

3. Lung fluke

Kingdom: Animalia

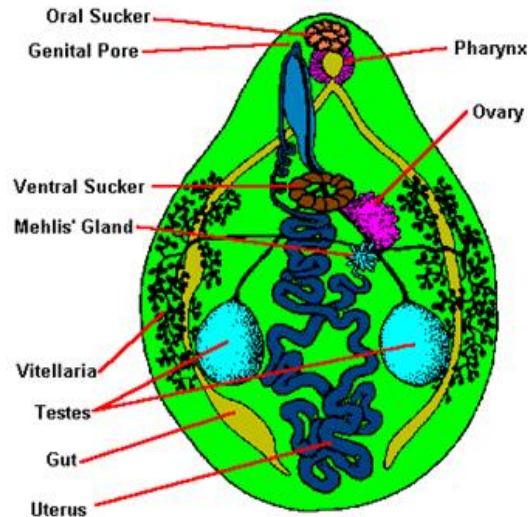
Phylum: Platyhelminthes

Class: Trematoda

Order: Plagiorchiida

Family: Paragonimidae

Paragonimus westermani



Morphology: (8-12 X 4-6 mm)

- **Habitat:** Encapsulated in Lungs. Rarely, worm may migrate to liver, brain and heart
- **Definitive host:** Human, also other mammals.
- **First intermediate host:** Water snail.
- **Second intermediate host:** Crustaceans, Crabs.
- **Infective stage:** Encysted metacercariae.
- **Diagnostic stage:** Eggs in sputum or feces; Chest X-ray.
- **Common name:** The Oriental Lung Fluke.
- **Disease:** Paragonimiasis.
- **Treatment:** Praziquantel

4. Blood flukes

Kingdom: Animalia

Phylum: Platyhelminthes

Class: Trematoda

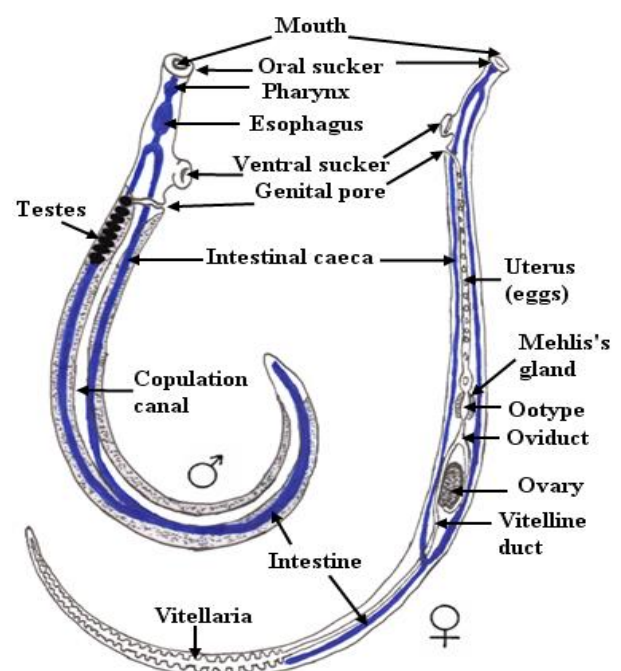
Order: Strigeiformes

Family: Schistosomatidae

Schistosoma haematobium

Schistosoma mansoni

Schistosoma japonicum



Adults live in blood capillaries of Man, monkey, bird, pig and rat. It feeds on blood, and causes a disease known as Schistosomiasis (Bilharziasis).

<i>Schistosoma</i> spp. (blood fluke)	Other trematodes (intestinal, liver and lung fluke)
Dioecious (Male is larger and shorter than female and possess gynecophoric canal)	monoicous (both sexes present in same animals)
Rounded worm	Flat worm
Infective stage: cercaria	Metacercaria
second intermediate host: none present	present
Penetrate integument of definitive host	Through ingestion

Schistosoma mansoni

- **Common name:** Blood Fluke.
- **Habitat:** blood capillaries of large intestine
- **Definitive host:** Human.
- **Intermediate host:** Water snail *Biomphalaria* sp
- **Infective stage:** Cercaria
- **Diagnostic stage:** Eggs in feces or rectal biopsy.
- **Disease:** Intestinal Schistosomiasis (Intestinal Bilharziasis).

Adult:

Male: (6.4 - 9.9) mm X 1mm.

Female: (7 -14) mm X 0.16 mm.

Eggs

Has lateral spine; Embryonated (with miracidium).





Schistosoma haematobium

Habitat: blood capillaries (mesenteric veins) of urinary bladder

Intermediate host: Water snail *Balimus* sp.

Disease: Urinary Bilharziasis.

Adult:

Male: (10-15) mm X 1mm, No. Of testes: (4-5)

Female: 20mm X0.2mm

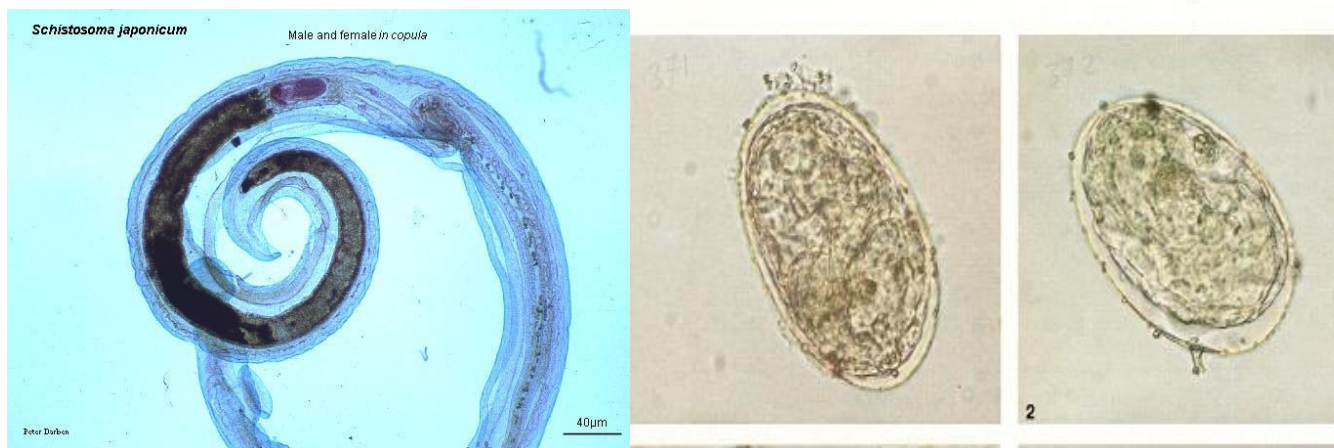
Eggs

- Has terminal spine; Non-operculate, Embryonated.



Schistosoma japonicum**Habitat:** blood capillaries of small intestine**Intermediate host:** Water snail *Oncomelania* sp.**Disease:** Oriental Schistosomiasis (Katayama disease).**Adult:****Male:** (12-20) mm X 0.5mm, No. Of testes: (9)**female:** (15-30) mm X 0.2 mm**Eggs**

- Has lateral knob; Ovoid, thin clear shell, embryonated, non-operculated and Smaller than *S. mansoni* and *S. hematobium*.

**Diagnosis**

1. Blood sample
2. Detect the eggs in fecal sample
3. Testing the urine
4. Serological and skin tests

Treatment

- Praziquantel is effective against all species.
- Oxamniquine is used exclusively to treat intestinal schistosomiasis.
- Metrifonate is effective for the treatment of urinary schistosomiasis.