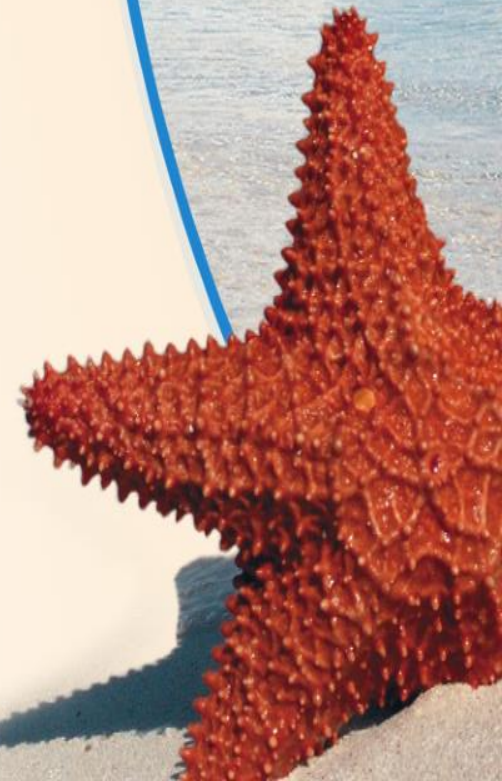


CRUSTACEANS DISEASES



Fish Lice Disease

- Fish lice is common name for branchiurid ectoparasites of fish from the genus *Argulus*



Fig. 2. Microscopic examination of males of two species: *Argulus japonicus* (left side) and *A. foliaceus* (right side)
Magn. $\times 0.8$ (stereomicroscope)



Fish Lice Disease

- Infested fish are lethargic, stay in the corners of tanks, cease feeding and lose condition
- In chronic heavy infections, the skin becomes opaque and the fins frayed and the fish is listless.



- The skin was inflamed, the scales were loosened and, in severe cases, the fins were frayed and almost gone
- The first feeding sites of argulids are often marked by **haemorrhagic spots**. Under low magnification they appear as craters formed by hyperplasia of the epidermis at the margins of the wound.



Fish Lice Disease

- Histologically, the craters may be restricted to the epidermis, especially on large fish with a thick epidermis, or they may penetrate through to the stratum spongiosum of the dermis and even to the stratum compactum beneath.



- The dermis becomes oedematous. Mucus and club cells are absent from any epidermis remaining in the crater but are abundant in tissue at the margin of the crater. In terminal cases the epithelium over the whole fish becomes thin and may be missing from parts of the body and fins .



Lernaeosis

Definition:

It is a parasitic disease caused by species of family Lernaeidae and affects body surface of freshwater fish.

May perforate to internal organs

Long parasite

Anchor worm

Carp are highly susceptible



Lernaeosis

Causative Agent

- *Lernaea sp.*
- Very sensitive to salt
- Only mature fertilized females are parasitic
- Outbreaks are more in warm water



Lernaeosis

Clinical Signs

- Focal hemorrhage at point of attachment
- Skin shows signs of inflammation.
- Flashing and common signs
- Respiratory manifestations if gills are affected
- Exophthalmia if eyes are affected
- Lethargy



Lernaeosis

- Tissues adjacent to the head part of worm become inflamed, which are susceptible to secondary infections of bacteria. In Japanese eel, many *Lernaea cyprinacea* infect the buccal cavity, impairing the feeding activity of the host fish.



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