



Dr. Bbosa Science

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### Phylum Platyhelminthes (Flatworms)

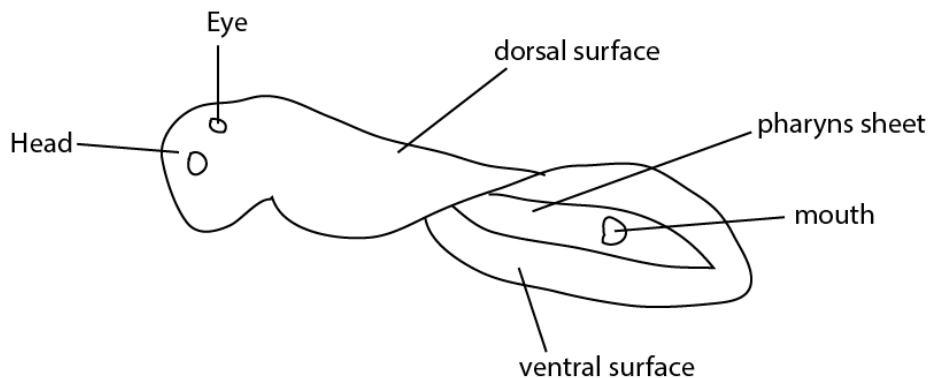
#### Characteristics

1. their bodies are flat with distinct head.
2. they are parasitic
3. are hermaphrodite (have both sexes)
4. They are **triploblastic** with a body wall composed of an outer epidermis and inner gastrodermis separated by a relatively undifferentiated region of mesoderm called **mesenchyme**.

They are subdivided into three classes

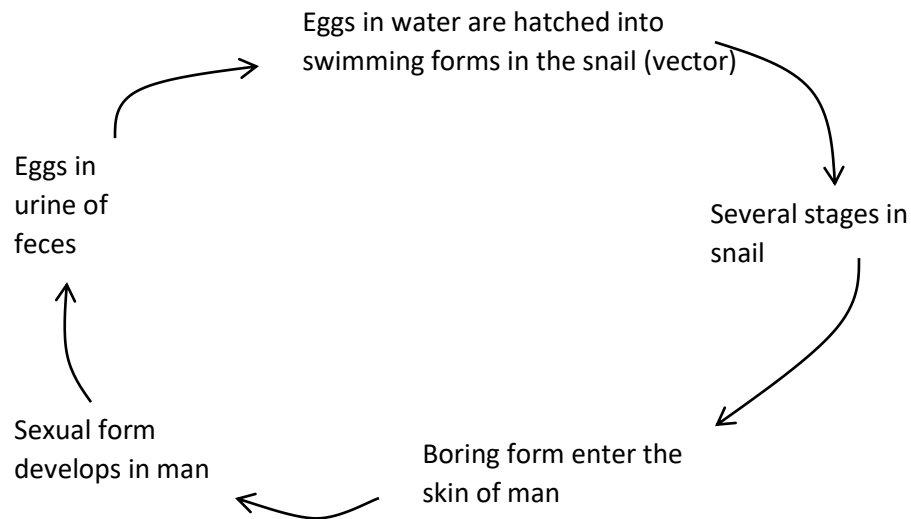
1. Turbellaria: these are carnivorous flat worms found in fresh water, streams and ponds. It remain under water during day and comes out to feed at night e.g. planarian

A diagram of planaria showing external feature

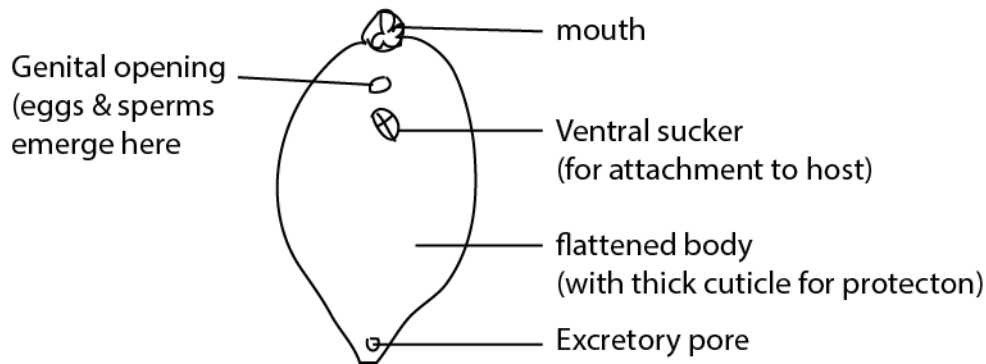


2. Trematoda; are generally endo or ecto-parasites e.g.
- fasciola hepatica or liver fluke is a parasite found in the liver.
  - Blood fluke cause bilharzias.

#### Life cycle of the blood fluke



#### External features of fasciola hepatica



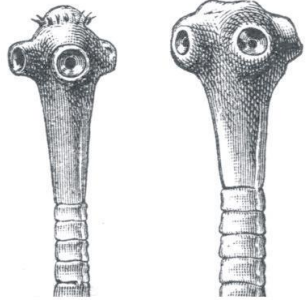
#### Economic importance

Liver fluke cause liver diseases, large number block bile ducts.  
Blood fluke cause bilharzias.

3. Cestoda (tape worms)
- they are endo parasites found in the alimentary canal of vertebrates.
  - They are ribbon-like with distinct head or scolex and a series of segments or proglottis
  - The proglottis contain both male and female reproductive system.
  - Lack a digestive system
  - Lack any means of locomotion

They are two types

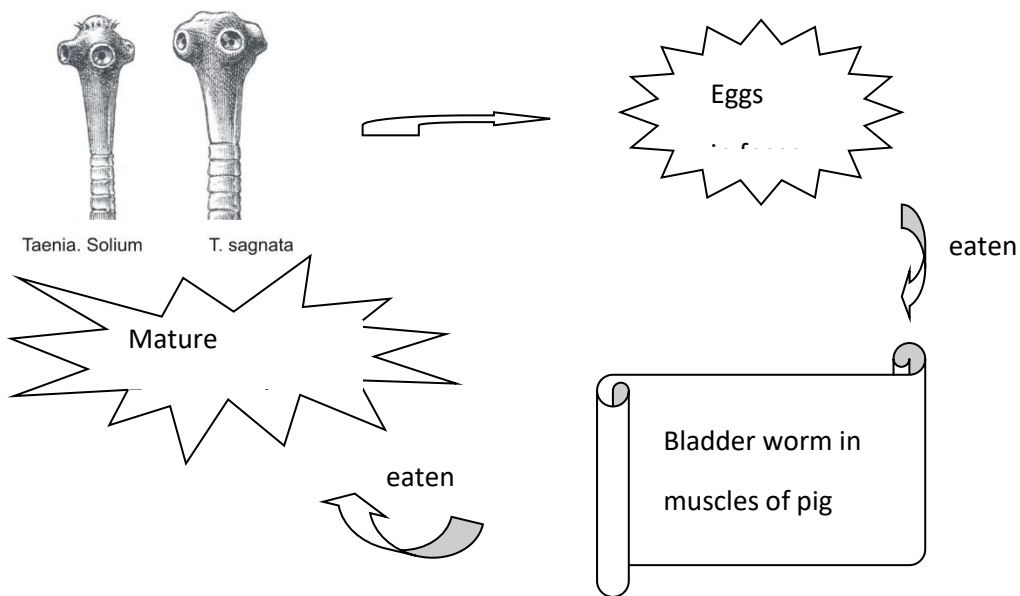
- a. *Taenia saginata* uses a cow as a secondary host.
- b. *Taenia solium* uses a pig as a secondary host



Taenia. Solium

T. sagnata

### Life Cycle of a tape worm



### Harmful effects of tape worms

- They are parasites
- They may block the intestine and cause constipation and other problems
- Lead to anemia

### Control of spread of tapeworms

- proper disposal of feces
- eat well cooked food
- proper sanitation
- regular deworming with drugs

### Dangers of parasitic mode of life

- failure to find a host
- Failure to penetrate a host
- Failure to protect self from host defense mechanisms.

### Adaptations of the tape worm parasitic mode of life

1. possesses suckers and hooks for attachment
2. produces a lot of mucus that protects it from the host digestive enzyme
3. produces a large number of eggs to increase chance of finding a host
4. has intermediate secondary host e.g. pig or cow.
5. lack unnecessary organs to reduce on energy demands.
6. its hermaphrodite to increase the rate of egg production.
7. it survives in low oxygen area by using anaerobic respiration
8. has resistant stage in the soil.
9. its flat and long to increase absorptive surface.
10. can regenerate

### How to control the spread of tapeworm

- proper disposal of feces
- Eat well cooked food and water
- Regular deworming