

## PARASITES OF SOME OHIO AMPHIBIA<sup>1, 2</sup>

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Reports of parasites from amphibian hosts in Ohio are few in number. There are two published reports each dealing with but a single species of parasite or with a single group. Stunkard and Cable (1931) described the copepod *Lernaea ranae* from tadpoles of *Rana clamitans* taken near Cincinnati; Hazard (1937, unpublished in part) examined approximately 850 frogs and toads from Clinton County and reported 5 species and 2 subspecies of *Opalina* from these hosts. Other parasites observed were *Zelleriella intermedia cuneata*, *Nyctotherus cordiformis*, *Haptophrya michiganensis*, and *Trichomonas augusta*. In addition, Hazard reported *Euglenamorphia hegneri* and *Entameba ranarum* from about 500 *Rana clamitans* tadpoles; Groves (1945), studying the ecology of *Desmognathus fuscus* in Licking County, reported *Phyllodistomum solidum* from the urinary bladder of these salamanders; Ritter (1950) described *Opalina obtrigonoidea* and *Nyctotherus cordiformis*, among others, from *Rana pipiens* collected in Hocking, Hardin, Franklin, and Fairfield Counties.

During the summer and fall of 1952, amphibia were collected from 19 stations in 7 Ohio counties, with the majority of the hosts being taken in Franklin and Hocking Counties. The frogs were from Ottawa, Erie, Logan, and Trumbull Counties, whereas the majority of the salamanders were taken from Hocking County. Specific stations by county are listed in table 1.

Following is a list of the hosts collected and parasites found:

### **Acris crepitans**

The only parasite found was the ciliate *Opalina obtrigonoidea* in the large intestine.

### **Bufo americanus**

The protozoan *Opalina obtrigonoidea* in the large intestine; the cestode *Distoichometra bufonis* in the small intestine.

### **Desmognathus fuscus**

The trematodes *Brachycoelium salamandrae* and *Plagitura salamandra* from the small intestine; the cestode *Crepidobothrium amphiumae* from the small intestine; the nematode *Cosmocercoides variabilis* from the large intestine; numerous acanthocaphalan cysts attached to the mesenteries of the body cavity. No phyllodistomes were recovered from the urinary bladder, lending weight to Grove's (1945) statement that "*Phyllodistomum solidum* is not a common parasite of *Desmognathus fuscus*."

### **Eurycea longicauda**

No parasites were found in these salamanders.

### **Hyla crucifer**

The trematode *Glypthelmins quieta* from the small intestine; the nematode *Oswaldocruzia pipiens* from the small intestine.

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**Necturus maculosus**

The cestode *Crepidobothrium lönnbergi* from the small intestine.

**Plethodon cinereus**

No parasites were recovered from these salamanders.

**Pseudacris triseriata**

The protozoan *Opalina obtrigonoidea* from the large intestine; the trematode *Brachycoelium salamandrae* from the small intestine; the nematode *Cosmocercoides variabilis* from the large intestine.

**Rana catesbeiana**

*Opalina obtrigonoidea* from the large intestine; *Glyphelminis quieta* from the small intestine.

TABLE I  
Stations by county where amphibia were collected

Ottawa	Fairfield	Franklin	Hocking	Logan	Erie	Trumbull
McGee Marsh	Canals near Sugar Grove	Indian Run Hayden Run	Conkle's Hollow Crane Hollow	Mac-o-chee Creek	Marsh on Sandusky Bay	Mosquito Creek near Warren
Portage River	Cranberry Bog, Buckeye Lake	Walnut Creek Scioto River Olentangy River University Pond	Venard's Run Springs near Bremen Springs near Dr. Thomas' Cabin			

**Rana clamitans**

*Nyctotherus cordiformis* from the large intestine; *Gorgoderina tanneri* from the urinary bladder, the first report of this parasite from *Rana clamitans*; *Cosmocercoides dukae* from the large intestine; cysticerci and encysted acanthocephalan larvae from the mesenteries of the body cavity.

**Rana pipiens**

*Opalina obtrigonoidea* and *Nyctotherus cordiformis* from the large intestine; *Gorgoderina attenuata* from the urinary bladder; *Haematoloechus complexus* from the lungs; *Megalodiscus temperatus* from the large intestine; metacercariae of *Apharyngostrigea pipientis* (*Tetracotyle pipientis*) encysted in masses around the urinary bladder, heart, and on the muscles of the throat; *Rhabdias ranae* from the lungs; *Oswaldocruzia pipiens* from the small intestine; *Cosmocercoides variabilis* from the large intestine; cysticerci from mesenteries of the body cavity.

**Rana sylvatica**

*Opalina obtrigonoidea* from the large intestine; *Brachycoelium salamandrae* from the small intestine, constituting a new host record; *Oxysomatium americanum* from the large intestine; larval acanthocephala encysted on the mesenteries of the body cavity.

## SUMMARY OF PARASITES REPORTED FROM OHIO AMPHIBIA

(Data from Stunkard and Cable (1931), Hazard (1937), Groves (1945),

Ritter (1950), Odlaug (present paper)

- Acris gryllus:** *Opalina virguloidea magninucleata*, *Nyctotherus cordiformis*, *Trichomonas augusta*.
- Acris crepitans:** *Opalina obtrigonoidea*, *Nyctotherus cordiformis*, *Trichomonas augusta*.
- Bufo americanus:** *Opalina obtrigonoidea americana*, *Nyctotherus cordiformis*, *Trichomonas augusta*, *Distoichometra bufonis*.
- Desmognathus fuscus:** *Plagitura salamandra*, *Brachycoelium salamandrae*, *Crepidobothrium amphiumae*, *Phyllodistomum solidum*, larval acanthocephala.
- Eurycea bislineata:** *Phyllodistomum solidum*.
- Hyla crucifer:** *Opalina pickeringi*, *Nyctotherus cordiformis*, *Trichomonas augusta*, *Glyphthelmins quieta*.
- Hyla versicolor:** *Opalina hylaxena*, *Nyctotherus cordiformis*, *Trichomonas augusta*.
- Pseudacris triseriata:** \**Opalina chorophali*, *Nyctotherus cordiformis*, *Trichomonas augusta*, *Brachycoelium salamandrae*, *Cosmocercoides variabilis*.
- Necturus maculosus:** *Crepidobothrium lönnbergi*.
- Rana catesbeiana:** *Glyphthelmins quieta*.
- Rana clamitans:** *Nyctotherus cordiformis*, *Trichomonas augusta*, *Megalodiscus temperatus*, *Gorgoderina lanneri*, cysticerci.
- Rana clamitans tadpoles:** *Opalina larvarum*, *Euglenamorpha hegeneri*, *Entameba ranarum*, *Lernaea ranae*.
- Rana pipiens:** *Opalina obtrigonoidea*, *Nyctotherus cordiformis*, *Trichomonas augusta*, *Trichomonas batrachorum*, *Trichomitus parvus*, *Hexamitus intestinalis*, *Chilomastix caulleryi*, *Trepomonas agilis*, *Retortomonas dobelli*, *Entameba ranarum*, *Megalodiscus temperatus*, *Haematoloechus complexus*, *Gorgoderina attenuata*, *Cosmocercoides variabilis*, *Rhabdias ranae*, *Oswaldocruzia pipiens*, metacercaria of *Apharyngostrigea pipientis*, cysticerci.
- Rana sylvatica:** *Opalina obtrigonoidea*, *Trichomonas augusta*, *Haplophrya michiganensis*, *Brachycoelium salamandrae*, *Oxysomatium americanum*, larval acanthocephala.

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