First Report of *Anchoradiscus triangularus* (Ancyrocephalidae) from Bluegill, *Lepomis macrochirus* (Perciformes: Centrarchidae) from Southeastern Oklahoma

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Abstract: During April 2024, seven bluegill, *Lepomis macrochirus* were collected with a backpack electrofisher from Yashau Creek, McCurtain County, Oklahoma. Fish were examined for gill parasites and a single (14%) *L. macrochirus* harbored a monogenean, *Anchoradiscus triangularis*. Mensural data is included as well as a photomicrograph of the specimen. This is the first time this parasite has been reported from Oklahoma. In addition, a summary of hosts and localities of *A. triangularis* is provided.

Introduction

Bluegill, *Lepomis macrochirus* (Rafinesque) have been reported as hosts for several parasites, including at least 35 monogeneans (Hoffman 1999). One species, *Anchoradiscus triangularis* (Summers, 1937) Mizelle, 1941 appears to be specific to centrarchid fishes, including *L. macrochirus* and other *Lepomis* spp. (Ta-

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ble 1). Here we document *A. triangularis* from a bluegill from southeastern Oklahoma, a new geographic distributional record for the parasite, and only the second time it has been reported from west of the Mississippi River.

Table 1. Previous reports of *Anchoradiscus triangularis* in fishes.

Host	Locality	Reference
Lepomis gibbosus	North Carolina	Mayes and Miller (1975)
Lepomis macrochirus	Alabama	Rawson and Rogers (1971)
	Arkansas	Becker and Cloutman (1975); Cloutman (1975)
	Florida	Mizelle (1941)
	Louisiana	Duobinis-Gray and Corkum (1985)
	North Carolina	Cloutman (1988)
	Oklahoma	This report
Lepomis microlophus	Florida	Mizelle (1941)
	Louisiana	Summers and Bennett (1938)*; Duobinis-Gray and Corkum (1985)
Lepomis symmetricus	Louisiana	Summers (1937)†

*Abstract.
†Original description.

Methods

Host collection and processing

During April 2024, seven *L. macrochirus* (mean ± SD total length [TL] = 79.4 ± 18.2, range 46–100 mm TL) were collected by backpack electrofisher from a tributary to Yashau Creek off Airport Road at Broken Bow (34°01′08.04″N, −94°45′24.51″W). Fish were transferred to containers with aerated habitat water and killed with a concentrated tricaine methanesulfonate solution. Gills were removed from the fish, placed in Petri dishes containing 0.9% (v/v) saline, and examined for parasites under a stereomicroscope at 20-30×. A single parasite was picked from the gills with minute needles, placed on a clean microscope slide in 0.9% (v/v) saline, cover-slipped, photographed alive with a Swift model M10 microscope (Microscope Central, Feasterville, PA), and fixed in 10% (v/v) neutral-buffered formalin (NBF). The specimen was permanently mounted on a microscope slide in Gray and Wess medium stained with Gomori's trichrome (Kritsky et al. 1978). Observations were made with an Accu-Scope 300-LED Series phase-contrast microscope (Accu-Scope®, Commack, NY). Digital images were taken with a camera mounted on the microscope. Measurements, in micrometers (µm), were made as presented by Mizelle and Klucka (1953). The specimen was deposited in the Harold W. Manter Laboratory (HWML), University of Nebraska, Lincoln. A host voucher

specimen was deposited in the vertebrate collection of Northeast Texas Community College, Mt. Pleasant, TX.

Results

A single gill parasite with characters of the genus *Anchoradiscus* as diagnosed by Mizelle (1941) and Rawson and Rogers (1971) as well as conforming with the morphometric characters of *A. triangularis* described by Summers (1937) and Rawson and Rogers (1971) was found. A morphometric description is provided below.

Comparative Description (Fig. 1)

Body 720 long × 232 wide. Haptor discoidal, diameter 362. Two pairs of pigmented light receptors, anterior pair smaller and closer apart than posterior pair. Pharynx circular, diameter 54. Anchors with large triangular concave base. Dorsal anchors 148–150 long, 110–132 wide. Ventral anchors 150 long, base 114–120 wide. Dorsal bar 186 long. Ventral bar 194 long. Bars articulated by two pairs of knobs near midpoint. Dorsal bar consists of two heavily sclerotized arms and two lamellar lateral accessory plates. Ventral bar consists of two heavily sclerotized arms and two lamellar lateral accessory plates. Hooks 13–17 long. Male copulatory organ and accessory piece indiscernible among vitellaria.

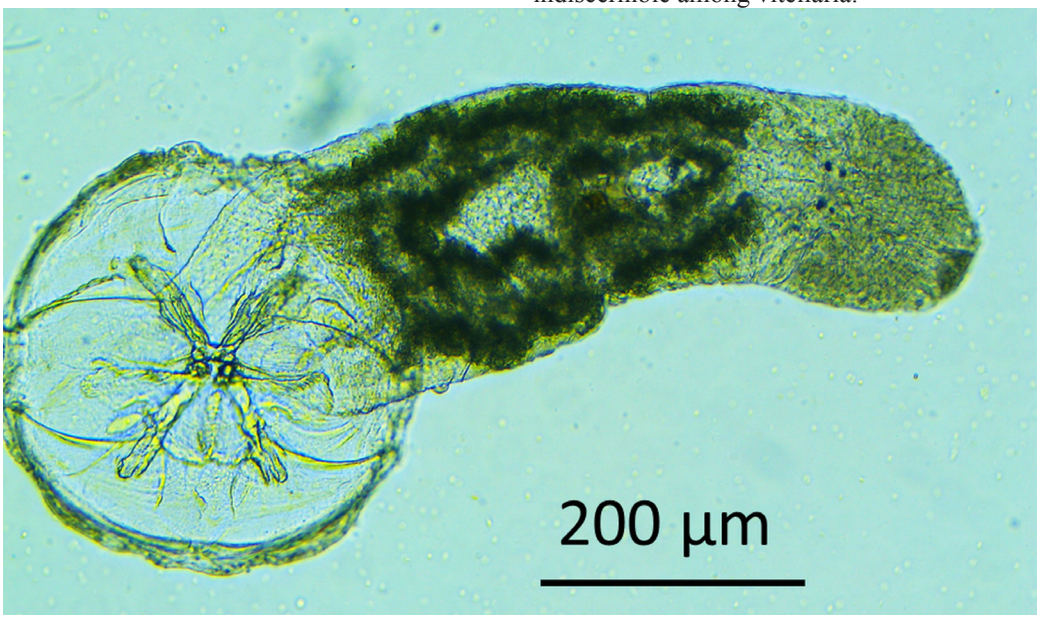

Figure 1. *Anchoradiscus triangularis*. Whole mount (ventral view) of live specimen showing entire haptor and transverse bars.

Discussion

Our specimen of *A. triangularis* conforms to those provided in the original description by Summers (1937) from bantam sunfish, *Lepomis symmetricus* (Forbes) from Louisiana. It has now documented from bluegill from Oklahoma (this report) and *L. macrochirus* from Alabama, Arkansas, Florida, Louisiana, and North Carolina (Table 1). The parasite has only been reported, to date, from other centrarchids, including pumpkinseed, *Lepomis gibbosus* (L.) and redear sunfish, *Lepomis microlophis* (Günther) (Table 1). However, one of us (EML; *unpubl. data*) has examined numerous centrarchids for the presence of monogeneans from Wisconsin waters of the upper Mississippi River and *A. triangularis* has not been observed despite the connected watershed. Nevertheless, it would not be too surprising to see future reports of *A. triangularis* from any of the other nine recognized species of *Lepomis* albeit we have surveyed several longear sunfish, *Lepomis megalotis* (Rafinesque) and green sunfish,

Lepomis cyanellus Rafinesque from Arkansas and Oklahoma, and none harbored this parasite.

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