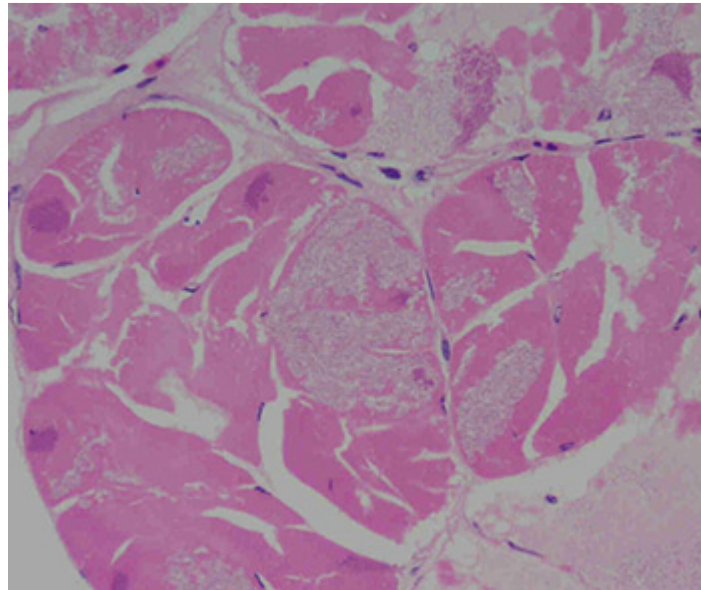




## **NAAHTWG Slide of the Quarter (January – March 2008) – Microsporidiosis in western rock lobster (*Panulirus cygnus*)**

### **Case History**

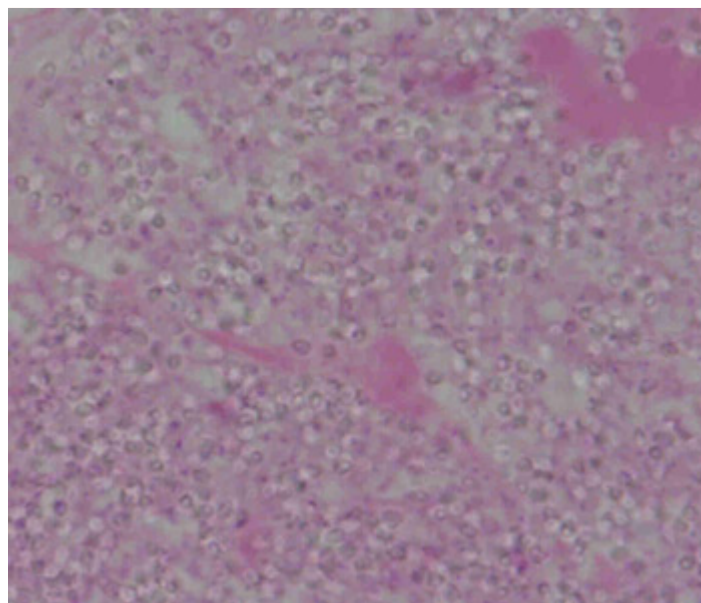
Muscles in the tail of affected lobsters are white, resembling those of cooked muscle.



**Figure 1**

### **Histopathology**

There are numerous refractile microsporidian spores (approximately 2.0  $\mu\text{m}$  in diameter) within the muscle fibres.

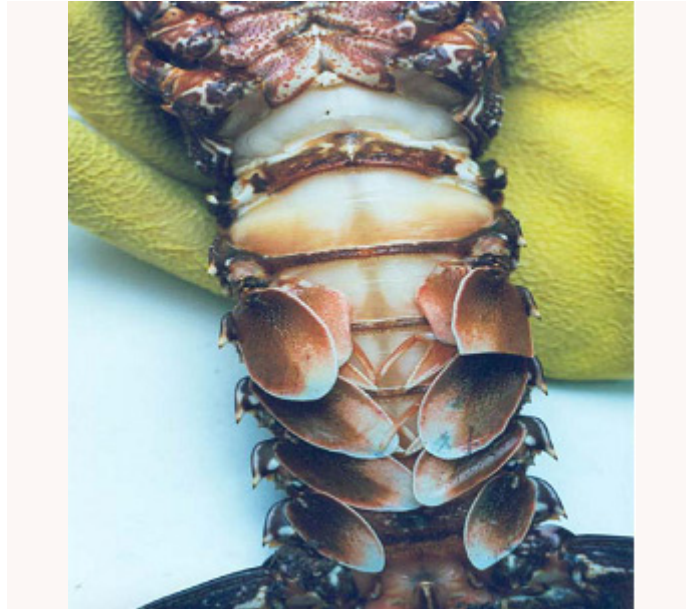


**Figure 2**



## Aetiology

### Microsporidiosis



**Figure 3**

### Comments

Microsporidia are obligate intracellular parasites, now believed to be related to fungi. Confirmation of the diagnosis depends on identifying, through electron microscopy, the presence of a coiled polar tubule that is responsible for injecting the infective spore contents into the host cell. The morphology of the infective agent is similar to that of the widely distributed microsporidian of prawns, *Ameson (Nosema) nelsoni*, however precise identification has yet to be made.

The prevalence of microsporidiosis in lobsters (*Panulirus cygnus* and *Panulirus ornatus*) in Australia is low<sup>1</sup>. *Panulirus cygnus* infected by microsporidia appear to suffer increased mortality when they are stressed and fishers tend to throw back infected animals. Cannibalism is considered to be one method of spread.

### References

- <sup>1</sup>. Dennis, D.M. and B.L. Munday. 1994. Microsporidiosis of palinurid lobsters from Australian waters. Bulletin of the European Association of Fish Pathologists 14: 16-18.