

## NOTES ON A COLLECTION OF HEMIPTERA

By W. Downes, Victoria, B.C.

With a view to extending the hitherto very limited list of Heteroptera and Homoptera known to occur in British Columbia, considerable collecting has been done by the writer during the past season, principally in the neighbourhood of Victoria, and the resulting material has been submitted to specialists in the order for identification. For determinations I am indebted to the following gentlemen: Heteroptera, Dr. H. M. Parshley; Cicadidae, Mr. W. T. Davis, N.Y.; Membracidae, Dr. Funkhouser; other Homoptera, Dr. E. D. Ball.

While the collection is necessarily as yet a very limited one, a good start on the list of British Columbia Hemiptera has been made, and some additional light has been thrown on the knowledge of the distribution of many of the species. The majority of species were taken in the neighbourhood of Victoria, or on the Saanich Peninsula to the north of the city, especially near Royal Oak, and a few species were collected during brief visits to the Okanagan in the neighbourhood of Vernon and Armstrong.

By far the largest number of species collected belong to the Heteroptera, and as these have not yet been fully examined by Dr. Parshley, their consideration will have to be left until later, and the present brief paper will deal with the Homoptera. Besides those species collected by myself, a few have been received from R. C. Treherne, Vernon, B.C., and M. H. Ruhman, Vernon, B.C.

## List of Species

## FAMILY CICADIDAE:

*Okanagana occidentalis* Walk. Armstrong, July 12, 1917; Saanich District, June 18, 1918. (W. D.) This is the commonest Cicada occurring in British Columbia.

*Platypedia areolata* Uhl. Nelson, May 6, 1918 (R. C. T.); Armstrong, July, 1914 (W. D.). One more species was taken but is not yet identified.

## FAMILY CERCOPIIDAE:

*Aphrophora irrorata* Ball. Saanich, October 25, 1917 (W. D.).

*Aphrophora permutata* Uhl. Vernon, June 24, 1917 (R. C. T.).

*Philaenus leucophthalmus* Linn. Saanich, August 3, 1918 (W. D.).

*P. leucophthalmus* var. *astulatus* Fall. June 18, 1918 (W. D.).

*P. leucophthalmus* var. *pallidus*. June 18, 1918 (W. D.).

*P. leucophthalmus* var. *lineatus*. June 18, 1918 (W. D.). This cercopid is extremely common everywhere, the three varieties noted above being more usual than the type form but they all intergrade.

*Clastoptera obtusa* Say. August 13, 1918 (W.D.), on alder.

**FAMILY MEMBRACIDAE:**

**Ceresa basalis** Walk. Saanich, October 8, 1917; August 14, 1917 (W. D.). A common species. On willow and goldenrod.

**Stictocephala pacifica** Van D. Saanich, August 3, 1918; July 31, 1918 (W. D.). Taken on willow (*Salix scouleriana*).

**Glossonotus univittatus** Harr. Saanich, October 10, 1917; July 11, 1918 (W. D.); Vancouver, September 23, 1918 (W. D.). This species is rarely taken. Occurs on *Salix scouleriana*.

**Platycotis quadrivittata** Say. Saanich, June 13, 1918; April 18, 1918 (W. D.). Occurs on oak (*Quercus garryana*). Very variable both in colour and form. In some individuals the humeral and dorsal processes are well developed; in others absent altogether. In colour the species vary from brown mottled with black to a dull green speckled with red.

A beautiful form is sometimes taken in which the ground colour is greenish white with a bright red stripe extending from the head over the humeral angles and bordering the lower edges of the pronotum, and two parallel red stripes extending caudad from the head on each side of the median carina. The species winters in the adult condition, and I took nymphs in final and penultimate stages on September 9, 1918.

**Campylenchia latipes** Say. Vernon, September 28, 1918 (W.D.). One specimen on willow. Although this is said to be a grass-inhabiting species in the East, I failed to take any in the alfalfa field which was bordered by the willow trees on which the specimen was taken.

In spite of persistent collecting, the number of **Membracidae** taken is disappointingly few, the above mentioned five species being all that have been observed so far. Probably when further collections can be made over a more extended area a number of species will be added.

**FAMILY CICADELLIDAE:**

**Agallia novella** Say. Goldstream, B.C., June 2, 1918 (W. D.).

**Agallia lyrata** Bak. (?) Armstrong, September 29, 1918; Saanich, April 19, 1918 (W. D.).

**Idiocerus pallidus** Fh. Victoria, August 17, 1917; Saanich Sept. 9, 1918 (W. D.). A common species on *Salix scouleriana*.

**Idiocerus pallidus**. Variety with a dark saddle. Not uncommon. Armstrong, September 29, 1918 (W. D.).

**Idiocerus suturalis** var. **lunaris** Ball. Saanich, August 3, 1918. Common.

**Idiocerus musteus** Ball. Royal Oak, September 28, 1917; August 25, 1918 (W. D.). Common on willow.

**Idiocerus concinnus** Ball. Saanich, September 11, 1918 (W. D.).

- Idiocerus amabilis* Ball. Saanich, September 11, 1918 (W. D.).
- Idiocerus productus* Bak. Royal Oak, September 6, 1918.; Victoria, July 1, 1918 (W. D.). Not common. Taken on *Salix lasiandra*.
- Macropsis viridis* Fh. Saanich, August 3, 1918 (W. D.).
- Macropsis canadensis* Van D. Saanich, August 3, 1918 (W. D.).
- Oncopsis variabilis* Fh. Vernon, July 4, 1917 (R. C. T.); Victoria, July 11, 1918 (W. D.).
- Bythoscopus rufoscutellatus* Bak. Vernon, June 24, 1917 (R. C. T.).
- Cicadella hieroglyphica* var. *confluens* Uh. Royal Oak, September 6, 1918 (W. D.). At Duncan I have recently found this species in great numbers on the willows bordering the Cowichan River.
- Cicadella gothica* Sign. Vernon, September 24, 1918 (W. D.).
- Helochara communis* Fh. Saanich, September 18, 1917; Armstrong, September 29, 1918; Shawnigan, July 21, 1918 (W. D.). Common everywhere.
- Draeculacephala crassicornis* Van D. Saanich, August 14, 1917; Victoria, July 1, 1918; Shawnigan, July 21, 1918 (W. D.). Common species on herbage in moist places.
- Eucanthus acuminatus* Fabr. Saanich, August 3, 1918 (W. D.). Common on alder.
- Errhomenellus lineatus* Bak. Vernon (R. C. T.). A pair in coitu.
- Gypona angulata* Spangh. Shawnigan, July 21, 1918 (W. D.). Very few taken. This is a new record for this species (E. D. B.).
- Xerophloea viridis* Fabr. Saanich, May 3, 1918; Royal Oak, November 9, 1917 (W. D.).
- Scaphoideus scalaris* Van D. Saanich, September 12, 1918 (W. D.).
- Platymetopius acutus* Burm. Saanich, August 3, 1918; Shawnigan, July 21, 1918 (W. D.). Common species.
- Deltocephalus affinis* G & B. Armstrong, Sept. 29, 1918 (W. D.).
- Deltocephalus fuscinervosus* Van D. (var.). Saanich, September 11, 1918; June 22, 1918 (W. D.).
- Deltocephalus misellus* Ball. Victoria, June 11, 1918 (W. D.).
- Deltocephalus Van duzei* G & B. Saanich, June 5, 1918 (W. D.).
- Euscelis striatulus* Fall. Cowichan, July 24, 1918 (W. D.).
- Euscelis clavatus* Ball. Royal Oak, September 6, 1918 (W. D.).
- Phlepsius apertus* Van D. Victoria, July 11, 1918 (W. D.). A common species everywhere.
- Phlepsius occidentalis* Bak. Saanich, August 14, 1917 (W. D.).
- Thamnotettix geminatus* Van D. Royal Oak, September 28, 1917; Saanich, June 6, 1918 (W. D.). Common species.
- Thamnotettix montanus* Van D. Saanich, August 18, 1917; Goldstream, June 2, 1918 (W. D.). Common species.

*Thamnotettix flavocapitatus* Van D. Victoria, June 12, 1918. Red variety; occurs on oak (*Quercus garryana*).

*Thamnotettix inornatus* Van D. Saanich, August 3, 1918 (W. D.).

*Chlorotettix unicolor* Fh. Saanich, August 13, 1918 (W. D.).

*Neocoelidia lineata* Bak. Armstrong, September 29, 1918 (W. D.).

*Cicadula sexnotata* Fall. Royal Oak, August 18, 1917; Saanich, June 10, 1918 (W. D.). An abundant species.

*Balclutha manitou* G. & B. Saanich, May 5, 1918; April 19, 1918 (W. D.).

*Dikraneura mali* Prov. Saanich, April 19, 1918 (W. D.).

*Empoa querci* var. *Gillettei* Van D. Victoria, June 17, 1918 (W. D.). Abundant on oak.

*Empoa commisuralis* Stal. Saanich, September 9, 1918 (W. D.). Taken usually on alder, on which it is quite abundant. The form with the dark stripe on the tegmina not very frequent, most specimens are immaculate or very slightly marked.

*Erythroneura comes* var. *vitifex* Fitch. Gordon Head, May 3, 1918; Saanich, April 30, 1918. Generally taken when sweeping grass and low herbage.

#### FAMILY FULGORIDAE:

*Scolops sulcipes* Say (?). Vernon, July 10, 1917 (M. H. R) (nymph); Goldstream (A. W. H.), no date.

*Cixius* sp. Armstrong, September 29, 1918 (W. D.).

*Liburnia* sp. (*Osborni*?). Saanich, June 6, 1918 (W. D.).

*Liburnia* sp. Saanich, September 14, 1918; Vernon, September 28, 1918. Taken abundantly when sweeping damp places and borders of lakes.

Of the above species thirty-four are new records for the district. A number of other species await identification. The nomenclature used is that of Van Duzee's recent list.

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Since the above list was compiled, Dr. Parshley has completed his examination of the British Columbia material (Heteroptera) and has published the results of his findings (Occas. pap. 71 Mus. Zool. Univ. Mich., 1919). In this paper 137 species are recorded for British Columbia, of which 90 are new records. The few ecological notes communicated by me are in this paper, and at the present time there is little of interest that I can add. The determination of this material was in many cases most difficult, and our thanks are due to Dr. Parshley for the exhaustive and careful manner in which he has dealt with it. Since this collection was made a number of other species have turned up, and it is hoped that he will make them the subject of an additional paper.