29-VII-95 (95G443+); WA, CHELAN—1-VIII-95 (95G481+).
- Aphis* nr *salicariae* Koch [on *Epilobium angustifolium*]: WA, CHELAN—Swauk Pass, 1-VIII-95 (95G492+); YAKIMA—YIR, Old Mead Canyon, 25-VII-95 (95G442).
- Aphis varians* Patch [on *Epilobium angustifolium*]: ID, KOOTENAI—Rathdrum, 29-VII-95 (95G443+); WA, CHELAN—Stevens Pass, 16-IX-95 (95K134+); KITTITAS—Lost Lk, 24-VII-95 (95G399+).
- Aphis* nr *variens* Patch: WA, CHELAN—1-VIII-95 on *Epilobium angustifolium* (95G481+).
- Aphis* sp.: WA, CHELAN—Chelan SP, 11-IX-97 on *Salix* sp. (97K042+); GARFIELD—Bear Cr Rd, 14-IX-95 on *Lilium columbianum* (95T577); KITTITAS—Taneum Lk, 11-IX-97 on *Pedicularis racemosa* (97G411+); WHITMAN—Pullman, 12-VIII-96 on *Helianthus annuus* (96T438); YAKIMA—YIR, Windy Point, 19-IX-95 on *Cimicifuga laciniata* (95G631).
- Brachycaudus helichrysi* (Kaltenbach): WA, YAKIMA—Wenas, 11-VI-97 on *Prunus domestica* (97G079).
- Brachycaudus tragopogonis* (Kaltenbach): WA, WHITMAN—Pullman, 12-IX-95 on *Tragopogon dubius* (95T561).
- Cavariella aegopodii* (Scopoli): WA, YAKIMA—nr Wenas Lk, 17-VI-97 on *Lomatium* sp. (97G095+) & *Umbelliferae* (97G097).
- Cavariella pastinacae* (L.): WA, YAKIMA—N. Fork Tieton River, 27-VI-96 on *Heracleum lanatum* (96G288).
- Diuraphis noxia* (Kurdjumov) [on *Triticum aestivum*]: WA, ASOTIN—Asotin Cr Rd, 20-VI-95 (95T161); BENTON [*]; KLINKITAT—Bickleton, 6-VIII-97 (97G354); SPOKANE—Mt Spokane SP, 22-VII-95 (95T495).
- Dysaphis plantaginea* (Passerini) [on *Pyrus malus*]: WA, CHELAN—WSU-Wenatchee, 30-V-96, 13-VI-96 (96R009, 96R028); YAKIMA—Grandview, 26,28-VI-96 (96G282, 96G308).
- Ericaphis gentneri* (Mason): WA, BENTON—WSU-Prosser, 24-VI-97 on *Crataegus* sp. (97G124).
- Hyperomyzus lactucae* (L.): WA, WHITMAN—Pullman, 12-IX-95 on *Lactuca serriola* (95T559).
- Hyperomyzus nigricornis* (Knowlton): WA, GARFIELD—Alder Thicket, FR 40, 22-VIII-95 on *Senecio* sp. (95T447); KITTITAS—Ellensburg, 13-VI-97 on *Ribes* sp. (97G084).
- Macrosiphum euphorbiae* (Thomas): ID, KOOTENAI—Rathdrum, 29-VII-95 on *Epilobium angustifolium* (95G443+); WA, KITTITAS—Lost Lk, 6-VIII-97 on *Castilleja* (97G342+); YAKIMA [on *Solanum lycopersicon**].
- Macrosiphum gaurae* (Williams): WA, YAKIMA—Wenas Lk, 11-VI-97 on *Madia* sp. (97G059).
- Macrosiphum pallidum* (Oestlund): WA, YAKIMA—American River, 5-IX-97 on *Epilobium minutum* (97G375+).
- Macrosiphum valerianae* (Clarke): WA, KITTITAS—Lost Lk, 24-VII-95 on *Epilobium angustifolium* (95G399+).
- Macrosiphum* sp. [nr *fuscicornis* MacDougall & *pallidum* (Oestlund)]: WA, CHELAN—Swauk Pass, 1-VIII-95 on *Epilobium angustifolium* (95G492+).
- Metopolophium dirhodum* (Walker): WA, YAKIMA—Glade Rd, 7-VII-97 on *Triticum aestivum* (97G217+).
- Myzodium knowltoni* Smith & Robinson: WA, KLINKITAT—John Day Dam, 28-IV-95 on *Veronica anagallis-aquatica* (95G009+).
- Myzus cerasi* (F.): WA, CHELAN—Wenatchee Heights, 6-VI-96 on *Prunus* sp. (96R019).
- Myzus persicae* (Sulzer): WA, DOUGLAS—Orondo, 25-V-95 on *Prunus armeniaca* (95R011); KLINKITAT—John Day Dam, 28-IV-95 on *Veronica anagallis-aquatica* (95G009+); WHITMAN—Pullman, 13-VI-96 on unknown plant (96T031+).
- Myzus* sp.: WA, WHITMAN [on *Forsythia* sp.*].
- Nasonovia ribisnigri* (Mosley): WA, PIERCE—RNP, Tipsoo Lk, 5-IX-97 on *Castilleja* sp. (97G361+).
- Nasonovia* (*Kakimia*) sp.: WA, GARFIELD—Spruce Spring, 22-VIII-95 on *Castilleja* sp. (95T463+); KITTITAS—Lost Lk, 6-VIII-97 on *Castilleja* sp. (97G342+); WHITMAN—Kamiak Butte, 12-IX-95 on *Penstemon* sp. (95T551).
- Nearctaphis bakeri* (Cowen): WA, ASOTIN—De Spain Springs, 1-VIII-95 on *Penstemon* sp. (95T383).
- Nearctaphis kachena* (Hottes) [on *Castilleja* sp. unless otherwise indicated]: ID, BENEWAH—McCroskey SP, 31-VIII-95 (95T522); WA, GARFIELD—Spruce Spring, 22-VIII-95 (95T463+); Teal Springs, 22-VIII-96 (96T484); KITTITAS—Lost Lk, 6-VIII-97 (97G342+); Taneum Lk, 11-IX-97 on *Pedicularis racemosa* (97G411+); SPOKANE—Mt Spokane SP, 24-VIII-95 (95T479, 95T485); YAKIMA—YIR, Mt Adams Lk Rd, 23-VI-95 (95G242).
- Phorodon humuli* (Schränk) [on *Prunus salicina* unless otherwise indicated]: WA, BENTON—WSU-Prosser,

19,25-IV-95, 1-V-95 (95G006, 95G007, 95G016), 9-IX-95 on *Humulus lupulus* (95K154); YAKIMA—Sunnyside, 24-V-96 on *H. lupulus* (96G079†); Yakima Arboretum, 30-V-96 (96G104).

Rhopalosiphum insertum (Walker): WA, CHELAN—WSU-Wenatchee, 30-V-96 on *Pyrus communis* (96R015), 17-V-95 on *Pyrus malus* (95R007); DOUGLAS—Orondo, 25-V-95 on *Pyrus communis* (95R010), 11 & 28-V-96 on *Pyrus malus* (96R003, 96R004, 96X005); Bridgeport, 12 & 17-VI-96 on *Pyrus malus* (96X006, 96X007†); KITTITAS—Ellensburg, 17-V-96 on *Crataegus columbiana* (96G066).

Rhopalosiphum maidis (Fitch): WA, BENTON [on *Panicum milliaceum**]; YAKIMA—Sunnyside, 2-X-95 on *Hordeum vulgare* (95G671†).

Rhopalosiphum padi (L.): WA, BENTON [on *Triticum aestivum* & *Hordeum vulgare**]—WSU-Prosser, 24-IV-92, on *T. aestivum* (92A010); GRANT—Ephrata, 8-VII-97, on *Zea mays* (97K058); YAKIMA—Sunnyside, 2-X-95 on *H. vulgare* (95G671†).

Sitobion avenae (F.) [on *Triticum aestivum* unless otherwise indicated]: WA, ASOTIN—De Spain Springs, 24-VII-96 on *Aquilegia formosa* (96T339); BENTON—West Richland, 28-VI-95 (95G279); WSU-Prosser, 3, 11 & 18-VII-97 (97F191, 97F192, 97F215, 97F217, 97F227, 97F243, 97F249, 97F253, 97F256); YAKIMA—Glade Rd, 7-VII-97 (97G217†).

Uroleucon sp.: ID, BENEWAH—McCroskey SP, 31-VIII-95 on unknown plant (95T520); KOOTENAI—Rathdrum, 29-VII-95 on *Epilobium angustifolium* (95G443†).

Undetermined spp.: WA, WHITMAN—Pullman, 19-VI-96 on *Pyrus malus* (96T042).

***Praon nr unicum* Smith**

Eucraphis gillettei Davidson: WA, KITTITAS—Manastash Rd, 25-VI-97 on *Alnus* sp. (97G134†‡).

Oestlundiella flava (Davidson): WA, KITTITAS—Manastash Rd, 25-VI-97 on *Alnus* sp. (97G134†‡).

***Praon yakimanum* Pike & Stary**

Caviella pastinacae (L.): WA, ASOTIN—Asotin Cr, 11-VII-95 on *Oenothera* (95T196).

Diuraphis noxia (Kurdjumov) [on *Triticum aestivum*]: WA, ASOTIN—Pataha Cr Rd, 10-VIII-95 (95T435); BENTON [*]—WSU-Prosser, 23-V-97 (97F100, 97F112); KICKITAT—Bickleton, 9-VII-95 (95G319†).

Metopolophium dirhodum (Walker): WA, YAKIMA—Sunnyside, 28-VI-95 on *Phalaris arundinacea* (95G254).

Rhopalosiphum padi (L.): WA, BENTON [on *Triticum aestivum* & *Hordeum vulgare**]; GRANT—Ephrata, 8-VII-97 on *Zea mays* (97K058).

Sitobion avenae (F.): WA, KICKITAT—Bickleton, 9-VII-95 on *Triticum aestivum* (96G319†).

Undetermined sp.: WA, SPOKANE—Turnbull National WLA, 13-VI-95 on *Amelanchier alnifolia* (95T414).

***Praon* spp.**

Acyrtosiphon lactucae (Passerini) [on *Lactuca serriola*]: WA, KITTITAS—S Fork Manastash Cr, 24-VII-95 (95G376); Ellensburg, 22-VI-96 (96G266); YAKIMA—Grandview, 20-X-95 (95G728).

Acyrtosiphon pisum (Harris): MT, SANDER [on *Lathyrus odoratus**]; WA, YAKIMA—YIR, Delaney Springs, 25-VII-95 on *Vicia* sp. (95G408).

Amphorophora rubi (Kaltenbach): WA, KICKITAT—Trout Lk, 29-VI-97 on *Rubus* sp. (97G168).

Amphorophora sensoria Mason: WA, YAKIMA—Grandview, 22-VII-95 on *Rubus* sp. (95G368).

Aphis armoraciae Cowen: WA, KITTITAS [on *Mertensia paniculata**].

Aphis ceanothi Clarke: WA, KITTITAS—S Fork Manastash Cr, 25-VI-97 on *Ceanothus velutinus* (97G137).

Aphis coweni Palmer: WA, KITTITAS [on *Veratrum viride**].

Aphis fabae Scopoli: WA, KITTITAS—Lost Lk, 6-VIII-97 on *Senecio* sp. (97G335).

Aphis pomi de Geer: WA, YAKIMA [on *Pyrus malus**].

Aphthargelia symphoricarpi (Thomas) [on *Symphoricarpos* sp.]: WA, KITTITAS [*]; KICKITAT—Trout Lk, 29-VI-97 (97G159).

Aspidophorodon longicauda (Richards): WA, SKAMANIA [on *Spiraea* sp. *].

Caviella aegopodii (Scopoli): WA, GARFIELD—nr FR40 & FR44, 22-VIII-95 on *Osmorhiza chilensis* (95T464†‡).

Ceruraphis viburnicola (Gillette): WA, SKAMANIA [on *Carex* sp.*].

Chaetosiphon fragaefolii (Cockerell): ID, BOUNDARY [on *Rosa* sp.*]; WA, PEND OREILLE—Le Clerc WLA, 3-VIII-95 on native *Rosa* sp. (95T398); WA, STEVENS—Little Pend Oreille National WLA, 9-VII-96 on native *Rosa* sp. (96T209†‡).

Epameibaphis atricornis G&P: WA, BENTON—WSU-Prosser, 4-V-95 on *Chrysothamnus nauseosus* (95G020†‡).

Ericaphis gentneri (Mason): WA, KITTITAS—Colockum Pass, 2-VII-97 on *Crataegus* sp. (97G214).

Ericaphis scammelli (Mason): STEVENS—Little Pend Oreille National WLA, 9-VII-96 on native *Rosa* sp. (96T209†‡).

Hyperomyzus lactucae (L.): WA, BENTON [on *Sonchus oleraceus**].

- Hyperomyzus nigricornis* (Knowlton): WA, GARFIELD—Wickiup CG, 29-VIII-95 on *Hieracium* sp. (95T508); KITTITAS—Ellensburg, 23VI-96 on *Ribes* sp. (96G267).
- Hyperomyzus* sp.: WA, BENTON [on *Sonchus oleraceus**].
- Illinoia* nr *cristleae* (Smith & Knowlton): WA, KITTITAS—S Fork Manastash Cr Rd, mi marker 8, 16-VIII-96 on *Lonicera involucrata* (96G489).
- Illinoia maxima* (Mason): WA, KICKITAT—Trout Lk, 29-VI-97 on *Rubus parviflorus* (97G164).
- Illinoia rhododendri* (Wilson): WA, KITTITAS [on *Rhododendron albiflorum**].
- Illinoia* sp.: WA, GARFIELD—Stentz Springs, 1-VIII-95 on *Thalictrum* sp. (95T367); PIERCE—RNP, nr Tipsoo Lk, 16-VIII-95 on *Spiraea densiflora* (95A037); SPOKANE—Mt Spokane SP, 27-VII-95, on *Vaccinium* sp. (95T346).
- Macrosiphoniella ludoviciana* (Oestlund): WA, ASOTIN—Couse Cr Rd, mi marker 5, 18-VII-95 on *Artemisia ludoviciana* (95T257).
- Macrosiphoniella tanacetaria* (Kaltenbach): WA, SPOKANE—nr Mt Spokane, 29-VI-95 on *Tanacetum vulgare* (95T172†‡).
- Macrosiphum albifrons* Essig [on *Lupinus* sp.]: WA, KING—Stampede Pass, 8-VIII-96 (96G444); KICKITAT—Trout Lk, 11-VII-95 (95K068).
- Macrosiphum californicum* (Clarke): WA, SPOKANE—Mt Spokane SP, 27-VII-95, on *Salix* sp. (95T348).
- Macrosiphum euphorbiae* (Thomas): ID, LATAH—Moscow Mtn, 3-VIII-96 on *Castilleja* sp. (96T398); WA, GARFIELD—nr FR40 & FR44, 22-VIII-95 on *Osmorhiza chilensis* (95T464†‡); SPOKANE—nr Mt Spokane, 29-VI-95 on *Tanacetum vulgare* (96T172†); YAKIMA [on *Chenopodium album**]—N Fork Tieton River, 15-VI-96 on *Hieracium albertinum* (96K094).
- Macrosiphum* nr *euphorbiae* (Thomas): WA, YAKIMA—YIR, Mill Cr Guard Station, 6-VI-95 on *Lomatium nudicaule* (95G115).
- Macrosiphum* nr *gaurae* (Williams) [det. by A. Jensen]: WA, YAKIMA—Wenas Lk, 11-VI-97 on *Mentzelia laevicaulis* (97G052).
- Macrosiphum pallidum* (Oestlund): WA, SPOKANE—Cheney, 23-V-95 on native *Rosa* sp. (95K006).
- Macrosiphum rosae* (L.): WA, WHITMAN—Pullman, 1-VIII-96 on cultivated *Rosa* sp. (96T376); YAKIMA [on *Rosa* sp.*].
- Macrosiphum* sp.: WA, YAKIMA—YIR, Howard Lk, 19-IX-95 on *Pteridium aquilinum* (95G640).
- Macrosiphini* [immatures]: WA, BENTON—WSU-Prosser, 27-X-95 on *Malva neglecta* (95K212†).
- Metopolophium dirhodum* (Walker): WA, YAKIMA—Sunnyside, 28-VI-95 on *Phalaris arundinacea* (95G254).
- Microsiphoniella artemisiae* (Gillette): WA, ASOTIN—Asotin Cr HMU, 5-VII-96 on *Artemisia ludoviciana* (96T141).
- Myzus cerasi* (F.) [on *Prunus avium*]: WA, BENTON [*] WHITMAN—Pullman, 5-VII-96 (96T173).
- Myzus persicae* (Sulzer): WA, BENTON—WSU-Prosser, 20V-97 on *Prunus persica* (97G036).
- Myzus* sp.: WHITMAN [on *Forsythia* sp.*].
- Nasonovia* nr *cynosbati* (Oestlund): WA, YAKIMA—N Fork Tieton River, 15-VI-96 on native *Ribes* sp. (96K091).
- Nasonovia polemonii* (G&P): WA, KITTITAS—Buck Meadows, 9-VII-96, on *Polemonium pulcherrimum* (96G347).
- Nasonovia* (*Kakimia*) sp.: WA, SPOKANE—nr Peone, 29-VI-95 on *Phlox* sp. (95T176); YAKIMA—YIR, nr Mt Adams Lk, 4-VIII-95 on *Lonicera cilosa* (95K091).
- Nearctaphis* sp.: WA, ASOTIN—De Spain Springs, 11-VII-96 on *Castilleja* sp. (96T236).
- Pleotrichophorus* sp.: WA, BENTON—WSU-Prosser, 4-V-95 on *Chrysothamnus nauseosus* (95G020†‡); KICKITAT—Alderdale & Mabton-Bickleton Rds, 28-IV-95 on *Chrysothamnus* sp. (95G012).
- Rhopalomyzus loniceræ* (Siebold): WA, SPOKANE—nr Peone, 13-VII-95 on unknown Gramineae (95T228).
- Rhopalosiphum maidis* (Fitch): WA, BENTON [on *Echinochloa crus-galli**].
- Rhopalosiphum nymphaeae* (L.): WA, YAKIMA—Morgan Lk, 28-VI-95 on *Nymphaea* sp. (95G262).
- Rhopalosiphum padi* (L.): WA, BENTON [on *Echinochloa crus-galli**].
- Sitobion avenae* (F.) [on *Triticum aestivum*]: WA, BENTON—WSU-Prosser, 25-VII-97 (97F276); YAKIMA—Zillah, 28-VI-95 (95G270).
- Uroleucon* nr *erigeronense* (Thomas): WA, KITTITAS—Buck Meadows, 9-VII-96 on *Hieracium albiflorum* (96G340).
- Uroleucon ivae* Robinson: WA, YAKIMA [on *Iva xanthifolia**].
- Uroleucon russellae* (HRL): WA, SKAMANIA [on *Anaphalis margaritacea**].
- Uroleucon sonchi* (L.): WA, BENTON—WSU-Prosser, 6-VII-95 on *Sonchus oleraceus* (95A025).
- Uroleucon* sp.: WA, YAKIMA—Union Gap, 23-X-95 on *Centaurea maculosa* (95G720).
- Undetermined spp.: MT, SANDERS [on *Senecio* sp.*]; OR, UMATILLA—Harris Pk, 11-VI-96 on *Pteridium*

aquilinum (96G235); WA, ASOTIN—nr Anatone, 30-V-95 on *Philadelphus lewisii* (95T042); De Spain Springs, 24-VII-96 on Compositae (96T346); KITTITAS—Quartz Mtn, 25-VII-96 on *Rubus lasiococcus* (96G407); KLINKITAT—nr Cleveland, 7-VII-97 on *Lotus pinnatus* (97G233); WHITMAN—Pullman, 9-VII-96 on *Lactuca serriola* (96T228); 25-VII-95, on *Lapsana communis* (95T332); YAKIMA—N Fork Tieton River, 27-VI-96 on *Achlys triphylla* (96G289).

Genus *PSEUDOPRAON* Starý

Pseudopraon mindariphagum Starý

Mindarus abietinus Koch: WA, YAKIMA—Yakima Arboretum, 30-V-96, on *Abies concolor* (96G102).
Mindarus sp.: WA, YAKIMA—Grandview, 10-VI-96, on *Abies grandis* (96G215); N. Fork Tieton River, 15-VI-96, on *Abies* sp. (96K098†).

Genus *TOXARES* Haliday

Toxares deltiger (Haliday)

Macrosiphum adianti (Oestlund): OR, BENTON—McDonald State Forest, on unknown plant, 21-V-91 (91J002).
Macrosiphum walkeri Robinson [det. by A. Jensen]: OR, HOOD RIVER—Starvation Cr, 21-IX-95 on *Polypodium glycyrrhiza* (95K180).

Genus *TRIOXYS* Haliday

Troxys artemisiarum Pike & Starý

Aphis (*Zyaphis*) *canae* Williams: WA, DOUGLAS—Badger Mtn, 13-VII-95, on *Artemisia tridentata* (95B012†‡).
Macrosiphoniella ludoviciana (Oestlund) [on *Artemisia ludoviciana*]: WA, ASOTIN [*]—Asotin Cr WLA, 5-VII-96 (96T138).
Microsiphoniella artemisiae (Gillette): WA, ASOTIN—Asotin Cr HMU, 5-VII-96, on *Artemisia ludoviciana* (96T141).

Troxys bonnevillensis Smith

Aphis canae Williams [on *Artemisia tridentata*]: WA, DOUGLAS—Badger Mtn, 13-VII-95 (95B012†); FRANKLIN—Kahlotus Hwy, 11-VI-96 (96G242†‡).
Artemisaphis artemisicola (Williams) [on *Artemisia tridentata*]: WA, BENTON—Six Prong Rd, 24-IV-97 (97G008†); FRANKLIN—Kahlotus Hwy, 11-VI-96 (96G242†); YAKIMA, Glade Rd, 18-VI-97 (97G103†‡).
Epameibaphis atricornis G&P [on *Artemisia tridentata*]: WA, BENTON [*]—ALE, 19-V-95 (95G072†); Byron Rd, 14-V-97 (97G024†‡); KLINKITAT [*]; YAKIMA [†*].
Epameibaphis utahensis Knowlton & Smith: WA, KLINKITAT [on *Artemisia tridentata*†*].
Epameibaphis sp.: WA, BENTON—ALE, 8-VI-95 on *Artemisia tridentata* (95G151†).
Flabellomicrosiphum knowltoni Smith [on *Artemisia tridentata*]: WA, BENTON [†*]; YAKIMA [†*]—YIR, Fort Simcoe, 30-V-95 (95G091).
Flabellomicrosiphum tridentatae (Wilson) [on *Artemisia tridentata*]: WA, FRANKLIN [*]—Juniper Sand Dunes, 23-V-95 (95G088†, 95G089†); KLINKITAT [†*]—Alderdale Cr & Columbia River Rds, 28-IV-95 (95G013).
Flabellomicrosiphum sp. [on *Artemisia tridentata*]: WA, KLINKITAT [†*] & YAKIMA [†*].
Microsiphoniella acophorum (Smith & Knowlton) [on *Artemisia tridentata*]: WA, FRANKLIN [*]—Juniper Sand Dunes, 23-V-95 (95G088†, 95G089†); FRANKLIN [†*].
Microsiphoniella sp. (Smith & Knowlton): WA, BENTON [on *Artemisia tridentata*†*].
Obtusicauda artemisiphila (Knowlton & Allen): WA, BENTON—ALE, 10-V-95 on *Chrysothamnus nauseosus* (95G033†); KLINKITAT—nr Roosevelt [on *Artemisia tridentata*†*].
Obtusicauda coweni (Hunter): WA, ASOTIN—Asotin Cr HMU, 7-V-96 on *Artemisia tridentata* (96T142†).
Obtusicauda filifoliae (G&P) [on *Artemisia tridentata*]: WA, BENTON—Byron Rd, 14-V-97 (97G024†‡); nr Prosser, Rotha Rd, 2-V-95 (95G017†‡); KLINKITAT [†‡*]; YAKIMA [†‡*].
Obtusicauda sp. [on *Artemisia tridentata*]: WA, BENTON [†‡*]; KLINKITAT [†‡*]; YAKIMA [†‡*].
Pleotrichophorus quadririchus (Knowlton & Smith)?: WA, YAKIMA—Wenas Lk, 11-VI-97 on *Artemisia tridentata* (97G058†‡).
Pleotrichophorus sp. [on *Artemisia tridentata*]: WA, BENTON [†‡*]; KLINKITAT—Alderdale Rd, 9-V-95 (95G028†‡).
Pseudoepameibaphis essigi Knowlton & Smith: WA, KLINKITAT [on *Artemisia tridentata*†*].
Pseudoepameibaphis tridentata (Wilson) [on *Artemisia tridentata*]: WA, BENTON [†*]—ALE, 19-V-95 (95G072†); Byron Rd, 14-V-97 (97G024†‡); KLINKITAT [†*]—Alderdale Rd, 9-V-95 (95G028†); KITTITAS

[†*]; YAKIMA [†*]—Naught Rd, 18-VI-97 (97G103†‡, 97G120); Wenas Lk, 11-VI-97 (97G058†); YIR, Ft. Simcoe, 30-V-96 (95G091†).

***Trioxys cirsii* (Curtis)**

Drepanosiphum platanoidis (Schrank): WA, BENTON [on *Acer pseudoplatanus**].

***Trioxys complanatus* Quilis**

Therioaphis riehi (Börner) [on *Melilotus* sp.]: WA, BENTON—WSU-Prosser, 11 & 18-VII-97 on *Melilotus officinalis* (97F218†, 97F254†); KLINKITAT—Roosevelt, 24-IV-96 (96G014†); YAKIMA, YIR, Signal Peak, 19-IX-95 (95G625†).

Therioaphis sp.: WA, BENTON—WSU-Prosser, 28-VI-95 on *Medicago sativa* (95G277†).

***Trioxys pallidus* (Haliday) [group]**

Chromaphis juglandicola (Kaltenbach) [on *Juglans regia*]: WA, BENTON—WSU-Prosser, 6-IX-95 (95K143†); KLINKITAT—Bickleton, 27-VIII-96 (96G511); YAKIMA [*]—Yakima Arboretum, 26-IX-95 (95G657).

Eucallipterus tiliae (L.) [on *Tilia americana*]: MT, LINCOLN—Libby, 29-VII-95 (95G449); WA, BENTON—Prosser, 1-VIII-95, 25-IX-95 (95A029, 95G647, 95G648); WHITMAN—Pullman, 9-X-96 (96T586).

Monelliopsis caryae (Monell) [on *Juglans nigra* unless otherwise indicated]: WA, BENTON [on *J. regia**]; WSU-Prosser, 6-IX-95 (95G650†); YAKIMA [*]—Yakima Arboretum, 7-VII-94 & 26-IX-95 (94K020, 95G656).

Myzocallis coryli (Goeze): WA, CLARK—WSU-Vancouver, 21-IX-95 on *Corylus* sp. (95K176).

Myzocallis multisetis Boudreaux & Tissot: WA, BENTON—WSU-Prosser, 9-IX-95 on *Quercus borealis* (95K158).

Myzocallis sp.: WA, BENTON [on *Quercus rubra**]; WHITMAN—Pullman, 9-X-96 on *Quercus* sp. (96T579).

Panaphis juglandis (Goeze) [on *Juglans regia*]: WA, BENTON [*]—Prosser 25-IX-95 (95G646); WSU-Prosser, 6-IX-95 (95K143†); YAKIMA [*]—Grandview, 25-IX-95 (95G653).

***Trioxys rosae* Pike & Starý**

Macrosiphum pallidum (Oestlund): WA, SPOKANE—nr Cheney, 23-V-95 on native *Rosa* sp. (95K006).

Macrosiphum rosae (L.): WA, YAKIMA [on native *Rosa* sp.*].

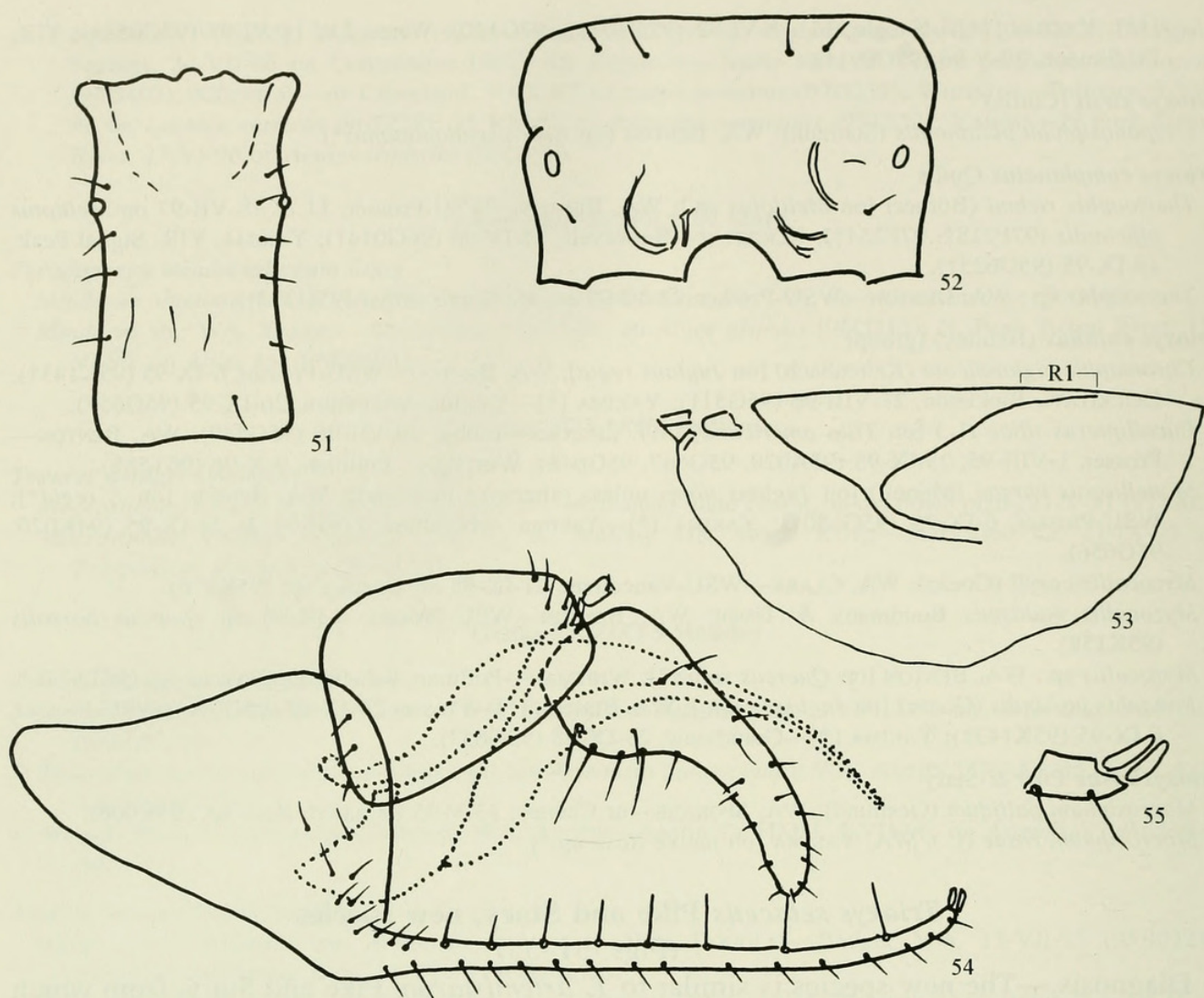
***Trioxys setaceus* Pike and Starý, new species**

(Figs. 51–55)

Diagnosis.—The new species is similar to *T. artemisiarum* Pike and Starý, from which it may be distinguished as follows: head prevalently dark brown; antenna 11-segmented; metasomal tergum 1 parallel-sided, not dilated to apex; prong dorsal surface with 6 perpendicular setae and 2 shorter setae close to the base; last sternum with a group or longitudinal row of setae equal in length with 2 neighboring setae at dorsal base of prong.

Etymology.—The name of the new species is derived from the presence of numerous setae on the prong of the last metasomal sternum.

Description.—Female. *Head*: Eye large. Malar space equal to $\frac{1}{7}$ eye length. Tentorio-ocular line $\frac{1}{7}$ intertentorial line. Antenna 11-segmented, reaching to mid-metasoma. Flagellomeres F_3 to F_9 approximately equal in size, F_2 to F_5 as long as wide. *Mesosoma*: Mesosoma smooth, with a simple row of sparse individual setae tracing the effaced notauli on the disc. Propodeum (Fig. 52) smooth, with indications of short carinae or longitudinal rugosities in the distal portion. *Forewing* (Fig. 53): Stigma triangular, length $3\times$ width; distal abscissa of R_1 (metacarpus) short, distinctly shorter than stigma width. *Metasoma*: Metasomal tergum 1 (Fig. 51) length almost $2\times$ width at spiracles (spiracles slightly prominent), roughly parallel sided from spiracle to posterior margin. *Genitalia* (Fig. 54): Prong straight, except for slight curve apically, apex with 2 longitudinally dilated setae (Fig. 55). Prong dorsal setae perpendicular (6 setae about $2\times$ prong diameter, 2 near base short equal to prong diameter and to setae on distal part of last sternum); prong ventral setae numerous, oblique, about equal to prong diameter. *Coloration*: Head dark brown; lower part, clypeus, and gena yellow, palpi light yellow. Antenna scape, pedicel, and base of flagellomere 1 yellow, remaining antenna brown. Legs yellow brown, trochanters and base of tibia somewhat lighter. Hind leg with dark tinge. Metasomal tergum 1 yellow,



Figs. 51–55. *Trioxys setaceus*, ♀ [illustrations not to equal scale]. 51, Metasomal tergum 1. 52, Propodeum. 53, Fore wing, in part. 54, Genitalia. 55, Prong, close-up of apex. Abbreviations: R1, distal abscissa of post-marginal vein [= metacarpus].

terga 2 and 3 with yellow center and brown lateral spots; middle terga brown; distal tergum yellow. Ovipositor sheath yellow with brown apex; prong completely yellow to brownish at apex. *Length of body*: about 1.9–2.2 mm.

Male.—Antenna 13-segmented. Coloration: head brown; clypeus and mandibles yellow, palpi light brown. Mesosoma brown. Wings hyaline, venation brown. Legs light brown, trochanter and base of tibia yellow. Metasoma brown, except tergum 1 yellow.

Holotype.—♀, USA, WA, ASOTIN CO., Schumaker Rd, 18-VII-1995, T. Miller collector (collection code 95T266). Host aphid: *Acyrtosiphon macrosiphum* (Wilson) on *Amelanchier alnifolia*. Deposited in USNM.

Paratypes.—5 specimens, collection data same as holotype, deposited in collection of WSU-Prosser (4 ♀, 1 ♂).

Other material reared from:

Acyrtosiphon macrosiphum (Wilson) [on *Amelanchier alnifolia*, unless indicated otherwise]: MT, LINCOLN—Libby, 6-VII-96 (96G322); WA, ASOTIN—Anatone, 18-VII-95 (95T266, 13 specimens); PEND OREILLE—Le Clerc WLA, 3-VIII-95 (95T402); SPOKANE, Cooper Rd nr Hwy 206, 29-VI-1995 (95T180, 5 specimens); nr Mt Spokane, on *Ribes* sp.?, (95T174).

***Trioxys tenuicaudus* Starý**

Eucallipterus tiliae (L.): WA, BENTON—Prosser, 25-IX-95 on *Tilia americana*, (95G647, 95G648); KLUCKITAT—Trout Lk, 29-VI-97 on *T. sp.* (97G174); WHITMAN—Pullman, 14-VIII-96 on *T. americana*, (96T443).

***Trioxys* spp.**

Aphis coweni Palmer: WA, KITTITAS [on *Veratrum viride**].

Chaetosiphon fragaefolii (Cockerell): WA, SPOKANE—Turnbull National WLA, 1-VI-95, on native *Rosa* sp. (95T048).

Eucallipterus tiliae (L.): WA, WHITMAN—Pullman, 1-VIII-96 on *Tilia americana* (96T377).

Eucera sp.: WA, SKAMANIA—Yellow Jacket Cr, 25-IX-94 on *Trautvetteria caroliniensis* (94G021†‡).

Macrosiphoniella ludoviciana (Oestlund): WA, YAKIMA—Naches, 28-VII-97 on *Artemisia ludoviciana* (97G277).

Macrosiphum rosae (L.): WA, YAKIMA—nr Yakima, 3-VI-94 on native *Rosa* sp. (94/063).

Monelliopsis nr *caryae* (Fitch): WA, BENTON—WSU-Prosser, 24-VI-97 on *Juglans nigra* (97G126).

Myzocallis nr *granovskyi* Boudreaux & Tissot: WA, BENTON—WSU-Prosser, 24-VI-97 on *Quercus rubra* (97G125).

Oestlundiella flava (Davidson): WA, SKAMANIA—Yellow Jacket Cr, 25-IX-94 on *Trautvetteria caroliniensis* (94G021†‡).

Panaphis juglandis (Goeze): WA, BENTON—WSU-Prosser, 24-VI-97 on *Juglans regia* (97G127).

Pleotrichophorus sp.: WA, YAKIMA [on *Haplopappus resinosus**].

Genus *XENOSTIGMUS* Smith***Xenostigmus bifasciatus* (Ashmead)**

Cinara ponderosae (Williams) [on *Pinus ponderosa*]: WA, ASOTIN—De Spain Spring, 5-VII-96 (96T149); YAKIMA [*].

Cinara sp.: WA, ASOTIN—Cooper Canyon, 18-VII-96 on *Pinus ponderosa* (96T308).

Undetermined sp.: WA, YAKIMA—Clear Lk, 15-VI-96 on *Pinus ponderosa* (96K087).

APHID HOST—PARASITOID INDEX

‡—INDICATES APHID-PARASITOID ASSOCIATION NOT CERTAIN

- Acyrtosiphon kondoi*
Aphidius ervi
Acyrtosiphon lactucae
Aphidius avenaphis ‡
Aphidius ervi
Aphidius polygonaphis
Aphidius sp.
Diaeretiella rapae
Ephedrus californicus
Lysiphlebus testaceipes
Praon occidentale
Praon unicum
Praon sp.
Acyrtosiphon macrosiphum
Aphidius sp.
Lysiphlebus testaceipes
Praon humulaphidis
Praon pequodorum
Trioxys setaceus
Acyrtosiphon pisum
Aphidius ervi
Aphidius nr *pisivorus*
Aphidius pulcher
Aphidius smithi
Aphidius sp.
Diaeretiella rapae
Lysiphlebus testaceipes
Monoclonus sp.
Praon occidentale
Praon pequodorum
Praon sp.
Amphorophora geranii
Aphidius sp.
Praon occidentale
Amphorophora parviflori
Aphidius polygonaphis
Amphorophora rubi
Praon pequodorum
Praon sp.
Amphorophora nr *rubitoxica*
Aphidius sp.
Amphorophora sensoriata
Praon sp.
Amphorophora sp.?
Aphidius polygonaphis
Anoecia corni
Lysiphlebus testaceipes ‡
Aphis armoraciae
Adialytus fuscicornis
Aphidius sp.
Lysiphlebus testaceipes
Praon sp.
Aphis nr *armoraciae*
Lysiphlebus testaceipes
Aphis canae
Binodoxys clydesmithi ‡
Lysiphlebus adelocarinus
Lysiphlebus testaceipes ‡
Lysiphlebus utahensis ‡
Trioxys artemisiarum ‡
Trioxys bonnevillensis ‡
Aphis ceanothi
Aphidius polygonaphis
Binodoxys carolinensis
Lysiphlebus testaceipes
Praon sp.
Aphis nr *ceanothi*
Lysiphlebus testaceipes
Aphis nr *chrysothamni*
Lysiphlebus testaceipes
Aphis coweni
Ephedrus sp.
Lysiphlebus testaceipes
Praon americanum
Praon unicum
Praon sp.
Trioxys sp.
Aphis craccivora
Aphidius ervi
Aphidius sp.
Diaeretiella rapae
Lysiphlebus testaceipes
Praon occidentale ‡
Praon unicum
Aphis nr *epilobiaria*
Lysiphlebus testaceipes
Aphis fabae
Aphidius matricariae
Aphidius sp.
Binodoxys grafi
Diaeretiella rapae
Ephedrus californicus
Lysiphlebus testaceipes
Praon sp.
Aphis nr *fabae*
Diaeretiella rapae
Lysiphlebus testaceipes
Praon unicum
Aphis filifoliae
Lysiphlebus testaceipes
Aphis frangulae
Lysiphlebus testaceipes
Aphis nr *frangulae*
Lysiphlebus testaceipes
Aphis gossypii
Lysiphlebus testaceipes
Aphis hederiae
Lysiphlebus testaceipes
Aphis helianthi
Adialytus fuscicornis
Aphidius matricariae
Aphidius polygonaphis ‡
Aphidius sp.
Binodoxys carolinensis
Binodoxys grafi
Diaeretiella rapae
Ephedrus californicus
Ephedrus clavicornis
Lysiphlebus testaceipes
Lysiphlebus sp.
Praon occidentale
Praon unicum
Aphis nr *helianthi*
Lysiphlebus testaceipes
Aphis hermistonii
Lysiphlebus testaceipes
Aphis holodisci
Aphidius sp.
Binodoxys grafi
Ephedrus californicus
Lysiphlebus testaceipes
Aphis lugentis
Lysiphlebus testaceipes
Praon occidentale
Aphis lupini
Lysiphlebus testaceipes
Aphis neogillettei
Lysiphlebus testaceipes
Aphis nerii
Aphidius colemani
Lysiphlebus testaceipes
Aphis nigratibialis
Aphidius sp.
Binodoxys carolinensis
Lysiphlebus testaceipes
Praon unicum
Aphis oenotherae
Lysiphlebus testaceipes
Praon unicum
Aphis nr *oenotherae*
Aphidius polygonaphis
Binodoxys carolinensis
Ephedrus californicus
Ephedrus clavicornis
Lysiphlebus testaceipes

- Monoctonus washingtonensis*
Praon unicum
Aphis pomi
Lysiphlebus testaceipes ‡
Praon unicum
Praon sp.
Aphis rumicis
Lysiphlebus testaceipes
Praon unicum
Aphis salicariae
Binodoxys carolinensis ‡
Binodoxys grafi
Binodoxys sp.
Lysiphlebus testaceipes
Praon americanum
Praon unicum
Aphis nr salicariae
Binodoxys grafi
Lysiphlebus testaceipes
Praon unicum
Aphis sambuci
Lysiphlebus testaceipes
Aphis spiraeicola
Lysiphlebus testaceipes
Aphis nr triglochinis
Binodoxys grafi
Lysiphlebus testaceipes
Aphis nr valerianae
Lysiphlebus testaceipes
Aphis varians
Aphidius sp.
Binodoxys carolinensis
Binodoxys grafi
Ephedrus californicus
Ephedrus clavicornis
Ephedrus sp.
Lysiphlebus testaceipes
Praon unicum
Aphis nr varians
Binodoxys carolinensis
Binodoxys grafi
Ephedrus californicus
Lysiphlebus testaceipes
Praon unicum
Aphis (Zyxaphis) sp.
Aphidius sp.
Lysaphidus adelocarinus
Lysaphidus rosaphidis ‡
Lysiphlebus testaceipes
Aphis sp. n.
Binodoxys carolinensis
Lysiphlebus testaceipes
Aphis spp.
Aphidius ervi
Binodoxys carolinensis
Lysiphlebus testaceipes
Lysiphlebus sp.
Praon unicum
Aphthargelia symphoricarpi
Aphidius matricariae
Ephedrus californicus
Ephedrus clavicornis
Lysaphidus sp.
Lysiphlebus testaceipes
Praon coniforme
Praon sp.
Artemisaphis artemisicola
Binodoxys clydesmithi
Lysaphidus adelocarinus
Lysiphlebus utahensis
Praon artemisicola
Trioxyx bonnevillensis
Aspidophorodon longicauda
Aphidius ervi
Aphidius sp.
Praon sp.
Aspidophorodon nr longicauda
Ephedrus lacertosus ‡
Boernerina variabilis
Betuloxys alnicolus ‡
Lysiphlebus testaceipes
Brachycaudus cardui
Aphidius matricariae
Aphidius polygonaphis ‡
Diaeretiella rapae
Ephedrus persicae
Lysiphlebus testaceipes
Brachycaudus helichrysi
Aphidius colemani
Aphidius ervi
Aphidius matricariae
Aphidius sp.
Diaeretiella rapae
Ephedrus californicus ‡
Ephedrus persicae
Lysiphlebus testaceipes
Monoctonus campbellianus
Praon occidentale
Praon unicum
Brachycaudus tragopogonis
Aphidius sp.
Diaeretiella rapae
Lysiphlebus testaceipes
Lysiphlebus sp.
Praon unicum
Brachycorynella asparagi
Diaeretiella rapae
Lysiphlebus testaceipes
Braggia eriogoni
Ephedrus californicus
Lysiphlebus testaceipes
Braggia nr. eriogoni.
Lysiphlebus testaceipes
Braggia sp. n.
Lysiphlebus testaceipes
Braggia sp.
Diaeretiella rapae
Lysiphlebus testaceipes
Brevicoryne brassicae
Aphidius ervi
Aphidius matricariae
Diaeretiella rapae
Ephedrus californicus
Lysiphlebus testaceipes
Capitophorus elaeagni
Aphidius matricariae
Aphidius polygonaphis
Aphidius sp.
Ephedrus californicus
Lysiphlebus testaceipes
Praon occidentale ‡
Carolinaia howardii
Aphidius sp.
Cavariella aegopodii
Aphidius salicis
Ephedrus californicus
Lysiphlebus testaceipes
Praon unicum
Praon sp. ‡
Cavariella nr aegopodii
Binodoxys carolinensis ‡
Cavariella pastinacae
Aphidius salicis
Ephedrus californicus
Lysiphlebus testaceipes
Praon unicum
Praon yakimanum
Cedoaphis incognita
Lysiphlebus flavidus
Ceruraphis viburnicola
Lysiphlebus testaceipes
Praon sp.
Chaetosiphon fragaefolii
Aphidius sp.
Binodoxys sp.
Ephedrus californicus
Ephedrus sp. ‡
Lysaphidus rosaphidis
Lysaphidus sp. ‡
Lysiphlebus testaceipes
Praon sp.
Trioxyx sp.
Chaetosiphon nr hottesi
Aphidius ervi
Aphidius sp. ‡
Chaetosiphon tetrarhodum
Aphidius sp. ‡
Chaetosiphon thomasi
Praon occidentale
Chaetosiphon nr thomasi
Lysaphidus rosaphidis
Chaitophorus populicola
Adialytus salicaphis
Lysiphlebus testaceipes

- Chaitophorus populifolii*
Adialytus salicaphis
Ephedrus chaitophori
Chaitophorus utahensis
Adialytus salicaphis
Chaitophorus viminalis
Adialytus salicaphis
Lysiphlebus testaceipes
Chaitophorus sp.
Adialytus salicaphis
Chromaphis juglandicola
Trioxys pallidus
Cinara brevispinosa
Pauesia sp.
Cinara chinookiana
Lysiphlebus testaceipes
Cinara pilicornis
Pauesia juniperaphidis
Cinara ponderosae
Pauesia ahtanumensis
Pauesia pahtonis
Pauesia ponderosaecola
Pauesia sp.
Xenostigmus bifasciatus
Cinara pseudotaxifoliae
Pauesia pseudotsugae
Cinara pseudotsugae
Pauesia sp.
Cinara spp.
Lysiphlebus testaceipes
Pauesia ahtanumensis
Pauesia bicolor
Pauesia sp.
Xenostigmus bifasciatus
Diuraphis noxia
Aphidius avenaphis
Aphidius ervi
Aphidius matricariae
Aphidius sp.
Diaeretiella rapae
Ephedrus californicus
Ephedrus sp.
Lysiphlebus testaceipes
Monoctonus washingtonensis
Praon gallicum
Praon occidentale
Praon unicum
Praon yakimanum
Drepanosiphum platanoidis
Trioxys cirsi
Dysaphis plantaginea
Aphidius matricariae ‡
Diaeretiella rapae
Ephedrus clavicornis
Lysiphlebus testaceipes
Praon occidentale
Praon unicum
- Epameibaphis atricornis*
Lysaphidus adelocarinus
Lysiphlebus utahensis ‡
Praon sp. ‡
Praon artemisicola
Trioxys bonnevillensis
Epameibaphis utahensis
Trioxys bonnevillensis
Epameibaphis sp.
Trioxys bonnevillensis
Ericaphis gentneri
Aphidius nr hortensis
Aphidius sp.
Ephedrus lacertosus
Lysaphidus sp.
Praon unicum
Praon sp.
Ericaphis nr gentneri
Aphidius sp.
Lysiphlebus testaceipes
Ericaphis scammelli
Aphidius sp.
Ephedrus sp. ‡
Lysaphidus sp. ‡
Praon sp. ‡
Ericaphis wakibae
Aphidius polygonaphis
Aphidius sp.
Ephedrus californicus ‡
Praon occidentale ‡
Eriosoma americanum
Lysiphlebus testaceipes ‡
Eriosoma lanigerum
Lysiphlebus testaceipes ‡
Eucallipterus tiliae
Trioxys pallidus
Trioxys tenuicaudus
Trioxys sp.
Euceraphis gillettei
Aphidius sp. ‡
Praon nr unicum ‡
Euceraphis sp.
Trioxys sp. ‡
Flabellomicrosiphum knowltoni
Lysaphidus adelocarinus
Trioxys bonnevillensis
Flabellomicrosiphum tridentata
Lysaphidus adelocarinus ‡
Lysiphlebus utahensis ‡
Trioxys bonnevillensis
Flabellomicrosiphum sp.
Lysaphidus adelocarinus
Praon artemisicola
Trioxys bonnevillensis
Forda marginata
Adialytus fuscicornis
Hayhurstia atriplicis
- Aphidius ervi*
Diaeretiella rapae
Hyadaphis foeniculi
Aphidius colemani
Lysiphlebus testaceipes ‡
Hyalopteroides humilis
Aphidius ervi
Hyalopterus pruni
Aphidius ervi ‡
Aphidius matricariae ‡
Monoctonus campbellianus
Hyperomyzus lactucae
Aphidius ervi
Aphidius segmentatus
Ephedrus californicus
Praon unicum
Praon sp.
Hyperomyzus nigricornis
Aphidius ervi
Aphidius polygonaphis
Aphidius segmentatus
Aphidius sp.
Ephedrus californicus
Ephedrus sp.
Lysiphlebus testaceipes
Praon occidentale
Praon unicum
Praon sp.
Hyperomyzus spp.
Aphidius polygonaphis
Aphidius segmentatus
Aphidius sp.
Ephedrus californicus
Praon occidentale
Praon sp.
Illinoia nr azaleae
Aphidius polygonaphis
Illinoia corylina
Aphidius matricariae
Diaeretiella rapae
Illinoia crystleae bartholomewi
Aphidius sp.
Illinoia nr crystleae
Aphidius sp.
Praon sp.
Illinoia davidsoni
Aphidius ervi
Aphidius polygonaphis
Aphidius sp.
Praon occidentale
Illinoia maxima
Ephedrus clavicornis
Praon sp.
Illinoia rhododendri
Aphidius sp.
Binodoxys sp.
Monoctonus sp.
Praon sp.

- Illinoia richardsi*
Praon occidentale ‡
- Illinoia spiraeae*
Lysiphlebus testaceipes
- Illinoia nr thalictri*
Praon occidentale
- Illinoia* spp.
Aphidius ervi
Aphidius polygonaphis
Aphidius sp.
Ephedrus californicus
Monoctonus sp.
Praon humulaphidis
Praon occidentale
Praon nr occidentale
Praon pequodorum
Praon sp.
- Illinoia* sp. ?
Praon humulaphidis
- Liosomaphis berberidis*
Aphidius nr hortensis
Aphidius sp.
- Lipaphis erysimi*
Aphidius avenaphis
Aphidius colemani
Diaeretiella rapae
- Macrosiphoniella ludoviciana*
Aphidius ohioensis
Aphidius polygonaphis
Aphidius sp.
Ephedrus californicus
Praon occidentale
Praon sp.
Trioxys artemisiarum
Trioxys sp.
- Macrosiphoniella nr ludoviciana*
Praon occidentale
- Macrosiphoniella tanacetaria*
Aphidius ohioensis
Ephedrus californicus
Praon sp. ‡
- Macrosiphum adianti*
Toxares deltiger
- Macrosiphum albifrons*
Aphidius ervi
Aphidius lupini
Ephedrus californicus
Ephedrus lacertosus
Praon occidentale
Praon sp.
- Macrosiphum californicum*
Aphidius sp.
Ephedrus californicus
Praon sp.
- Macrosiphum clydesmithi*
Aphidius nigripes
Aphidius polygonaphis
Aphidius sp.
- Macrosiphum creelii*
Aphidius ohioensis
Ephedrus californicus
- Macrosiphum euphorbiae*
Aphidius colemani
Aphidius ervi
Aphidius matricariae
Aphidius nigripes
Aphidius polygonaphis
Aphidius sp.
Diaeretiella rapae
Ephedrus californicus
Ephedrus lacertosus
Lysaphidus sp.
Lysiphlebus testaceipes
Monoctonus sp.
Praon fulvum
Praon humulaphidis
Praon occidentale
Praon unicum
Praon sp.
- Macrosiphum nr euphorbiae*
Aphidius polygonaphis
Diaeretiella rapae
Ephedrus californicus
Ephedrus sp.
Praon sp.
- Macrosiphum gaurae*
Aphidius ervi
Ephedrus californicus
Lysiphlebus testaceipes
Praon unicum
- Macrosiphum nr gaurae*
Praon sp.
- Macrosiphum osmaroniae*
Praon occidentale
- Macrosiphum pallidum*
Aphidius nr rosae
Aphidius sp. ‡
Ephedrus californicus ‡
Praon unicum
Praon sp.
Trioxys rosae
- Macrosiphum nr pallidum*
Aphidius ervi ‡
Lysiphlebus testaceipes ‡
- Macrosiphum pteridis*
Aphidius polygonaphis
- Macrosiphum rhamni*
Aphidius sp.
Ephedrus sp.
Praon simulans
- Macrosiphum rosae*
Aphidius ervi
Aphidius polygonaphis
Aphidius sp.
Ephedrus californicus
Praon occidentale
- Praon* sp.
Trioxys rosae
Trioxys sp.
- Macrosiphum tuberculaceps*
Aphidius sp.
Monoctonus pacificus
Praon fulvum
- Macrosiphum valerianae*
Aphidius ohioensis
Aphidius polygonaphis
Ephedrus californicus ‡
Praon unicum ‡
- Macrosiphum walkeri*
Aphidius nr polygonaphis
Monoctonus sp.
Toxares deltiger
- Macrosiphum* spp.
Aphidius ervi
Aphidius polygonaphis
Aphidius sp.
Diaeretiella rapae
Ephedrus lacertosus
Lysiphlebus testaceipes
Praon fulvum
Praon humulaphidis
Praon occidentale
Praon simulans
Praon unicum
Praon sp.
Toxares deltiger
- Macrosiphum* sp. ?
Aphidius ohioensis
Praon occidentale
- Macrosiphini* [immatures]
Ephedrus lacertosus
Monoctonus pacificus
Praon sp.
- Metopolophium dirhodum*
Aphidius ervi
Aphidius rhopalosiphi
Aphidius sp.
Ephedrus californicus ‡
Monoctonus sp.
Praon gallicum
Praon occidentale ‡
Praon unicum
Praon yakimanum
Praon sp.
- Metopolophium* sp.
Ephedrus lacertosus ‡
- Metopolophium* sp. ?
Praon occidentale
- Microlophium nr sibiricum*
Praon occidentale
- Microsiphoniella acophorum*
Trioxys bonnevillensis
- Microsiphoniella artemisiae*
Aphidius ohioensis

- Lysaphidus adelocarinus*
Praon sp.
Trioxys artemisiarum
Microsiphoniella sp.
Trioxys bonnevillensis
Mindarus abietinus
Pseudopraon mindariphagum
Mindarus sp.
Pseudopraon mindariphagum
Monelliopsis caryae
Trioxys pallidus
Monelliopsis nr *caryae*
Trioxys sp.
Myzocallis coryli
Trioxys pallidus
Myzocallis nr *granovskyi*
Trioxys sp.
Myzocallis multisetis
Trioxys pallidus
Myzocallis sp.
Trioxys pallidus
Myzodium knowltoni
Praon unicum ‡
Myzus ascalonicus
Lysiphlebus testaceipes
Myzus cerasi
Aphidius sp.
Ephedrus californicus
Lysiphlebus testaceipes
Praon unicum
Praon sp.
Myzus nr *cerasi*
Lysiphlebus testaceipes
Myzus nr *ornatus*
Aphidius ervi ‡
Myzus persicae
Aphidius colemani
Aphidius ervi
Aphidius matricariae
Diaeretiella rapae
Ephedrus californicus
Lysiphlebus testaceipes
Praon occidentale
Praon unicum
Praon sp.
Myzus spp.
Aphidius colemani
Aphidius ervi
Aphidius matricariae
Diaeretiella rapae
Praon unicum
Praon sp.
Nasonovia alpina
Aphidius kakimiaphidis
Nasonovia aquilegiae
Aphidius kakimiaphidis
Aphidius sp.
Praon occidentale
- Nasonovia* nr *aquilegiae*
Aphidius sp.
Nasonovia crenicorna
Aphidius polygonaphis
Nasonovia cynosbati
Aphidius kakimiaphidis
Nasonovia nr *cynosbati*
Aphidius kakimiaphidis
Praon sp.
Nasonovia houghtonensis
Aphidius polygonaphis
Harkeria rufa
Nasonovia nr *houghtonensis*
Aphidius kakimiaphidis
Nasonovia polemonii
Aphidius sp.
Praon occidentale
Praon sp.
Nasonovia ribisnigri
Ephedrus californicus
Praon humulaphidis
Praon unicum
Nasonovia wahinkae
Aphidius kakimiaphidis
Nasonovia spp.
Aphidius kakimiaphidis
Aphidius sp.
Ephedrus californicus
Lysaphidus sp.
Lysiphlebus testaceipes
Praon occidentale ‡
Praon unicum
Praon sp.
Nearctaphis bakeri
Lysiphlebus testaceipes
Praon occidentale ‡
Praon unicum
Nearctaphis californica
Lysiphlebus testaceipes
Nearctaphis kachena
Lysiphlebus testaceipes ‡
Praon occidentale
Praon unicum
Nearctaphis yohoensis
Lysiphlebus testaceipes
Nearctaphis spp.
Lysiphlebus testaceipes
Praon sp.
Obtusicauda artemisiphila
Ephedrus californicus
Lysiphlebus utahensis ‡
Trioxys bonnevillensis
Obtusicauda coweni
Binodoxys clydesmithi
Binodoxys coruscanigrans
Ephedrus californicus
Lysaphidus adelocarinus
Lysiphlebus utahensis
- Praon artemisaphis*
Trioxys bonnevillensis
Obtusicauda filifoliae
Lysiphlebus utahensis ‡
Trioxys bonnevillensis ‡
Obtusicauda spp.
Ephedrus californicus
Lysaphidus adelocarinus
Lysiphlebus utahensis
Praon artemisaphis
Trioxys bonnevillensis ‡
Oestlundia flava
Aphidius sp. ‡
Praon nr *unicum* ‡
Trioxys sp. ‡
Ovatus crataegarius
Aphidius ervi
Aphidius matricariae
Aphidius sp.
Ephedrus incompletus
Panaphis juglandis
Trioxys pallidus
Trioxys sp.
Periphyllus nr *brevispinosus*
Adialytus salicaphis
Periphyllus californiensis
Euaphidius setiger
Periphyllus lyropictus
Euaphidius setiger
Periphyllus sp.
Adialytus salicaphis
Euaphidius setiger
Phorodon humuli
Aphidius ervi ‡
Aphidius matricariae
Binodoxys conei
Diaeretiella rapae
Lysiphlebus testaceipes
Monoctonus campbellianus
Praon occidentale
Praon unicum
Pleotrichophorus nr *amsinckii*
Ephedrus californicus
Lysaphidus adelocarinus
Pleotrichophorus elongatus
Lysaphidus ramithyrus
Pleotrichophorus palmerae
Lysaphidus adelocarinus
Pleotrichophorus pseudoglandulosus
Ephedrus californicus ‡
Pleotrichophorus quadritichus
Praon artemiscola
Trioxys bonnevillensis ‡
Pleotrichophorus nr *wasatchi*
Lysaphidus ramithyrus
Pleotrichophorus spp.
Lysaphidus adelocarinus

- Lysaphidus rosaphidis* ‡
Praon artemisicola ‡
Praon sp.
Trioxys bonnevillensis ‡
Trioxys sp.
Prociphilus sp.
Aphidius sp.
Ephedrus clavicornis
Ephedrus sp.
Pseudoepameibaphis essigi
Lysaphidus adelocarinus
Trioxys bonnevillensis
Pseudoepameibaphis glauca
Lysaphidus adelocarinus
Pseudoepameibaphis tridentatae
Lysaphidus adelocarinus
Lysiphlebus testaceipes ‡
Lysiphlebus utahensis ‡
Praon artemisicola
Trioxys bonnevillensis
Pterocomma beulahense
Euaphidius cingulatus
Pterocomma bicolor
Euaphidius cingulatus
Pterocomma sanguiceps
Euaphidius cingulatus
Pterocomma smithiae
Euaphidius cingulatus
Pterocomma sp.
Euaphidius cingulatus
Lysiphlebus testaceipes
Rhopalomyzus loniceriae
Praon sp.
Rhopalosiphum cerasifoliae
Lysiphlebus testaceipes
Rhopalosiphum enigmae
Lysiphlebus testaceipes
Rhopalosiphum insertum
Aphidius matricariae
Diaeretiella rapae
Ephedrus californicus
Lysiphlebus testaceipes
Praon occidentale
Praon unicum
Rhopalosiphum maidis
Aphidius ervi
Diaeretiella rapae
Ephedrus californicus ‡
Lysiphlebus testaceipes
Praon unicum
Praon sp.
Rhopalosiphum nymphaeae
Diaeretellus palustris
Lysiphlebus testaceipes
Praon sp.
Rhopalosiphum padi
Aphidius avenaphis
Aphidius ervi
- Aphidius matricariae*
Aphidius sp.
Diaeretiella rapae
Ephedrus californicus ‡
Lysiphlebus testaceipes
Monoctonus washingtonensis
Praon gallicum ‡
Praon occidentale
Praon unicum
Praon yakimanum
Praon sp.
Schizaphis graminum
Lysiphlebus testaceipes
Sipha elegans
Adialytus ambiguus
Sipha sp.
Adialytus ambiguus
Sitobion avenae
Aphidius avenaphis
Aphidius ervi
Aphidius matricariae
Aphidius rhopalosiphii
Aphidius sp.
Diaeretiella rapae
Ephedrus californicus
Ephedrus clavicornis
Lysiphlebus testaceipes
Praon gallicum
Praon occidentale
Praon unicum
Praon yakimanum
Praon sp.
Sitobion fragariae
Aphidius sp.
Sitobion spp.
Aphidius polygonaphis
Ephedrus lacertosus
Lysiphlebus testaceipes
Therioaphis riehmii
Praon exoletum
Praon pequodorum ‡
Trioxys complanatus
Therioaphis trifolii
Praon exoletum
Therioaphis sp.
Praon exoletum
Trioxys complanatus
Tuberculatus columbiae
Lysiphlebus testaceipes
Uroleucon adenocaulonae
Aphidius ohioensis
Uroleucon nr arnesense
Aphidius ohioensis
Aphidius polygonaphis
Ephedrus californicus
Uroleucon cirsii
Lysiphlebus testaceipes
- Uroleucon nr epilobii*
Aphidius ohioensis
Uroleucon erigeronense
Aphidius ohioensis
Aphidius segmentatus ‡
Aphidius sp.
Ephedrus californicus
Praon occidentale
Praon nr occidentale
Uroleucon nr erigeronense
Aphidius ohioensis
Aphidius polygonaphis
Ephedrus californicus
Praon sp.
Uroleucon escalantii
Aphidius ohioensis
Uroleucon nr escalantii
Aphidius ohioensis
Uroleucon gigantiphagum
Aphidius ohioensis
Uroleucon ivae
Aphidius ohioensis
Aphidius polygonaphis
Aphidius sp.
Diaeretiella rapae
Ephedrus californicus
Praon pequodorum
Praon sp.
Uroleucon nr ivae
Praon nr occidentale
Uroleucon katonkae
Aphidius ohioensis
Ephedrus californicus
Uroleucon oliveri
Aphidius ohioensis
Uroleucon russellae
Aphidius ohioensis
Aphidius sp.
Binodoxys rhagii
Ephedrus californicus
Praon sp.
Uroleucon sonchi
Aphidius ohioensis
Aphidius sp.
Ephedrus californicus
Praon occidentale
Praon pequodorum
Praon sp.
Uroleucon suzannae
Aphidius ohioensis ‡
Praon nr occidentale ‡
Uroleucon zymozionense
Praon occidentale
Uroleucon spp.
Acanthocaudus caudacanthus
Aphidius ervi
Aphidius ohioensis
Aphidius sp.

Diaeretiella rapae
Ephedrus californicus
Lysiphlebus testaceipes
Praon occidentale

Praon unicum
Praon sp.
Utamphorophora humboldti
Aphidius sp.

Wahlgreniella nervata
Aphidius polygonaphis
Ephedrus californicus ‡
Praon occidentale ‡

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