

## Onslow Prawn Managed Fishery

### MANAGEMENT OVERVIEW

The Onslow Prawn Managed Fishery targets western king prawns (*Penaeus latisulcatus*), brown tiger prawns (*Penaeus esculentus*), endeavour prawns (*Metapenaeus* spp.) and banana prawns (*Penaeus merguensis*).

The 1999 fishing season commenced on 5 April and will end on 15 November. Within the main fishing period, a number of nursery area openings and closures allow access to tiger prawn and banana prawn stocks. Catches in these nursery areas are closely monitored to ensure the prevention of growth and recruitment over-fishing. In 1999 the boundaries of the Ashburton Nursery were realigned to allow access to additional tiger prawn stocks, however catches taken from the new area are being particularly closely monitored to ensure that the increase in access will not jeopardise recruiting stocks.

Other management controls include limited entry, gear restrictions and controls on replacement boat size.

### COMPLIANCE AND COMMUNITY EDUCATION OVERVIEW

Karratha Fisheries Officers conducted several licence and gear inspections aboard vessels alongside the wharf in Beadon Creek, Onslow.

Sea patrols were also conducted by agency patrol vessels assisted by Karratha-based Fisheries Officers who monitored closed waters and carried out both gear and licence inspections.

A number of patrols, including those aboard agency patrol vessels, were carried out in the company of officers from the Department of Transport under the Joint Servicing Agreement.

No major offences were detected within the fishery.

### RESEARCH OVERVIEW

Research for managing this small fishery involves stock monitoring and assessment utilising the Catch and Effort Statistics System (CAESS) data provided by industry, as well as information from interviews with vessel skippers. Annual meetings are held with vessel operators to consider the status of the stocks and recommend changes to fishing operations.

The following status report summarises the research findings for this fishery.

## Fishery Status Report

### Main Features

#### Stock assessment complete:

*Not assessed*

#### Exploitation status:

*Not assessed*

#### Breeding stock levels:

*Not assessed*

#### Previous catch projections for year 1998:

*30-265 tonnes*

#### Catch current season (1998):

*Major penaeids 61 tonnes, comprising:*

<i>King prawns</i>	<i>35 tonnes</i>
<i>Tiger prawns</i>	<i>14 tonnes</i>
<i>Endeavour prawns</i>	<i>11 tonnes</i>
<i>Banana prawns</i>	<i>2 tonnes</i>

#### Estimated annual value (to fishers) for year 1998:

*\$0.9 million*

#### Catch projection next year (1999):

*61-132 tonnes (based on five-year range)*

#### Recreational component (1999):

*Not applicable*

### Boundaries and Access

The boundaries of this fishery are 'all Western Australian waters of the Indian Ocean below high water mark lying west of 116°45' east longitude and east of a line commencing at the high water mark on the mainland due south of the southernmost extremity of Locker Island drawn due north to the high water mark at that extremity; thence northwesterly to the high water mark at the southernmost extremity of Serrurier Island; thence northerly along the high water mark of that island on its western shore to its northernmost point; thence due north' (Other Prawn Figure 1).

The fishery is then divided into three fishing zones with associated nursery areas as follows:

Area 1	(incorporating Ashburton Nursery)
Area 2	(incorporating Coolgra Point Nursery)
Area 3	(incorporating Fortescue Nursery)

During the 1998 season the areas were open during the following periods:

Area 1	1 April-15 November
Area 2	1 April-15 November
Area 3	1 March-15 November
Fortescue Nursery	1 May-15 November
Ashburton and Coolgra Point Nursery	
Areas	Closed throughout the whole season

Different licence classes apply to this fishery allowing vessels to trawl in specific zones. These classes are listed below (figures in brackets indicate 1998 endorsements):

Class A	Areas 1, 2 and 3 (4 vessels)
Class B	Areas 2 and 3 (3 vessels)
Class C	Area 2 (12 Exmouth Gulf vessels)
Class D	Area 3 (12 Nickol Bay vessels)

### Annual Production

#### Main fishing method

Otter trawl.

#### Landings

The total landings for the 1998 season were 61 tonnes, including 14 tonnes of tiger prawns, 35 tonnes of king prawns and 11 tonnes of endeavour prawns (Other Prawn Figure 2).

The banana prawn landing of 2 tonnes was very low, and appears to be related to the low rainfall over the preceding summer period (December to March inclusive).

In contrast, the tiger, king and endeavour prawn catches increased in comparison with those of the previous season.

#### Fishing effort

Not assessed.

#### Catch rate

Not assessed.

### Stock Assessment

The catches during 1998 were at the low end of the range for all species (except king prawns, which were average at 35 tonnes). This was particularly the case for banana prawns, which declined to a very low catch level, from 90 tonnes in 1997 down to 2 tonnes in 1998. This corresponded to a very low summer rainfall, which commonly correlates with low recruitment for this species. Further work is under way to assess the relationship between summer rainfall and catches from the two separate nursery areas for this species within the Onslow trawl fishery.

### Breeding Stock Levels

Not assessed.

### Catch Projection for Year 1999

Under current effort levels, the projections for the 1999 season range of prawn catches, based on the five-year range, are:

King prawns	19-56 tonnes
Tiger prawns	5-96 tonnes
Endeavour prawns	5-22 tonnes
Banana prawns	2-91 tonnes

### Product Value for Year 1998

Wholesale prices for prawns vary depending on the type of product and the market forces operating at any one time. Generally, average prices were as follows:

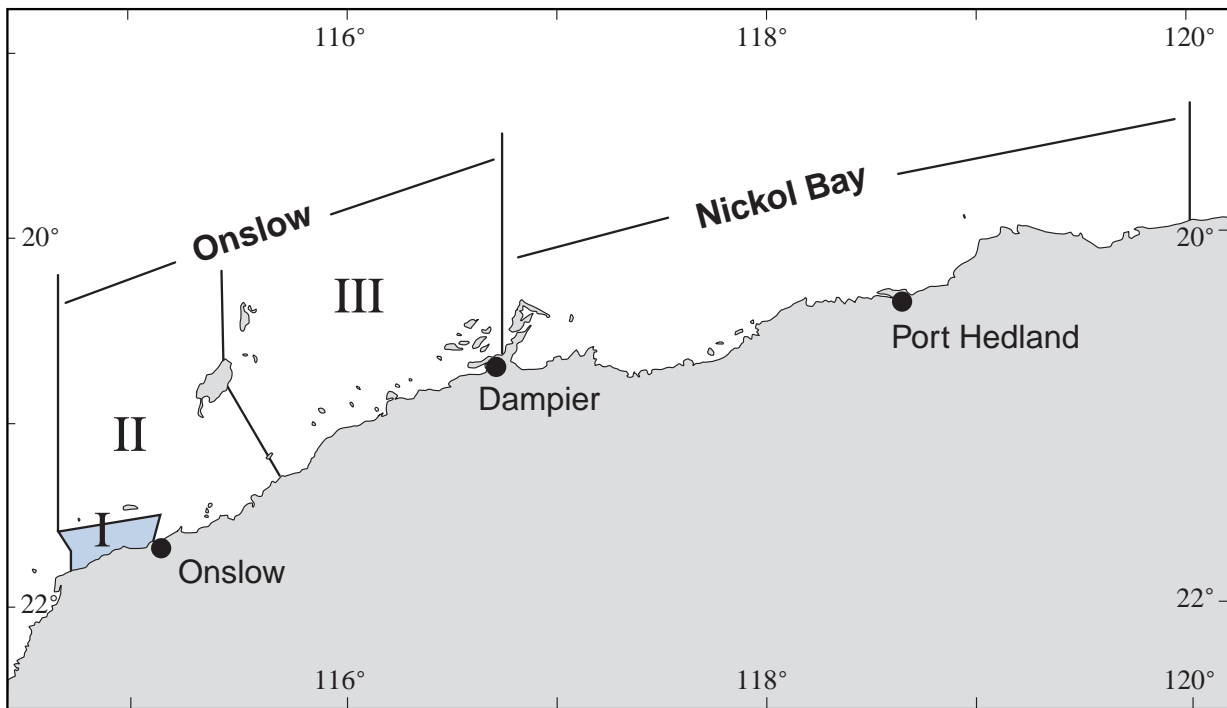
King prawns	\$14.50/kg
Tiger prawns	\$16.40/kg
Endeavour prawns	\$10.00/kg
Banana prawns	\$10.50/kg
Coral prawns	\$3.50/kg

### General Comments

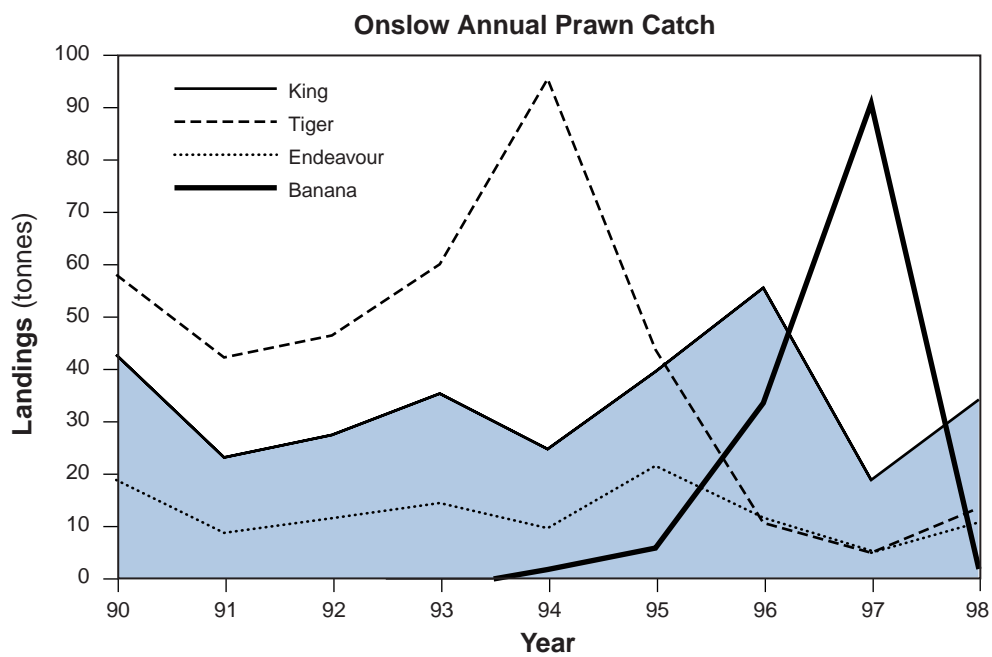
The monitoring of stocks in this fishery is undertaken using data from CAESS. The catches taken are, however, from a number of separate nursery areas and are highly variable from year to year. This is particularly the case for the rainfall-dependent banana prawn, which was the dominant species caught during 1997 yet provided the smallest component of the catch taken during the 1998 season.

Catches of tiger prawns from this fishery are also quite variable. It is likely that the severity of storms impacts negatively on tiger prawns in some years, and moreover, the effect varies depending on whether juvenile prawns are still in vulnerable, shallow seagrass nursery areas at the time. Severe storms can impact directly on king prawns and endeavour prawns as well. At times, debris from flooding can compound the problem by restricting fishing activities, and hence landings for the year.

The king prawn catch for 1997 declined as a result of flooding from the Ashburton River dispersing the stock and thus reducing their catchability. It was expected, however, that the king prawn catch would return to the normal range for the 1998 season, and this in fact occurred.



**Other Prawn Figure 1** Boundaries of the Onslow and Nickol Bay Prawn Managed Fisheries.



**Other Prawn Figure 2** Annual landings for the Onslow Prawn Managed Fishery, 1990-1998