

## ***Echinococcus granulosus***

**Class:** Cestoda

**Family:** Taeniidae.

**Common name:** dwarf dog tapeworm, hydatidosis.

**Final host:** dog and many wild canids

**Second host:** domestic and wild ruminants, man and primates, pig and lagomorphs; horse and donkey are resistant.

**Predilection site:** anterior small intestine (final host); mainly liver and lungs (intermediate host).

### **Description, gross:**

The entire cestode is only about 6.0 mm long, and is therefore difficult to find in the freshly opened intestine. It consists of scolex and three or four segments, the terminal gravid one occupying about half the length of the complete tapeworm. Hydatid cysts are large fluid-filled vesicles, 5-10 cm in diameter.

### **Description, microscopic:**

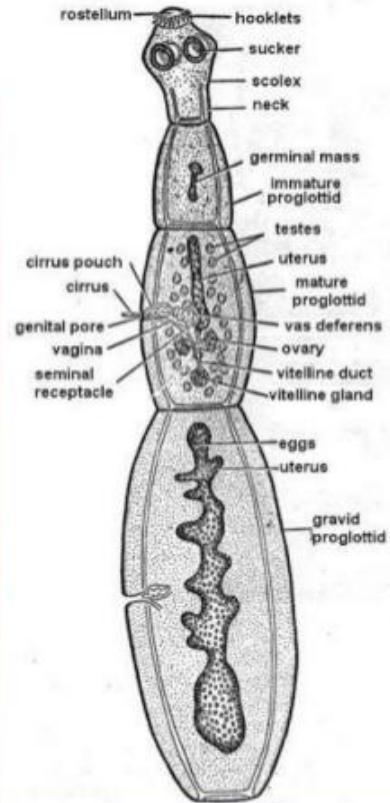
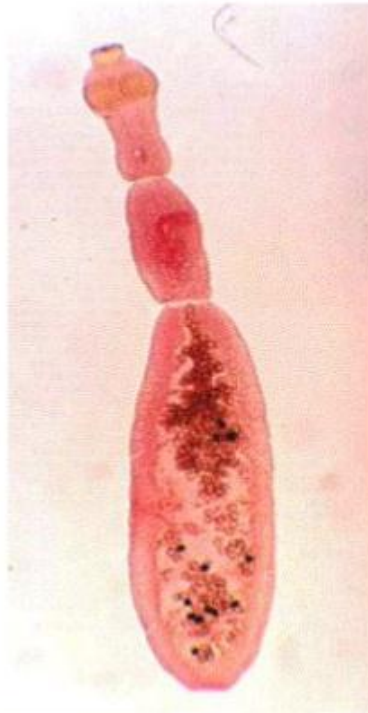
The scolex is typically Taeniid and the rostellum has two rows of hooks 30-60 in number. Each segment has a single genital opening with the penultimate segment sexually mature and the last segment gravid. The genital pores alternate irregularly. Hydatid cyst is a large fluid-filled cyst lined with germinal epithelium from which are produced invaginated scolices which lie free or in bunches surrounded by germinal epithelium (brood capsule). The contents of cysts other than the fluid i.e. scolices and brood capsule are frequently described as (hydatid sand).

### **Diagnosis:**

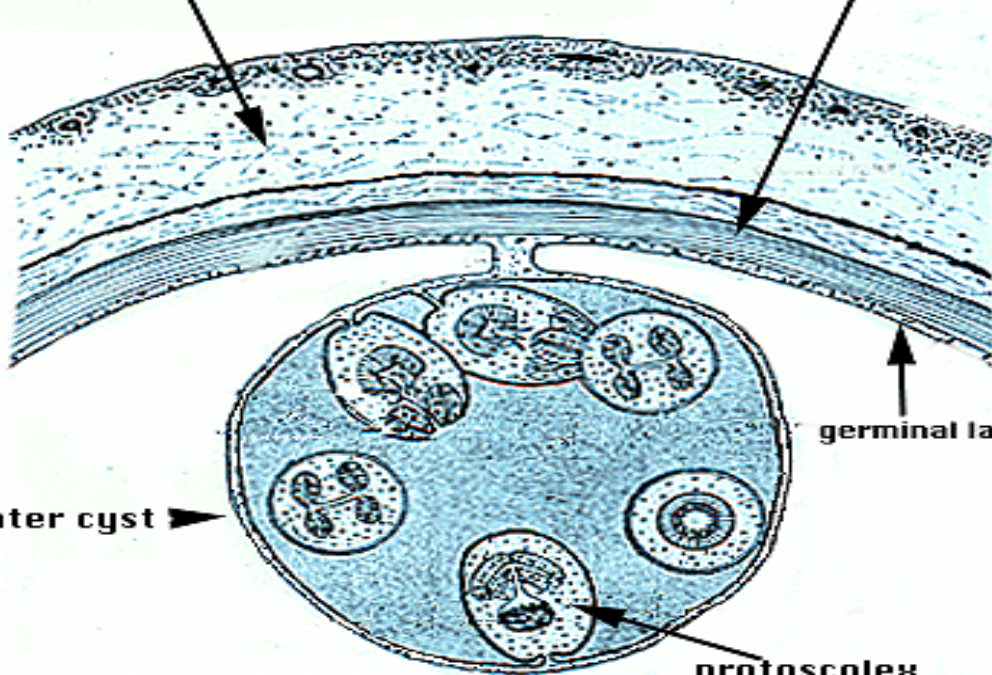
- 1- Diagnosis of infection in dogs is difficult, because the segments are small and only shed sparsely. When found, identification is based on their size (2.0-3.0 mm), ovoid shape and single genital pore.
- 2- Immunodiagnostic tests are based on the faecal antigen detection antibody sandwich ELISA technique.

Cestodes  
Lab7

*E. granulosus*



Fibrous capsule (host origin)      Fibrous capsule (parasite origin)



**Hydatid cyst**

## ***Diphyllobothrium latum***

**Class:** Cestoda

**Family:** Diphylobothriidae.

**Common name:** broad tapeworm

**Final host:** man and fish-eating mammals, such as the dog, cat, pig, and polar bear.

**Second host:** 1- copepods. 2- freshwater fish (pike, trout, perch).

**Predilection site:** small intestine.

### **Description, gross:**

A very long, ivory coloured tapeworm, (up to 20m in length) with several hundred proglottids. The scolex is unarmed with two muscular longitudinal grooves or bothria as organs of attachment.

### **Description, microscopic:**

The mature and gravid proglottids are retriangular-shaped with a central genital pore, being broader than they are long. Eggs are yellow, ovoid, operculate and measure around  $70 \times 50 \mu\text{m}$ .

### **Diagnosis:**

This is based on the detection of the characteristic eggs in the faeces.

# D. LATUM



Scolex

Proglottids

