Wild Tiger Health Centre Information Sheet

Disease threat: Diphyllobothrium spp.

Hazard description: A large cestode in the order Pseudophyllidea, Family Diphlyllobothriidae (along with *Spirometra*).

Host species: Two intermediate hosts – copepods and freshwater fish. The final hosts are fish-eating mammals including man (Taylor *et al*. 2007). Reported from captive tigers in India (Deshmukh *et al.* 2009; Rao & Singh 1998), from free-ranging tigers in RFE (Konyaev 2012), and free-ranging tigers in Tadoba National Park, central India (Marathe *et al.* 2002). This Indian report (with ca 50% prevalence of infection), combined with the absence of evidence of fish as prey (from faecal examination) raises some questions over the life cycle of the species of *Diphyllobothrium* found in wild tigers in India (Marathe *et al.* 2002).

Pathogenesis: Adult worms live in the small intestine of the definitive host. Disease in the animal final host is considered uncommon, although may cause enteric upset in humans (Taylor *et al.* 2007). Reportedly a causal factor in clinically diseased (non-specific lethargy, poor coat) in zoo tigers in India (Rao & Hamza 2008). The report from free-ranging tigers in India also raises questions over pathogenicity due to the large size of the adult worm and the potential pathogenicity of its mere physical presence (Marathe *et al.* 2002).

Diagnosis: Eggs in faeces.

Free-ranging tiger occurrence: Has been reported from free-ranging tiger in RFE (Konyaev 2012), and central India (Marathe *et al.* 2002).

Distribution: Reports of human infections (Muratov 1990) and tiger in RFE (Konyaev 2012). Reports from India (Rao & Hamza 2008). It may be present other Asian range states too.

Assumptions: Relatively low pathogenicity in free-ranging tigers.

Limitations: None.