

# Inshore Crustaceans

## SARDI AQUATIC SCIENCES

The Inshore Crustaceans Subprogram conducts biological, ecological and fisheries research to provide scientific advice to State Government on issues related to the ecologically sustainable utilisation of South Australia's western king prawn and blue swimmer crab fisheries resources.

### Overview

The Subprogram is led by Cameron Dixon and the primary outputs are stock assessment reports for each of the three prawn fisheries, Spencer Gulf, Gulf St Vincent and West Coast, and for the blue swimmer crab fishery of Spencer Gulf and Gulf St Vincent.

Stock assessment reports synthesize historic and contemporary information to assess the current status of the resource; assess the fishery against the Performance Indicators of the Management Plan; consider the uncertainty of the assessment, and; identify future research needs.

Each assessment is underpinned by data collected from fishery-independent surveys. The surveys are conducted collaboratively by scientists and industry participants and provide critical information for understanding the population dynamics of these short lived, highly valued crustaceans.

Survey data also provide critical information for the complex spatial management arrangements of the Spencer Gulf and Gulf St Vincent prawn fisheries. The Spencer Gulf prawn fishery is recognised nationally for its responsive management arrangements that are underpinned by effective working relationships among scientists, industry and managers.

As well as conducting stock assessments, Subprogram staff are involved in other aspects of research for these fisheries. Currently, an FRDC funded project is being conducted that aims to model the predicted path of prawn and blue crab larvae from release to settlement. The project involves close collaboration among scientists and oceanographers and aims to improve the understanding of the recruitment processes for these species in Spencer Gulf.

Other research includes studies on the distribution and abundance of by-catch species for each fishery, and studies on the recruitment habitats of prawns and blue crabs in Spencer Gulf and Gulf St Vincent.

### Current Research Projects

FRDC funded study to model recruitment processes for prawns and blue crabs.

Prawn trawl by-catch studies to underpin a by-catch risk assessment for the Spencer Gulf Prawn Fishery.



### Recent Publications

Dixon, C.D. and Hooper, G.E (2011). Blue Crab (*Portunus armatus*) Fishery 2009/10. SARDI Publication No. F2007/000729-7. SARDI Research Report Series No. 531.

Dixon, C.D., Roberts, S.D and Hooper, G.E (2011). Gulf St Vincent Prawn, *Penaeus (Melicertus) latisulcatus*, Fishery 2009/10. SARDI Publication No. F2007/000782-4. SARDI Research Report Series No. 526.

Dixon, C.D., Hooper, G.E. and Roberts, S.D (2010). Spencer Gulf Prawn *Penaeus (Melicertus) latisulcatus* Fishery 2008/09. SARDI Publication No. F2007/000770-4. SARDI Research Report Series No. 511.

Hooper, G.E., Dixon, C.D. and Roberts, S.D (2011). West Coast Prawn, *Penaeus (Melicertus) latisulcatus* Fishery, 2010. SARDI Publication No. F2007/000772-4. SARDI Research Report Series No. 563.

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