

Shell Fungus

I. Causative Agent

A fungal agent resembling *Penicillium* sp. was associated with abnormal brown/black conchiolin deposits on the inner surface of butter clams collected from Kodiak Island, Alaska. A different shell disease fungus, *Ostracoblabe implexa*, causes adductor muscle detachment and mortality characterized by inner shell conchiolin warts and severe thickening of the shell margin in oysters reported from Europe, India and on both Atlantic and Pacific coasts of Canada.

II. Host Species

The Alaskan shell fungus isolate has been detected in only one sample of butter clams from Kodiak Island collected in late 2005.

III. Clinical Signs

Clinical signs include brown to black semi-hard, flaky conchiolin deposits on the inside shell and around the mantle edges with no apparent mortality or unusual clam behavior.

IV. Transmission

The mode of transmission is unknown but likely horizontal via seawater.

V. Diagnosis

Abnormal brown to black conchiolin deposits are visible on the inside shell with associated septate fungal hyphae observed microscopically in wet mounts of the material. This fungus can be cultivated by inoculating the conchiolin material onto potato agar supplemented with 2% sodium chloride.

VI. Prognosis for Host

The prognosis for the host is un-

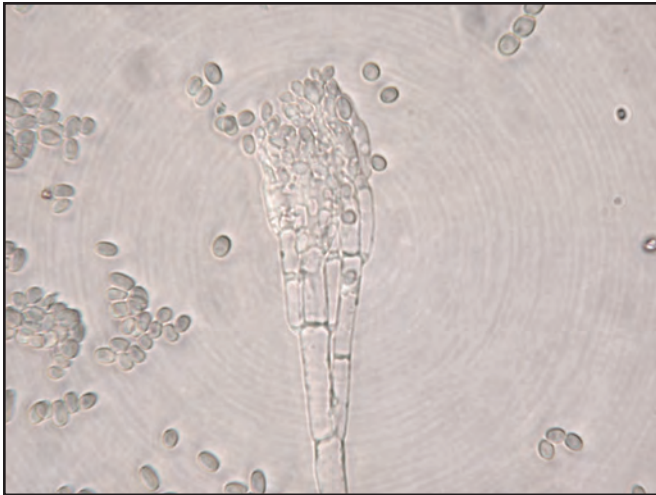
known but could lead to weakened shells and inability to close the valves properly if conchiolin deposits become too thick. The abnormal conchiolin deposition is a host response to wall-off or isolate an irritant.

VII. Human Health Significance

There are no known zoonotic human health concerns caused by this shell fungus.



Black conchiolin deposits (arrow) containing fungal hyphae on the inside shell surface of butter clams



Wet mount of conidiophore and typical conidia of *Penicillium*-like shell fungus from butter clams