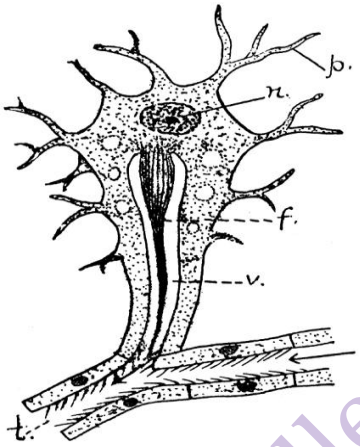
PHYLUM PLATYHELMINTHES
(Acoelomate flat worms)

1. Platyhelminths are multicellular, **dorsoventrally flat** and bilaterally symmetrical.
2. Body wall is made up of ectoderm, mesoderm and endoderm, hence **triploblastic**.
3. Lack of **body cavity,** hence referred as **Acoelomate**.
4. Excretion is performed by flame cells. **Flame cells** are club shaped having lumen. There is a tuft of cilia hanging from the roof of the lumen which pushes the excreted matter to canals.



p – Processes
n – Nucleus
f – Tuft of cilia
v – Lumen
t – Tubule

Flame Cell

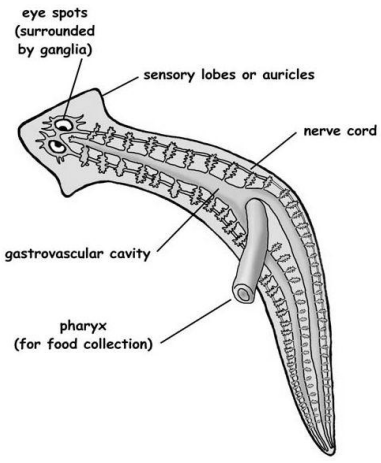
Classification of Phylum Platyhelminthes:

I. Class – Turbellaria: (class of planarians)

1. Turbellarians are **free living** aquatic forms.
2. They have sensory organs like **auricles and eye spots**.
3. Digestive system is present. Mouth leads to eversible muscular **pharynx.** Intestine is highly branched and **anus is absent**.
4. **A typical example is Planaria.**

Planaria

1. Planaria is fresh water, free living form. Mouth is present at mid-ventral region.
2. Digestive system is **incomplete**.
3. It has a dorsal pair of **eye spots** at anterior end.
4. Anteriorly it also has a pair of lateral sensory **auricles**.
5. There are several lateral **excretory apertures**.
6. Animal is highly regenerative.

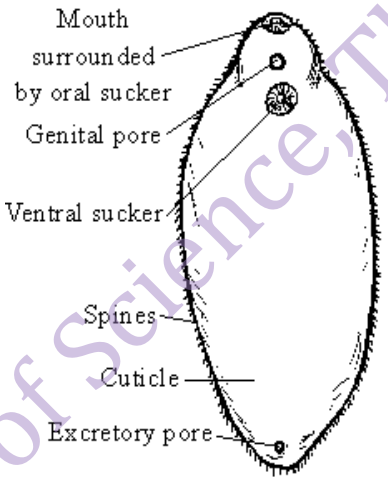


II. Class – Trematoda: (class of flukes)

1. Flukes are **endoparasitic** and found in liver, blood, bile etc.
2. These have two **suckers** for attachment.
3. **Epidermis is absent cuticle is present**.
4. **A typical example is Fasciola (Liver-fluke).**

Fasciola hepatica (Liver-fluke):

1. Liver-fluke is found in the liver or bile duct of sheep, goat or cattle.
2. It has **two suckers**. One is surrounding mouth called as **oral sucker** and other is situated ventrally called as **acetabulum**.
3. There is a genital aperture between these suckers.
4. An **excretory pore** is present at the posterior end.
5. It is **hermaphrodite**.

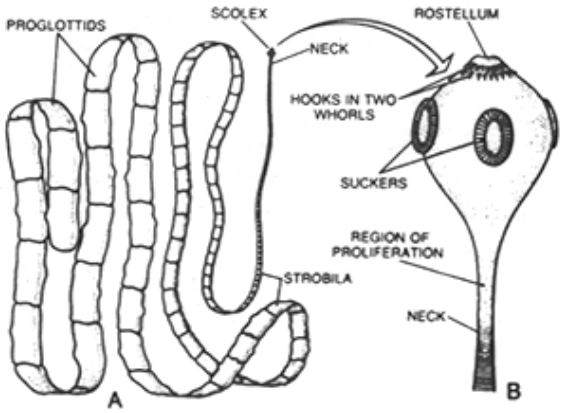


III. Class – Cestoda (class of tape worms)

1. Commonly known as tapeworms since body is long tape like.
2. These have **suckers and hooks** for attachment.
3. Tapeworms are **endoparasitic** and live in intestine of various vertebrates.
4. Body is **pseudosegmented.**
5. **Digestive system is absent**.
6. **A typical example is Taenia solium (tapeworm).**

Taenia solium (tapeworm):

1. It is **endoparasitic**, living in the human intestine.
2. Body is long ribbon like measuring 3-5 metres divisible into **scolex**, **neck** and **strobilla**. Scolex is knob-like has **four** lateral **suckers** and a conical **rostellum** encircled by **many hooks**.
3. Neck is very thin and unsegmented.
4. **Strobilla** is divided into three regions (a) **immature** segments (b) **mature** segments with male and female organs and (c) **gravid** segments which are full of fertilized eggs.
5. **Digestive** system is **absent**.
6. Suffering from tapeworm infection is known to **taeniasis**.



Taenia solium : A. whole; B. its scolex