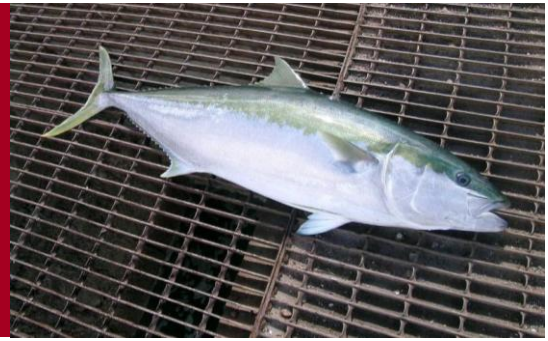
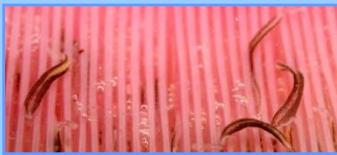


# Parasites of yellowtail kingfish (*Seriola lalandi*)

Parasite species with potential to cause fish pathology in fish farms



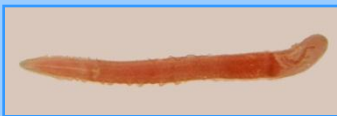
**Name:** *Benedenia seriolae*, flatworm parasites commonly called 'skin fluke'  
**Microhabitat:** Live on the surface of the fish and feed on skin cells  
**Appearance:** Transparent when alive, but turn white when they die  
**Pathology:** Heavy infections cause irritability, anorexia and mortality in *Seriola* aquaculture  
**Treatment:** Currently treated using hydrogen peroxide or freshwater baths  
**Curiosity:** Their circular attachment organ acts like a suction cap so they stick on the fish



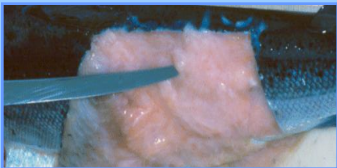
**Name:** *Zeuxapta seriolae*, flatworm parasites commonly called 'gill fluke'  
**Microhabitat:** Live on the gills and feed on blood  
**Appearance:** Brown, thin worms that look like blobs on gills when not immersed in water  
**Pathology:** Infections in *Seriola* farms can cause emaciation, lethargy and lethal anaemia  
**Treatment:** Currently treated using hydrogen peroxide or freshwater baths  
**Curiosity:** You find out how old they are by counting the clamps on the attachment organ



**Name:** *Caligus* spp., copepod crustaceans commonly called 'sea-lice' or 'skin crawlers'  
**Microhabitat:** Live on the surface of the fish including the skin and gills  
**Appearance:** Often with elongate paired eggs strings, scuttling around on the fish skin  
**Pathology:** Can cause irritation and anaemia in heavy infections  
**Treatment:** Hydrogen peroxide treatment may also remove these parasites  
**Curiosity:** These guys can hang on, despite the speed and distance their host travels



**Name:** *Paradeontacylix* spp., digenean flukes commonly called 'blood fluke'  
**Microhabitat:** Live in the circulatory system, including the heart and gills  
**Appearance:** Adult worms are 3mm long, eggs can cause white lesions in the gills  
**Pathology:** Eggs in the gills can impede blood flow, mass mortality in *Seriola* farms  
**Treatment:** none known (exclusion of potential intermediate mollusc annelid hosts?)  
**Curiosity:** These worms were only recently discovered in wild kingfish in Australia



**Name:** *Kudoa* spp. are myxosporeans, which can cause 'milky flesh' or 'soft flesh'  
**Microhabitat:** Live in the muscle tissue  
**Appearance:** Microscopic parasites that can only be observed under high power scopes  
**Pathology:** In heavy infections they can cause musculature liquefaction post-harvest  
**Treatment:** none known  
**Curiosity:** Put fish for eating immediately on ice and this condition may not show

## Further contact:

Kate S. Hutson  
Marine Parasitology  
School of Earth & Environmental Sciences  
The University of Adelaide  
Adelaide SA 5005  
P: +61 4 8303 5282  
F: +61 4 8303 4364  
E: kate.hutson@adelaide.edu.au

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Prepared by Kate S. Hutson 2007