

Two alien Heteroptera (Hemiptera) new to Canada

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ABSTRACT

This paper reports two alien species of Heteroptera (Hemiptera), *Rhopalus tigrinus* (Schilling) (Rhopalidae) and *Plinthisus brevipennis* (Latreille) (Rhyparochromidae) new to Canada. The former is now known from British Columbia, the latter from British Columbia and Ontario.

Key Words: Canada, two new alien Heteroptera species

INTRODUCTION

The distribution, spread, and adaptations of 81 alien heteropterous species recorded in Canada was summarized by Scudder and Footitt (2006). Recent research has revealed two additional alien species in the Canadian fauna. These are reported below, with Museum abbreviations as follows:

CNC: Canadian National Collection of

Insects, Agriculture and Agri-Food Canada, Ottawa, ON.

RBCM: Royal British Columbia Museum, Victoria, BC.

USNM: United States National Museum of Natural History, Smithsonian Institution, Washington, DC.

ALIEN HETEROPTERA NEW TO CANADA

FAMILY RHOPALIDAE

Rhopalus tigrinus (Schilling)

Rhopalus tigrinus was first reported from North America by Hoebeke and Wheeler (1982) with records from New Jersey, New York and Pennsylvania. Known breeding host plants are members of the Brassicaceae (= Cruciferae). Subsequently, Wheeler and Hoebeke (1999) recorded *R. tigrinus* from Arizona, California, Colorado, Nebraska, Oregon and Wyoming. Hoebeke and Wheeler (1982) provide a key to separate this alien Eurasian species from the other rhopalids known to occur in eastern North America, and give a dorsal view photograph.

The following characteristics will serve to identify this species: Dorsal coloration yellowish or greyish with black markings on head, anterior margin of pronotum, antero-lateral corners of scutellum, and spots

on veins of hemelytra; abdominal dorsum black with yellow markings at apex; connexivum generally yellow, but sometimes with black spots posteriorly. Head short, more than 1.5 times as broad as long; rostrum short, not or barely extending to metasternum; pronotum without anterior collar; lateral margins of pronotum straight or slightly sinuate, without a distinct notch behind anterior margin; pronotal cicatrices not ending in a loop; pronotum anterior to cicatrices not smooth or polished, but always with numerous coarse punctures; metapleuron distinctly divided into episternum and epimeron; posterior margin of metasternum deeply concave, with dorso-lateral angle distinctly produced caudad; metathoracic scent gland opening conspicuous. Total length (♂ 5.9-6.6 mm, ♀ 6.1-7.1 mm).

This species is now known to occur

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quite commonly in the southern interior of British Columbia. The species was previously reported from the province as *Liorhyssus hyalinatus* (Fabricius) by Blades and Maier (1996), based upon my misidentification. Canadian material has been compared with a colour photograph of a specimen from the USA kindly provided by Dr. T.J. Henry.

Material examined.

BC: 3♀, Barnhartvale, NW area, 50° 38'47"N 120°09'14"W, 23.vi.2003 (G.G.E. Scudder) [CNC, UBC]; 1♂, Boston Bar, 23.vi.1996 (G.G.E. Scudder) [CNC]; 2♂ 1♀, Chopaka, 27.viii.1986 (G.G.E. Scudder) [CNC, UBC]; 1♂, Chopaka, SATH habitat, BGxh1, SN, CH11, 26.v.1995, (J. Jarrett) [UBC]; 1♀, *id.*, CH 15, 19.vi.1995 (J. Jarrett) [UBC]; 1♀, Chopaka, BGxh1, SN, pitfall trap CH1-1, 23.vi-28.vii.1997 (J. Jarrett) [UBC]; 1♀, *id.*, CH1-3, 23.vi-28.vii.1997 (J. Jarrett) [UBC]; 1♂, *id.*, CH5-1, 23.vi-28.vii.1997 (J. Jarrett) [UBC]; 1♀, *id.*, CH1-3, 28.vii.-18.viii.1997 (J. Jarrett) [UBC]; 1♀, *id.*, CH2-1, 28.vii.-18.viii.1997 (J. Jarrett) [UBC]; 1♀, *id.*, CH5-4, 28.vii.-18.viii.1997 (J. Jarrett) [UBC]; 2♀, Chopaka, Mariposa Conserv. Area, 3.vii.1996 (G.G.E. Scudder) [CNC]; 1♀, Fairview, White L., BGxh1, SWm, 7.vi.1996 (G.G.E. Scudder) [CNC]; 1♀, Fairview, White L., SATH habitat, BGxh1, SWm, pan trap WL P-1, 4.vii.-11.vii.1995 (J. Jarrett) [UBC]; 1♀, *id.*, WL P-2, 13.vi.-20.vi.1995 (J. Jarrett) [UBC]; 1♂, Fairview, White L., SATH habitat, BGxh1, SWm, sweeping 9, 11.vii.1995 (J. Jarrett) [UBC]; 1♂, Hedley, 5 km W, 15.vi.1990 (G.G.E. Scudder) [CNC]; 1♀, Hedley, 7 km E on *Clematis*, 10.ix.1995 (G.G.E. Scudder) [CNC]; 4♂ 12♀, Kalamalka Lake Prov. Pk., 24.viii.1989 (G.G.E. Scudder) [CNC, UBC, USNM]; 1♀, Keremeos, 10.ix.1995 (G.G.E. Scudder) [CNC]; 2♀, Kilpoola L., 31.v.2006 (G.G.E. Scudder) [CNC]; 2♂, Merritt, 35 km S, 14.viii.1988 (G.G.E. Scudder) [CNC]; 1♀, Nicola, 1.ix.1993 (G.G.E. Scudder) [CNC]; 1♀, Okanagan Falls, Mandalay Ranch, McLean Cr., 49° 20'52"N 119°31'29"W, collected on *Chenopodium album*, 31.viii.2004 (G.G.E.

Scudder) [CNC]; 1♀, Okanagan Falls, Nature Trust Land, 49°18'54"N 119°31'33"W, 20.v.2004 (G.G.E. Scudder) [CNC]; 3♂ 3♀, Okanagan Falls, Vaseux Ranch, 49° 18'55"N 119°31'34"W, on *Sisymbrium altissimum* L. (Tumble mustard), 24.v.2004 (G.G.E. Scudder) [CNC, UBC]; 1♂, Okanagan Falls, Vaseux Ranch, 49° 18'55"N 119°31'34"W, 24.v.2004 (G.G.E. Scudder) [CNC]; 1♂ 1♀, *id.*, 20.viii.2004 (G.G.E. Scudder) [CNC]; 7♂ 9♀, Osoyoos, 29.viii.1988 (G.G.E. Scudder) [CNC, UBC, USNM]; 2♂ 3♀, *id.*, 23.viii.1989 (G.G.E. Scudder) [CNC]; 2♂, Osoyoos, Anarchist Mt., 26.viii.1989 (G.G.E. Scudder) [CNC]; 1♀, Osoyoos, Desert Centre, BGxh1, 8PD/2AN:P, pitfall trap DS3-1, 22.vii.-20.viii.1999 (G.G.E. Scudder) [CNC]; 1♀, Osoyoos, East Bench, 4.vi.1992 (G.G.E. Scudder) [CNC]; 1♀, *id.*, 15.ix.2000 (G.G.E. Scudder) [CNC]; 1♀, *id.*, 15.viii.2006 (G.G.E. Scudder) [CNC]; 1♀, *id.*, vane trap, 17.v.-12.vii.2007 (G.G.E. Scudder) [CNC]; 1♀, Osoyoos, Ecol. Res., 14.vi.1987 (S.G. Cannings) [UBC]; 1♀, *id.*, 8.v.1994 (G.G.E. Scudder) [CNC]; 1♀, Osoyoos, Haynes E.R., BGxh1, AN recovery after fire, pitfall trap B2, 8.vi.-9.vii.1994 (G.G.E. Scudder) [CNC]; 3♀, *id.*, E2, 26.v.-13.vii.1995 (G.G.E. Scudder) [CNC]; 1♀, *id.*, A1, 9.viii.-20.ix.1996 (G.G.E. Scudder) [CNC]; 1♂ 2♀, Osoyoos, Haynes E.R., BGxh1, AN recovery after fire, 9.viii.1995 (G.G.E. Scudder) [CNC]; 1♂ 1♀, *id.*, 23.v.1996 (G.G.E. Scudder) [CNC]; 1♀, Osoyoos, Haynes E.R., collected on *Sporobolus cryptandrus* (Torr.) Gray, 2.ix.1993 (G.G.E. Scudder) [CNC]; 1♀, *id.*, 5.ix.1993 (G.G.E. Scudder) [CNC]; 1♂ 1♀, *id.*, sweeping *Sisymbrium loeselli* L., 8.v.1994 (G.G.E. Scudder) [CNC]; 3♂ 3♀, *id.*, sweeping *Bromus tectorum* L., 8.v.1994 (G.G.E. Scudder) [CNC, UBC]; 2♂ 2♀, *id.*, sweeping *Stipa comata* T.&R., 2.vi.1994 (G.G.E. Scudder) [CNC]; 1♀, *id.*, sweeping *Sisymbrium loeselli* L., 2.vi.1994 (G.G.E. Scudder) [CNC]; 1♂, Osoyoos, Haynes Lease Eco. Reserve, "Throne area", 27.vii.1988 (C.S. Guppy) [RBCM]; 1♀, Osoyoos, nr. Haynes E.R., 28.ix.2001 (G.G.E. Scudder) [CNC]; 6♂ 7♀, Osoyoos,

8 km N, near canal, 49°05'32"N 119°32'18"W, collected on *Berteroa incana* (L.) DC (Brassicaceae), 11.ix.1995 (G.G.E. Scudder) [CNC, UBC]; 1♀, Osoyoos, 8 km N, collected on *Rosa*, 21.ix.1995 (G.G.E. Scudder) [CNC]; 1♀, Osoyoos, Mt. Kobau, 1865 m, on *Artemisia tridentata*, 27.viii.1988 (G.G.E. Scudder) [CNC]; 1♀, Osoyoos, Mt. Kobau, 560 m, LM3, 8-13.vii.1991 (D. Blades, C. Maier) [RBCM]; 1♀, Osoyoos, Mt. Kobau Rd., PPxh1, WAw, pitfall trap K1B-4, 23.vi.-28.vii.1997 (J. Jarrett) [UBC]; 1♀, Osoyoos, Mt. Kobau Rd., km 1.8, 815 m, PPxh1, 4WAw:F/4WSw:F/2SS:F, 28.vii.1997 (G.G.E. Scudder) [CNC]; 1♀, Penticton, 5.ix.1982 (L. Vasington) [UBC]; 1♂, Penticton, Sage Mesa subdiv., grassland, 30.iv.1989 (R.A. Cannings) [RBCM]; 1♀, Penticton, West Bench, malaise, 29.iv.1989 (R.A. Cannings) [RBCM]; 1♂, Vaseux Cr., 'Kennedy bench', 49°16'N 119°30'W, *Purshia* assoc., BGxh1, AN, pitfall trap Z2-2, 12.viii.-6.ix.1995 (G.G.E. Scudder) [CNC]; 1♂ 1♀, Walhachin, 23.vi.2003 (G.G.E. Scudder) [CNC]; 3♀, White L., Observatory Jct., on *Sisymbrium altissimum* L., (Tumble mustard), 8.vi.2004 (G.G.E. Scudder) [CNC, UBC]; 1♀, White L., White L. Ranch, 49°18'N 119°40'W, *Lepidium perfoliatum* L. (Clasping peppergrass), 9.vi.2004 (G.G.E. Scudder) [CNC].

FAMILY RHYPAROCHROMIDAE

Plinthisus brevipennis (Latreille)

This alien European seed bug was first

reported from North America by Asquith and Lattin (1991), who recorded the species from Oregon and Washington, with the first collection from near Seattle in 1964. Asquith and Lattin (1991) provide a fine illustration of this species, and note that it is easily distinguished from the three native western species of *Plinthisus* by its size (total length ♂ 2.45-3.00 mm, ♀ 2.98-3.20 mm), and the width of the fore femur, which in *P. brevipennis* is equal to, or greater than, the width of the vertex.

Canadian material has been compared with specimens of *P. brevipennis* in my own collection, collected by me in Jersey, Channel Islands in 1957. *P. brevipennis* is here reported new to Canada, with specimens collected in British Columbia and Ontario.

Material examined.

BC: 1♀, Victoria, Mary Hill, Site 1, 48°20.6'N 123°33.0'W, low broom, grasses, pitfall trap 5, sample MH1PSA, 05-14.ix.2003 (A. Behennah, I. Behennah) [RBCM]; 1♀, *id.*, 21-28.ix.2003 (A. Behennah, I. Behennah) [RBCM]; 2♀, S. Gulf Islands, Tumbo Island, CDF, 48°47.602'N 123°03.143'W, pitfall trap, 8.vii.2004 (J. Heron, S. Lavallee, R. Bennett) [RBCM]; 1♂, *id.*, 48°47.650'N 123°03.721'W, [RBCM]; 1♀, *id.*, 48°47.754'N 123°05.466'W, [RBCM].

ON: 2♀, Rondeau Pk., on sand beach, edge oak for., Int. trap 5, 14.vi.-2.vii.1985 (L. LeSage & D.M. Wood) [CNC].

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REFERENCES

- Asquith, A. and J.D. Lattin. 1991. A review of the introduced Lygaeidae of the Pacific Northwest, including the newly discovered *Plinthisus brevipennis* (Latreille) (Heteroptera: Lygaeidae). *Pan-Pacific Entomologist* 67: 258-271.
- Blades, D.C.A. and C.W. Maier. 1996. A survey of grassland and Montane arthropods collected in the southern Okanagan region of British Columbia. *Journal of the Entomological Society of British Colum-*

- bia 93: 49-73.
- Hoebcke, E.R. and A.G. Wheeler, Jr., 1982. *Rhopalus (Brachycarenum) tigrinus*, recently established in North America, with a key to the genera and species of Rhopalidae in eastern North America (Hemiptera: Heteroptera). Proceedings of the Entomological Society of Washington 84: 213-224.
- Scudder, G.G.E. and R.G. Foottit. 2006. Alien true bugs (Hemiptera: Heteroptera) in Canada: composition and adaptations. The Canadian Entomologist 138: 24-51.
- Wheeler, A.G., Jr. and E.R. Hoebcke. 1999. *Rhopalus (Brachycarenum) tigrinus* (Hemiptera: Rhopalidae): first western U.S. records of a Eurasian scentless plant bug. Entomological News 110: 92-96.