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Common Freshwater Fish Parasites Pictorial Guide: Motile Ciliates[1]

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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 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

The following information is provided for each parasite on the guide.

- 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.

Motile Ciliates

Chilodonella

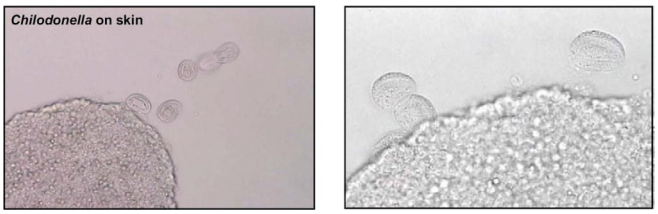

Figure 1. Chilondella on skin

Target Tissues: Skin, fin, gills

Appearance: Ovoid or kidney-shaped with bands of cilia along the long axis; dorsoventrally flattened; appears translucent

Size: Approx. 30–80 µm x 20–60 µm

Movement: Free-moving

Note: Often causes fish to excrete excessive mucus

Ichthyophthirius multifiliis

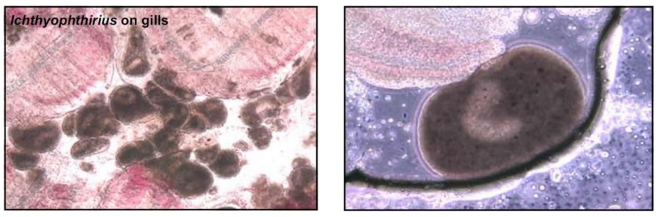

Figure 2. Ichthyophthirius on gills

Target Tissues: Skin, fin, gills

Appearance: Amoeboid; C-shaped nucleus seen in "adults" only

Size: Trophont approx. 50 µm–1 mm; theront approx. 30 µm x 50 µm

Movement: Free-moving; rolling, amoeboid motion

Note: Life cycle includes stages on and off fish

Tetrahymena

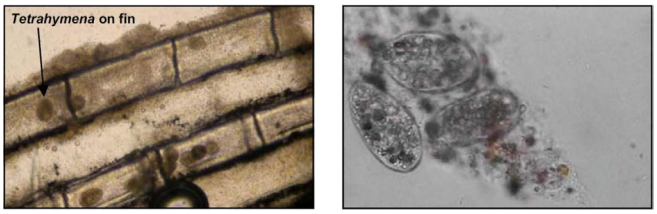

Figure 3. Tetrahymena on fin

Target Tissues: Skin, fin, gills, eyes, internal organs

Appearance: Ovoid with evenly distributed cilia

Size: Approx. 55 µm x 30 µm

Movement: Free-moving Note: Commonly found on dead fish or detritus or in water with high organic concentration

Trichodina

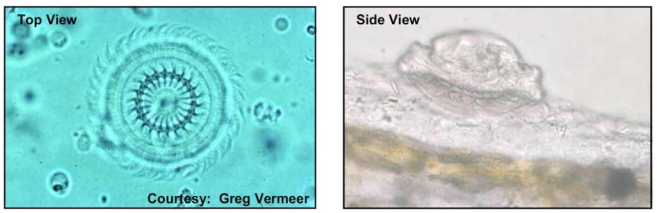

Figure 4. Trichodina, top view (left), and side view(right) Credit: Courtesy of Greg Vermeer

Target Tissues: Skin, fin, gills

Appearance: "Flying saucer" or "scrubbing bubbles" shape

Size: Approx. 35–135 µm in diameter

Movement: Free-moving; whirling motion

Note: Common in water with high organic concentration

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Recommended Reading

UF/IFAS Circular 91 Nematode (Roundworm) Infections in Fish. https://edis.ifas.ufl.edu/fa091

UF/IFAS Circular 120 Fish Health Management Considerations in Recirculating Aquaculture Systems - Part 1: Introduction and General Principles. https://edis.ifas.ufl.edu/fa099

UF/IFAS Circular 121 Fish Health Management Considerations in Recirculating Aquaculture Systems - Part 2: Pathogens. https://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. https://edis.ifas.ufl.edu/fa101

UF/IFAS Circular 920 *Ichthyophthirius multifiliis* (White Spot) Infections in Fish. https://edis.ifas.ufl.edu/fa006

UF/IFAS Circular 921 Introduction to Fish Health Management. https://edis.ifas.ufl.edu/fa004

UF/IFAS Fact Sheet FA-13 Use of Copper in Freshwater Aquaculture and Farm Ponds. https://edis.ifas.ufl.edu/fa008

UF/IFAS Fact Sheet FA-90 Pentastomid Infections in Fish. https://edis.ifas.ufl.edu/fa090

UF/IFAS Fact Sheet FA-107 Common Freshwater Fish Parasites Pictorial Guide: Sessile Ciliates. https://edis.ifas.ufl.edu/fa107

UF/IFAS Fact Sheet FA-109 Common Freshwater Fish Parasites Pictorial Guide: Flagellates. https://edis.ifas.ufl.edu/fa109

UF/IFAS Fact Sheet FA-110 Common Freshwater Fish Parasites Pictorial Guide: Dinoflagellates, Coccidia, Microsporidians, and Myxozoans. https://edis.ifas.ufl.edu/fa110

UF/IFAS Fact Sheet FA-111 Common Freshwater Fish Parasites Pictorial Guide: Monogeneans. https://edis.ifas.ufl.edu/fa111

UF/IFAS Fact Sheet FA-112 Common Freshwater Fish Parasites Pictorial Guide: Digenean Trematodes. https://edis.ifas.ufl.edu/fa112

UF/IFAS Fact Sheet FA-113 Common Freshwater Fish Parasites Pictorial Guide: Nematodes. https://edis.ifas.ufl.edu/fa113

UF/IFAS Fact Sheet FA-114 Common Freshwater Fish Parasites Pictorial Guide: Acanthocephalans, Cestodes,

Leeches, and Pentastomes. https://edis.ifas.ufl.edu/fa114

UF/IFAS Fact Sheet FA-115 Common Freshwater Fish Parasites Pictorial Guide: Crustaceans. https://edis.ifas.ufl.edu/fa115

UF/IFAS Fact Sheet VM-104 *Cryptobia iubilans* in Cichlids. https://edis.ifas.ufl.edu/vm077

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