

# Mud Crab Research Update

*A biannual update on mud crab research  
in the Northern Territory*

*Edition 3: Mar 2007*

## Introduction

Welcome to the third edition of the 'Mud Crab Research Update'. This newsletter has been developed to provide a half-yearly update on mud crab research being undertaken in the Northern Territory (NT). If you would like to join the mailing list for this newsletter, please contact Fisheries on 08 8999 2144, or e-mail: [fisheries@nt.gov.au](mailto:fisheries@nt.gov.au). Copies are also available via post or e-mail. Alternatively, you can download this newsletter at: [www.fisheries.nt.gov.au](http://www.fisheries.nt.gov.au).

## Staff movements

Dr Mark Grubert has joined the Coastal Research Unit of NT Fisheries and will spend the majority of his time on mud crab research.

Mr Don Elphick (Aquatic Resource Manager for mud crabs) regrettably leaves NT Fisheries for a permanent position with FaCSIA.

Ms Kate Seidel has moved to Customs and Mr Chris Errity has returned to the Pelagics Section of NT Fisheries. Mr Michael Phelan continues as head of the Coastal Research Unit.

## Award for mud crab scientist

Michael Phelan is the NT winner of the 2006 BRS Science and Innovation Awards for Young People in Agriculture, Fisheries and Forestry. Michael's project hopes to remove some of the uncertainty in terms of what constitutes a "soft" or "hard" mud crab. He will use a durometer (a small instrument used to measure hardness – see picture below) to measure shell hardness in mud crabs and compare the results with the commonly used "thumb test". Michael hopes to obtain a threshold value for "hard" crabs which can be used as a reference point that is independent of the tester's size or strength.



Mud crab research in the Northern Territory is conducted by NT Fisheries with the assistance of commercial fishers and wholesalers.

## Industry liaison

Michael Phelan, Mark Grubert and Don Elphick attended the AGM of the NT Crab Fishermen's Association at the NT Seafood Council offices on the 14<sup>th</sup> of November, 2006. Michael provided an update on the status of recent funding applications and the organisation of the mud crab stock assessment workshop. Mark summarised the market monitoring data from the past 10 years and presented a preliminary analysis of the mud crab observer data. Don Elphick clarified a number of issues relating to the interpretation of the Mud Crab Fisheries Management Plan (2006).

NT Fisheries also hosted the Restricted Bait Net Entitlement review on the 30<sup>th</sup> of January, 2007. This meeting was attended by NT Fisheries staff (as above), members of the NT Seafood Council and the NT Crab Fishermen's Association. Issues discussed included the effectiveness of logbook reporting, the catch composition of bait nets (see below) and interactions with protected species (such as spartooth sharks and freshwater sawfish – see right). The review was necessary to ensure accreditation under the Commonwealth EPBC Act which allows for the export of mud crabs.



## 2007 Mud crab stock assessment

Planning is underway to host an independent assessment of the NT mud crab fishery in mid 2007 (probably June). The assessment will examine data from the commercial mud crab logbook, observer, freight and market monitoring programs and describe the current status of the fishery. Invites will be sent to all industry members when dates are confirmed.

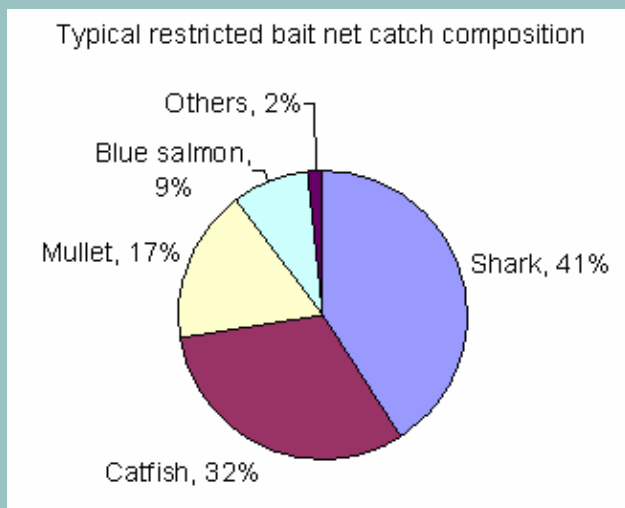
## Funding applications

Michael Phelan and Doug Neville (Chair, NT Crab Fishermen's Association) have submitted a funding application to FRDC to conduct a study on the distribution and abundance of juvenile mud crabs. It is hoped that such information may assist in the development of predictive models for the mud crab fishery.

Mark Grubert is applying for funding to use the fluorescent pigment lipofuscin to age mud crabs. This substance accumulates in nervous tissue (such as the brain and eyestalks) of most crustaceans (including mud crabs) in concentrations proportional to the animal's age. If successful, the project will lead to more accurate estimates of age, growth and mortality of mud crabs.

### How to contact us

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Other taxa in the bait net catch include: Trevally, Queenfish, Bream, Milkfish, Cod, Stingrays, Diamond scale mullet and Herring.

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