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## Alaskan Heteroptera (Hemiptera): new records, associated data, and deletions

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### Abstract

Twenty-seven species of Heteroptera are recorded new to Alaska. Specimen data for ten additional species reported from Alaska without previously published data are also provided. Additionally, four species previously reported from the state are removed from the Alaska list of Heteroptera.

**Key words:** Heteroptera, Alaska, new records, associated data, deletions.

### Introduction

Lattin (2008) provided a catalogue of the Heteroptera reported from Alaska. This included 21 families, 93 genera and 181 species and subspecies that have been reported so far.

In the process of identifying the Heteroptera specimens in the University of Alaska Museum, and some other collections, an additional 27 species were found to occur in Alaska, an increase of 15%. Also, Maw *et al.* (2000) listed 10 species from the state that lack published specimen data. These records can now be documented.

Finally, in the process of checking all species of Heteroptera previously reported from Alaska, four species have evidently been erroneously recorded. These are removed from the Alaska list with explanations.

The systematic arrangement adopted herein follows that in Maw *et al.* (2000).

Museum abbreviations are as follows:

- CNC Canadian National Collection of Insects and Arthropods, Agriculture and Agri-Food Canada, Ottawa, Ontario (R.G. Footitt).
- UAM University of Alaska Museum Insect Collection, University of Alaska Fairbanks, Fairbanks, Alaska (D.S. Sikes).
- UBC University of British Columbia, Beaty Biodiversity Museum, Spencer Entomological Collection, Vancouver, British Columbia (K.M. Needham).

Locality data cited are exactly as on the specimen labels. No attempt has been made to standardize the data. Museum barcode identifiers for all specimens in the University of Alaska Museum Insect Collection are included. In addition, some specimens determined by Dr. M.D. Schwartz have been given numbers for inclusion in the Planetary Biodiversity Inventory (Schuh 2011): these are also included. Online data for the University of Alaska Museum specimens can be accessed at: <http://arctos.database.museum/saved/new-AK-Heteroptera>. These data are also shared with the Global Biodiversity Information Facility (GBIF).

## I. Species newly recorded from Alaska

### Infraorder DIPSOCOROMORPHA

#### Family CERATOCOMBIDAE

*Ceratocombus vagans* McAtee & Malloch

AK: 1 adult, Prince of Wales Is., Stoney Creek, 55.79726°N 133.1363°W, ±20 m, pitfall 2, 9–24.vii.2012 (Sarah Meierotto, Ian MacDougall) [UAM100343521].

### Infraorder NEPOMORPHA

#### Family CORIXIDAE

*Sigara conocephala* (Hungerford)

AK: 1♂, Fairbanks, Peat Pond, el. 175 m, 64.911560°N 147.93802°W, ± 40m, 26.vii.2009 (D.S. Sikes) [UAM100270518].

### Infraorder GERROMORPHA

#### Family GERRIDAE

*Gerris incognitus* Drake & Hottes

AK: 4♂6♀, Prince of Wales, Hatchery Creek, 55.92644°N 132.93938°W, ±20 m, small roadside ck., dip net, 17.v.2013 (Derek S. Sikes) [UAM100335994 -98, UAM100336001 -03, UAM100336005-06; 4♂, Sitka, Galankin Isl., 7 m el., 57.03011°N 135.32588°W, ±12m, pond shore, in pond, dip net, 18.viii.2011 (D. Sikes, K. LaBounty) [UAM100336535, UAM100336537 -39].

### Infraorder LEPTOPODOMORPHA

#### Family SALDIDAE

*Salda lugubris* (Say)

AK: 1♂, Norutak Lake, 229m, 66.79609°N 154.27638°W, ±19 m, sandy beach & under beach rocks, 23.vi.2010 (D.S. Sikes) [UAM100282761].

*Saldula nigrita* (Parshley)

AK: 1♂, Beaver Creek, White Mountains, el. 473 m, 65.39245°N 147.30821°W, ±7 m, gravel bar, creek shore, sandy, *Salix*, 3.viii.2007 (D.S. Sikes) [UAM100019312, UAM100019239]; 1♂, Dalton Hwy. mi 135, Prospect Creek, el. 265 m, 66.79376°N 150.73164°W, ±24 m, gravel creek shore, under rocks, 31.v.2008 (D.S. Sikes) [UAM100029826]; 1♂, Unalakleet River, DC9669, 63.9462°N 160.097418°W, ±13 m, pitfall trap, vegetated sandbar, 13.vii.2010 (D. Collet) [UAM100274603].

### Infraorder CIMICOMORPHA

#### Family ANTHOCORIDAE

*Tetraphleps furvus* Van Duzee

AK: 2♀, Fairbanks, Univ. AK, campus, el. 180 m, 64.85998°N 147.84118°W, ±5 m, Lindgren, 14-21.iv.2010 (D.S. Sikes, J. Stockbridge) [UAM100270774, UAM100270577]; 2♂1♀, Nogahabara Dunes, Spruce Is., el. 155 m, 65.66221°N 157.47039°W, ±13 m, 1600–1630, beat trees, 12.vii.2010 (J.A. Slowik) [UAM100307198, UAM100307175, UAM100307133].

## Family CIMICIDAE

### *Cimex lectularius* L.

AK: 1 adult, west of Fairbanks, indoors, dry cabin, 64.82565°N 148.03148°W, ±8 km, 21.ix.2013 (K. Burbage, D.S. Sikes) [UAM100058097]; 2 adults, 6 nymphs, Fairbanks, 24<sup>th</sup> Ave. indoors, 64.82567°N 147.7274°W, ±750 m, 29.vii.2013 [UAM100055651]; 1 adult, Fairbanks, Irving I, UAF campus, basement, 64.85933°N 147.84621°W, ±100 m 20.xii.2012 [244002]; 1 adult, Fairbanks, College Rd. el. 131–151 m, 64.86286°N 147.77016°W, ±2.5 km 31.x.2008 (C. Turner) [UAM100047333].

### *Cimex pilosellus* (Horváth)

AK: 1♂, Juneau, Backloop Rd. *Ex. Myotis lucifugus* female, 58.393539°N 134.625122°W ±10 m, 9.v.2014 (K. Blejwas, R. Armstrong) [UAM100115997]

### *Oeciacus vicarius* Horvth

AK: 1 adult, Cordova, el. 10–35 m, 60.5365°N 145.7017°W ±10 km, 14.xii.2010 (L. Krichen) [UAM100049285]; 25 adults, Fairbanks, 1235 Kennicott Ave. indoors, el. 134 m, 64.83513°N 147.74591°W, ±200m 10.i.2007 (C. Turner) [UAM100033107]; 3 adults, Fairbanks, University of Alaska, Gruening Building, 8th floor, el. 160 m, 64.85664°N 147.82167°W, ±30 m, 24.v.2012 (K. Adams) [UAM100111876].

## Family NABIDAE

### *Nabis americoferus* Carayon

AK: 2♂, Fairbanks, Creamer's Field, el. 141 m, 64.86711°N 147.72794°W, ±54m, meadow grasses, forbs, sweep, 31.vii.2010 (D.S. Sikes) [UAM100272568, UAM100272564].

## Family MIRIDAE

### Subfamily BRYOCORINAE

#### Tribe DICYPHINI

### *Tupiocoris confusus* (Kelton)

AK: 1♂, Horner Hot Springs, el. 137 m, 64.92351°N 154.83914°W, ±4 m, by spring, sweep, 15.vii.2010 (J.A. Slowik) [UAM100322099] (AMNH\_PBI 00397987).

### Subfamily MIRINAE

#### Tribe MIRINI

### *Adelphocoris rapidus* (Say)

AK: 1♀, Arctic NWR, Coleen River—15 mi NW Porcupine River, 67.77621°N, 142.39573°W, ±981 m, 25–28.vii.2001 (J.J. Kruse) [UAM100035224]; 1♀, Kanuti NWR, “Clawanmenka SE, 66.48935°N 151.271133°W, ±50 m, grid 37156, Malaise & sweep, 15–16.vii.2008 (L. Saperstein) [UAM100248194]; 1♂1♀, North of Galena, el. 56 m, 64.74835°N 156.94193°W, ±24 m, marsh, sweep, 10.vii.2010 (J.A. Slowik) [UAM100327168, UAM100327171].

*Pappus piceicola* (Kelton)

AK: 1♂, Lowell Pt., S. of Seward, el. 1–30 m, 60.06508°N 149.44261°W, ±500 m, rocks on beach, above tide line, 15.viii.2010 (S.K. Ridling) [UAM100328973] (AMNH\_PBI 00397940).

**Tribe RESTHENINI**

*Prepops nigripilus* (Knight)

AK: 1♀, Fairbanks, el. 131–151 m, 64.83771°N 147.75938°W, ±25 km, *Alnus* sp., sweep, 20.vii.2006 (D.M. Collet) [UAM100274942]; 1♀, Kanuti NWR, el. 180m, 66.20544°N 152.19774°W, ±54 m, *Equisetum*, grasses, lake shore, sweep, 22.vi.2010 (D.S. Sikes) [UAM100281714]; 1♀, Kanuti NWR, Dune Lake, el. 172m, 66.21912°N 152.29062°W, ±104 m, ancient dune, overgrown, sweep, 22.vi.2010 (D.S. Sikes) [UAM100282030]; 1♂, Palmer, 61.56603°N, 149.25049°W, ±1 km, 27.vii.1954 (R.H. Washburn) [UAM100343512].

**Subfamily ORTHOTYLINAE**

**Tribe ORTHOTYLINI**

*Orthotylus alni* Knight

AK: 1♀, Chicken, *Betula glandulosa*, 22.vii.1982 (L.A. Kelton) [CNC] (AMNH\_PBI 00114687); 1♀, Homer, East Hill Rd., el. 330 m, 59.66391°N 151.52012°W, ±1.36 km, *S. barclayi*, 4.viii.2004 (D.M. Collet, 6544) [UAM100275413] (AMNH\_PBI 00397970); 1♂, Lower Tonsina, 15.vii.1953 (W.C.F.) [UAM100342911] (AMNH\_PBI 00397968); 1♀, Richardson Hwy. mi 250, 27.vii.1951 (W.R.M. Mason) [CNC] (AMNH\_PBI 00114688).

*Orthotylus candidatus* Van Duzee

AK: 1♀, Horner Hot Springs, el. 137 m, 64.92351°N 154.83914°W, ±4 m, by spring, sweep, 15.vii.2010 (J.A. Slowik) [UAM100322041] (AMNH\_PBI 00398002).

**Subfamily PHYLINAE**

**Tribe PHYLINI**

*Atractotomus cooperi* Stonedahl

AK: 6♂, Haines, Flower Mtn., el. 1116 m, 59.37780°N 136.32814°W, ±1 km, on snow fields, 15–19.vii.2010 (D.S. Sikes) [UAM100268960, UAM100269047, UAM100269155, UAM100269157, UAM100269166, UAM100269169] (AMNH\_PBI 00398014-19).

**Infraorder PENTATOMOMORPHA**

**Family ARADIDAE**

*Aradus borealis* Heidemann

AK: 1♀, Fairbanks, 531a Narwhale Trail, el. 166 m, 64.88281°N, 147.78452°W, ±104 m, spruce forest, pitfall, 2–7.vi.2009 (J.A. Slowik) [UAM100043050].

*Aradus quadrilineatus* Say

AK: 1♀, Fairbanks, 930 Fitz Ct., el. 280 m, 64.901296°N 147.528609°W, ±15 m, 19–20.v.2007 (D.S. Sikes) [UAM100031359]; 1♀, *id.*, 24.vi.2007 (D.S. Sikes) [UAM100031089]; 1♀, *id.*, 64.901137°N 147.527741°W,

±5m, woodpile, 30.viii.2007 (D.S. Sikes) [UAM100019326]; 1♀, Fairbanks, UAF Farm, el. 165 m, 64.8568°N 147.84261°W, ±1 km, *Picea/Betula*, *Populus* stand litter, dry pitfall, 30.vii.2010 (B. Fleshman) [UAM100287661].

### Family GEOCORIDAE

*Geocoris discopterus* Stål

AK: 1♂1♀, Selawik NWR, el. 37m, 66.85873°N 158.16618°W, ±502 m, open sand dunes, 24.vi.2010 (D.S. Sikes, E. Sieh) [UAM100283471, UAM100282893].

### Family ORSILLIDAE

*Nysius angustatus* Uhler

AK: 1♂, Donnelly Dome, Richardson Hwy., pond, 17.vii.1987 (S.G. Cannings) [UBC]; 2♂1♀, Dot L., 17.vii.1987 (S.G. Cannings) [UBC]; 6♂8♀, Fairbanks, Bonanza Creek LTER, el. 142 m, 64.704°N 148.30188°W, ±57 m, relic steppe, 22.viii.2008 (D.S. Sikes) [UAM100037832, UAM100037833, UAM100037801, UAM100037802, UAM100037806, UAM100037807, UAM100037808, UAM100037810, UAM100037812, UAM100037813, UAM100037823, UAM100037872, UAM100037797, UAM100037906 ]; 2♂3♀, Tanana River, 64°20'N 14°651'W, 19.vii.1985 (S.G. Cannings) [UBC].

### Family OXYCARENIDAE

*Crophius disconotus* (Say)

AK: 3♂1♀, Fairbanks, Bonanza Creek LTER, el. 142m, 64.704°N 148.30188°W, ±57 m, relic steppe, 22.viii.2008 (D.S. Sikes) [UAM100037926, UAM100037937, UAM100037915, UAM100037977].

### Family RHYPAROCHROMIDAE

*Plinthisus americanus* Van Duzee

AK: 1♂, Fairbanks, el. 1257ft., 64.9181°N 147.71997°W, ±200 ft, S-facing hill, forest edge, *Pop. trem.*, pitfall, 17–24.vii.2007 (B. Mortensen) [UAM100327092]; 1♀, Fairbanks, Chena Ridge Rd., el. 197 m, 64.844152°N 147.894891°W, ±20 m, *Populus*, *Betula*, Berlese, 20.viii.2009 (D.S. Sikes) [UAM100036203]; 1♂, Fairbanks, UAF, West ridge, 500–600ft., 64.8606°N 147.84908°W, ±100 m, in woods near ski trail, in leaf litter, hand collected, 28.viii.2006 (B. Fleshman) [UAM100343523].

*Trapezonotus arenarius* (Linnaeus)

AK: 2♀, Fairbanks, Creamer's Field, el. 141 m, 64.86711°N 147.72794°W, ±54 m, open meadow and forest edge, 31.vii.2010 (P.B. Knight) [UAM100269407, UAM100269495 ]; 1♀, Fairbanks, 930 Fitz Ct., el. 280 m, 64.901296°N 147.528609°W, ±15 m, yellow pan trap, 23–28.v.2007 (D.S. Sikes) [UAM100031065]; 1♂, *id.*, 64.90142°N 147.5282°W, ±15 m, 42°F, snow, sun, yard, 16.iv.2011 (D.S. Sikes) [UAM100322830]; 1♂1♀, *id.*, 64.90130°N 147.52861°W, ±15 m, misc. yard, fireweed, grasses, 1.v.–1.ix.2010 (D.S. Sikes) [UAM100287056, UAM100287232 ]; 1♀, Sheenjok R., shrubby ridge, Trans. 1–5, 14.vi.2000 (A. Johnson) [UAM100035324]; 1♂, Two Rivers, el. 185 m, 64.86980°N 146.94193°W, ±5 m, hand coll., 15.v.–25.vi.2011 (S.L. Meierotto) [UAM100324017]; 1♂, Unalakleet, 9.viii.1961 (R. Madge) [CNC].

### Family PENTATOMIDAE

*Brochymena quadripunctata* (Fabricius)

AK: 1♂, College, 29.xi.1971 [UAM100343515].

*Codophila remota* (Horvath)

AK: 1♂, Sheenjek River, Camp 2000, on aufies, 28.vi.2000 (T. Omtzigt) [UAM100012732].

*Sciocoris microphthalmus* Flor

AK: 3♂3♀, Fairbanks, 930 Fitz Ct., el. 280 m, 64.90142°N 147.5282°W, ±15 m, 42°F, snow, sun, yard, 16.iv.2011 (D.S. Sikes) [UAM100323640, UAM100323645, UAM100323700, UAM100323637, UAM100322837, UAM100323661]; 1♂1♀, Horner Hot Springs, East Hill, el. 160 m, 64.92369°N 154.83885°W, ±3 m, big log, 15.vii.2010 (J.A. Slowik) [UAM100327055, UAM100326978].

**II. Data on species reported from Alaska by Maw *et al.* (2000).**

**Infraorder CIMICOMORPHA**

**Family MIRIDAE**

**Subfamily BRYOCORINAE**

**Tribe DICYPHINI**

*Dicyphus discrepans* Knight

AK: 1♂, Fairbanks, 16.iv.1952 (W.R. Mason) [CNC]; 3♂, Fairbanks, Bonanza Creek LTER, el. 142 m, 64.704°N 148.30188°W, ±57 m, relic steppe, 22.viii.2008 (D.S. Sikes) [UAM100037897, UAM100037918, UAM100038015]; 1♂, Richardson Hwy. mi 315, 7.vi.1951 (W.R.M. Mason) [CNC]; 1♀, Tonsina, 31.v.1954 (W.C.F.) [UAM100022951] (AMNH\_PBI 00397962) [Previously determined as *D. hesperus* Kgt. by Froeschner 1961].

**Subfamily MIRINAE**

**Tribe MIRINI**

*Agnocoris rubicundus* (Fallén)

AK: 1♀, Big Delta, 20.vii.1951 (Mason & McGillis) [CNC]; 2♀, Fairbanks, 448', 4.viii.1951 (H.C. Severin) [CNC]; 1♀, Fairbanks, 25.vi.1952 (B. Hartley) [CNC]; 9♂6♀, Tok, *Salix*, 22.vii.1982 (L.A. Kelton) [CNC]; 4♂2♀, Yukon R., 3 mi N of Galena, el. 54m, 64.72025°N 156.75622°W, ±83 m, 1030–1100, shoreline, under logs, sweep, 11.vii.2010 (J.A. Slowik) [UAM100306270, UAM100307162, UAM100307128, UAM100307193, UAM100307204, UAM100307253] (AMNH\_PBI 00306270, 003307128, 00307193, 00307204, 00307253, 00397991).

*Dichrooscytus latifrons* Knight

AK: 2♂, Chicken, on spruce, 22.vii.1982 (L.A. Kelton) [CNC]; 1♀, Richardson Hwy. mi 250, 27.vii.1951 (W.R.M. Mason) [CNC].

**Subfamily ORTHOTYLINAE**

*Blepharidopterus provancheri* (Burque)

AK: 2♀, Nogahabara Dunes, Koyukuk NWR, el. 155m, 65.65846°N 157.49608°W, ±22m, willow, sweep, 13.vi.2010 (J.A. Slowik) [UAM100327199, UAM100327208] (AMNH\_PBI 00397995-6); 1♂1♀, Tok, on *Salix*, 22.vii.1982 (L.A. Kelton) [CNC].

*Lopidea dakota* Knight

AK: 1♀, Arctic NWR, Coleen River—15 mi NW Porcupine River, 25–28.vii.2001 (J.J. Kruse) [UAM100035256]; 1♀, Big Delta, 14.vii.1951 (J.R. McGillis) [CNC]; 2♂, Shaw Cr., Richardson Hwy. mi 289, 11.vii.1951 (Mason & McGillis) [CNC]; 1♂3♀, Tanana River, 64°20'N 146°51'W, 19.vii.1985 (S.G. Cannings) [UBC]; 1♀, Tok, 22.vii.1982 (L.A. Kelton) [CNC] [Previously determined as *L. nigridea serica* Knight by Scudder 1999].

*Orthotylus ute* Knight

AK: 1♂, Haines, *Alnus tenuifolia*, 4.viii.1961 (FIS 61-7331-26) [CNC] (AMNH\_PBI 00278392); 2♂, Seward, 10.viii.1951 (W.J. Brown) [CNC] (AMNH\_PBI 00278390-91).

**Subfamily PHYLINAE**

*Psallus falleni* Reuter

AK: 1♂, Fairbanks, 930 Fitz Court, 218 m, 64°51'4.43"N 147°31'42.10"W, ±30 m, 30 m, ex. small stand of *Betula* and *Populus*, flight intercept trap, 26.viii.–10.ix.2008 (D.S. Sikes) [UAM100344638] (AMNH\_PBI 00397944).

**Family TINGIDAE**

*Corythucha marmorata* (Uhler)

AK: 1♀, Tok, 17 mi SW, 30.vi.1951 (G. Lewis) [CNC].

*Galeatus spinifrons* (Fallén)

AK: 1♂, Unalakleet, 10.vii.1961 (R. Madge) [CNC].

**Family PENTATOMIDAE**

*Zicrona caerulea* (Linnaeus)

AK: 1♀, Moose Pass, Kenai Pen., 1300', 2.vii.1951 (W.J. Brown) [CNC]; 1♀, Sheenjek River, Camp 2000, on aufies, 27.vi.2000 (T. Omtzigt) [UAM100037412].

**III. Species removed from the list of Alaska Heteroptera**

**Infraorder NEPOMORPHA**

**Family CORIXIDAE**

*Callicorixa praeusta praeusta* (Fieber)

Fieber (1848) recorded *C. praeusta* from Sitka and Unalaska, and Heidemann (1900) reported this species from Kodiak and Sitka. However, Hungerford (1948) noted that the Fieber (1848) records must be based on misidentified specimens that are probably *C. alaskensis* Hungerford. Hungerford (1948) listed the Fieber (1848) and Heidemann (1900) records under *C. alaskensis* and in fact listed specimens that he had examined from Kodiak (10.ix.1919 (Jas. S. Hine)) and Unalaska (26.viii.1937 (V.B. Scheffer)). Sailer (1952) also noted that Hungerford (1948) had shown that the earlier records of *C. praeusta* from Alaska actually referred to *C. alaskensis*. This was also noted by Polhemus *et al.* (1988). Hence, the Kiritshenko (1960) and Lattin (2008) reports of *C. praeusta* from Alaska must be disregarded, and this species removed from the list of Alaska Heteroptera.

## Infraorder CIMICOMORPHA

### Family MIRIDAE

#### *Lopidea nigridea serica* Knight

Reported from Alaska by Maw *et al.* (2000), based on 1 ♀, with data Tok, 22.vii.1982 (L.A. Kelton) [CNC]. Dr. M.D. Schwartz has determined that this specimen is actually *L. dakota* Knight (see above). Hence, *Lopidea nigridea serica* should be deleted from the list of Alaska Heteroptera.

#### *Trigonotylus americanus* Carvalho

Recorded from Hope by Scudder (1997). However, a male specimen with data AK, Hope, Kenai Pen., 15.vii.1951 (W.J. Brown) [CNC] has recently been dissected by Dr. M.D. Schwartz and determined as *T. viridis* (Provancher). A female with the same data is evidently *T. caelestialium* (Kirkaldy). Hence, *T. americanus* should be removed from the list of Alaska Heteroptera.

## Infraorder PENTATOMOMORPHA

### Family RHYPAROCHROMIDAE

#### *Perigenes constrictus* (Say)

Originally recorded from Alaska by Van Duzee (1919) as *Ligyrocoris constrictus* Say, the female specimen involved with data Alaska, Ketchikan, 10.ix.1916 (Canadian Arctic Expedition) [CNC] is actually *Ligyrocoris sylvestris* (Linnaeus). Hence, the reports of *Perigenes constrictus* (Say) from Alaska by Slater (1964), Ashlock & Slater (1988), Maw *et al.* (2000) and Lattin (2008) are in error. *Perigenes constrictus* is an eastern North American species that does not occur in Alaska, and should be removed from the list of Alaska Heteroptera.

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