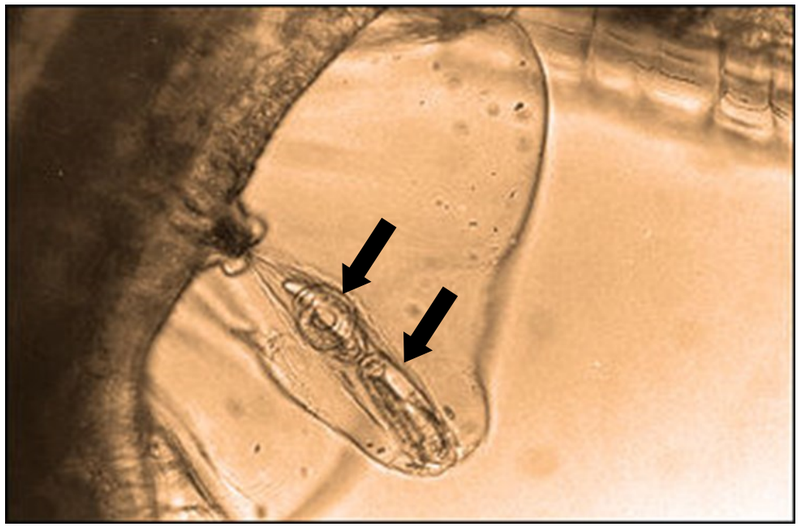
The Life cycle of the Fox lungworm *Crenosoma vulpis*

Crenosoma vulpis (the Fox lungworm) infects the bronchi, bronchioles, and trachea of wild and domestic canids and various other carnivores. The life cycle is similar to that of *Angiostrongylus vasorum* but *C. vulpis* seems to be relatively rare in dogs in the UK and is less pathogenic. Intermediate hosts are various gastropods detritivores. This parasite is endemic in fox populations in Europe and parts of North America.

1. ***Crenosoma vulpis*** resides in the airway mucus. Female worms are white and up to 1.5cm long. The head end of the parasite has annular folds when viewed under the microscopic (arrow).



2. The worm is ovo-viviparous, i.e. first stage larvae (L1) develop quickly within a thin egg shell and hatching is immediate within the host. The arrows show coiled larvae within eggs being expelled from the vulva region of the worm.

3. L1 measure approx. 300µm, and may be seen in bronchoalveolar lavage; they are then coughed up and swallowed and appear in the faeces. The L1 is differentiated from the L1 of *A vasorum* by the tail being straight and ending in a simple spike (arrow)

SIGNIFICANCE

Infections can result in broncho-pneumonia and blockage of the smaller bronchi and bronchioles. The symptoms are those of chronic respiratory infection with coughing sneezing and nasal discharge. In domestic dogs, *Crenosoma vulpis* seems to have a seasonality linked to increased abundance in mollusc intermediate hosts in late summer/autumn.

The pre patent period is approx. 3 weeks

4. L1 penetrate a mollusc - a slug or a snail feeding on faecal matter - and moult twice to become the infective stage (L3) after approx. 3 weeks.

5. Once the intermediate host is ingested by the fox or dog, the L3 travel to the lungs via the lymphatic glands and hepatic circulation and the parasite moults twice to the adult stage.