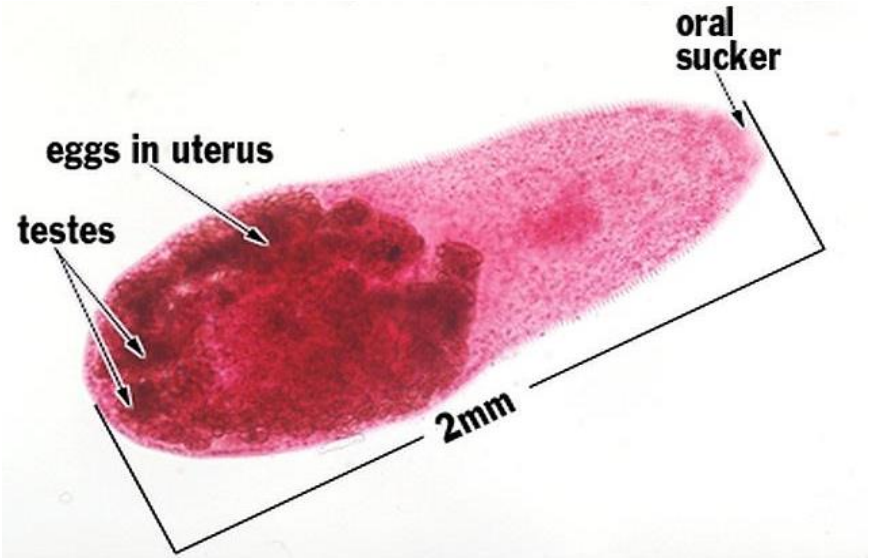
# *Heterophyes heterophyes*

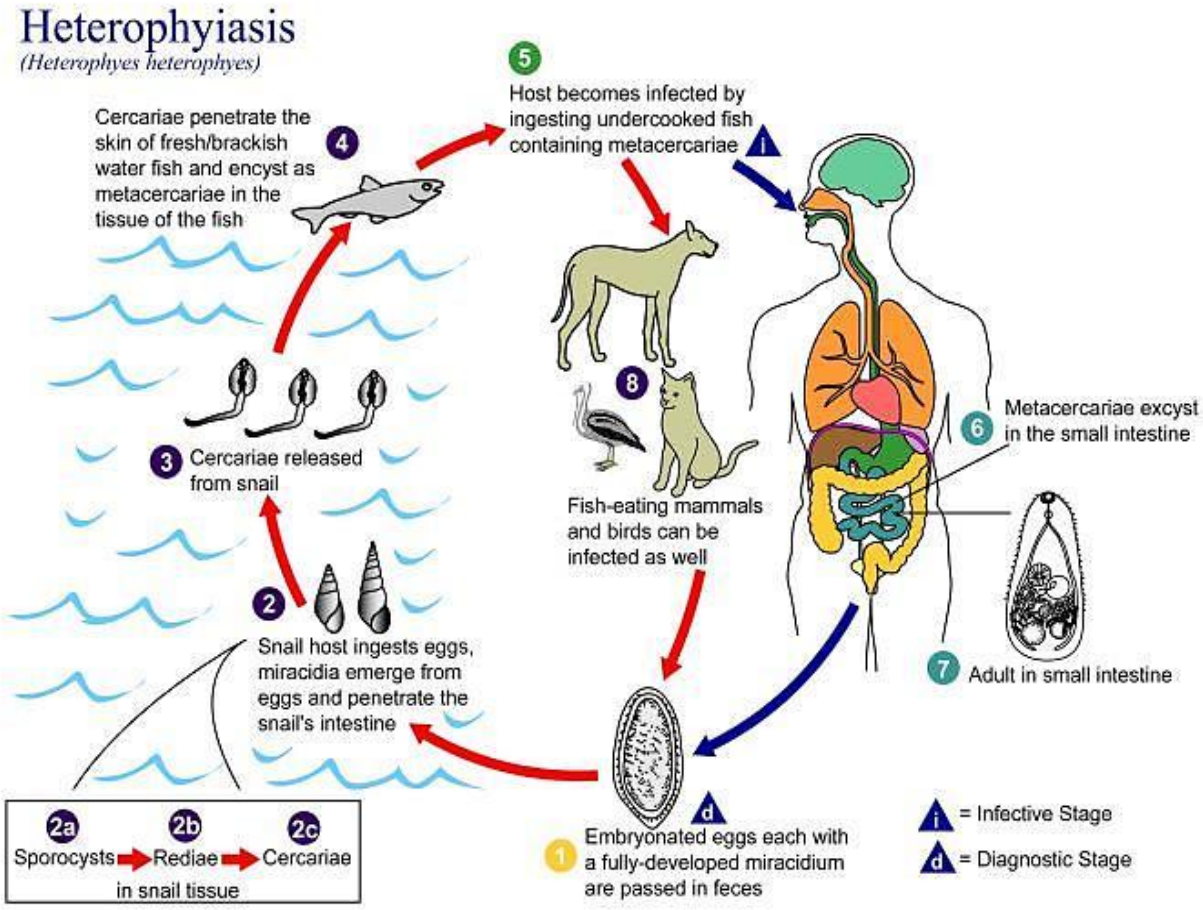



*Heterophyes heterophyes* (Von Siebold, 1852) Stiles and Hassal, 1900, is a common parasite in the lower Nile Valley near the Mediterranean coast. It occurs in the Orient and has been reported from Western India.

## Morphology, Biology and Life Cycle

The mature *Heterophyes heterophyes* is a minute pyriform worm, broadly rounded posteriorly and somewhat narrower anteriorly. It measures 1 to 2 mm in length by 0.3 to 0.4 mm in breadth. It is covered with minute spines set close together.

The eggs are small (28 to 30 micron by 15 to 17 microns), have a conspicuous conical operculum, and each contains a mature miracidium. When these eggs are ingested by *Pirenella conica* (Egypt) or *Cerithedia cingulata* (Japan), they hatch and proceed with their intra-molluskan stages of development. The cercariae which escape from the mollusk encyst in fresh or brackish-water fishes to become infective metacercariae, which constitute the source of infection for man.




## Pathogenicity and Symptomatology

*Heterophyes* and related species in the mucosal crypts of the duodenum and jejunum produce superficial irritation, with excess secretion of mucus and superficial necrosis of the mucosa. In heavy infections this may be accompanied by colicky pains and a mucus diarrhea. More serious is the occasional deep penetration of the worms into the mucus coat of the intestine, so that their minute eggs get into mesenteric venules or lymphatics and are carried to the heart, brain or spinal cord, where they may stimulate a granulomatous reaction with symptoms related to these lesions. It has been calculated that 14.6 % of fatal heart cases in the Philippines result from heterophyid myocarditis.

## Diagnosis

Eggs of *H. heterophyes* and other heterophyid flukes following their recovery in the stool must be differentiated from those *Clonorchis sinensis* and species of *Opisthorchis* which are about the same size and general shape.

## Treatment

This consists in the administration of Praziquantel by mouth as recommended in *F.buski* infection.

## Epidemiology

Infection is acquired from eating fresh- or brackish water fish in a raw, salted or dried condition. Brackish-water snails become infected when they ingest the eggs of the fluke discharged in the definitive host's excreta which reach the water.

## Control

Control can be affected by the thorough cooking of all fish intended for human consumption.