

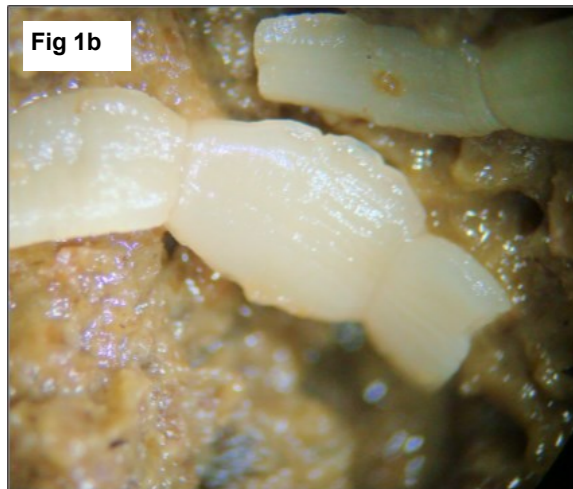
# IDENTIFICATION OF TAPEWORM EGGS AND SEGMENTS IN DOG AND CAT FAECAL SAMPLES

Adult tapeworms (cestodes) of dogs and cats inhabit the small intestine. It is important to follow best worming practices as advised by your vet. ESCCAP UK & Ireland recommends regular faecal testing for cats and dogs to monitor their tapeworm status

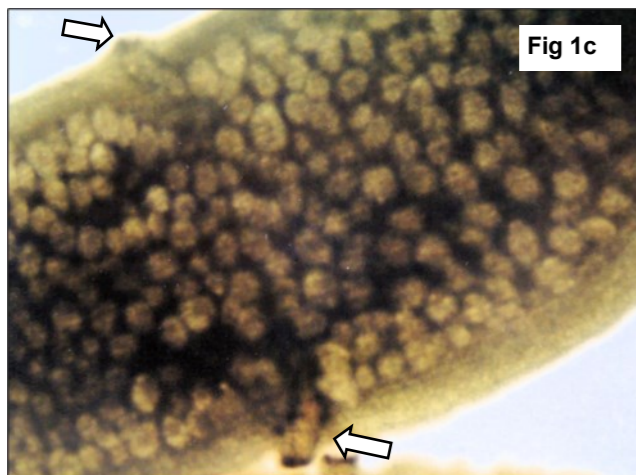
*Dipylidium caninum* is the most common tapeworm of dogs and cats. The larval stages (cysticercoids) of this particular parasite utilise fleas or sometimes chewing lice as their intermediate host. Pets become infested when infected fleas are ingested through licking the coat and self grooming.



*Dipylidium* eggs in faeces are not usually found singly, but inside capsules (Fig 1). These egg 'packets' can be up to 200µm in size and are released from mature tapeworm segments or (the proglottids). Each packet varies in size and contains small brown/yellow eggs.

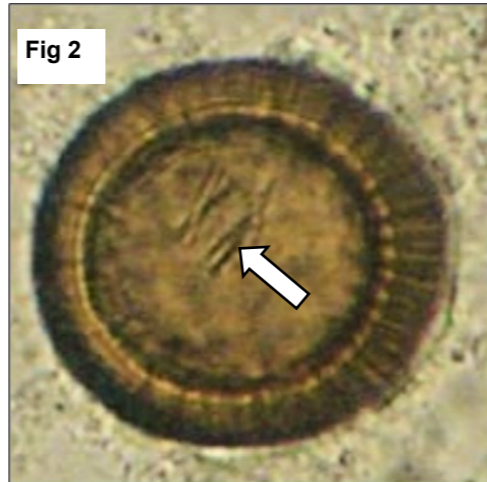


The mature segments themselves can sometimes appear in faeces (Fig 1b) and are motile.

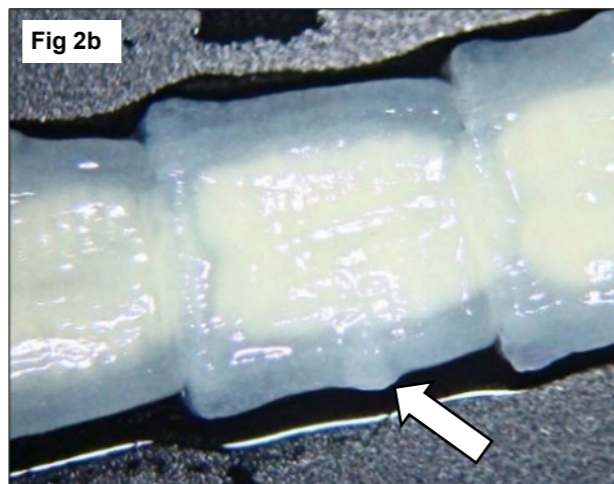


*Dipylidium* segments can be distinguished from those of *Taenia* tapeworms being rice grain-shaped and having a pore on each side the segment (arrows, Fig 1c)

*Taenia* spp. In the UK comprise several different species which utilise various mammalian intermediate hosts for their larval (metacestode) stages. Transmission is associated with opportunity to scavenge, eating poorly cooked meat or catching wildlife. Specific identification of adult *Taenia* spp. in dogs is very difficult, as their segments are similar and eggs identical.



*Taenia* spp. eggs (Fig 2) occur singly, are spherical/ellipsoid, and have a thick smooth shell. They are small 32-38µm, brown in colour and contain three pairs of tiny hooklets (arrow) which are part of the hexacanth embryo.

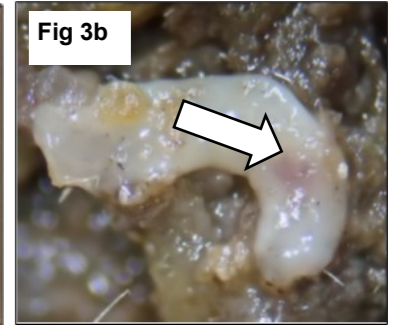
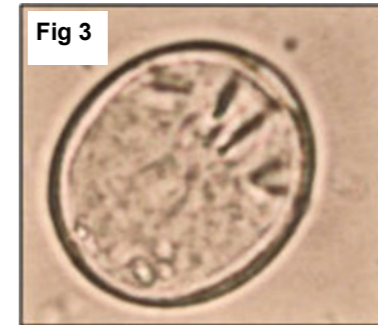


*Taenia* segments in faeces are roughly rectangular (Fig 2b) and each segment has a single lateral pore situated at the midpoint on the margin (fig 2b, arrow);



Fig 2c shows the detail of the segment pore and many spherical eggs inside the uterus

*Mesocestoides* is a tapeworm of dogs and cats more common in continental Europe. The eggs are thin-shelled, approx. 50µm in size and contain hooklets (Fig 3). The segments are small, only a few mm in size, and have a pink uterine area (Fig3b, arrow)



**NOTE:** *Echinococcus granulosus* (Fig 4) is a zoonotic tapeworm which infects mainly farm dogs and hunting dogs in some areas of the UK. The adult tapeworms (below) are relatively harmless in dogs but of considerable health and economic importance due to growth of hydatid cysts in livestock. These zoonotic parasites can also develop in the human liver and lung.

Another zoonotic species, *E multilocularis* is not endemic in the UK. This parasite forms 'alveolar' cysts which are extremely invasive.

*Echinococcus* eggs appear morphologically similar to those of *Taenia*.

