

Monitoring Queensland's mud crabs

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Mud crabs, *Scylla serrata*, are a highly desired species utilized by commercial, recreational and indigenous sectors along the entire Queensland coast. Since 1999, the Queensland Department of Primary Industries and Fisheries (DPI&F) have monitored mud crab populations through annual surveys in various river systems around the Queensland coastline. In 2005–06 the DPI&F conducted a comprehensive review of its mud crab monitoring program. The review aimed to reassess the program objectives to ensure the data being collected were appropriate to monitor mud crab stocks in Queensland. The review enabled DPI&F to assess whether the 17 sites monitored were still appropriate and reflected regions of high harvest and regions in close vicinity to a large resident population. This presentation will demonstrate some of the key factors leading to the review, data used to assess our objectives and the changes to the program as a result of the review.

Using hook/bait size and angling technique manipulations to influence the catch, hooking location and initial post-release survival of recreationally caught black bream (*Acanthopagrus butcheri*)

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Post-release survival of line-caught black bream (*Acanthopagrus butcheri*) and numerous other species is strongly influenced by hooking location. Maximising post-release survival rates for *A. butcheri* is reliant upon anglers increasing shallow-hooking rates. The present study followed from previous studies by the authors and aimed to determine whether higher initial post-release survival rates (survival for first hour) are achievable by increasing hook/bait size (sizes 8, 4 and 1 hooks tested) and fishing with tight instead of slack lines. Shallow-hooking increased when larger hook/bait sizes and tight line fishing were used, and consequently initial survival increased. Survival was not directly affected by hook size, but was higher for deep-hooked fish that did not have the hook removed. Post-mortem examinations showed that removing hooks from deep-hooked fish caused more frequent and severe throat and gill injuries, which resulted in mortality. This study demonstrated that *A. butcheri* initial post-release survival