

**Biosecurity Queensland**  
**Gladstone Fish Health**  
**Interim Veterinary Diagnostic Assessment Report Number 2 (6 October 2011)**

- A. The cause of the severe ulcerative lesions on the barramundi samples from Gladstone Harbour could not be determined. EUS (red spot) and bacterial infection have been ruled out as causative agents. The skin damage is serious and increases the likelihood of mortality in affected fish.

A range of bacteria were isolated from the affected barramundi. However the lack of distinct invasion or micro-colony establishments in the skin and muscle lesions suggests that they are not fish pathogens. Bacteria isolated include: *Micrococcus* sp.; *Moraxella* sp.; *Proteus vulgaris* and *Pseudomonas* sp.

- B. The Spotted Cod, Spangled Emperor and Whiting did not show eye disease nor have these fish been observed to carry *Neobenedenia* sp., even at subclinical levels.

EUS was not detected in the Spotted Cod, Spangled Emperor or Whiting skin lesions. A protozoan *Uronema*-like parasite was found in the Spangled Emperor. This was not considered to be significant. Histopathology of the Whiting showed skin fibrosis, but there were no other significant findings. Histopathology showed the skin lesions of the Spotted Cod were due to superficial abrasions. This could be caused by mild trauma.

- C. Histopathology examination of the gills of all fish submitted from Gladstone Harbour found no sediment on the gills of these samples.

- D. Prawn and mud crab samples examined indicated an erosive shell disease which is most likely the result of bacterial infection by *Vibrio* spp. which are organisms found in marine waters. These bacterial are opportunistic and cause shell fouling with erosion due to chitinolytic activity. The mud crab had a low grade viral infection in the hepatopancreas, but is not considered significant.

This is an interim report and subject to revision and refinement when new information is available pending completion of examinations in progress.

Table 1 summarises the fish and shellfish samples received as of 6.10.11 in connection with Gladstone Harbour Fish Health investigation.

Table 1.

Date received /Case no.	Sample Type, Number, Condition	History	Findings
30.8.11 P11-74662	Whole barramundi x 4 Dead >24h on ice	Caught from Boyne River, Gladstone. Eye and skin lesions reported.	Ocular pathology One fish with deep necrotic lesion EUS not found
30.8.11 P11-74663	Whole barramundi x 2 Dead >24h on ice	Caught from China Bay, Gladstone. Eye lesions reported.	Ocular pathology
5.9.11 P11-74796	Whole Moreton Bay bug x 1 Dead >2 weeks, decomposed as not on ice in transit to lab	Coordinates 23.28.70-151.30.50 23.22.80-151.26.20	Samples unsuitable for testing
7.9.11 P11-74868	Whole barramundi x 1 Dead >24h on ice	Caught from South Tree Inlet, Gladstone. Eye lesions reported.	Ocular pathology caused by fluke <i>Neobenedenia</i> sp.

8.9.11 P11-74903	Whole barramundi x 1 Dead >24h on ice	Caught from Port Alma, Gladstone. Skin lesions reported.	Severe deep chronic necrotic lesions. Lesions caused by EUS
9.9.11 P11-74922	Whole barramundi x 1 Dead >24h on ice	Caught from Calliope River, Gladstone. Eye and skin lesions reported.	Ocular pathology caused by fluke <i>Neobenedinia</i> sp. EUS not found
19.9.11 P11-75082	Mud crab X1	Found dead Shelley's Beach	Erosion of carapace consistent with shell disease. Cause of death not able to be determined due to post mortem degeneration.
16.9.11 P11- 75085	Whole spotted cod x 1 Dead <24h on ice	Caught from Rat Island, Gladstone. Skin lesions reported.	Superficial lesions on left side due to superficial abrasions
20.9.11 P11-75123	Whole prawn x 2 Dead on ice >24h	Location being clarified.	Erosive shell disease
20.9.11 P11-75124	Whole mud crab x2 Live	Caught from mouth of South Tree Inlet, Gladstone.	Erosion of carapace consistent with Shell Disease. Low grade viral infection of hepatopancreas
22.9.11 P11-75194	Spangled Emperor x1 Dead >24h on ice	Caught from Gladstone Reef	Evidence of intestinal stricture. Protozoan <i>Uronema</i> -like parasite
27.9.11 P11-75286	Whiting X1 Dead >24h on ice	Caught outside Gladstone Harbour closure area	Skin fibrosis
4.10.11 P11-75412	Barramundi X1	Water outlet Calliope	To be reported

Note: As all fish were received by the laboratory as dead fish on ice, there is a risk that *Neobenedinia* sp. have detached from the fish therefore reducing the probability of detection.

A preserved collection of the *Neobenedinia* sp., a capsid monogenean fluke, has been forwarded for confirmatory identification. Results expected in 2-3 weeks.

Samples of barramundi from submissions P11-74663 (China Bay) and P11-74903 (Port Alma) have been forwarded for toxicological study including: heavy metals; agrichemical residues and PAH residues. Results expected 6-8 weeks.