Introduction

This publication is one in a series of pictorial guides that is designed to assist in the identification of common freshwater fish parasites. The publications included in this series are:

- **Common Freshwater Fish Parasites Pictorial Guide: Sessile Ciliates**
- **Common Freshwater Fish Parasites Pictorial Guide: Motile Ciliates**
- **Common Freshwater Fish Parasites Pictorial Guide: Dinoflagellates, Coccidia, Microsporidians, & Myxozoans**
- **Common Freshwater Fish Parasites Pictorial Guide: Monogeneans**
- **Common Freshwater Fish Parasites Pictorial Guide: Digenean Trematodes**
- **Common Freshwater Fish Parasites Pictorial Guide: Nematodes**
- **Common Freshwater Fish Parasites Pictorial Guide: Acanthocephalans, Cestodes, Leeches, & Pentastomes**
- **Common Freshwater Fish Parasites Pictorial Guide: Crustaceans**

The information provided in this guide is not intended to be a complete, detailed description of each parasite or parasite group and its characteristics but rather is intended to assist in the visual identification of some of the most common species or groups of parasites seen in freshwater fish. For further information on each parasite, refer to publications in the “Recommended Reading” and “Reference” sections below.

Guide Information

- **Target Tissue:** provides the location on/in the fish where the parasite is most commonly found.
- **Characteristic:** provides a brief description about the appearance of the parasite.
• Size: provides the size or size range of the parasite. (1 µm = 0.001 mm = 0.0001 cm) (µm = micron or micrometer; mm = millimeter; cm = centimeter)

• Movement: provides the type of movement, if any, of the parasite.

• Note: provides a brief comment of interest about the parasite.

**Printing Tips**

For the best results as a pictorial guide, print this document in color on photo quality paper at a photo or “best” setting.

**Recommended Reading**


UF/IFAS Circular 91 Nematode (Roundworm) Infections in Fish. [http://edis.ifas.ufl.edu/FA091](http://edis.ifas.ufl.edu/FA091)

UF/IFAS Circular 120 Fish Health Management Considerations in Recirculating Aquaculture Systems - Part 1: Introduction and General Principles. [http://edis.ifas.ufl.edu/FA099](http://edis.ifas.ufl.edu/FA099)

UF/IFAS Circular 121 Fish Health Management Considerations in Recirculating Aquaculture Systems - Part 2: Pathogens. [http://edis.ifas.ufl.edu/FA100](http://edis.ifas.ufl.edu/FA100)

UF/IFAS Circular 122 Fish Health Management Considerations in Recirculating Aquaculture Systems - Part 3: General Recommendations and Problem Solving Approaches. [http://edis.ifas.ufl.edu/FA101](http://edis.ifas.ufl.edu/FA101)

UF/IFAS Circular 716 Introduction to Freshwater Fish Parasites. [http://edis.ifas.ufl.edu/FA041](http://edis.ifas.ufl.edu/FA041)

UF/IFAS Circular 919 Stress--It's Role in Fish Disease. [http://edis.ifas.ufl.edu/FA005](http://edis.ifas.ufl.edu/FA005)

UF/IFAS Circular 920 Ichthyophthirius multifiliis (White Spot) Infections in Fish. [http://edis.ifas.ufl.edu/FA006](http://edis.ifas.ufl.edu/FA006)

UF/IFAS Circular 921 Introduction to Fish Health Management. [http://edis.ifas.ufl.edu/FA004](http://edis.ifas.ufl.edu/FA004)

UF/IFAS Fact Sheet FA-13 Use of Copper in Freshwater Aquaculture and Farm Ponds. [http://edis.ifas.ufl.edu/FA008](http://edis.ifas.ufl.edu/FA008)

UF/IFAS Fact Sheet FA-23 The Use of Potassium Permanganate in Fish Ponds. [http://edis.ifas.ufl.edu/FA032](http://edis.ifas.ufl.edu/FA032)

UF/IFAS Fact Sheet FA-28 Monogenean Parasites of Fish. [http://edis.ifas.ufl.edu/FA033](http://edis.ifas.ufl.edu/FA033)

UF/IFAS Fact Sheet FA-37 Use of Potassium Permanganate to Control External Infections of Ornamental Fish. [http://edis.ifas.ufl.edu/FA027](http://edis.ifas.ufl.edu/FA027)

UF/IFAS Fact Sheet FA-55 Submission of Fish for Diagnostic Evaluation. [http://edis.ifas.ufl.edu/FA055](http://edis.ifas.ufl.edu/FA055)

UF/IFAS Fact Sheet FA-90 Pentastomid Infections in Fish. [http://edis.ifas.ufl.edu/FA090](http://edis.ifas.ufl.edu/FA090)

UF/IFAS Fact Sheet FA-107 Common Freshwater Fish Parasites Pictorial Guide: Sessile Ciliates. [http://edis.ifas.ufl.edu/FA107](http://edis.ifas.ufl.edu/FA107)

UF/IFAS Fact Sheet FA-108 Common Freshwater Fish Parasites Pictorial Guide: Motile Ciliates. [http://edis.ifas.ufl.edu/FA108](http://edis.ifas.ufl.edu/FA108)


UF/IFAS Fact Sheet FA-110 Common Freshwater Fish Parasites Pictorial Guide: Dinoflagellates, Coccidia, Microsporidians, and Myxozoans. [http://edis.ifas.ufl.edu/FA110](http://edis.ifas.ufl.edu/FA110)

UF/IFAS Fact Sheet FA-111 Common Freshwater Fish Parasites Pictorial Guide: Monogeneans. [http://edis.ifas.ufl.edu/FA111](http://edis.ifas.ufl.edu/FA111)
UF/IFAS Fact Sheet FA-113 Common Freshwater Fish Parasites Pictorial Guide: Nematodes.  http://edis.ifas.ufl.edu/FA113


UF/IFAS Fact Sheet FA-115 Common Freshwater Fish Parasites Pictorial Guide: Crustaceans.  http://edis.ifas.ufl.edu/FA115


UF/IFAS Fact Sheet VM-77 Use of Formalin to Control Fish Parasites.  http://edis.ifas.ufl.edu/VM061

UF/IFAS Fact Sheet VM-78 Bath Treatment for Sick Fish.  http://edis.ifas.ufl.edu/VM037

UF/IFAS Fact Sheet VM-85 "Red Sore Disease" in Game Fish.  http://edis.ifas.ufl.edu/VM059

UF/IFAS Fact Sheet VM-86 Use of Salt in Aquaculture.  http://edis.ifas.ufl.edu/VM007


UF/IFAS Fact Sheet VM-104 Cryptobia iubilans in Cichlids.  http://edis.ifas.ufl.edu/VM077

References


**Digeneans**

("Digenes", “White Grub”, “Yellow Grub”, or “Black Grub”)

**Target Tissues:** Metacercariae (juvenile encysted stage) in any internal or external tissue (if fish are intermediate host); adults usually in gut lumen (if fish are final host)

**Appearance:** Metacercariae seen as nodules/masses approx. 1-4 mm in length, adults approx. 1.5 mm in length; adults and juveniles have visible oral and ventral suckers but no segments or chitinous hooks

**Movement:** Adults free-moving; may see movement inside metacercariae cyst

**Note:** Indirect life cycle often involving bird, snail, and fish; fish usually intermediate host; if in cyst, burst cyst to “free” individual for identification