



Trematodes

Fasciolopsis buski

By

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Fasciolopsis buski

The giant intestinal fluke

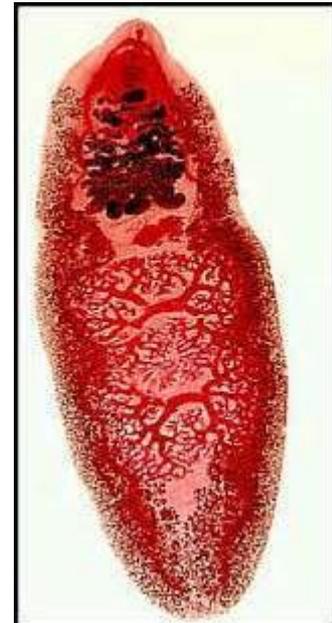
: Geographical distribution ❖

.Far east ➤

More prevalent in areas where **pigs** are raised or where ➤

.aquatic plants are consumed

Disease: Fasciolopsiasis

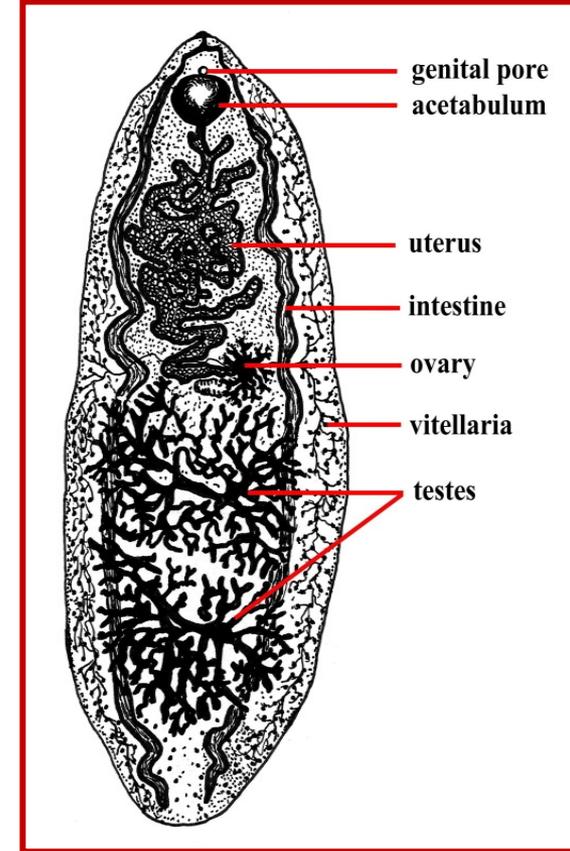
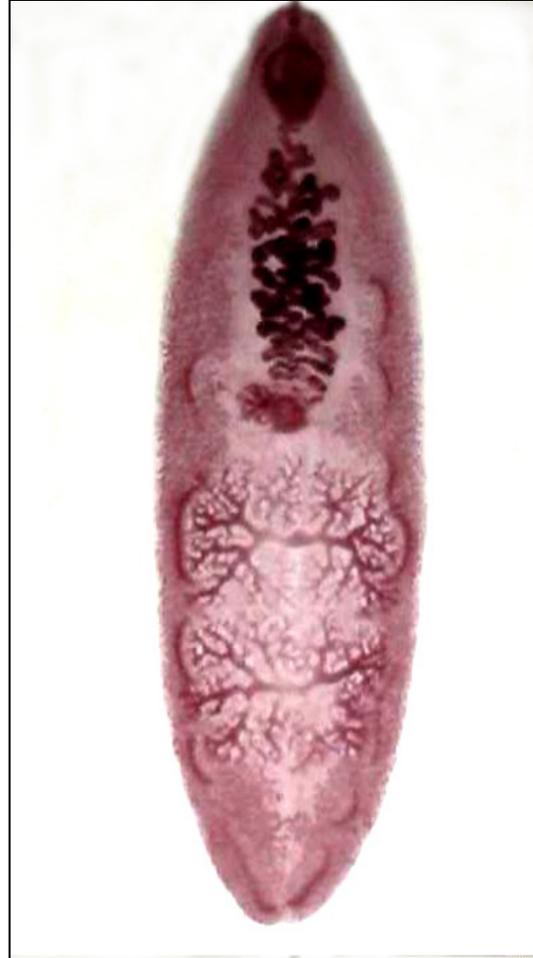


Morphological characters

Simple intestinal caeca -

Oval in shape -

Size: 7 x 2 cm -



-:Egg (D.S)

.Size : 140 x 70 μm

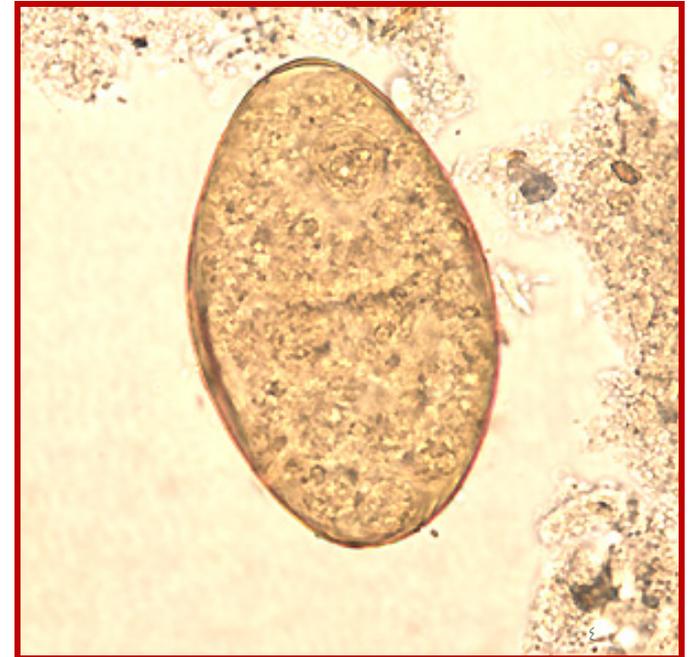
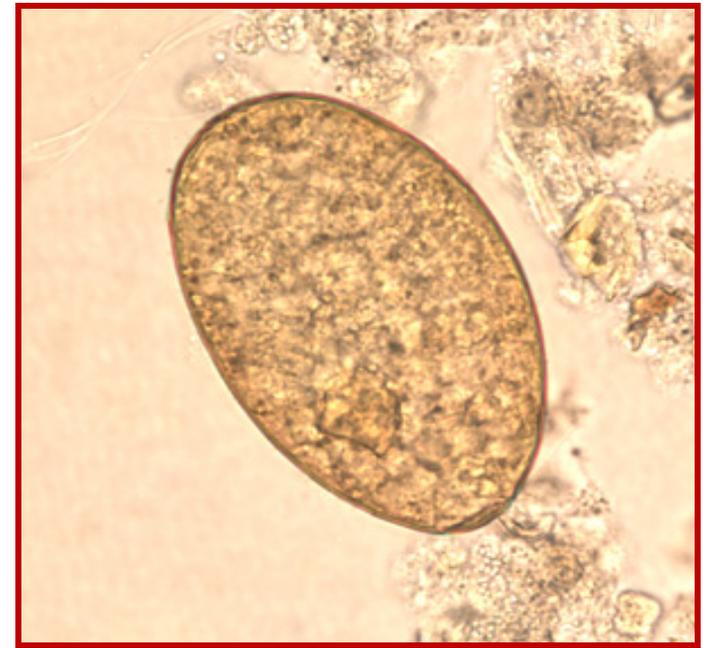
.Shape : Oval

.Shell : Thin, operculated

.Color : Yellowish brown

Content : Immature (ovum

& yolk cells)



.I.H: *Segmentina* snail ❖

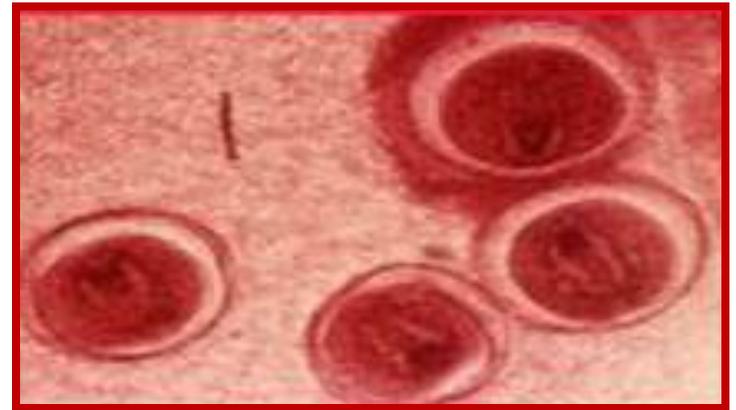
miracidium → sporocyst → redia)

.cercaria (leptocercous cercaria)



Encysted metacercaria (I.S): ❖

.encysted on water plants & in water



:Mode of infection ❖

Ingestion of water plants (chestnuts and bamboo) -1

.infected with encysted metacercaria

Drinking water contaminated with encysted -2

.metacercaria

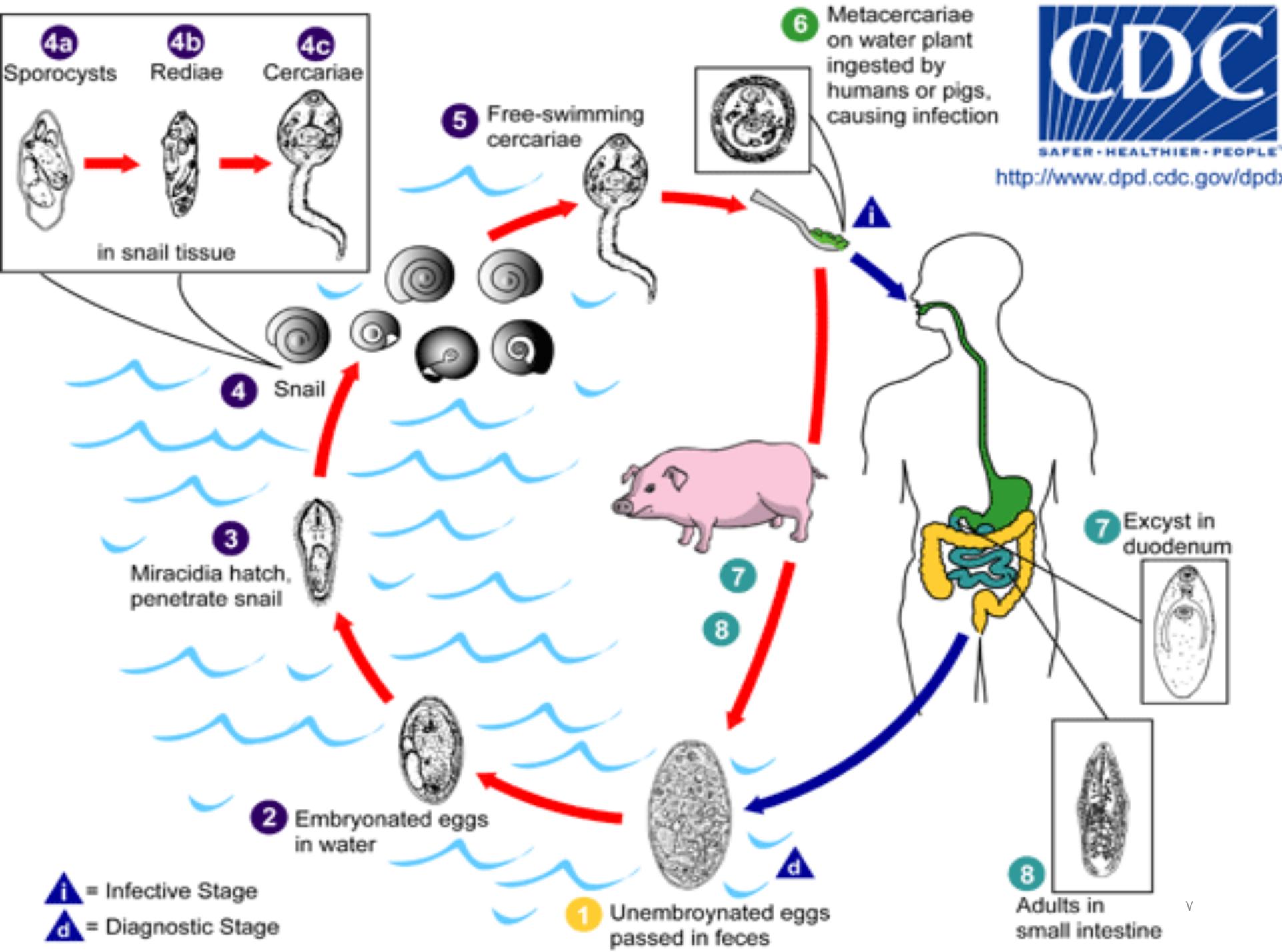
Water plants



Chestnuts



Bamboo



Habitat

Host

Definitive host

•

Intermediate host

•

Reservoir host

•

Diagnostic stage

Infective stage

Mode of infection

Pathogenesis & symptomatology

Adult worm causes traumatic, mechanical & toxic effects. ❖
Ulceration & abscess formation occurs due to its attachment to the
.intestinal mucosa by the ventral sucker

:Clinical pictures ❖

:Symptoms depend on the parasitic load ➤

.Light infection are asymptomatic -1

Moderate infection may presented by abdominal pain, nausea & -2
.vomiting especially in the morning

Heavy infection causes fever, severe abdominal pain, **bloody** -3
diarrhea, malabsorption, protein losing enteropathy, generalized
oedema due to toxic metabolites, anaemia due to bleeding at the
.site of attachment & intestinal obstruction

Diagnosis

.Clinically -1

:Laboratory -2

.Stool examination to detect eggs

Treatment

.Praziquantel is the drug of choice



Trematodes

Heterophyes heterophyes

Heterophyes heterophyes
(The smallest intestinal worm)

-: Geographical distribution ❖

.Far East : China, Japan, Korea, Taiwan ➤

Egypt : Mainly found in the north part ➤

of Delta especially in Borollos and

.Manzala lakes

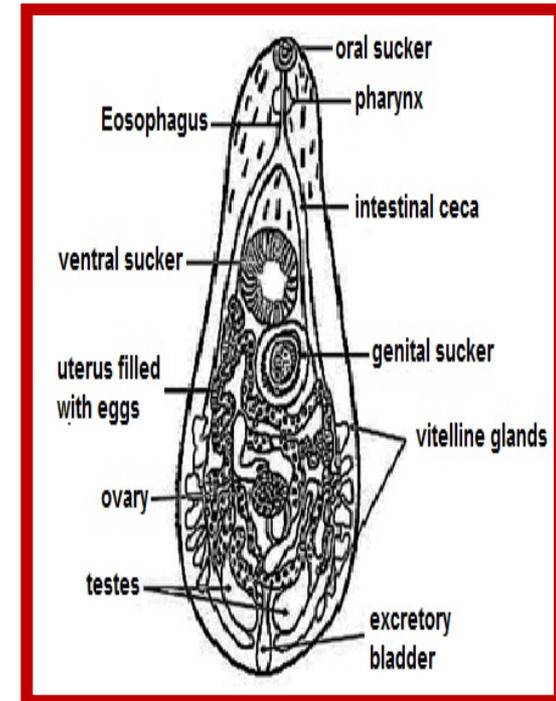
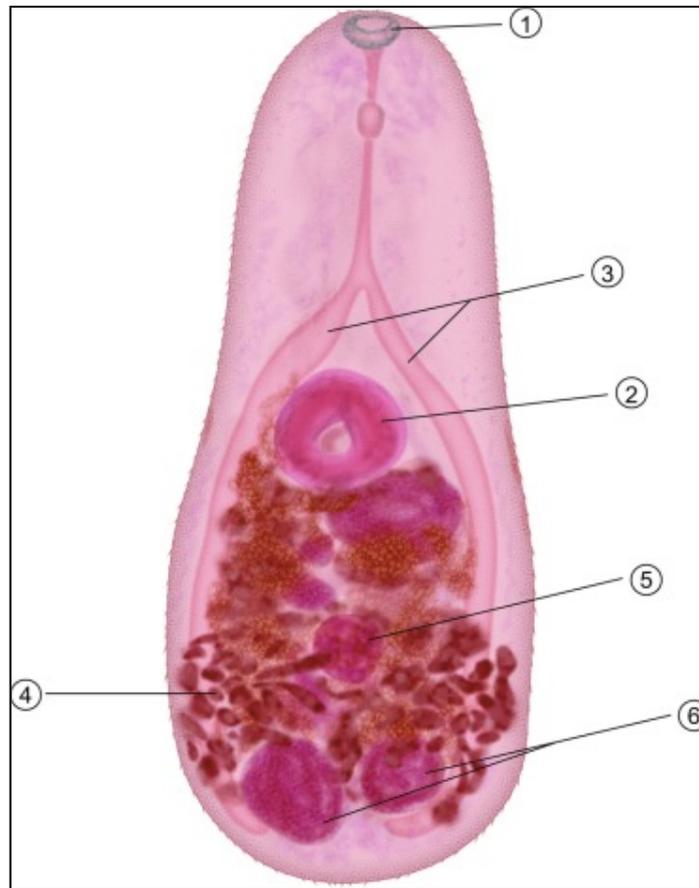
Morphological characters

Shape: pear-shaped with 3 suckers -

Size: 2.5 x 0.75 mm -

Globular 2 testes and one globular ovary -

Globular vitelline glands in the post. third of the body-



-: Eggs (D.S) ❖

.Size : 30 x 15 µm ➤

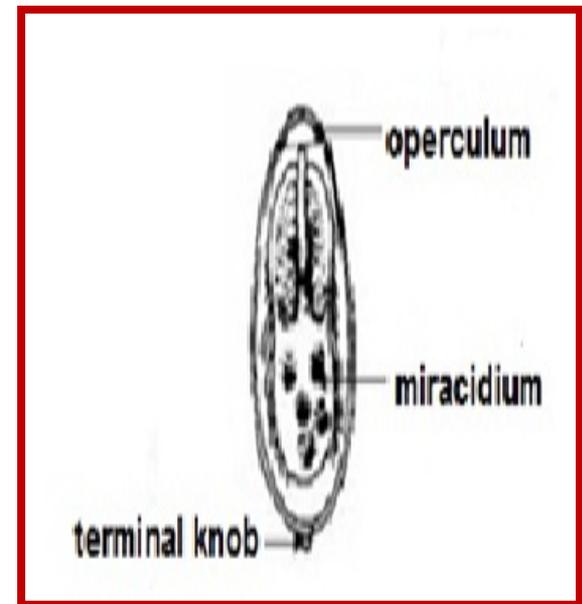
.Shape : Oval ➤

Shell : Thick with anterior operculum and a small knob at ➤

.posterior end

.Color : Yellowish brown ➤

.Content : Mature (miracidium) ➤



:1st IH

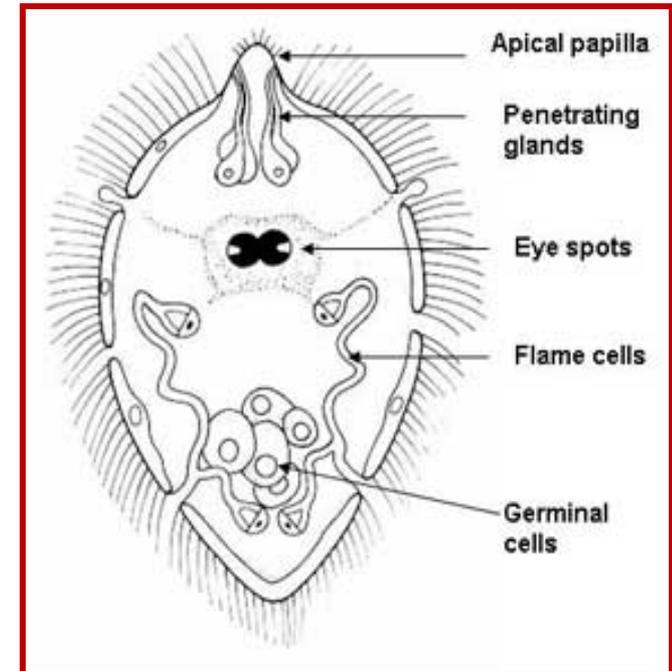
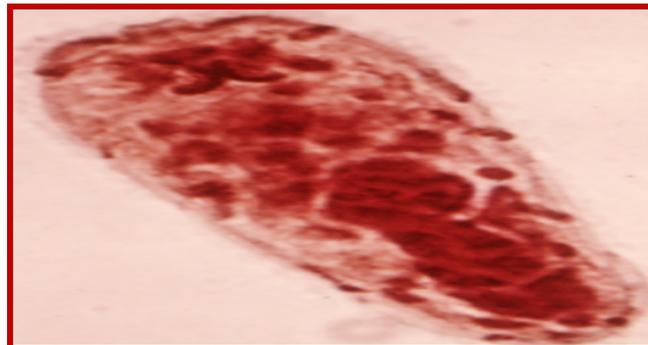
.*Pirenella conica* snail

-.:Miracidium ❖

.Pyriform ciliated larva ➤

Germinal cells develops into ➤

.sporocyst



-:Sporocyst ❖

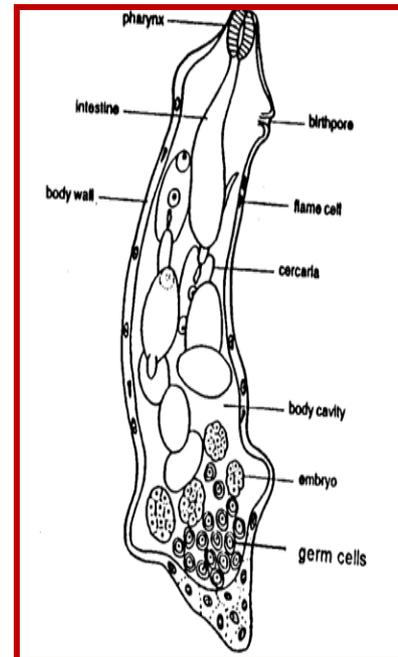
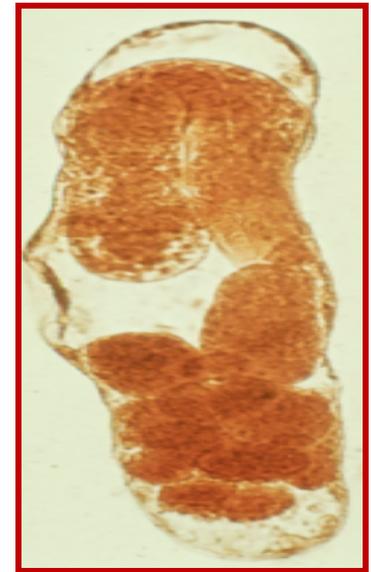
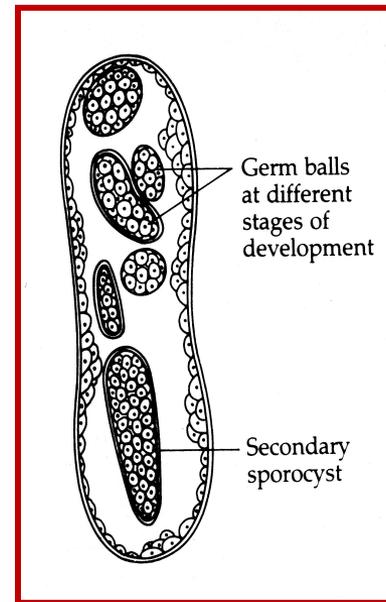
Simple elongated sac
filled with germ cells.
sporocyst develops into
.rediae

-:Redia ❖

.Cylindrical larva ➤

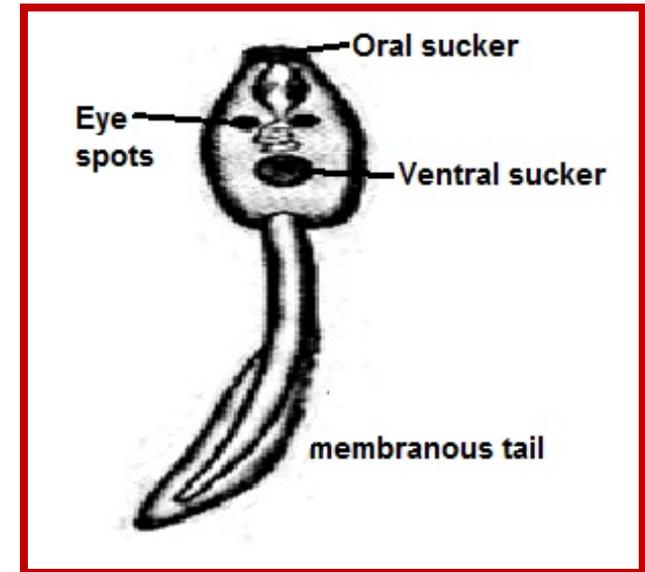
Germ cells develop into ➤

.cercariae

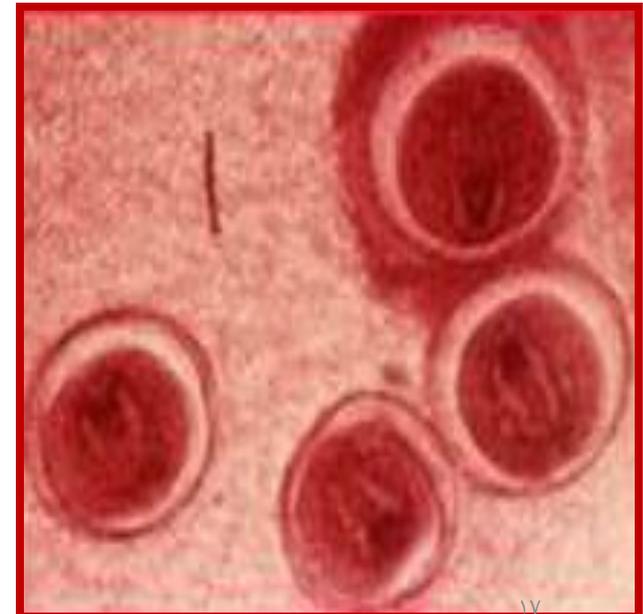


-:Cercaria ❖

Has body and membranous
.tail (lophocercous cercaria) ➤

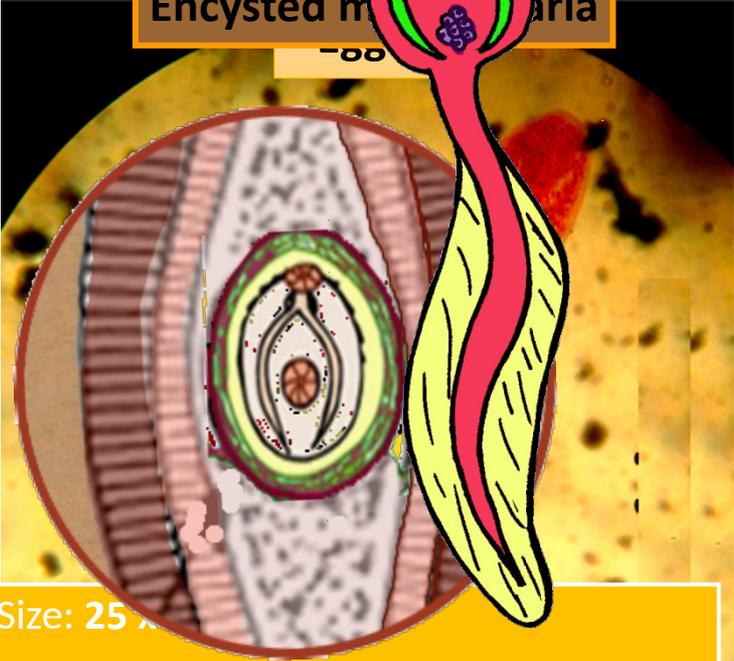


Encysted metacercaria (IS) ❖
in fish (2nd I H)



Cercaria

Encysted metacercaria



Size: 25 x 0.75 mm

Body and membranous tail

Cercarial body within cyst wall under the scales or in the fish-flesh

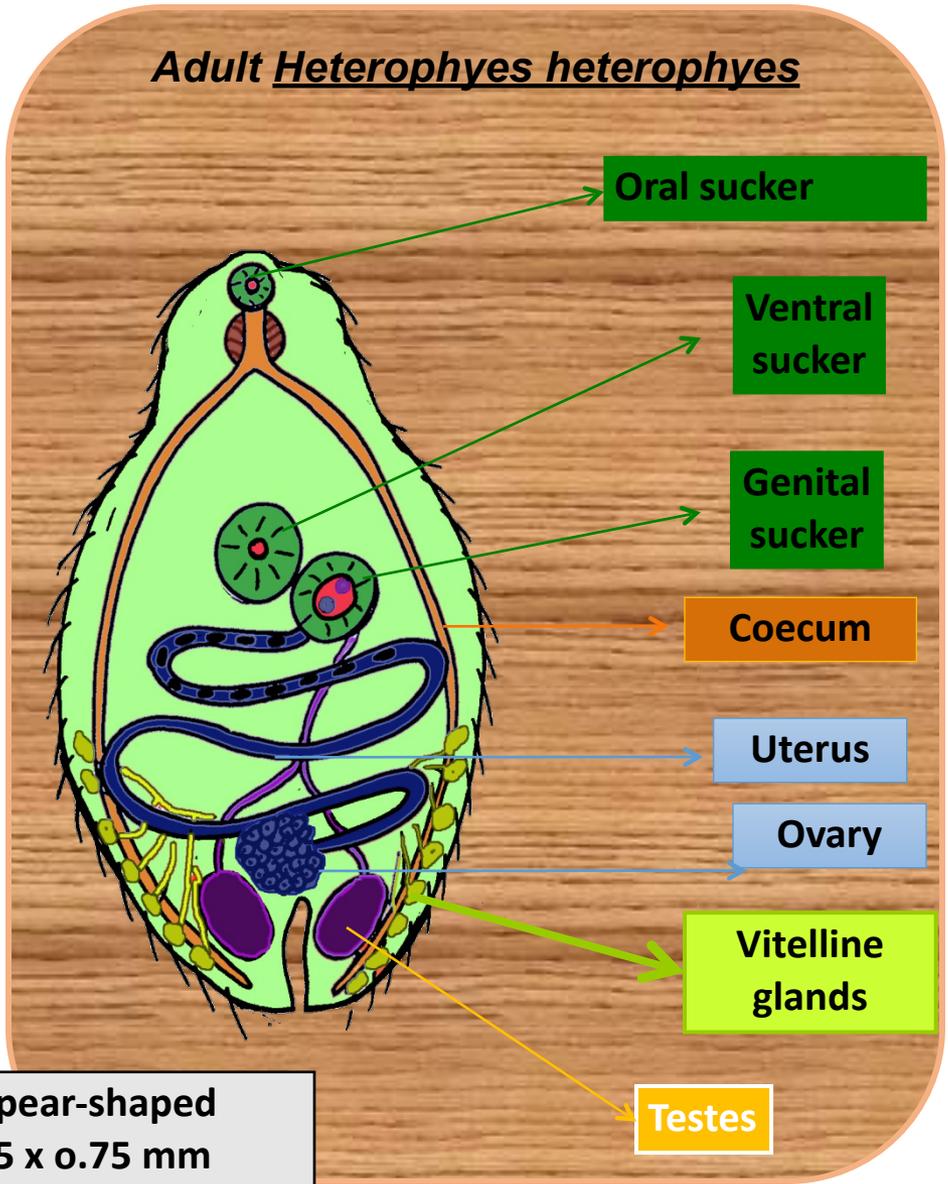
.Simple caeca

.Cystogenous glands

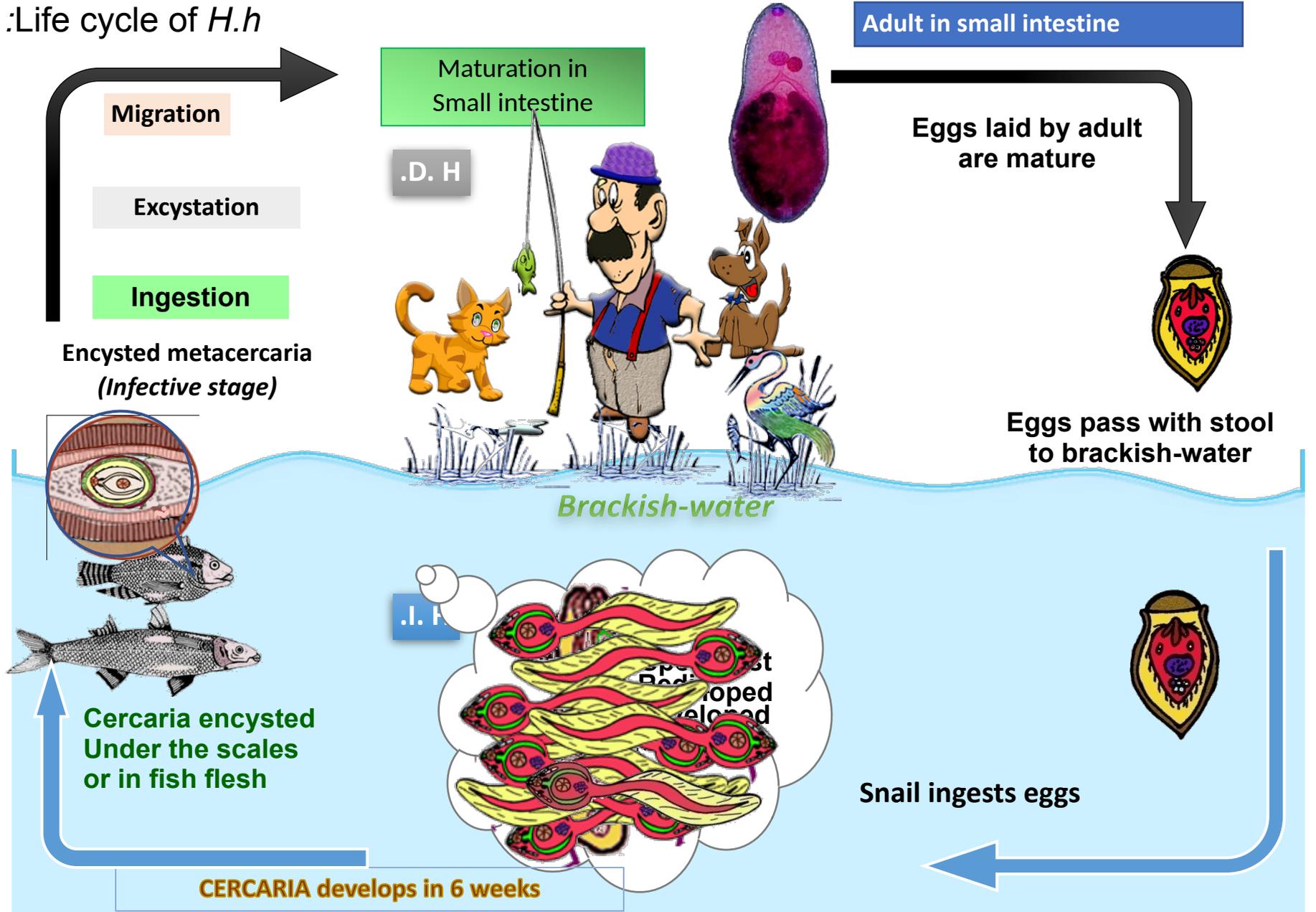
.Flame cells

Shape: pear-shaped
Size: 2.5 x 0.75 mm

Adult *Heterophyes heterophyes*



:Life cycle of *H.h*



-: Habitat



.Small intestine (deeply embedded between villi)

D.H :Man



.R.H: fish eating animals (dogs & cats)



.I.H : 1st ⇨ *Pirenella conica* snail



2nd ⇨ Brackish water Fish e.g. Boury and

.Bolty

D.S: eggs



I.S: Encysted metacercaria



Pathogenesis & Symptomatology

.Diseases :Heterophyiasis

Intestinal phase (1)

Mild inflammatory reaction ➤
.at the site of attachment

In heavy infections, ➤
damage of the mucosa
occur ➤ **colicky abdominal**
.pain and mucus diarrhea

Ectopic sites (2)

Sometimes eggs can inter the
blood stream (due to its minute
size) to reach other organs
especially heart (myocarditis &
heart failure) and brain
.(neurological disorders)

Diagnosis

.Clinically (1

Laboratory: Identification of eggs in the stool (2
.(by direct and concentration methods)

Treatment

.Praziquantel (Biltricide) is the drug of choice



Test Knowledge

Eating fried or grilled fish better in endemic areas to avoid •

?*Heterophyes heterophyes* infection

Mention the complications of *Fasciolopsis buski* and •

.*Heterophyes heterophyes* infection

Thank You

The image features the words "Thank You" in a large, 3D, pink font. The letters are arranged in a slightly staggered, horizontal line. Two monarch butterflies, with their characteristic orange and black wings, are positioned as if flying around the text. One butterfly is on the left, and the other is on the right. The base of the letters is decorated with a cluster of bright green, leafy plants. The entire graphic is set against a plain white background and is enclosed within a thick black border.