

# *Piscicola*

## **I. Causative Agent and Disease**

*Piscicola* is a freshwater leech belonging to the phylum Annelida (segmented worms) that can be abundant in some freshwater lakes, ponds and streams. *Piscicola* attaches to the skin of freshwater fish and is nourished by sucking blood and other tissue fluids from the host. Members of the genus *Piscicola* usually remain attached to a fish for several days while feeding and then drop off and sink to the bottom where the food is digested. *Piscicola* has well developed oral and caudal suckers with a subcylindrical and elongate body. Leeches usually do not cause serious harm to their hosts since most tissue damage is localized at the sites of attachment. However, when present in large numbers parasitic leeches can cause extensive tissue damage to fishes including epidermal erosion and ulceration, hemorrhaging, necrosis and anemia. External epidermal erosions may serve as portals of entry for secondary bacterial or fungal pathogens.

## **II. Host Species**

The parasite occurs on many species of freshwater fishes in Europe and North America. Salmonids are most commonly parasitized by *P. salmositica* in Alaska.

## **III. Clinical Signs**

*Piscicola* leeches are visible with the naked eye. Attachment of leeches may occur anywhere on the host body and are often found on or under the opercula, in the mouth, along the jaw and at the bases of fins.

## **IV. Transmission**

The life cycle of leeches is relatively simple, consisting of an egg, a juvenile stage and a mature hermaphroditic adult that produces eggs. After digestion of

a blood meal, a leech either attaches to a fish for another feeding cycle or it produces eggs. Eggs are encased in oval "cocoons" that are attached to the substrate at the bottom of the lake or river. Juvenile leeches hatch from the eggs and enter the water column to find a fish host. Parasitic juvenile leeches usually require several blood meals before becoming mature adults. Leeches of this genus have been implicated as possible vectors of the fish virus, IHNV.

## **V. Diagnosis**

Leeches are obvious by visual examination of the host. Observation of the worm under a dissecting microscope for various morphological characteristics including color and pattern of pigmentation, number and arrangement of eye spots on the oral sucker and other external features help identify the genus *Piscicola*.

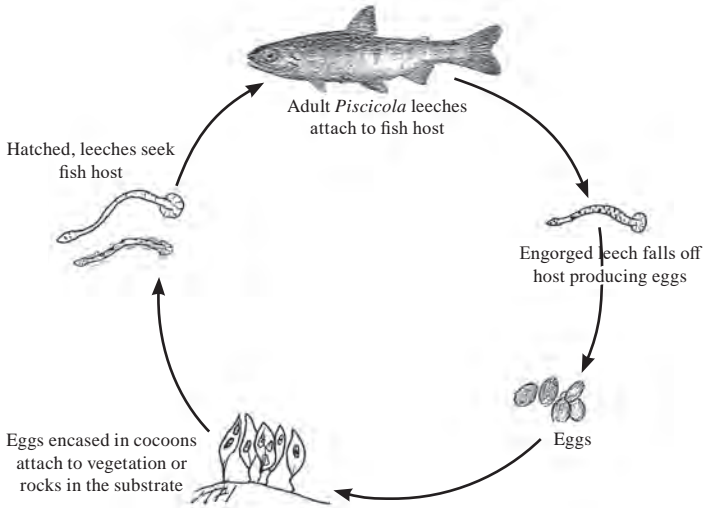
## **VI. Prognosis for Host**

Leeches usually do not cause significant harm to their hosts unless present in large numbers. Prognosis for a host is good when infestations are low to moderate, but host inflammation may occur locally at the site of attachment.

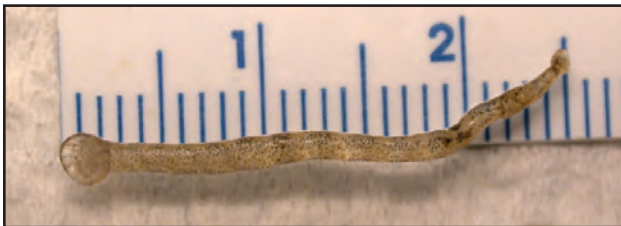
## **VII. Human Health Significance**

There are no human health concerns associated with *Piscicola*.

### *Piscicola* Life Cycle



Adult and juvenile *Piscicola* on rainbow trout producing typical epidermal attachment lesions (visible as round depressions).



Freshwater leech of the genus *Piscicola* (measurement in cm).