

July 1966

Interference of the Snail *Physa Sayii* with Equilibrium in *Tropisternus Glaber* (Coleoptera: Hydrophilidae)

Ronald B. Willson
Michigan State University

Follow this and additional works at: <https://scholar.valpo.edu/tgle>



Part of the [Entomology Commons](#)

Recommended Citation

Willson, Ronald B. 1966. "Interference of the Snail *Physa Sayii* with Equilibrium in *Tropisternus Glaber* (Coleoptera: Hydrophilidae)," *The Great Lakes Entomologist*, vol 1 (1)
Available at: <https://scholar.valpo.edu/tgle/vol1/iss1/2>

This Peer-Review Article is brought to you for free and open access by the Department of Biology at ValpoScholar. It has been accepted for inclusion in *The Great Lakes Entomologist* by an authorized administrator of ValpoScholar. For more information, please contact a ValpoScholar staff member at scholar@valpo.edu.

INTERFERENCE OF THE SNAIL *PHYSA SAYII* WITH
EQUILIBRIUM IN *TROPISTERNUS GLABER*

(COLEOPTERA: HYDROPHILIDAE)

Ronald B. Willson

Department of Entomology, Michigan State University
East Lansing, Michigan 48823

On January 9, 1964, a larva of the hydrophilid beetle *Tropisternus glaber* (Herbst) was removed from an aquarium and placed in a finger bowl of water along with a sprig of coontail (*Ceratophyllum demersum* Linnaeus). The plant provided support for the larva to reach the water's surface. By accident rather than design it harbored the snail *Physa sayii* (Tappan), individuals of which were clinging to its leaves.

On January 17, a *Drosophila* larva was given to the beetle, which immediately grabbed the prey, moved to the vegetation, and began ingesting the meal. A second larva was offered when the first was finished. The hydrophilid took it, too, with the mandibles, but this time did not move toward the vegetation. It thrust its anal spiracle up to the water's surface and began moving about through swimming movements of the legs and of the body, but no attempt was made to eat the second prey. As a result of the beetle's vigorous movements, a snail not previously noted was dislodged from the side of the finger bowl. The snail extended its foot and attached itself to the dorsal thoracic region of the beetle. It then proceeded to crawl the length of the beetle larva before falling off the animal's posterior.

Following the above events, the *Tropisternus* was noted to be in distress. Its body was coated by mucus wherever the snail's foot had made contact, and its legs were inextricably bound together by viscous strands of mucus. The unfortunate larva began violent contractions of the body, while attempting to keep the anal spiracle to the water's surface. When its legs came in contact with the surface film, air bubbles attached to the mucous coating on them. The bubbles subsequently buoyed the venter, leaving the larva in a state of imbalance. The insect continued its contortions, became separated from the surface film, and fell to the bottom of the finger bowl. The observer attempted rescue by moving the larva to the *Ceratophyllum* at the surface, where it continued twisting and contracting the anterior portion of its body while still attempting to separate its legs. After a time it became motionless and dropped the fly larva. It resumed the twisting and contorting and again fell to the bottom of the finger bowl. Its contortions continued, with periodic lapses, but surface film contact was never regained. Finally the *Tropisternus* died from suffocation.