

Schistocephalus

I. Causative Agent and Disease

Schistocephalus is a cestode (tapeworm) within the family Diphyllbothriidae parasitizing fish hosts as plerocercoid larvae transmitted by ingestion of parasitized copepods. The worm in the fish host occurs in the body cavity often causing abdominal distention due to multiple infestations and the large size of the plerocercoids.

II. Host Species

Several freshwater fish species are susceptible to this parasite in North America and Eurasia. In Alaska, this cestode is most often found in sticklebacks.

III. Clinical Signs

Fish with heavy infestations of this parasite are often bloated and misshapen since the parasite is quite large. Normal fish swimming behavior may be impaired.

IV. Transmission

Transmission occurs through a complex life cycle utilizing two intermediate hosts. The first intermediate host is a copepod that is parasitized by a coracidium hatched from a cestode egg deposited in the water column. A proceroid stage develops in the gut of the copepod that is eaten by the second intermediate host, a freshwater fish. The plerocercoid develops in the second intermediate fish host that is eaten by the final bird host where the adult worm develops and produces eggs in the intestinal tract.

V. Diagnosis

Diagnosis is made by internal observation of the plerocercoid larvae. The white larvae are 2-7 cm long, broader at one end and segmented with shallow

bothria (grooves) on the scolex. Fish will often contain multiple plerocercoids.

VI. Prognosis for Host

Prognosis for the host is dependent on the degree of infestation. Pathology caused by the plerocercoids includes growth retardation, abdominal distension, and physiological dysfunction of internal organs. The debilitation caused by the parasite increases the vulnerability of the fish host to predation by the final host.

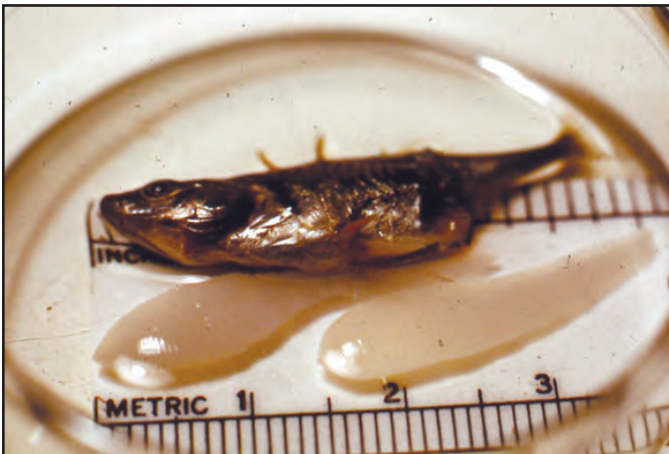
VII. Human Health Significance

There are no known human health concerns associated with *Schistocephalus*.

HELMINTHS



Plerocercoid stage of *Schistocephalus* from abdominal cavity of parasitized stickleback



Two plerocercoids of *Schistocephalus* removed from the body cavity of a stickleback.