

NOTES ON THE LEECHES FOUND PARASITIZING  
SOME PERCIFORME FISHES IN TENNESSEE

BRUCE H. BAUER

*Tennessee Technological University,  
Cookeville, Tennessee 38501*

## ABSTRACT

New host and distributional records are established for the leeches *Piscicola reducta* Meyer, *Illinobdella alba* Meyer, *I. elongata* Meyer, and *I. moorei* (Meyer) are established from perciforme fishes in Tennessee.

## INTRODUCTION

No records of piscicolid leeches on Tennessee fishes of the order Perciformes have been established in the open literature except for the dated paper of Bangham and Venard (1942) which lists the leech *Illinobdella alba* Meyer from *Lepomis microlophus* and the leech *Illinobdella moorei* (Meyer) from *Micropterus salmoides* and *Chaenobryttus gulosus*. Due to the general paucity of knowledge of the leeches of North American freshwater fish any definite host and distributional record is of importance.

The piscicolidae comprise a family of Hirudinea living as periodic, ectoparasites chiefly on fishes. The body in extended condition is usually more than ten times as long as wide, a sucker is found at each end of the body; the posterior, which serves as an adhesive organ, is larger and better developed than the anterior which has a protrusile proboscis opening within it.

Previous works dealing with piscicolid leeches found on members of the Perciformes have been reported from several other areas of North America. *Piscicola reducta* was reported from *Percina phoxocephala* in Illinois by Meyer, 1940, and from *Lepomis macrochirus* in New Jersey by Meyer, 1946. Klemm (1972) listed it from several Connecticut and Michigan fishes, White and Crisp (1973) found it on *Percina caprodes* in Kentucky and Bauer and Branson (1975) reported it from three members of the genus *Percina* and five members of the genus *Etheostoma* also in Kentucky.

Meyer (1940) reported *Illinobdella alba* from *Lepomis macrochirus* and both *I. alba* and *I. elongata* from *Pomoxis annularis* in Illinois. Meyer and Moore (1954) reported *I. alba* from *Perca flavescens*, both *I.*

*alba* and *I. elongata* from *Micropterus dolomieu* and *I. moorei* from *Lepomis* and *Perca* in Ontario. Meyer (1946) listed *I. alba* from *Lepomis microlophus* and *Perca flavescens* in Connecticut and New York and *I. moorei* from the following seven genera in Iowa, Illinois, and Minnesota: *Lepomis*, *Chaenobryttus*, *Micropterus*, *Pomoxis*, *Stizostedion*, *Perca*, and *Percina*. Bangham (1944) found *I. moorei* on the genus *Stizostedion* in Wisconsin and Bangham (1955) reported *I. alba* from *Perca flavescens* and *I. moorei* from *Ambloplites* and *Perca* in Lake Huron. White and Crisp (1973) reported *I. moorei* from *Micropterus punctulatus* and *Lepomis sp.* in Kentucky.

## METHODS

For the most part the leeches were secured in connection with general ichthyofaunal studies being carried out by various graduate students in the Department of Biology, Tennessee Tech University, Cookeville, Tennessee. The fish were identified by the author with the aid of Keys by Etnier (1973) and Moore (1968). The leeches were originally preserved in 10 percent formalin, later changed to 50 percent isopropanol, and deposited in the collections of Dr. C. K. Mathers and Mr. Steven L. Richmond, Department of Biology, Northern Illinois University, DeKalb, Illinois, who identified the specimens.

## RESULTS

Table 1 lists the host fish, the number of fishes examined, the number and locations of the leeches on each fish, and the date and location where the fishes were captured. All leeches were attached externally, with 71.4 percent attached to the caudal fin, 20.4 percent on the pectorals, 6.1 percent on the pelvics, and 2.0 percent on the soft dorsal fin.

This study increases the number of "host" species and reported range for *Piscicola reducta*, *Illinobdella alba*, *I. elongata*, and *I. moorei*.

TABLE 1:

Leeches, their hosts, number of fishes infested, the date and location where the fishes were captured, and the numbers and locations of the leeches on each fish. C = caudal fin; P<sub>1</sub> = pectoral fin; P<sub>2</sub> = pelvic fin; D = soft dorsal fin.

Leech Species Fish Host Species	# Fishes Infested	Date & Location Where Fishes Were Captured	# & Location of Leeches on Fish
<i>Illinobdella alba</i> <i>Lepomis megalotis</i>	(1):	Clear Fork River at Burnt Mill Bridge; Morgan-Fentress Co. line, TN 14 Aug. 1974.	1 C
<i>Illinobdella elongata</i> <i>Lepomis megalotis</i>	(1):	White Oak Creek, 2-3 mi. N-NW Sumbright-Hambright Bridge; Morgan Co., TN 9 July 1974.	2 C
<i>Illinobdella moorei</i> <i>Lepomis macrochirus</i>	(1):	Hiwassee River, .5 mi. below Hiwassee Reservoir; Polk Co., TN 8 Aug. 1974.	2 C
<i>Chaenobryttus gulosus</i>	(1):	Jones Creek, Center Hill Reservoir; Dekalb Co., TN 18 Dec. 1974.	1 C
<i>Micropterus salmoides</i>	(1):	Daddy's Creek, Hwy 68 Bridge; Cumberland Co., TN 16 Aug. 1974.	1 C
<i>Etheostoma caeruleum</i>	(2):	Crooked Creek at Bridge near Allardt; Fentress Co., TN 14 Aug. 1974.	2 C
<i>Etheostoma blennioides</i>	(2):	" " " " " "	2 C
<i>Etheostoma blennioides</i>	(5):	Clear Fork River at Burnt Mill Bridge; Morgan-Fentress Co. line, TN 14 Aug. 1974.	2 P <sub>1</sub> 1 C 2 C 2 C 3 C 1 D
<i>Piscicola reducta</i> <i>Etheostoma blennioides</i>	(1):	Big South Fork of the Cumberland River at Leatherwood Ford; Scott-Fentress Co. line, TN 14 Oct. 1974.	2 C
<i>Percina caprodes</i>	(1):	" " " " " "	4 C 1 P <sub>1</sub>
<i>Percina copelandi</i>	(1):	" " " " " "	2 C
<i>Percina maculata</i>	(1):	Crooked Creek at Bridge near Allardt; Fentress Co., TN 14 Aug. 1974.	1 C
<i>Percina aurantiaca</i>	(1):	Daddy's Creek at Devil's Breakfast Table; Cumberland Co., TN 30 Sept. 1973.	6 C 7 P <sub>1</sub> 3 P <sub>2</sub>

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