

The character of the apical spine of the pala and the prominence at the base of the apical lower palmar bristle serves to separate larvae of *C. bifida* from those of *C. expleta*. The larval instars are also easy to key out in each species.

The study of *Cenocorixa* suggests that it should be possible to key out the last three larval instars of most Corixid species, since the characters of the fifth instar are usually also found in the third and fourth instar. However, the first two instars lack many of these essential characters, and may prove extremely difficult to identify when a mixture of species occur together.

The great transformation between the second and third instar larvae in *Cenocorixa*, also occurs in other Corixidae, for example *Palmocorixa buenoi* Abbott (Hungerford, 1919). Not only does this involve the external characters cited, but there is also great changes in the internal anatomy at this time.

The duration of the immature stages in *C. bifida* at 20°C and fed on *Artemia salina* every other day, is 23-31 days. Since it is possible to lengthen the egg from 7-9 days at 20°C to 44-46 days at 10°C, it seems likely that the larval instars would also take much longer to develop at lower temperatures, and so the life cycle at different times of year would not occupy the same developmental time period. Griffith (1944) reports 35 days as the developmental time for *Ramphocorixa acuminata* (Uhler) and 36 days for *Corisella edulis* (Champion), but notes a great variation in rearing experiments. These differences could have been due to different feeding rates and/or different temperatures: no temperature data are given in the paper.

#### Acknowledgements

This research was carried out while in receipt of grants from the National Research Council of Canada and the University of British Columbia.

#### References

- Cobben, R. H., and Pillot, H. M., 1960. The larvae of Corixidae and an attempt to key the last larval instar of the Dutch species (Hem., Heteroptera). **Hydrobiologia** 16:323-356.
- Griffith, M. E., 1945. The environment, life history and structure of the water boatman, *Ramphocorixa acuminata* (Uhler) (Hemiptera, Corixidae). **Univ. Kansas Sci. Bull.** 30:241-365.
- Hungerford, H. B., 1919. The biology and ecology of aquatic and semiaquatic Hemiptera, **ibid.** 11:1-328.
- Hungerford, H. B., 1948. The Corixidae of the Western Hemisphere (Hemiptera). **ibid.** 32:5-827.
- Lansbury, I., 1960. The Corixidae (Hemiptera-Heteroptera) of British Columbia. **Proc. Ent. Soc. B.C.** 57:34-43.

### A BRITISH COLUMBIA RECORD FOR *Xenos peckii* KIRBY

A male *Polistes fuscatus variatus* Cresson parasitized by *Xenos peckii* Kirby was among various wasps collected August 5, 1947 after they had settled for the night on mullein, *Verbascum thapsus* L., 2 miles south of Vernon, B.C. The parasitized wasp had two male strepsipteran pupae protruding from its abdomen, one laterally from between the 5th and 6th terga, the other ventrally from be-

tween the sterna of the same segments. The wasp and the parasites were identified in 1958 by Dr. R. M. Bohart, University of California, Davis, Calif. One of the parasites is in the collection of the University of British Columbia, Vancouver, B.C.

HUGH B. LEECH,  
Calif. Academy of Sciences,  
San Francisco, Calif.