

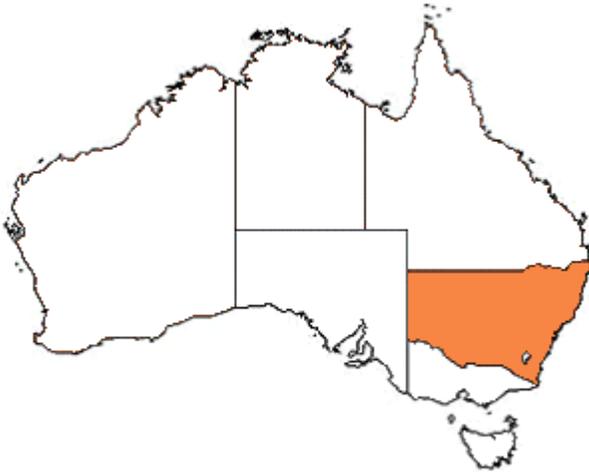
# Winter Mortality Disease

Disease agent: Unknown. Infection with small (2-3 micron) protozoan parasites that resemble microcells from the Order Mikrocytida within the Phylum Cercozoa.



Presence in Australia: Endemic

Presence in Queensland: Exotic



Winter mortality has been recorded from Sydney rock oysters in southern NSW south of Port Stephens. However given the presence of other microcell species (e.g. *Bonamia*) in Australia, any diagnosis of *Mikrocytos* spp. or *Bonamia* spp. requires specific confirmation using molecular techniques.

## Signs of Disease:

Molluscs infected with these parasites may exhibit the following signs:

- gaping and weakened shell closure
- high mortalities (80%) in oysters > 2 years old in late winter when water temperatures < 14°C
- focal abscess-like lesions in the gills, mantle, labial palps, gonad or adductor muscle



**Winter mortality:** A Sydney rock oyster with winter mortality. Note large size of a 2+ year old oyster in poor condition with occasional darkened lesions on the surface of the mantle.

Photo: B. Diggles.

**Host Species affected may include:**

Sydney rock oysters

**At risk fisheries in QLD may include:**

Rock Oyster Industry

**Introduction Pathways to avoid:**

Do not translocate oysters of unknown disease status from areas where winter mortality infections are known to occur.

**Basic decontamination information:**

This disease agent can be inactivated by the following treatments: Dessication (drying out). Being a microcell, the winter mortality agent may be inactivated by treatments that inactivate other microcells (e.g. *Bonamia* sp.), namely temperatures above 60°C for over 15 minutes, or exposure to 10-50 mg/L (0.001-0.005%) acetic acid (vinegar).

**What to do if this disease is suspected:**

If you suspect this disease is present please contact the Department of Agriculture and Fisheries (13 25 23) or the National 24 hr Emergency Animal Disease Hotline (1800 675 888) immediately.

**How to collect and store samples for diagnosis:**

If you are taking samples to help authorities to test for this disease, whole molluscs should be provided alive (if possible) or chilled and on ice.

**Learn more**

For more information about other diseases of aquatic animals of significance to Australia, download the **Aquatic Disease Field Guide App** available for iOS, android and windows devices at these locations:

**IOS**<https://goo.gl/9UJNp9>**ANDROID**<https://goo.gl/T4Tn1X>**WINDOWS**<https://goo.gl/Y8Vibi>

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