

THE NYMPHS OF THE NORTH AMERICAN SPECIES OF
LEUCORRHINIA.

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Through the kindness of Mr. F. C. Whitehouse, of Red Deer, Alta., who has been actively collecting and studying the Odonate fauna of this locality during the past two years, I have recently obtained nymph exuviae of *Leucorrhinia borealis* Hagen and *L. proxima* Calvert, the only two North American species of this genus, whose nymphs have not yet been described. Recently-emerged imagines of both species, as well as of *L. hudsonica* were found by Mr. Whitehouse, accompanied by their exuviae, so that in addition to the finding of the two new nymphs he has been able to furnish the information necessary to prove that the nymph described by me as that of *hudsonica** was correctly referred to this species.

The nymphs of *Leucorrhinia* may be characterized as follows:—Head somewhat less than twice as broad as long, eyes most prominent behind the middle, lateral margins very oblique, curving into the posterior margin without any indication of an angle. Mentum of labium about as broad as long, mental setae usually 13-15, inner margins of lateral lobes with very low crenulations, the marginal spinules in groups of two or three, of which one is much the longest, sometimes single; movable hood slender, scarcely half as long as the free margin of the lateral lobe; lateral setae 10 or 11. Abdomen ovate in outline, broader than the head, broadest at segment 6, tapering almost equally cephalad and caudad; lateral spines present only on segments 8 and 9, those on 9 not extending beyond apices of abdominal appendages; dorsal hooks present or absent, but never on segment 9; superior appendage triangular, acuminate, distinctly longer than broad, but little shorter than the inferior appendages; lateral appendages about half as long as the inferiors.

I have been able to find no good characters for the separation of nymphs of *Leucorrhinia* and *Sympetrum*. Generally speaking, the superior abdominal appendage is somewhat more elongate and acuminate in *Leucorrhinia*, being considerably longer than the basal breadth and not much shorter than the inferior appendages.

* Can. Ent., 1914, vol. XLVI, p. 375, pl. XXV, figs. 9-12.
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