

Rescued dogs imported into the UK are often former street dogs, with a life history of exposure to exotic vector-borne diseases and parasites unfamiliar to UK vets, some of which have zoonotic potential.

THELAZIA CALLIPAEDA is a small white spiruroid worm transmitted by fruit flies and which resides in the conjunctival sac of the eye (Fig1), reaching 1.5cm in length. Fig 1a shows the appearance of the mouth (the buccal cavity) with typical striations on the cuticle. Mature female worms contain coiled first stage larvae (Fig 1b).

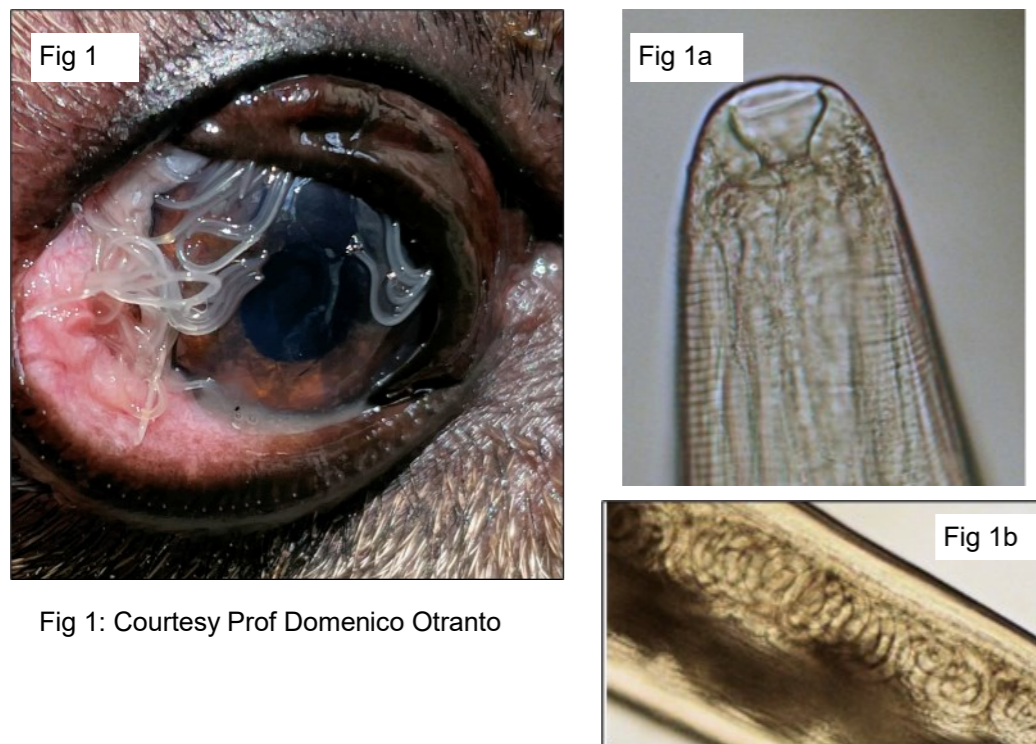
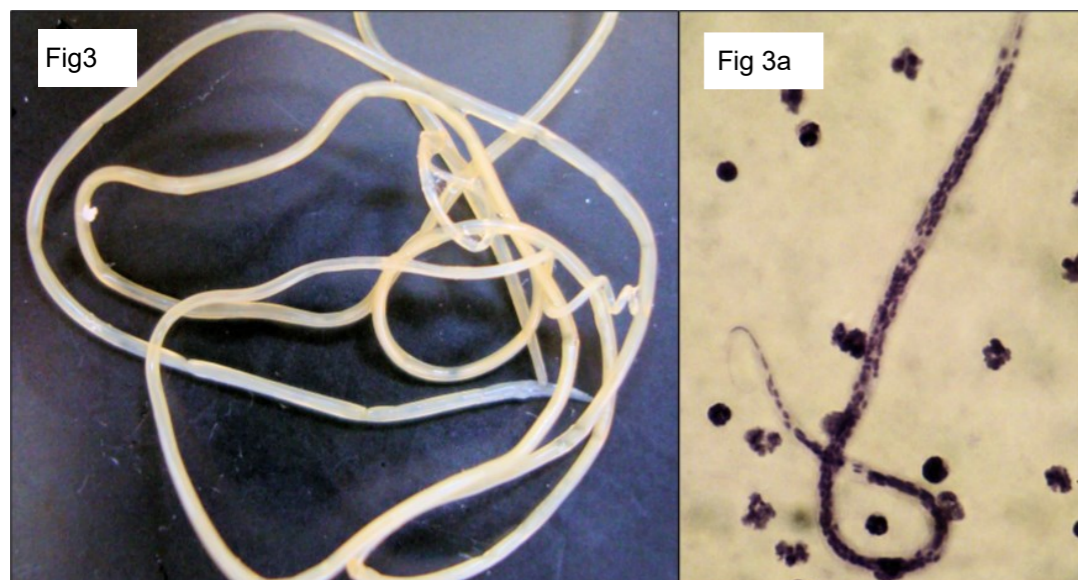


Fig 1: Courtesy Prof Domenico Otranto

DIROFILARIA IMMITIS is a highly pathogenic mosquito-transmitted filarial nematode up to 30cm long (Fig 3) which infects the right side of the heart and pulmonary vessels. Other related but much less harmful species such as *Dirofilaria repens* grow in the subcutaneous and connective tissues. These long slender filarial worms release tiny larvae or 'microfilariae' (Fig 3a) which may be found in the blood (*D.immitis*) or skin (*D.repens*). Blood microfilariae (approx. 350µm) can be concentrated and stained as an aid in diagnosis and identification.



ONCHOCERCA LUPI develops in nodules in the eye (Fig2) which may only become apparent many months or years after import. Isolated from the nodule and under the microscope, these filarial worms have a characteristic ridged cuticle (Fig2a). The vector of *O lupi* is as yet undescribed.

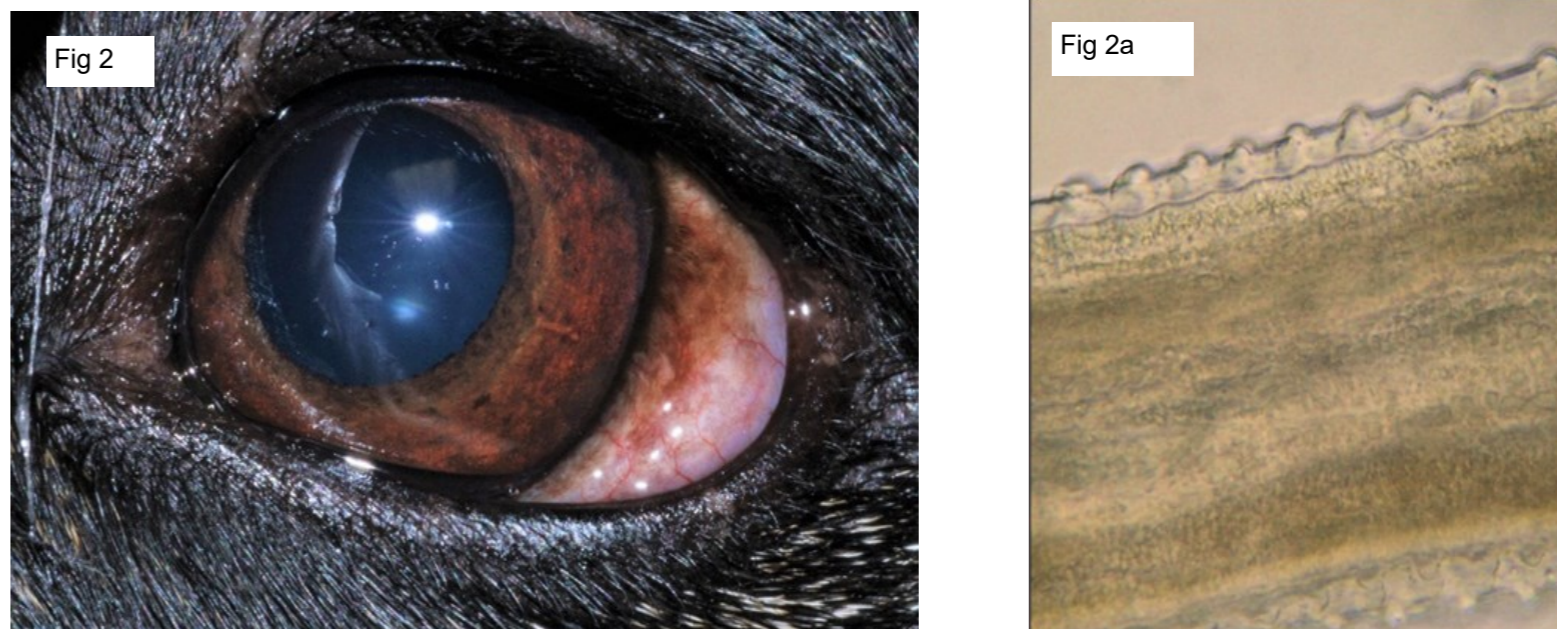


Fig 2: Courtesy Rossella Carrozza

SPIROCERCA LUPI mature inside nodules in the oesophagus wall and their larvae can damage the aorta. The adults of these spiruroid nematodes measure 5.0-6.0 cm and female worms contain small elongated eggs approx. 40µm in length, which contain a larva when passed in faeces. Dogs become infected by ingesting infected beetles or an infected vertebrate paratenic host.



LINGUATULA SERRATA is known as the 'Tongue worm'. This unusual pentasomid parasite is found in the nasal cavities and can reach 10cm in length. The body is distinctly segmented and tapeworm-like (Fig 5). The head end is large and blunt and bears very tiny claws on close examination. Dogs become infected if they eat raw tissue containing the parasite nymph stage. The parasite is sometimes sneezed out.

