

EPISTYLUS CAMBARI (CILIATA: PERITRICHIDA) AND
DRAGONFLY NYMPHS, AN EPIZOIC ASSOCIATION

Reid Jilek

Abstract.—*Epistylis cambari* was found attached to the dorsal abdominal surface of 30% of the dragonfly nymphs examined. Colonies ranged from 20–30 individuals with but one colony attached to each dragonfly nymph.

Introduction

Members of the genus *Epistylus* characteristically form epizoic associations (Sleigh 1975). Associations involving *Epistylus* have been recorded from crayfish (Kudo 1954), chironomid larvae (Jahn 1949), fishes (Crites 1977; Rogers 1971), and turtles (Bishop and Jahn 1941). This study has revealed the presence of *Epistylus cambari* from dragonfly nymphs.

Materials and Methods

A total of 30 dragonfly nymphs was collected from ponds 47, 48, 49, and 50 on the Delaware Reservoir Wildlife Area, Delaware County, Ohio, during April 1979. The nymphs were identified as *Gomphus quadricolor* Walsh (family Gomphidae) and *Pachydiplax longipennis* Burmeister (family Libellulidae).

The nymphs were maintained for one week in individual petri dishes filled with distilled water. After one week the nymphs were examined.

Identification of *Epistylis cambari* to species was performed following removal from the dragonfly nymphs. *E. cambari* were stained with Harris haematoxylin and Rose Bengal and examined by light microscopy.

Results

Nine of the 30 dragonfly nymphs (6 of 12 *G. quadricolor* and 3 of 18 *P. longipennis*) were found to have single colonies of *Epistylis cambari* attached to their dorsal abdominal surfaces. Each colony was comprised of 20–30 individuals. No evidence of pathology was observed at the site of attachment of *E. cambari*.

Discussion

Dragonfly nymphs provide a suitable environment for *Epistylis*. The rather sedentary existence of the nymphs allows for attachment of telotrochs and subsequent development into a colonial form. This epizoic association

is further enhanced by the hardened sclerotized abdominal plates of the dragonfly nymphs.

The presence of *E. cambari* attached to dragonfly nymphs represents a new host record. The presence is, however, not inexplicable since dragonfly nymphs commonly co-inhabit areas with crayfish, a known host of *E. cambari* and the ponds are inhabited by numerous crayfish.

Literature Cited

- Bishop, E. L. and T. L. Jahn. 1941. Observations on colonial peritrichs (Ciliata: Protozoa) of the Okoboji Region. Proc. Iowa Acad. Sci. 48:417-421.
- Crites, J. L. 1977. The occurrence of *Epistylis niagarae* (Ciliophora: Peritrichida) on fishes from the island region of western Lake Erie. Ohio J. Sci. 77:193-194.
- Jahn, T. L. 1949. How to Know the Protozoa. Wm. C. Brown Co. Dubuque, Iowa. 234 pp.
- Kudo, R. R. 1954. Protozoology. 4th Ed. Charles C Thomas, Springfield, Ill. 966 pp.
- Rogers, W. A. 1971. Disease in fish due to the protozoan *Epistylis* (Ciliata: Peritricha) in the Southeastern U.S. Proc. 25th Ann. Conf. Southeastern Assoc. Game and Fish Comm. 25:493-496.
- Sleigh, M. 1975. The Biology of Protozoa. Edward Arnold Limited, 25 Hill Street, London, London W1X 8LL. 315 pp.

Department of Zoology and The Center for Lake Erie Area Research,
The Ohio State University, Columbus, Ohio 43210.

Received for publication November 19, 1979.



Jilek, Reid. 1980. "Epistylus cambari (Ciliata: Peritrichida) and Dragonfly Nymphs, an Epizoic Association." *Journal of the New York Entomological Society* 88, 113–114.

View This Item Online: <https://www.biodiversitylibrary.org/item/206070>

Permalink: <https://www.biodiversitylibrary.org/partpdf/180092>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In Copyright. Digitized with the permission of the rights holder

Rights Holder: New York Entomological Society

License: <http://creativecommons.org/licenses/by-nc/3.0/>

Rights: <https://www.biodiversitylibrary.org/permissions/>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.