



NAAHTWG Slide of the Quarter – July – September 2007) **Chilodenellosis or *Chilodenella* sp. infestation in** **barramundi (*Lates calcarifer*) 06-44312**

Case History

Advanced juvenile barramundi of about eight months of age that had been reared in one of eight cages in a freshwater pond had not been fed well the previous day. The next day there were 10 mortalities in the cage and five fish were submitted for necropsy. The affected fish were lethargic and had raised scales with grey, opaque skin surface.

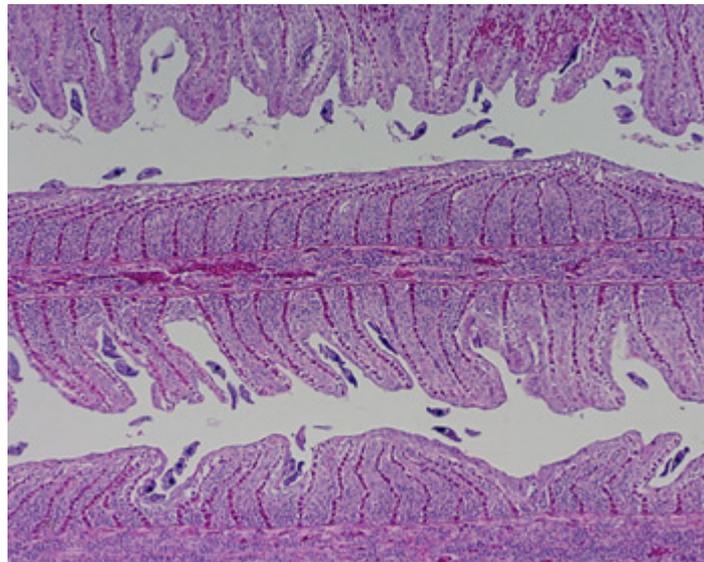


Figure 1

Histopathology

There is an extensive gill filament epithelial hyperplasia, with complete fusion of lamellae with occasional pseudocyst formation. The entire length of some gill filaments is affected by the severe hyperplasia. There is a mononuclear cell infiltrate in the filament connective tissue and in the epithelium at the base of the lamellae.

Numerous protozoan cells are present in the gill epithelium, between filament and lamellae. The range of alignment of the sectioned protozoa allow visualisation of features that indicate these are *Chilodonella* sp.: an ovoid shape of approximately 40 x 25 µm that is dorso-ventrally flattened with a notch at the cytostome, an oval macronucleus, rows of cilia and a cytopharyngeal tube.

A few of the slides include a section through the haptor of a single gill fluke.

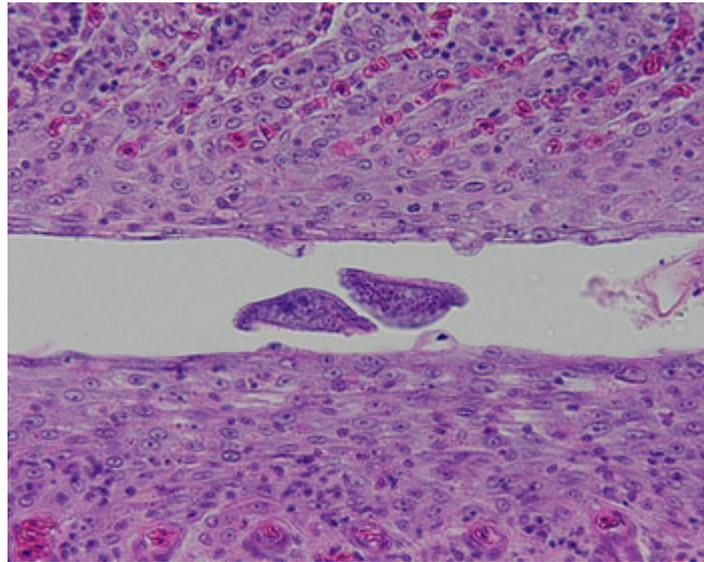


Figure 2

Morphological diagnosis

Chronic, severe, extensive hyperplasia of gill epithelium and a diffuse bronchitis associated with a protozoan infestation.

Aetiology

Chilodonellosis or a *Chilodonella* sp. infestation.

Comment

While the literature and fish disease texts usually refer to *Chilodonella* as a debility parasite, it remains a relatively common cause of disease of larger barramundi in freshwater pond systems in northern Queensland. On the previous occasions we have referred dried gill mucus preparations to parasitologists, this ectoparasite has been confirmed as *Chilodonella hexasticha*.

High cage stocking densities, a drop of water temperature and water quality (high organic levels) can be associated with epizootics.