

## ***Fasciola species***

### ***Fasciola hepatica***

**Common name:** liver fluke.

**Habitat (predilection site):** Bile duct of liver.

**Parasite class:** Trematoda

**Family:** Fasciolidae

**Final host:** Sheep, cattle, goat, horse, deer, man and other mammals.

**Second host:** snails of genus *Lymnaea*.

**Route of infection:** Man and animal eat aquatic plants with encysted metacercariae.

**Diagnostic stage:** Eggs in stool sample.

#### **Description, gross:**

1. Leaf-shaped and grey-brown in color
2. 2-3 cm in length and 1.0 cm in width
3. The anterior end is conical and marked off by distinct shoulders from the body.

#### **Description, microscopic:**

##### **Adult fluke:**

1. The tegument is covered with projecting spine.
2. Oral and ventral sucker may be readily seen.
3. Pharynx
4. branched caecum
5. coiled uterus , ovary and testis.

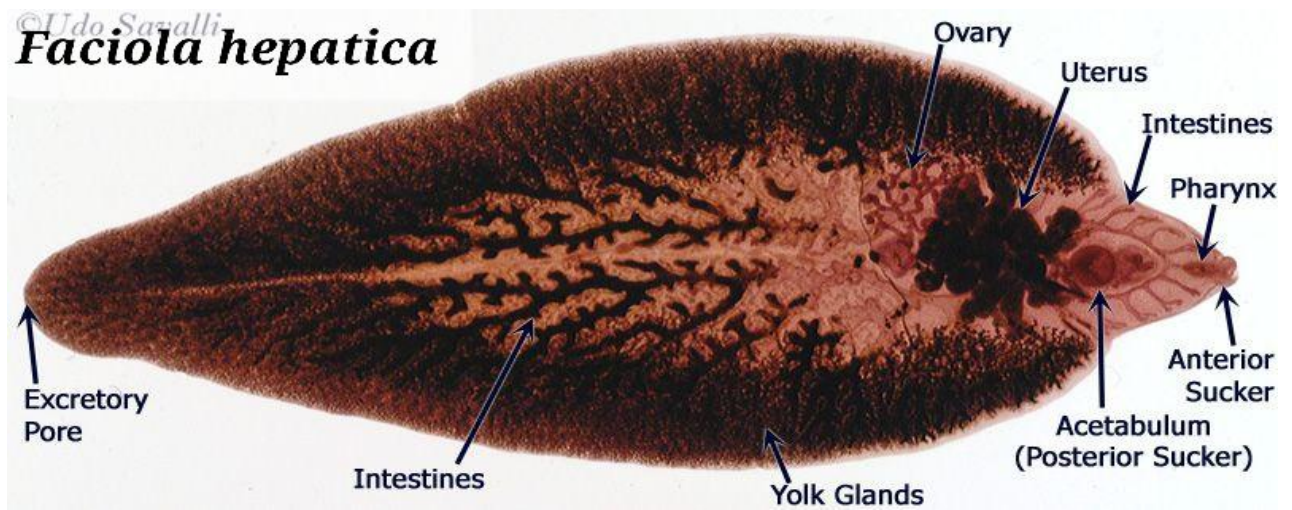
##### **Eggs of *F. hepatica***

1. Unembryonated.
2. Thin egg shell
3. Operculated
4. 130-150×63-90 μm

#### **Diagnosis:**

1. Clinical signs and seasonal occurrence.
2. Finding large operculated eggs in the feces.
3. A variety of immunological tests have been used (ELISA is a sensitive and practical method).

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***Faciola hepatica***



## ***Fasciola gigantica***

**Common name:** tropical large liver fluke

**Habitat (predilection site):** liver

**Parasite class:** Trematoda

**Family:** Fasciolidae

**Final host:** cattle, buffalo, Sheep, goat, pig, camel, deer, man.

**Second host:** snails of genus *Lymnaea*.

**Diagnostic stage:** the eggs can be found in the stool.

### **Description, gross:**

1. The adult fluke is larger than *F. hepatica*. It measures up to 7.5 cm in length and 12 cm in width.
2. the body is more transparent.
3. The shape is more leaf-like.
4. The conical anterior end is very short and the shoulders are absent.

### **Description, microscopic:**

#### **Adult fluke:**

1. It has a shorter cephalic cone, a larger ventral sucker and a more anterior position of testis.
2. It tends to be oblong with a longer rounded posterior end as compared to the broadly pointed posterior end of *Fasciola hepatica*.

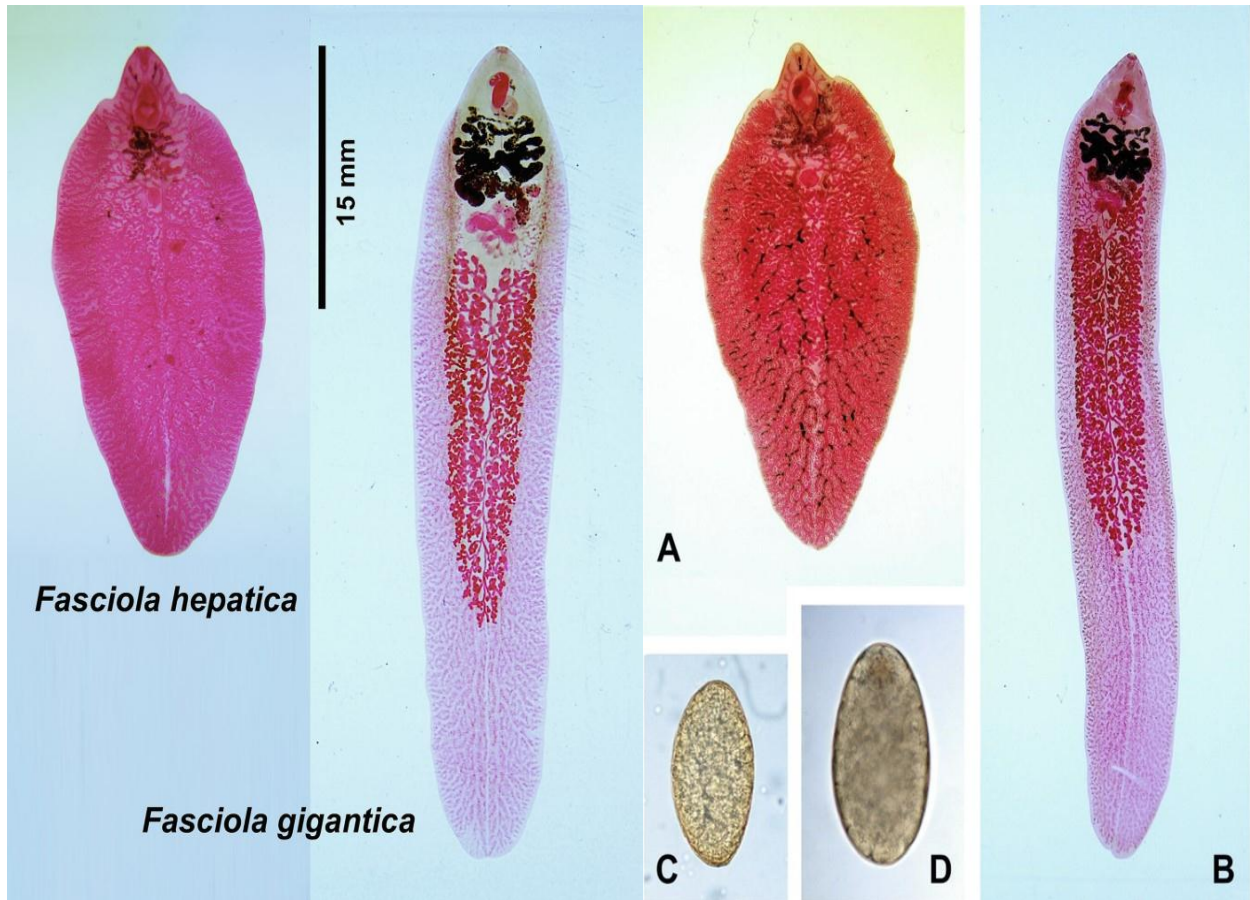
#### **Eggs of *F. gigantica*:**

They are larger (180µm × 80µm) than those of *F. hepatica*

#### **Diagnosis:**

1. Clinical signs and seasonal occurrence.
2. Identification of the typical operculated eggs in faeces sample

Trematoda  
Lab2



***Dicrocoelium dendriticum***

**Synonym:** *Dicrocoelium lanceolatum*.

**Common name:** Small lanceolate fluke.

**Predilection site:** Liver.

**Parasite family:** Dicrocoeliidae.

**Final hosts:** sheep, goats, cattle, deer and rabbits, occasionally horse and pig.

**Intermediate hosts:** Two are required:

- 1- Land snails
- 2- Brown ants of the genus *Formica*.

**Morphology: gross**

There is no possibility of confusion with other flukes in the bile ducts of ruminants as *Dicrocoelium* is 6 mm-1.0 cm long and 1.5-2.5mm wide, distinctly lanceolate and semitransparent. The oral sucker is smaller than the ventral.

**Morphology: microscopic****Adult:**

The gut is simple consisting of two branches and resembles a tuning fork. Behind the ventral sucker the testes lie in tandem with the ovary immediately posterior. There are no spines on the cuticle.

**The eggs:**

The egg is small, 35-40µm in length by 29-30µm in width, dark brown and operculate, usually with a flattened side. It contains a miracidium when passed in the faeces.

**Diagnosis:**

This is entirely based on faecal examination for eggs and necropsy examination of the bile ducts for the presence of flukes.



