



Prevention and diagnosis of *Epistylis* and *Temnocephala* on freshwater crustaceans

Yabbies grown in farm dams are susceptible to various parasites and surface fouling that can reduce their market value. *Epistylis* and *Temnocephala* are two of these commonly occurring organisms.

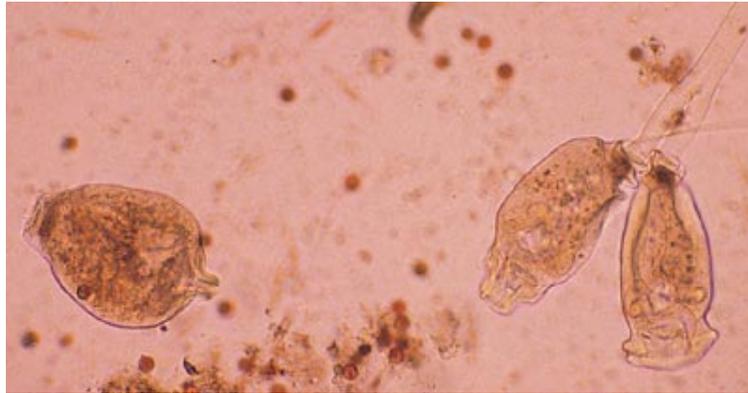
Epistylis

Epistylis is a stalked protozoan that appears as a fluffy growth on the external surface of crustaceans and fish. *Epistylis* is harmless to the animal unless it grows in such large numbers as to restrict water flow over the gills, causing asphyxiation. *Epistylis* uses the animal as an attachment substrate, so it can feed on bacteria and particles in the water.



***Epistylis* growing on the shell of a marron**

Their presence in large numbers on crayfish is seen as an indicator of a high organic load, low oxygen levels and poor water quality in a dam. It is thought that their abundance is directly proportional to the degree of organic pollution in the water and *Epistylis* grows best in warmer temperatures.



***Epistylis* organisms as they appear under the microscope**

Diagnosis

Epistylis appears as a fluffy, grey-white or brown scum on the shell of crustaceans. Formal identification requires the use of a light microscope.

Prevention

The best way to prevent *Epistylis* infestations is to stock with animals free of the parasite. However, if it is already present, improving water quality and container sanitation, decreasing bacterial and nutrient density, decreasing animal density and improving nutrition will help to control the problem. Animals should be returned to the dam and allowed to moult.

Temnocephala

Temnocephala are small (0.5 - 1mm) free-living flatworms that lay their eggs in gills and on the shell of crustaceans. The adult worms rove over the surface of the crayfish, eating algae and other microfauna.



***Temnocephala* eggs laid on the underside of a yabby.**



Temnocephala are very common on freshwater crayfish and although spectacular, pose no great health risk to the animal. However, when large numbers of adhesive eggs are laid on the surface of the crayfish, it may lead to rejection or poor prices at market. As with *Epistylis*, they are most prolific in dams with poor water quality and low oxygen.

Diagnosis

'Temno' are 0.5 - 1.0 mm long, have a pair of eyes and a sucker at the back end and can be easily seen.

Prevention

As for *Epistylis* above.



*Diagram of an adult
Temnocephala as they
appear under the
microscope.*