



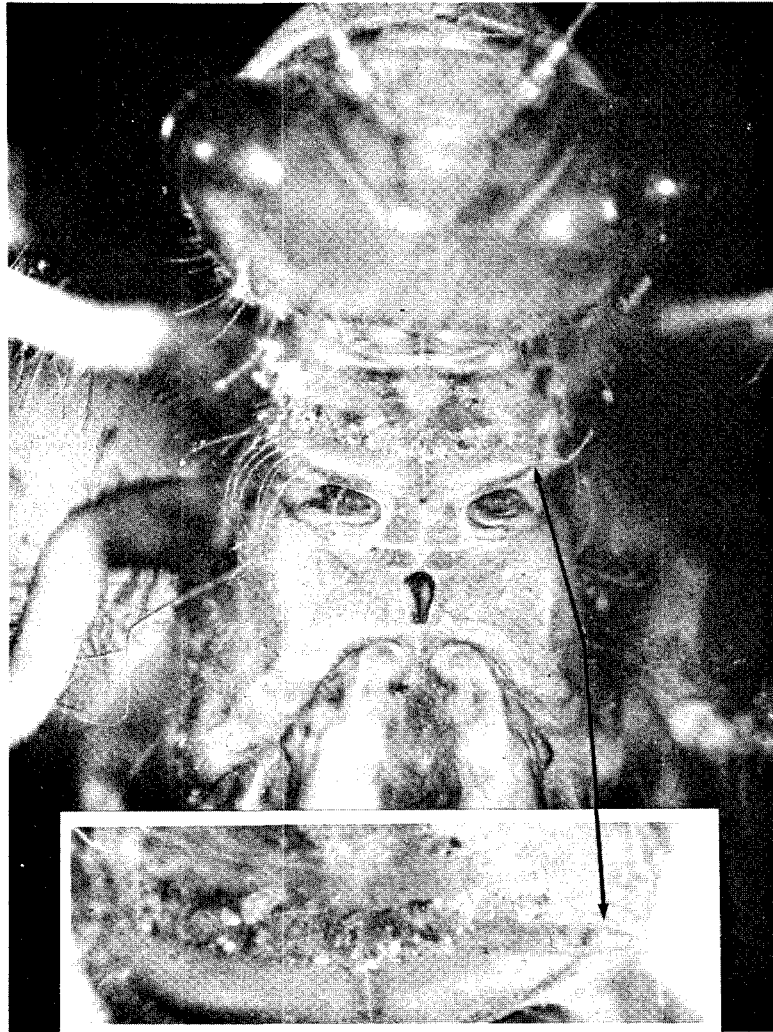
This work is licensed under the Creative Commons Attribution-Noncommercial-Share Alike 3.0 United States License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-sa/3.0/us/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.

A CHIRONOMID (DIPTERA) LARVA ATTACHED TO A
LIBELLULID (ODONATA) LARVA

D. ROSENBERG
Department of Entomology
University of Alberta
Edmonton 7, Alberta

Quaestiones entomologicae
8 : 3-4 1972

While identifying libellulid larvae collected in 1966-1968 from two sloughs located about 9 miles southeast of Edmonton, Canada, I found one specimen with the tube of a chironomid larva attached to its prothorox. (See photograph below; inset magnification is approximately 35x). The libellulid was a *Sympetrum* sp. probably *internum* Montgomery and the chironomid within the tube was a *Paratanytarsus* sp.



s The association is probably not truly phoretic like those reported by Steffan (1965a, 1965b, 1967) between chironomid larvae and other aquatic invertebrates, mainly insects, but more probably is accidental like those reported by Lewis et al (1960) and Corbet (1962) between immature simuliids and odonate larvae. I have reached this conclusion because only one of the few hundred libellulid larvae I examined carried a chironomid larva and because *Paratanytarsus* sp. larvae are one of the most common, free living chironomid larvae in the sloughs I studied. Such associations, however, may represent a stage in the development of phoresis and as Corbet (1962) wrote: "further attention paid to anomalous cases of this kind might throw light on the way in which the well-known [examples of] phoresis originated".

ACKNOWLEDGEMENTS

I would like to thank P.S. Corbet; and A.L. Hamilton and O.A. Saether for helping in identifying the libellulid and the chironomid respectively and J.S. Scott for the photographic work.

REFERENCES

- Corbet, P.S. 1962. Observations on the attachment of *Simulium* pupae to larvae of Odonata. Ann. Trop. Med. Parasit., 56 (2):136-140
- Lewis, D.J., E.T. Reid, R.W. Crosskey, & J.B. Davies. 1960. Attachment of immature Simuliidae to other arthropods. Nature, Lond., 187 (4737):618-619
- Steffan, A.W. 1965a. On the epizooic associations of Chironomidae (Diptera) and their phyletic relationships. Proc. 12th int. Congr. Ent., London 1964, 1:77-78
- Steffan, A.W. 1965b. *Plecopteracoluthus downesi* gen. et sp. nov. (Diptera: Chironomidae), a species whose larvae live phoretically on larvae of Plecoptera. Canad. Ent., 97 (12): 1323-1344.
- Steffan, A.W. 1967. Larval phoresis of Chironomidae on Perlidae. Nature, Lond., 213 (5078):846-847.