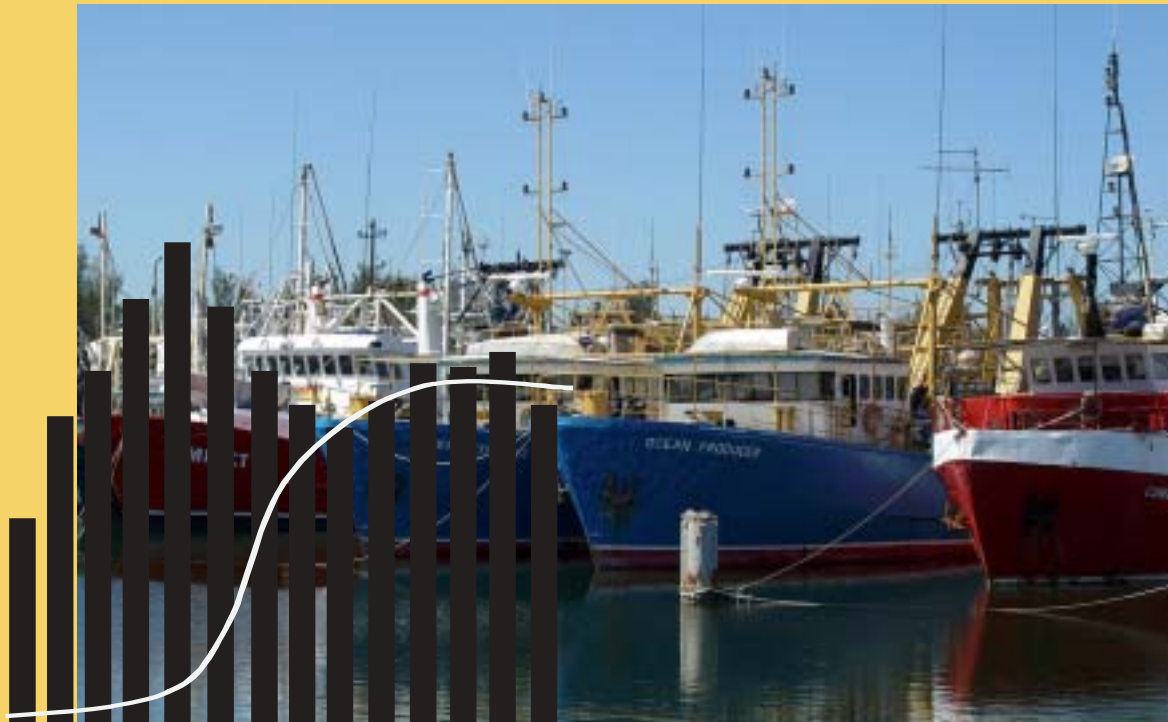




**Australian Government**

**Australian Fisheries Management Authority**

# **NORTHERN PRAWN FISHERY DATA SUMMARY 2003**



**[www.afma.gov.au](http://www.afma.gov.au)**

**Matthew Perdrau & John Garvey  
Logbook Program  
March 2004**

**DATA SECTION**

**Matthew Perdrau and John Garvey**  
**Northern Prawn Fishery Data Summary 2003**  
**March 2004**

**AFMA Logbook Program**  
**22 Brisbane Avenue**  
**BARTON ACT 2607**

© Commonwealth of Australia 2004

ISBN 1-877044-23-7

This report should be cited as: Perdrau, M., G. and Garvey, J., R. (2004). *Northern Prawn Fishery Data Summary 2003*. Logbook Program, Australian Fisheries Management Authority, Canberra.

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced by any process without prior written permission from the Commonwealth available from AusInfo. Requests and inquiries concerning reproduction and rights should be addressed to the Manager, Legislative Service, AusInfo, GPO Box 1920, Canberra ACT 2601

---

Published by the Australian Fisheries Management Authority

**STREET ADDRESS**  
3<sup>rd</sup> Floor  
John Curtin House  
22 Brisbane Avenue  
BARTON ACT 2600

**POSTAL ADDRESS**  
Box 7051  
Canberra BC  
ACT 2610

**ENQUIRIES**  
Telephone: (02) 6272 5029  
Facsimile: (02) 6272 5175



## Preface

### Scope of the Report

The Logbook Program's data summaries provides a broad outline of the catch and effort for a fishery. They are an important mechanism for providing feedback to operators on the logbook data that they send to AFMA. In addition, the extraction and analysis of the data by the Logbook Program helps to identify data quality issues and provides valuable information on how data can be collected and managed better.

AFMA has produced data summary reports for the Northern Prawn Fishery on an annual basis since 1992. The following data summary reviews the 2003 season prawn catch and effort for the Northern Prawn Fishery (NPF).

### Acknowledgements

Production of this report was made possible through the efforts of the skippers and vessel owners of the NPF. Skippers supplied daily logbook information and vessel owners completed seasonal landing returns. The log sheets and landing returns were processed by D&S Datafix.

If you have any comments or queries on the data summary, please do not hesitate to call:

Alex Lynch, Senior Logbook Officer, AFMA (Canberra) - Ph (02) 6272 5029

Please note that this Data Summary is also available on AFMA's website:  
[www.afma.gov.au](http://www.afma.gov.au)

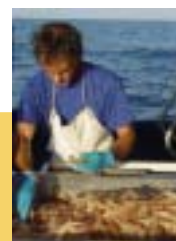


## Contents

<b>Introduction</b>	<b>7</b>
<b>Description of the Northern Prawn Fishery</b>	<b>7</b>
Area of Fishery	7
Fishing Methods	7
Management Information	8
Species	8
<b>Data Collection Program</b>	<b>8</b>
<b>Methods Used For Preparing Data Summary</b>	<b>9</b>
Banana and Tiger Prawn Fishery Components	9
<b>Catch and Effort Data For the Northern Prawn Fishery</b>	<b>10</b>
<b>Coverage</b>	<b>10</b>
<b>Catch</b>	<b>10</b>
Catch by Week	13
<b>Effort</b>	<b>13</b>
Nominal Effort and Effective Effort	13
Missed Fishing Days	13
<b>Catch Rate</b>	<b>14</b>
Catch, Effort and Catch Rate by Month	15
<b>Vessel and Gear Information</b>	<b>16</b>
Vessel Length	16
Distribution of Catch By Vessel	16
Average Catch per Vessel	16
Gear	19
<b>Catch and Effort by Statistical Area in the NPF</b>	<b>20</b>
<b>General</b>	<b>20</b>
<b>Weipa</b>	<b>22</b>
<b>Keerweer</b>	<b>24</b>
<b>Edward</b>	<b>26</b>
<b>Mitchell</b>	<b>28</b>
<b>Bold</b>	<b>30</b>
<b>Sweers</b>	<b>32</b>
<b>Mornington</b>	<b>34</b>
<b>Limmen Bight</b>	<b>36</b>



<b>Groote</b>	<b>38</b>
<b>Gove</b>	<b>40</b>
<b>Arnhem</b>	<b>42</b>
<b>Port Essington</b>	<b>44</b>
<b>Melville</b>	<b>46</b>
<b>Fog Bay</b>	<b>48</b>
<b>Bonaparte</b>	<b>50</b>
<b>Bycatch in the Northern Prawn Fishery</b>	<b>52</b>
<b>Turtle Bycatch</b>	<b>52</b>
<b>State/Territory Specific Data</b>	<b>56</b>
<b>Financial Year Catch of the NPF by State/Territory</b>	<b>56</b>
<b>Byproduct of the NPF by State/Territory</b>	<b>56</b>





## Introduction

The Northern Prawn Fishery Data Summary 2003 contains catch and effort statistics by prawn species, area, time and fishery. Comprehensive bycatch information is also included for the information of owners and skippers and to meet AFMA's obligations under Offshore Constitutional Settlements with Queensland, the Northern Territory and Western Australia. Turtle bycatch is also reported.

## Description of the Northern Prawn Fishery

### Area of Fishery

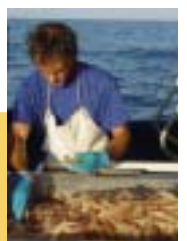
The Northern Prawn Fishery is located off Australia's northern coast, and extends from the low water mark to the outer edge of the Australian fishing zone (AFZ) in the area between Cape York in Queensland and Cape Londonderry in Western Australia (Figure 1).

### Fishing Methods

Prawn trawling is an active fishing method that involves towing a conical-shaped net spread open by two steel or timber otter boards over the seabed, commonly called otter trawling. Groundchains are also used on the nets to stimulate prawns into the trawl mouth. Vessels in the NPF tow two nets simultaneously in a double rig configuration, from booms on either side of the vessel. In addition to the main nets a small net, or try-net, is used to test the catches for a given area. All trawl nets (other than try-nets) in the NPF are required to be fitted with approved Turtle Excluder Devices (TEDs) and Bycatch Reduction Devices (BRDs).



Figure 1. Northern Prawn Fishery Management Area



Most of the vessels in the NPF are purpose built from steel and range in length from 14 m to 29 m. All NPF boats have modern, sophisticated catch handling, packing and freezing capabilities as well as wet (brine) holding facilities. All use electronic aids such as colour echo sounders and Global Positioning Systems (GPS). Satellite phone and fax equipment is used by most vessels and many have introduced on-board computing facilities. All vessels are required to have a Vessel Monitoring System (VMS).

### **Management Information**

The Fishery is managed through a combination of input controls (limited entry, seasonal closures, permanent area closures, gear restrictions and operational controls) which are implemented under the Northern Prawn Fishery Management Plan 1995 (the Management Plan).

The Management Plan provides for the granting of fully transferable Statutory Fishing Rights (SFRs) that determine the number of trawlers that may operate and the amount of gear used in the Fishery. In 2001 the management plan was amended to allow the total gear pool to be set by determination. The gear SFR is set as an amount of headrope length, which can be varied depending on the status of prawn stocks

In 2002 measures to reduce effort by 40% on tiger prawns were introduced. This was achieved by shortening the seasons and a further 25% reduction in the value of an SFR from 24 August 2002. This resulted in a reduction in Class B SFRs from 119 to 102.

### **Species**

The Fishery targets nine commercial species of prawns including white banana (*Fenneropenaeus merguensis*), red-legged banana (*F. indicus*), brown tiger (*Penaeus esculentus*), grooved tiger (*P. semisulcatus*), blue endeavour (*Metapenaeus endeavouri*), and red endeavour (*M. ensis*). Scampi, squid, scallops and bugs are also taken.

The fishery is split into two seasons. For 2003, the seasons were from 1 April to 13 May and from 1 September to 1 December respectively.

### **Data Collection Program**

Northern Prawn Fishery operators are required to complete the 'Northern and Torres Strait Prawn Fisheries Daily Fishing Log' (NP13) on a daily basis. In 2003, five operators trialed electronic logbook reporting. These electronic logbook data are included in this data summary.





## Methods Used For Preparing Data Summary

The data used to prepare the Northern Prawn Fishery Data Summary is comprised of the logbook information (NP13) submitted by NPF skippers and the seasonal landing returns (SLR-T01) completed by NPF vessel owners. This information is stored at the Australian Fisheries Management Authority on the Northern Prawn, Kimberley Prawn and Torres Strait Prawn database.

The data used in this summary was extracted on 3rd January 2004 after making every effort to reconcile the data provided by skippers with that obtained from vessel owners. This was to ensure that the logbook data and the landings figures approximated each other as closely as possible. Seventy eight vessels from a total of 97 had catches from logbooks totalling within 10% of the catch recorded in the landing returns for banana and tiger prawns. At the time of extraction, 100% of all possible logbook and landing data had been received. No days were missing because of lost logsheets.

Over the entire fleet, the logbook figures for banana and endeavour prawns were a little lower than the landings figures (by 0.2% each). For tiger prawns, the logbook figures were a little higher than the landings (by 1.4%). The catch of king prawns accounted for on the logbooks was only 40% of the total landings figure.

The catch and effort estimates in Table 1, Figure 2 and Figure 6 were derived from a combination of logbook and landings figures. The remainder of the tables and figures in the summary represent logbook data only. This may cause discrepancies between totals. Discrepancies may also occur due to rounding.

### Banana and Tiger Prawn Fishery Components

The fishery statistics have been split into banana and tiger prawn fishery components according to the composition of the catch in logbook records. If half or more of a vessel's daily catch was banana prawns or there was no prawn catch and the vessel was fishing, the vessel was defined as operating in the banana prawn fishery on that day; otherwise it was defined as operating in the tiger prawn fishery. Days fishing where vessels have been searching, but have not supplied details of the area searched, have not been included in the effort figures (11 days in the 2003 season).

Banana prawn fishery catch is the catch of all species (bananas + tigers + endeavours + kings) when a vessel is defined as fishing in the banana prawn fishery. Likewise, tiger prawn fishery catch is the catch of all species when a vessel is defined as operating in the tiger prawn fishery.



## Catch and Effort Data For the Northern Prawn Fishery

### Coverage

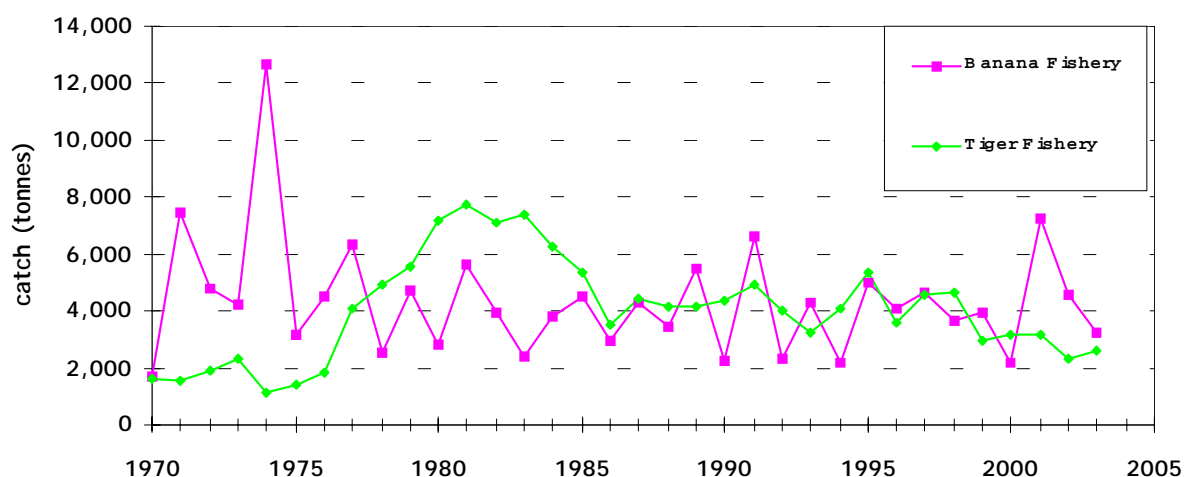
Statistics for the Northern Prawn Fishery (NPF) were collected from vessels that fished between Cape York (Queensland) and Cape Londonderry (Western Australia) (Figure 1).

The 2003 NPF seasons were from 1 April to 13 May and 1 September to 1 December. There were 43 days available to fish during the first season and 91 during the second season (a total of 134), which was the same as in 2002. Total effort in 2003 was 12,617 days compared to 12,866 in 2002.

The total NPF prawn catch for 2003 was 5,898 tonnes, compared with 6,936 tonnes in 2002 and 10,389 tonnes in 2001 (Table 1). The catch of banana prawns decreased compared to the previous year by 29%. The catch of tiger prawns increased by 14%, while endeavour prawns increased by 6%. The catch of king prawns decreased to 4 tonnes. During the 2003 fishing year, 97 different vessels landed product (95 during the first season and 97 during the second season).

### Catch

The catch in the banana prawn fishery decreased by 1,320 tonnes (29%) in 2003 to 3,263 tonnes. The tiger prawn fishery catch increased by 283 tonnes (12%) to 2,636 tonnes (Figure 2).



**Figure 2. Catch in the banana and tiger prawn fisheries between 1970 and 2003**

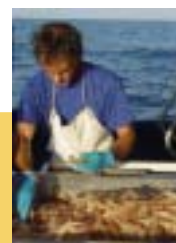
Source: AFMA logbook data adjusted to annual reconciled landing figures



Table 1. Annual reconciled landings, effort and vessel numbers from 1970 to 2003.

<i>year</i>	<i>banana prawns (tonnes)</i>	<i>tiger prawns (tonnes)</i>	<i>endeav. prawns (tonnes)</i>	<i>king prawns (tonnes)</i>	<i>total prawns (tonnes)</i>	<i>number of vessels</i>	<i>banana fishery effort (days)</i>	<i>tiger fishery effort (days)</i>
1970	1702	1138	417	0	3257	191	2041	5818
1971	7364	1183	400	0	8948	169	5571	6057
1972	4801	1380	472	0	6654	180	4327	7380
1973	4226	1672	594	0	6492	217	4917	7362
1974	12711	666	434	4	13815	196	7537	3439
1975	3160	973	444	6	4583	107	5361	6010
1976	4519	1118	675	5	6319	145	7238	6660
1977	6345	2900	1125	28	10398	193	7257	11673
1978	2535	3599	1240	82	7456	237	5569	18749
1979	4775	4218	1213	94	10300	240	7328	17791
<i>'70-'79 average</i>	<i>5214</i>	<i>1885</i>	<i>701</i>	<i>22</i>	<i>7822</i>	<i>188</i>	<i>5715</i>	<i>9094</i>
1980	2835	5124	1891	111	9964	269	8391	30594
1981	5672	5559	2073	95	13400	286	11524	31895
1982	3875	4891	2124	144	11036	271	8751	32956
1983	2382	5751	1488	207	9831	254	6856	34551
1984	3770	4525	1714	83	10095	252	5932	32447
1985	4469	3592	1671	77	9811	231	6946	26516
1986	2935	2682	748	85	6451	238	7132	26669
1987	4257	3617	772	65	8713	234	7954	22478
1988	3381	3458	669	81	7591	222	6655	26264
1989	5466	3173	909	85	9636	223	7439	27036
<i>'80-'89 average</i>	<i>3904</i>	<i>4237</i>	<i>1406</i>	<i>103</i>	<i>9653</i>	<i>248</i>	<i>7758</i>	<i>29141</i>
1990	2221	3550	735	128	6636	200	5044	25525
1991	6605	3987	879	81	11554	172	6515	20744
1992	2254	3084	880	47	6267	170	5132	21789
1993	4292	2515	733	35	7572	127	6299	16019
1994	2157	3162	872	72	6263	128	4955	18592
1995	4961	4125	1150	58	10294	125	4880	16834
1996	4078	2311	1235	41	7665	127	5525	16635
1997	4587	2694	1870	51	9202	129	5476	15385
1998	3569	3218	1322	20	8123	130	5301	18003
1999	3904	2136	885	21	6947	129	5639	12675
<i>'90-'99 average</i>	<i>3863</i>	<i>3078</i>	<i>1056</i>	<i>55</i>	<i>8052</i>	<i>144</i>	<i>5477</i>	<i>18220</i>
2000	2195	2190	958	13	5355	121	3697	12736
2001	7245	1983	1157	4	10389	118	6247	10440
2002	4577	1943	411	5	6936	114	4148	8718
2003	<b>3238</b>	<b>2222</b>	<b>435</b>	<b>4</b>	<b>5898</b>	<b>97</b>	<b>4114</b>	<b>8503</b>
<i>'00-'03 average</i>	<i>4314</i>	<i>2085</i>	<i>740</i>	<i>6</i>	<i>7140</i>	<i>113</i>	<i>4552</i>	<i>10099</i>
<i>'70-'03 average</i>	<i>4325</i>	<i>2951</i>	<i>1017</i>	<i>54</i>	<i>8348</i>	<i>184</i>	<i>6109</i>	<i>17792</i>

Source: Annual reconciled landings figures and AFMA Logbook data.





## Catch by Week

The highest catches were recorded in the first week of the banana season. Figures 3 (a), (b) and (c) show the catch of banana and tiger prawns by week during 2001, 2002 and 2003.

## Effort

### Nominal Effort and Effective Effort

Nominal effort is the number of days recorded by skippers in their logbooks. Effective effort applies only to the tiger prawn fishery based on the assumption that there has been an 'effort creep' (an increase in effectiveness of the gear utilised). A number of different approaches to effort creep are being used by NPFAG, including using an average 5% per year as well as variable effort creeps. As in previous years, for the purpose of preparing this report we have used 5%.

Nominal effort in the banana fishery decreased by 34 days (1%). In the tiger fishery, nominal effort decreased by 215 days (down 2%) (Figure 4).

### Missed Fishing Days

The various reasons for missed fishing days has been compiled from information recorded by skippers in the logbook (Figure 5). There were slightly less days missed due to break downs than in 2002. In the second season of 2003 there were more days spent in other fisheries than in 2002.

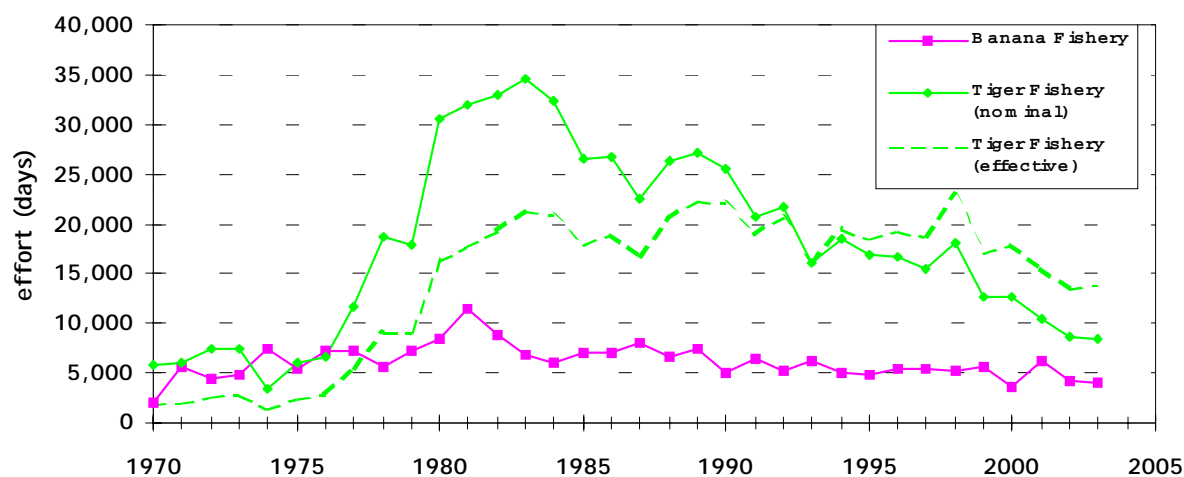
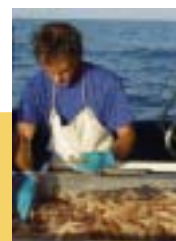
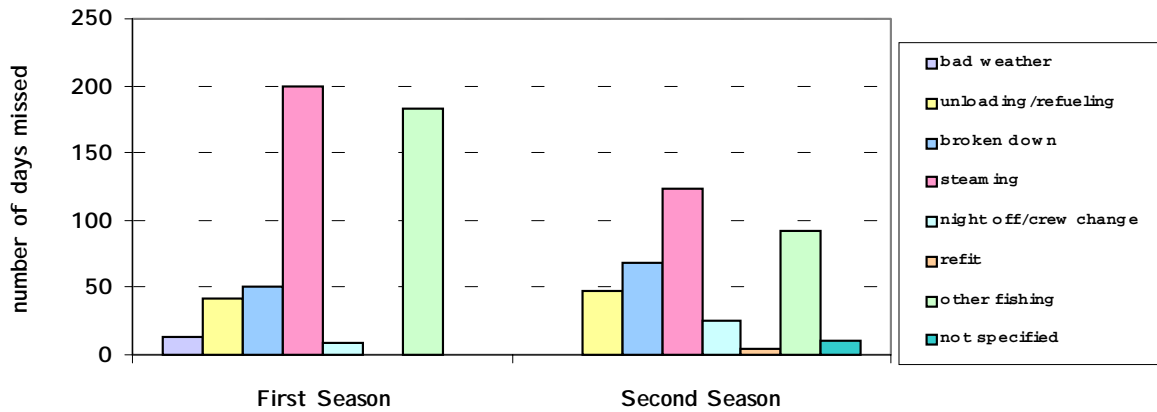


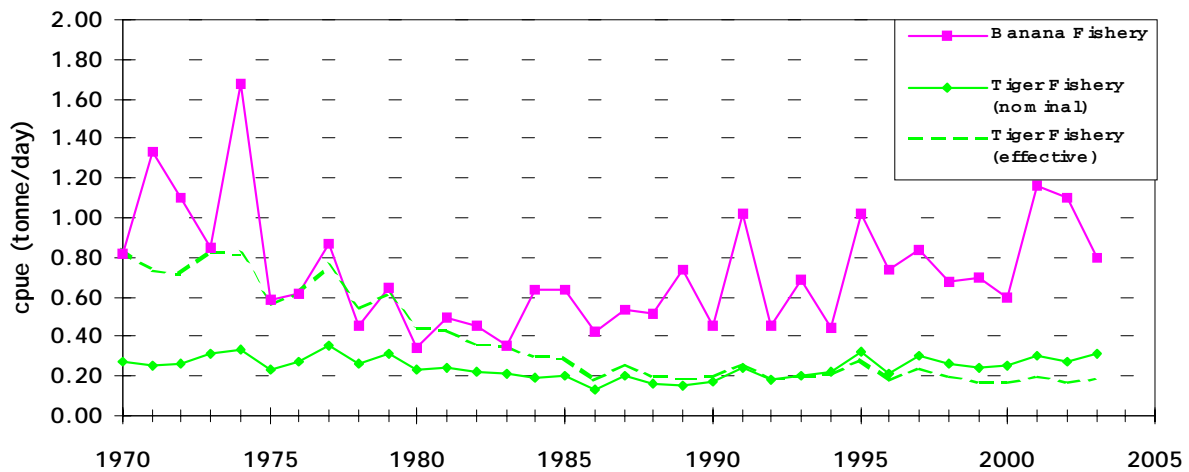
Figure 4. Effort in the banana and tiger prawn fisheries between 1970 and 2003.

Source: AFMA Logbook data





**Figure 5. Missed fishing days for the banana and tiger prawn season 2003.**  
Source: AFMA Logbook data



**Figure 6. Catch rate in the banana and tiger prawn fisheries between 1970 and 2003.**  
Source: AFMA Logbook data adjusted to reconciled landings figures

### Catch Rate

The banana fishery catch rate decreased from 1.10 tonne/day in 2002 to 0.79 tonne/day in 2003. The nominal catch rate for the tiger fishery increased slightly to 0.31 tonne/day while the effective catch rate increased to 0.19 tonne/day (Figure 6).



### Catch, Effort and Catch Rate by Month

Monthly banana prawn catches (Table 2) were up in May (34%) compared to 2002, but were down in all other months. Tiger prawn catches in April were lower in 2003 (12 t) compared with 2002 (65 t) and were higher in May (up 0.8%), September (up 7%), October (up 19%) and November (up 19%) than in 2002. Endeavour prawn catches were higher in October (130 t) and November (188 t) compared to 2002, but decreased in all other months.

The highest catches in the banana fishery were recorded in April, with the lowest in November. The highest catches in the tiger fishery were recorded in October with the lowest in April (Table 3).

Nominal effort in the banana fishery was down in all months except September compared with 2002. Nominal effort in the tiger fishery was slightly up in October (up 7%) and November (up 4%) compared to 2002. It was lower in all other months (Table 4).

The catch rates (tonnes/day) in the banana fishery were highest in April and lowest in May and November. The tiger fishery catch rates (tonnes/day) were highest in September and lowest in April (Table 5).

**Table 2. Monthly catch by species in 2003**

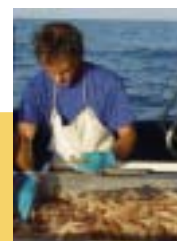
Source: AFMA Logbook data

<i>Catch (tonnes)</i>	<i>Apr</i>	<i>May</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<b>Total</b>
<i>Banana</i>	2,467	361	308	71	33	<b>3,240</b>
<i>Tiger</i>	12	52	820	819	488	<b>2,192</b>
<i>Endeavour</i>	6	19	87	130	188	<b>431</b>
<i>King</i>	0	0	1	0	0	<b>1</b>
<b>Total</b>	<b>2,486</b>	<b>432</b>	<b>1,216</b>	<b>1,020</b>	<b>709</b>	<b>5,864</b>

**Table 3. Monthly catch for all prawn species in the banana and tiger prawn fisheries in 2003**

Source: AFMA Logbook data

<i>Catch (tonnes)</i>	<i>Apr</i>	<i>May</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<b>Total</b>
<i>Banana Fishery</i>	2,476	371	315	71	34	<b>3,267</b>
<i>Tiger Fishery</i>	9	61	901	949	675	<b>2,597</b>



**Table 4. Monthly effort in the banana and tiger prawn fisheries in 2003**

Source: AFMA Logbook data

<i>Effort (days)</i>	<i>Apr</i>	<i>May</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<b>Total</b>
<i>Banana Fishery</i>	2,549	809	571	107	74	<b>4,110</b>
<i>Tiger Fishery (nominal)</i>	61	317	2,173	2,824	2,706	<b>8,081</b>
<i>Tiger Fishery (effective)</i>	99	516	3,540	4,600	4,408	<b>13,163</b>

**Table 5. Monthly catch rate for all species in the banana and tiger prawn fisheries in 2003**

Source: AFMA Logbook data

<i>CPUE (tonne/day)</i>	<i>Apr</i>	<i>May</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>
<i>Banana Fishery</i>	0.97	0.46	0.55	0.66	0.46
<i>Tiger Fishery (nominal)</i>	0.16	0.19	0.41	0.34	0.25
<i>Tiger Fishery (effective)</i>	0.10	0.12	0.25	0.21	0.15

## Vessel and Gear Information

### Vessel Length

The most common NPF vessel length in 2003 was between 22.00 - 22.99 metres (Figure 7).

### Distribution of Catch By Vessel

Thirty six vessels caught between 30 and 39 tonnes in the first season of 2003 (Figure 8a). In the second season, 58 vessels caught between 30 and 39 tonnes (Figure 8b).

### Average Catch per Vessel

The average catch per vessel of all prawns fell slightly to 61 tonnes per vessel in 2003 (Figure 9a). The average catch per vessel for banana prawns in 2003 fell to 33 tonnes per vessel (Figure 9b), while that of tiger prawns (Figure 9c) increased to 23 tonnes per vessel in 2003.





NORTHERN PRAWN FISHERY DATA SUMMARY 2003

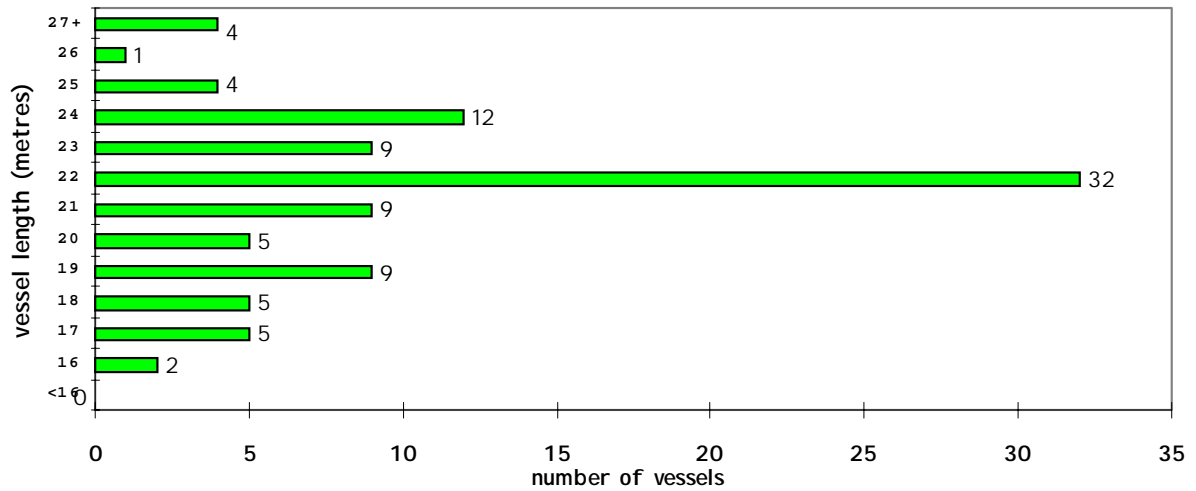


Figure 7. Frequency of vessels lengths in the NPF fleet in 2003

Source: AFMA licensing data

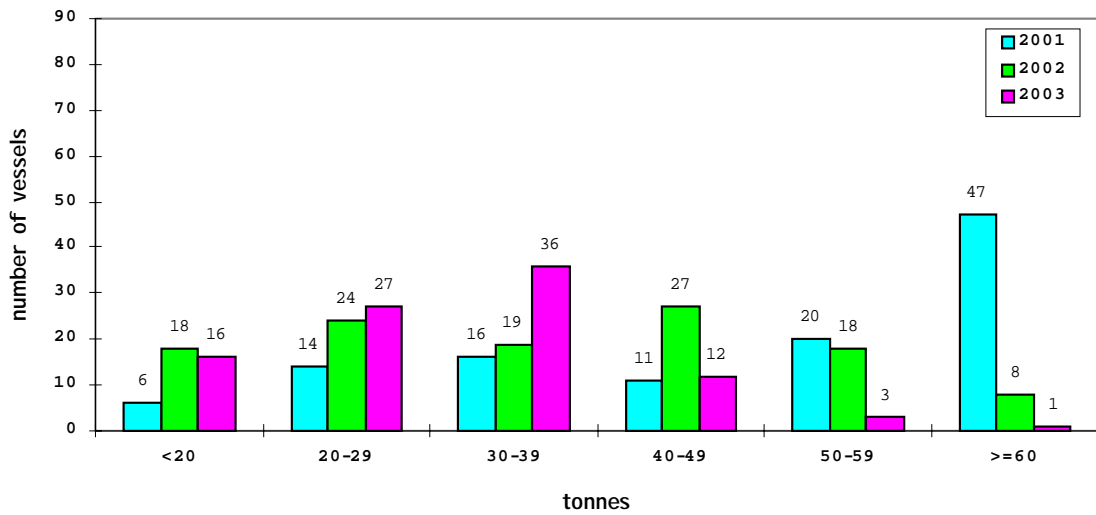


Figure 8a. Distribution of total catch by vessel in the first season, 2001 to 2003

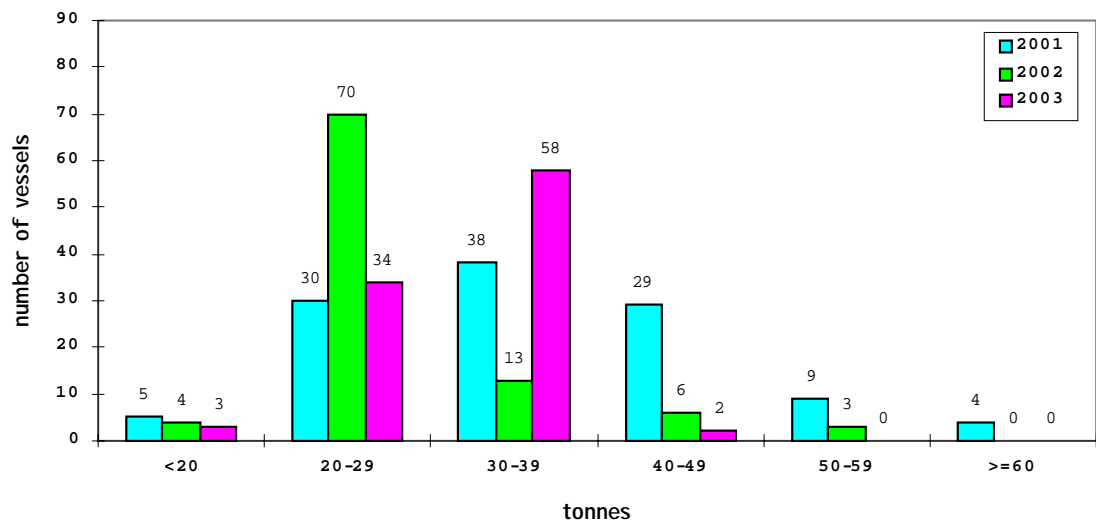


Figure 8b. Distribution of total catch by vessel in the second season, 2001 to 2003

Source: AFMA Logbook data



NORTHERN PRAWN FISHERY DATA SUMMARY 2003

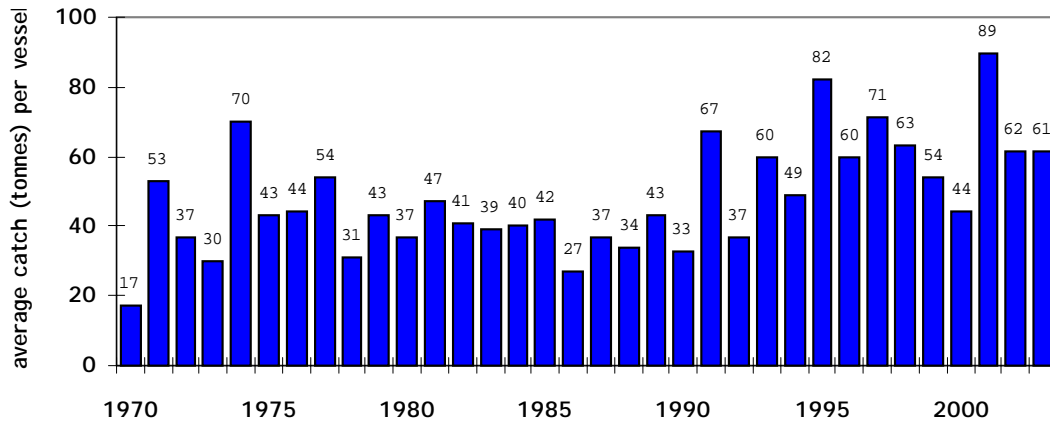


Figure 9a. Average total catch for all prawns per vessel from 1970 to 2003

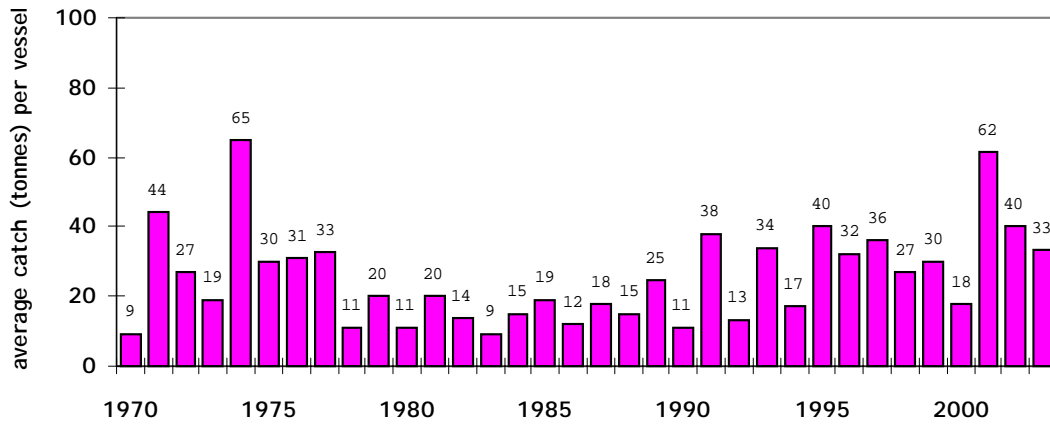


Figure 9b. Average total catch of banana prawns per vessel from 1970 to 2003

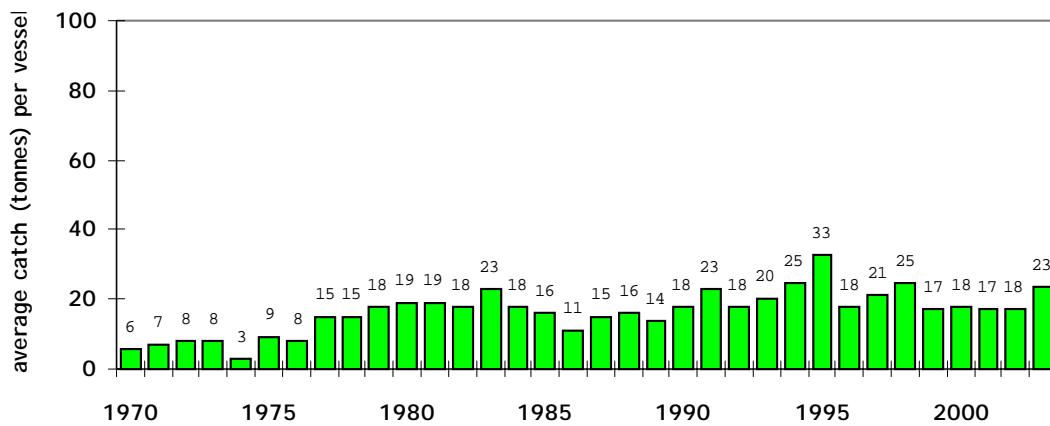


Figure 9c. Average total catch of tiger prawns per vessel from 1970 to 2003

Source: AFMA logbook data

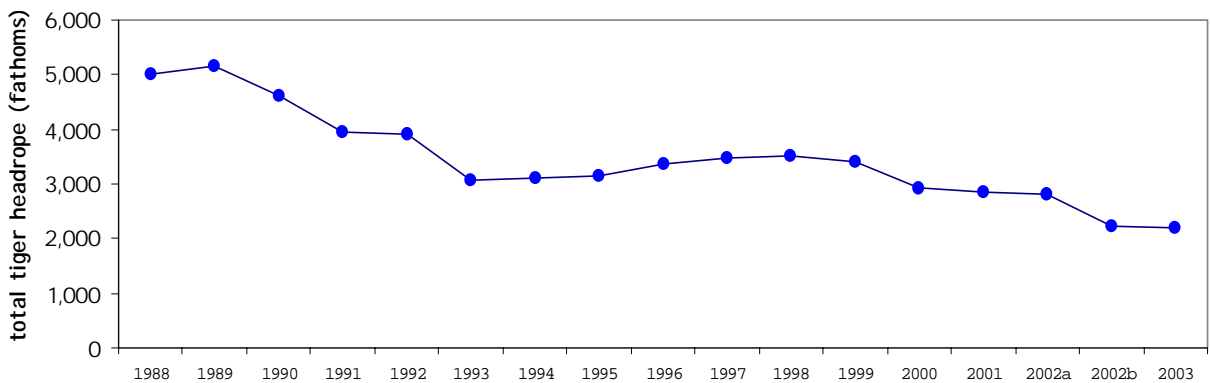


**Gear**

Total tiger headrope fell slightly in 2003 to 2,191 fathoms (4 km) compared to 2,223 (4.1 km) in the second season of 2002.

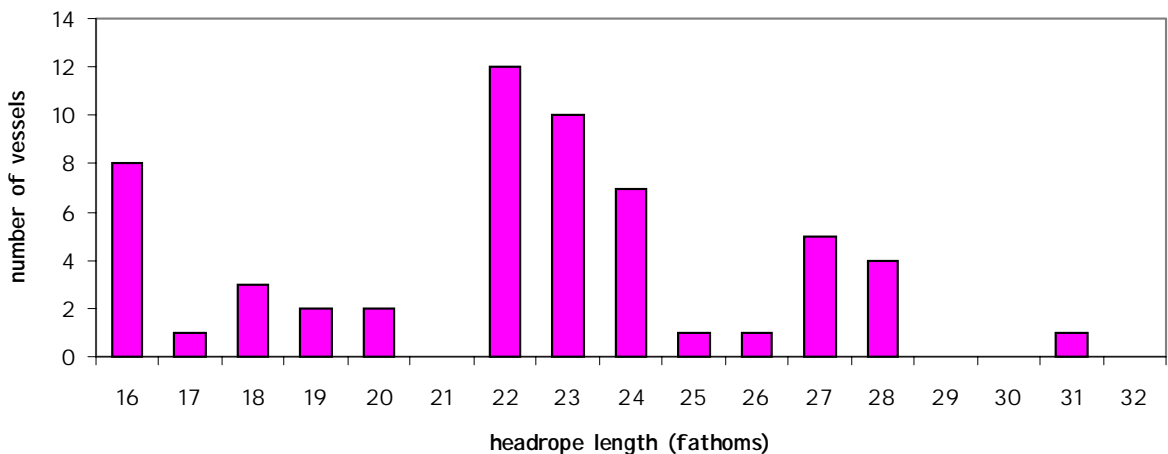
In the 2003 the most common headrope length per vessel was between 22 and 24.9 fathoms, with around 51% of the fleet using this length (Figure 11). The average headrope length was 22.6 fathoms.

**Note - The gear information presented is only based on the 60 vessels that returned gear sheets for the 2003 season. Also, gear units for both seasons in 2002 are presented due to an effort (headrope units) reduction of 25% between the two seasons.**



**Figure 10. Total tiger headrope length from 1988 to 2003.**

Source: AFMA logbook data



**Figure 11. Frequency of tiger headrope length in 2003**

Source: AFMA logbook data



## Catch and Effort by Statistical Area in the NPF

### General

Catch and effort has been partitioned into the 15 statistical areas illustrated below (Figure 12) and is detailed on the following pages. The highest banana catches were recorded in the Bold area with 609 tonnes (Figure 13). The highest catch of tiger prawns was recorded in the Groote area with 900 tonnes (Figure 14).

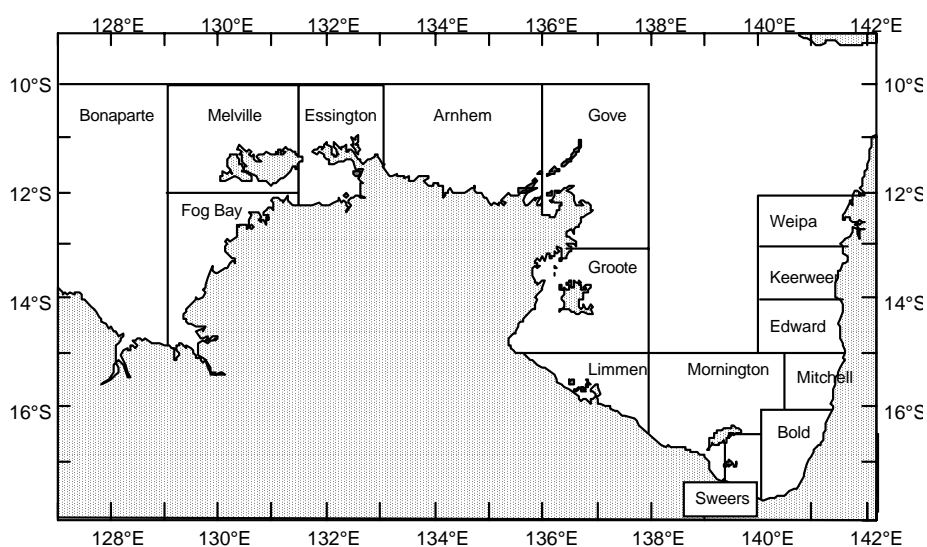


Figure 12. Statistical Areas of the Northern Prawn Fishery



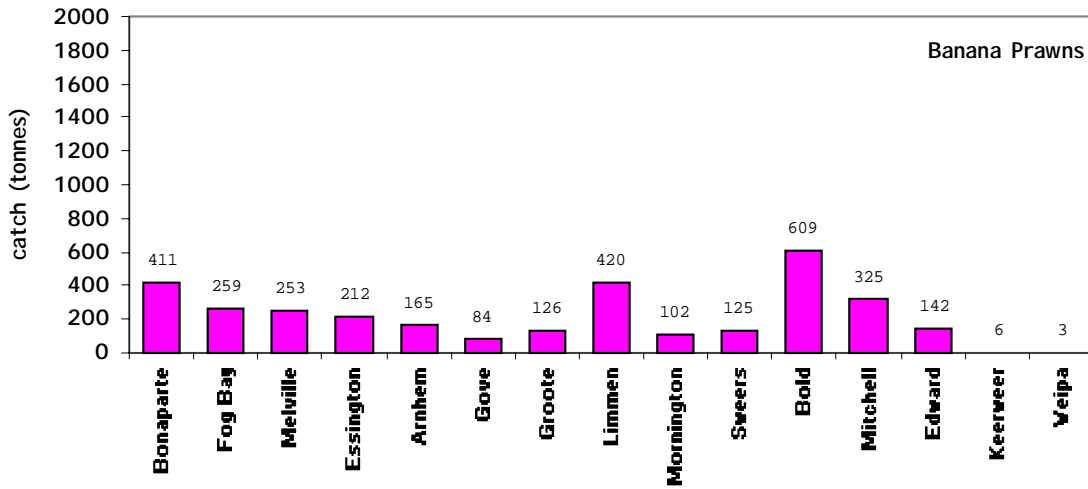


Figure 13. Catch of banana prawns in each statistical area of the NPF in 2003

Source: AFMA logbook data

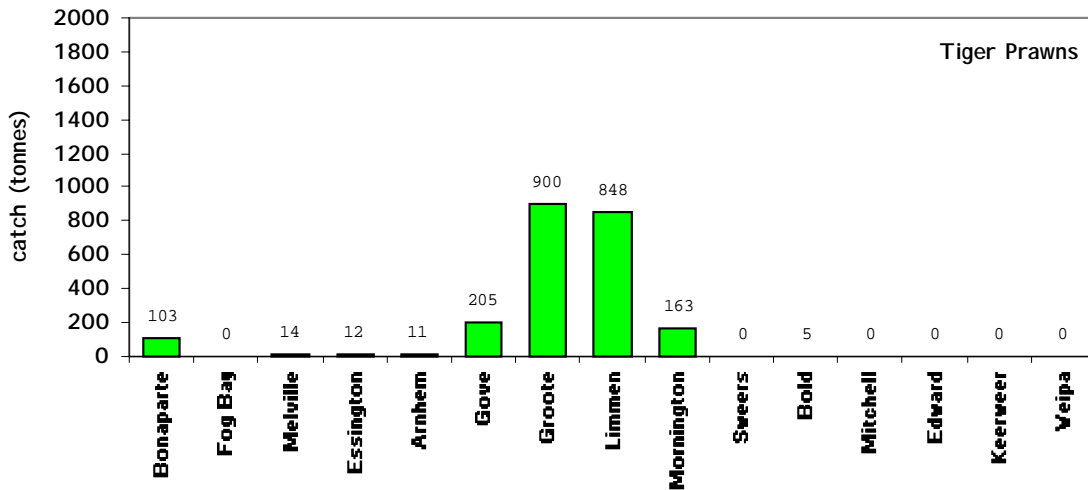


Figure 14. Catch of tiger prawns in each statistical area of the NPF in 2003

Source: AFMA logbook data



## Weipa

Banana prawn catches decreased to 3 tonnes, down 93% from 2002. Tiger prawn catches decreased to 330 kg (down 97%) and the catch of endeavour prawns decreased to 160 kg (down 99%) (Figure 15a). Banana prawns dominated the catch in this area (Figure 15b).

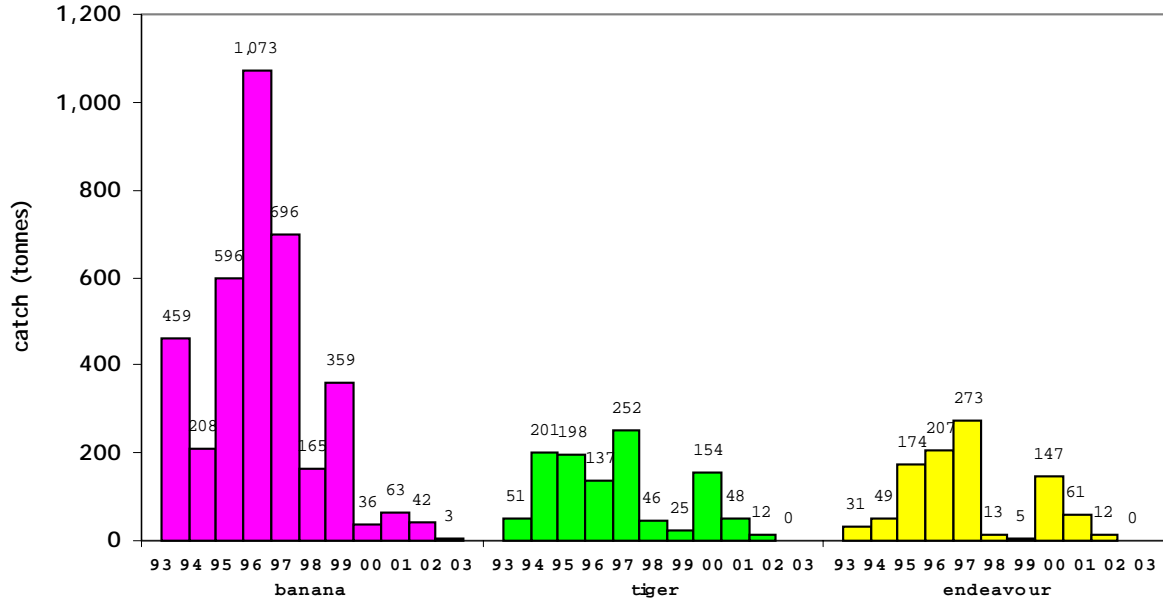


Figure 15a. Catch by species in the Weipa area between 1993 and 2003

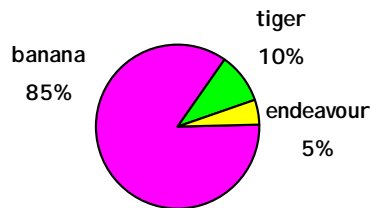


Figure 15b. Percentage catch by species in the Weipa area in 2003.

Source: AFMA logbook data



Effort in the banana fishery decreased by 36 days while effort in the tiger fishery decreased by 121 days (Figure 16a-c).

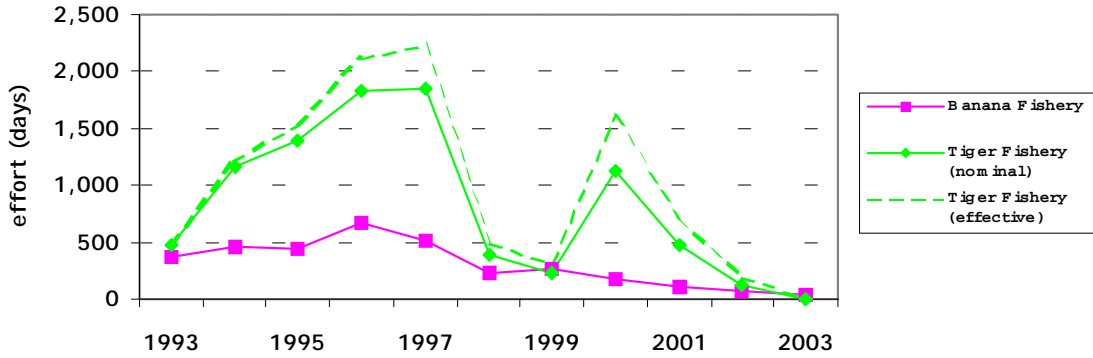


Figure 16a. Effort in the banana and tiger prawn fisheries in the Weipa area between 1993 and 2003

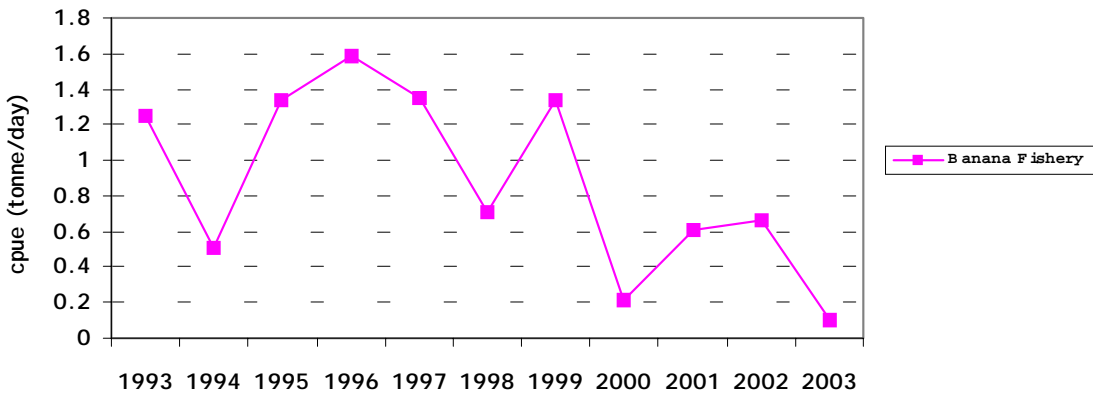


Figure 16b. Catch rate in the banana prawn fishery in the Weipa area between 1993 and 2003

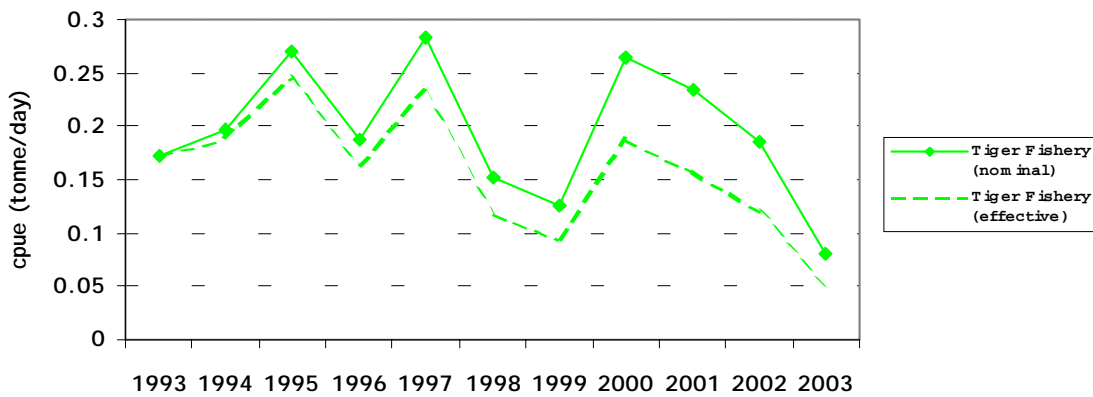


Figure 16c. Catch rate in the tiger prawn fishery in the Weipa area between 1993 and 2003

Source: AFMA logbook data



## Keerweer

The banana prawn catch in the Keerweer area decreased in 2003 to 6 tonnes, down from last years catch of 311 tonnes. The catch of tiger and endeavour prawns was maintained at virtually nil. (Figures 17a & 17b).

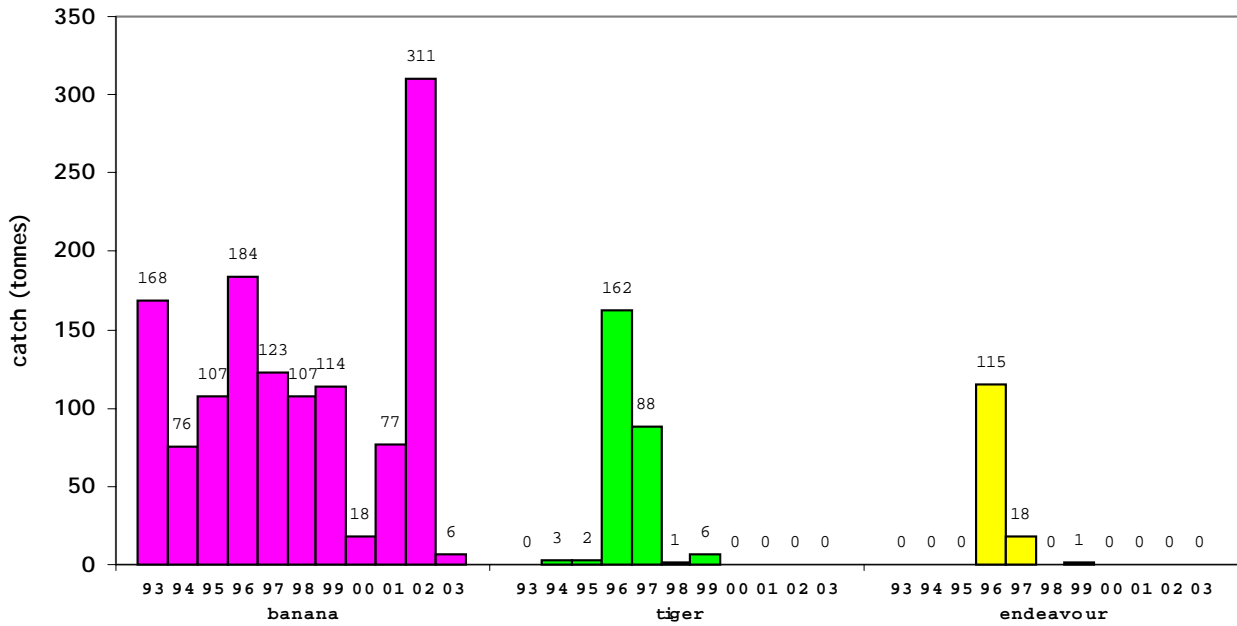


Figure 17a. Catch by species in the Keerweer area between 1993 and 2003

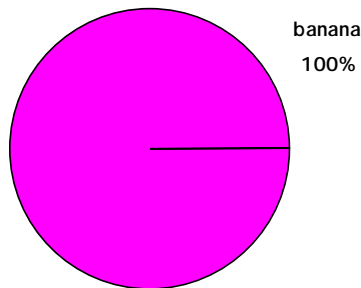


Figure 17b. Percentage catch by species in the Keerweer area in 2003.

Source: AFMA logbook data





Effort directed at banana prawns was 35 days, significantly down on the 229 days recorded in 2002. The effort in the tiger fishery was still extremely low (Figure 18 a-c).

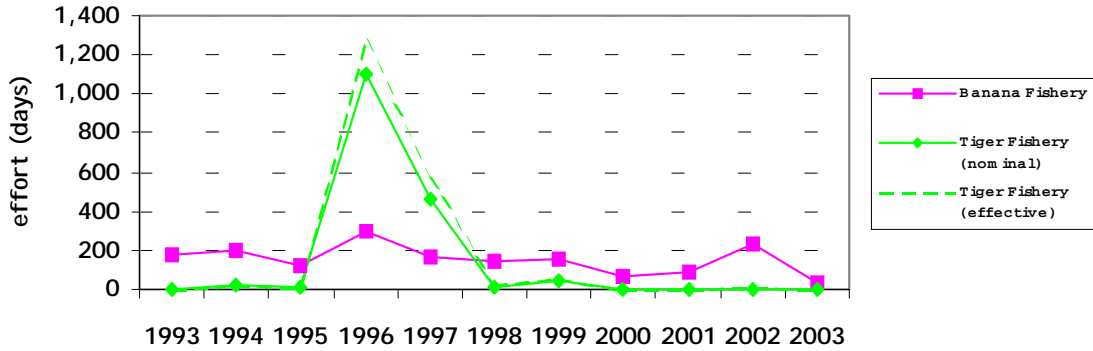


Figure 18a. Effort in the banana and tiger prawn fisheries in the Keerweer area between 1993 and 2003

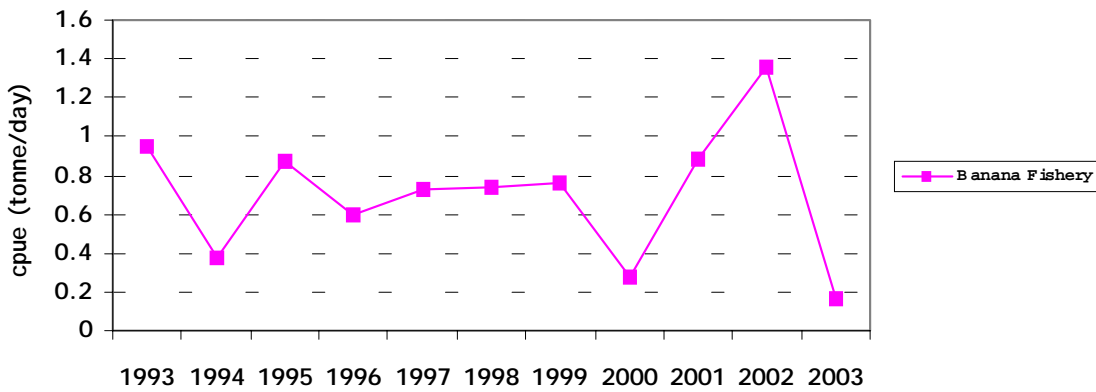


Figure 18b. Catch rate in the banana prawn fishery in the Keerweer area between 1993 and 2003

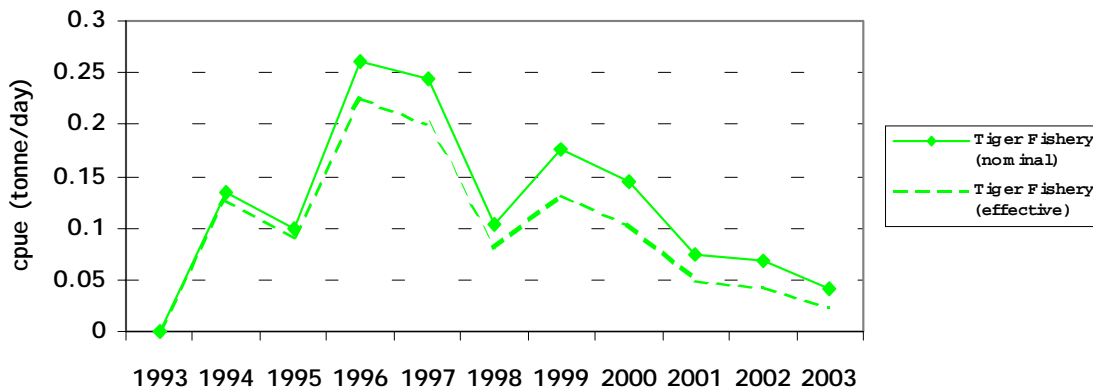


Figure 18c. Catch rate in the tiger prawn fisheries in the Keerweer area between 1993 and 2003

Source: AFMA logbook data



## Edward

The banana prawn catch in the Edward area decreased to 142 tonnes in 2003, down 64% from the 2002 catch of 399 tonnes. There have been no significant catches of endeavour or tiger prawns from this area for several years (Figure 19a & 19b).

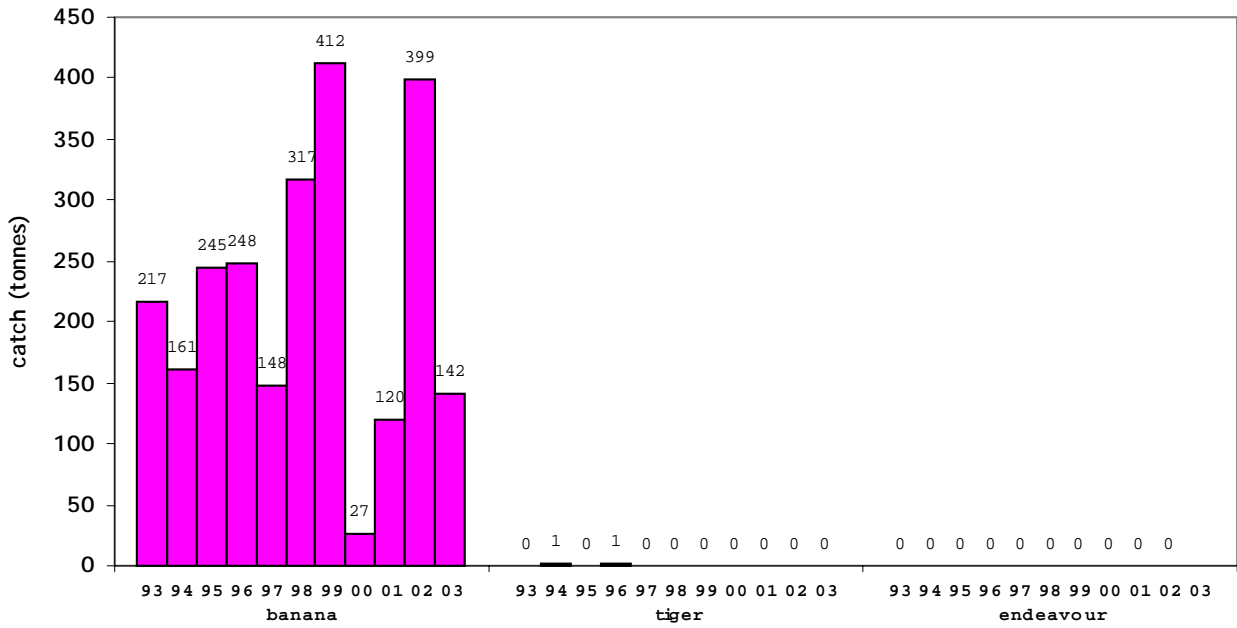


Figure 19a. Catch by species in the Edward area between 1993 and 2003

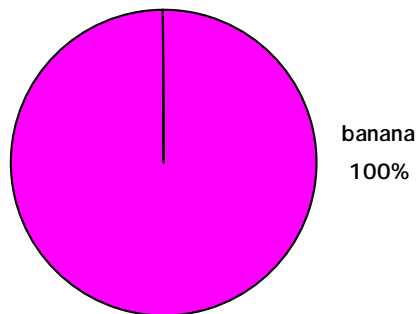


Figure 19b. Percentage catch by species in the Edward area in 2003

Source: AFMA logbook data



Effort for this region was down 25% to 182 days for the banana fishery in 2003. Tiger prawn effort was too low to be reported (Figure 20a & 20b).

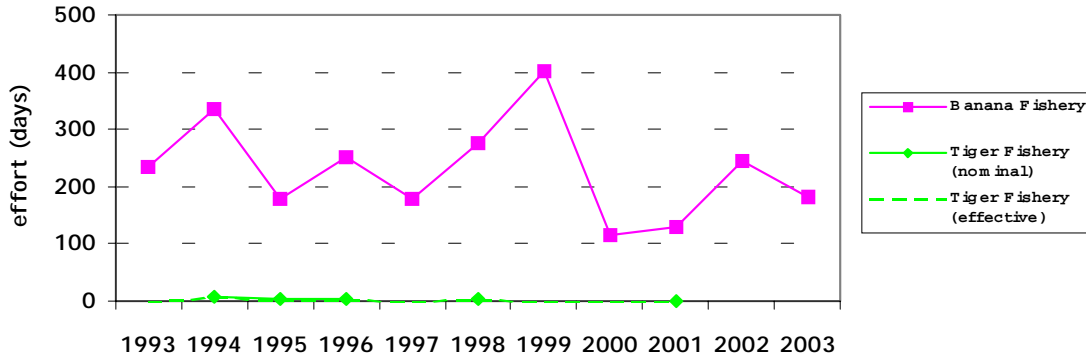


Figure 20a. Effort in the banana and tiger prawn fisheries in the Edward area between 1993 and 2003

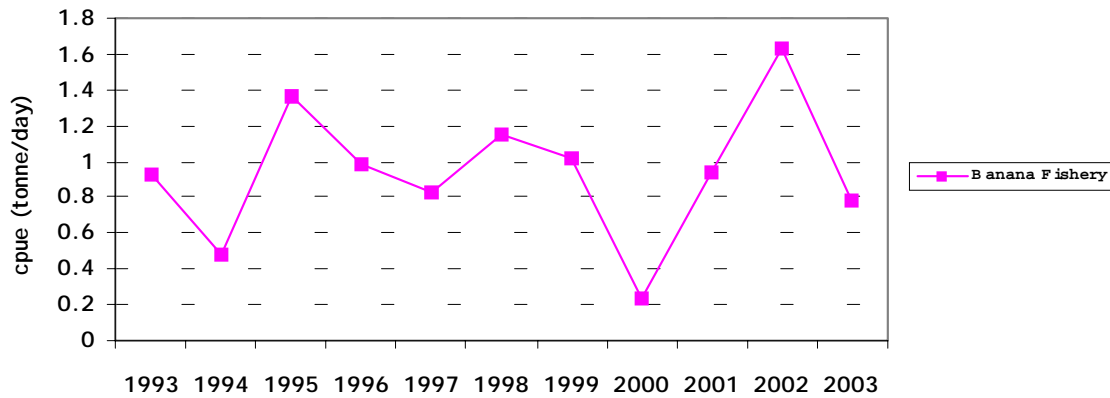


Figure 20b. Catch rate in the banana prawn fisheries in the Edward area between 1993 and 2003



## Mitchell

The banana prawn catch in the Mitchell area was 325 tonnes, down 46% from last year. Catches of tiger and endeavour prawns remained at virtually nil (Figures 21a & 21b).

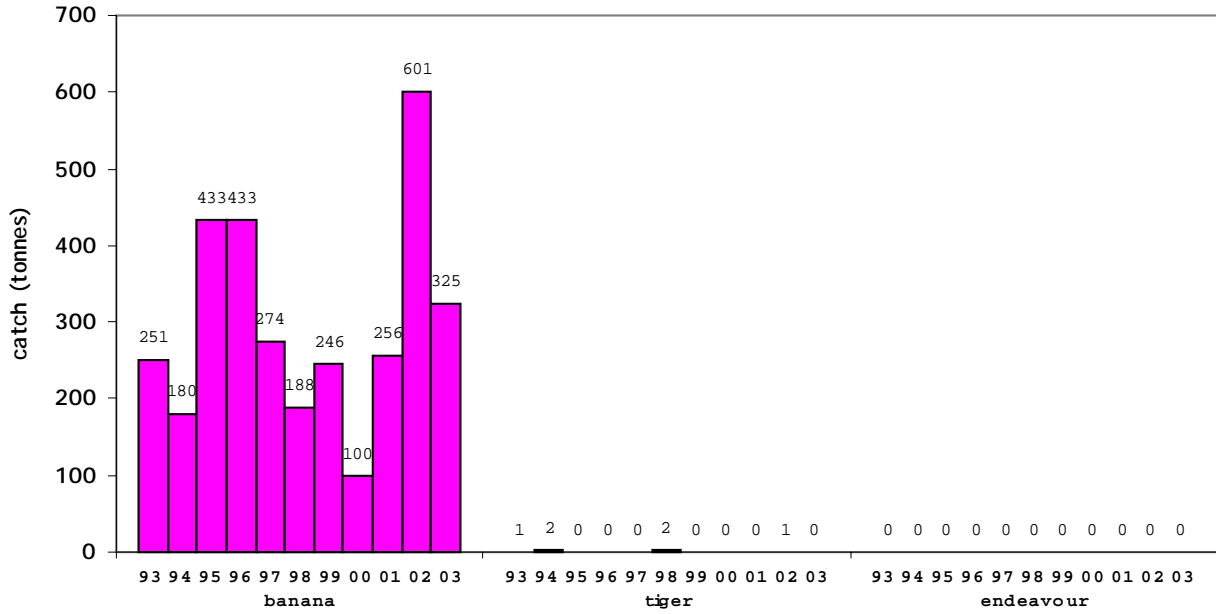


Figure 21a. Catch by species in the Mitchell area between 1993 and 2003

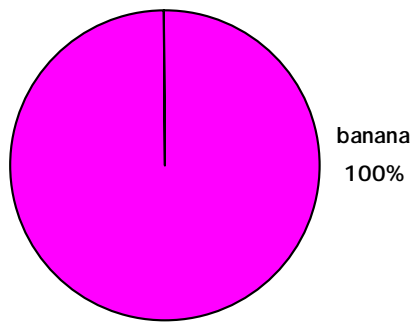


Figure 21b. Percentage catch by species in the Mitchell area in 2003

Source: AFMA logbook data



Effort directed at banana prawns was up 4% to 377 days in the Mitchell area. There was almost no effort directed at the tiger fishery in this area during the 2003 season (not reported) (Figure 22a & 22b).

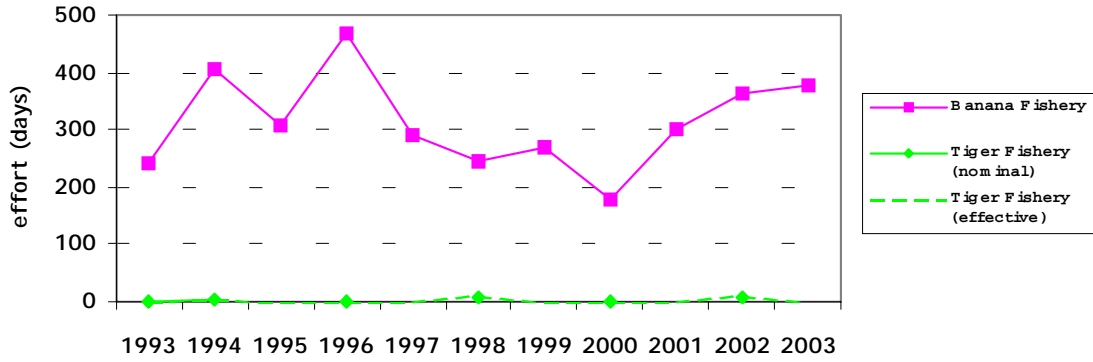


Figure 22a. Effort in the banana and tiger prawn fisheries in the Mitchell area between 1993 and 2003

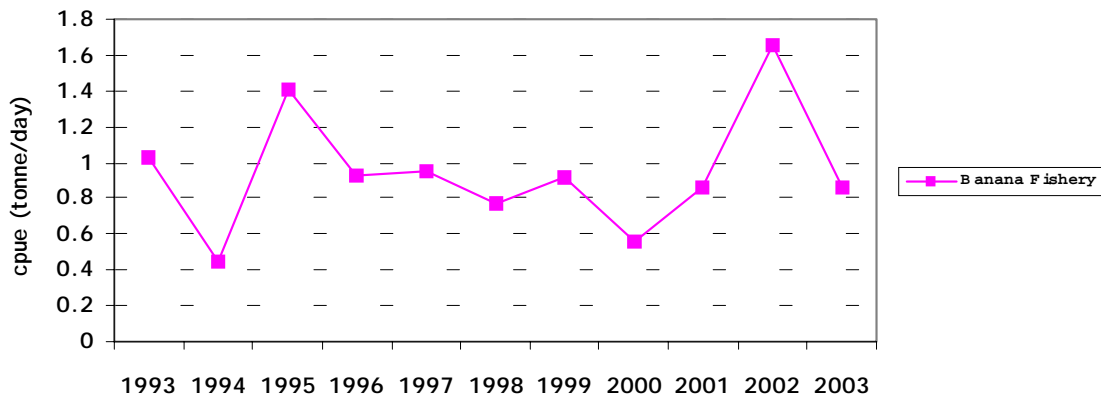
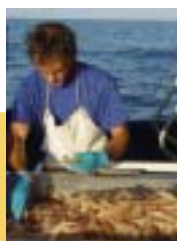


Figure 22b. Catch rate in the banana prawn fisheries in the Mitchell area between 1993 and 2003



**Bold**

This area had the highest catch of banana prawns in the 2003 season, 609 tonnes, down (62%) from the 2002 catch of 1,612 tonnes. The 2003 catch of tiger prawns also fell (84%) from last year to 5 tonnes (Figures 23a & 23b).

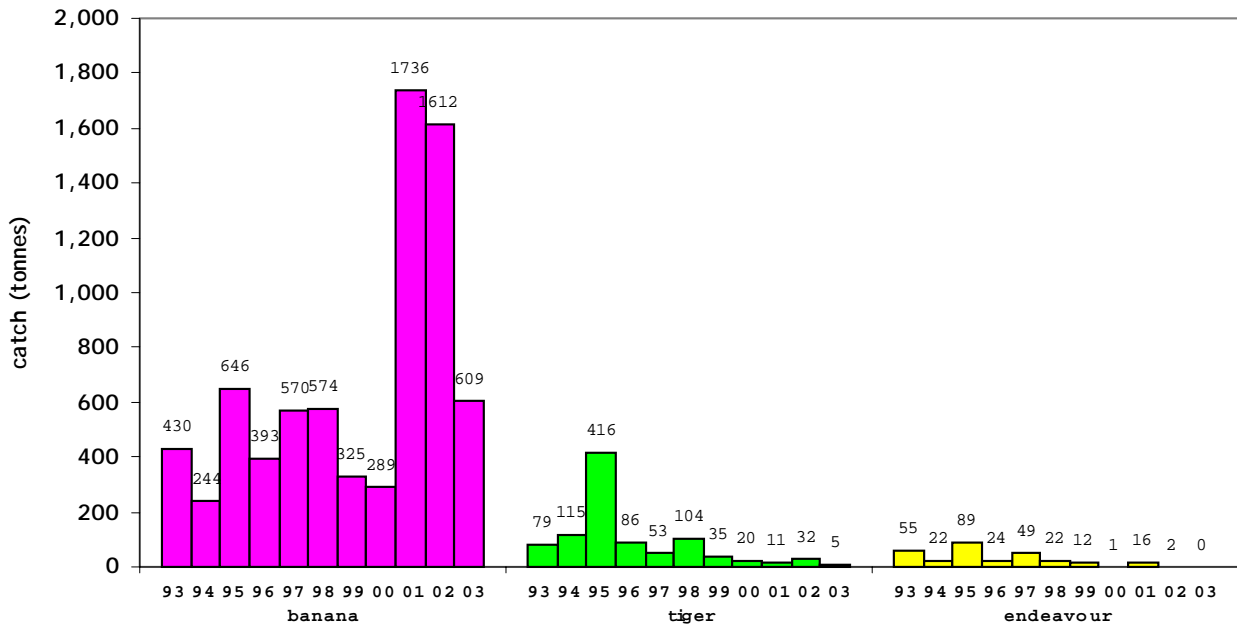


Figure 23a. Catch by species in the Bold area between 1993 and 2003

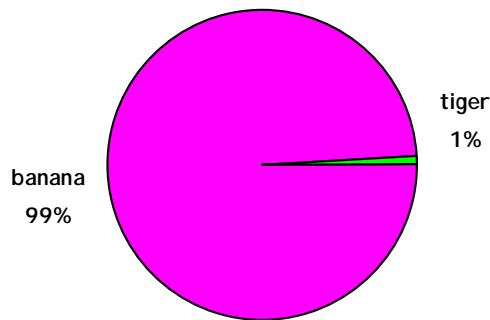


Figure 23b. Percentage catch by species in the Bold area in 2003  
Source: AFMA logbook data



Banana fishery effort for the Bold area was down (39%) to 480 days in 2003. Effort in the tiger fishery fell 78% to 37 days (Figure 24 a-c).

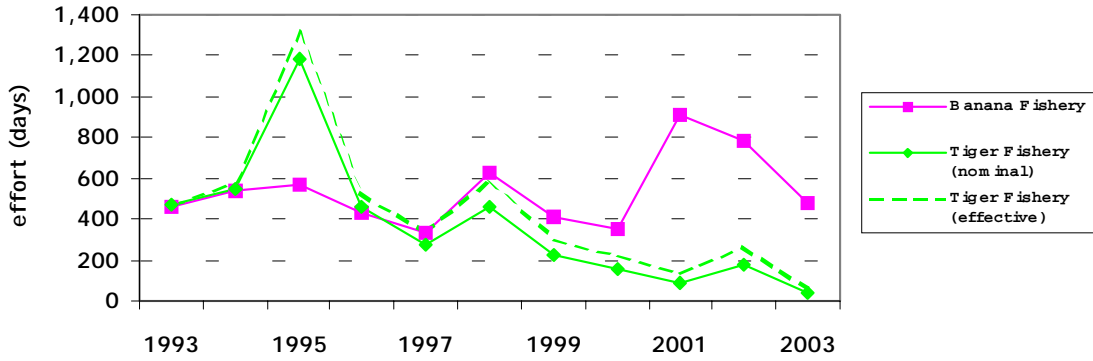


Figure 24a. Effort in the banana and tiger prawn fisheries in the Bold area between 1993 and 2003

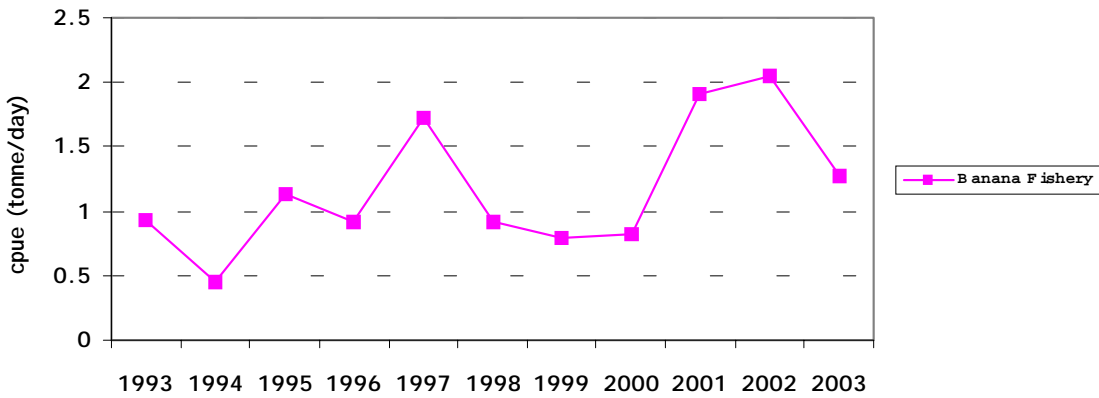


Figure 24b. Catch rate in the banana prawn fishery in the Bold area between 1993 and 2003

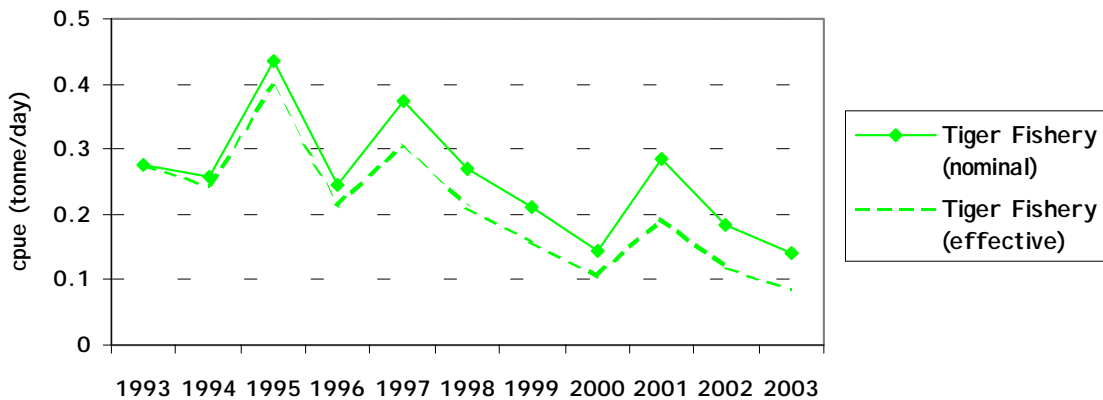


Figure 24c. Catch rate in the tiger prawn fisheries in the Bold area between 1993 and 2003

Source: AFMA logbook data



## Sweers

The catch of banana prawns in the Sweers region decreased to 125 tonnes in the 2003 season, down 44%. The catches of tiger and endeavour prawns were again low. (Figures 25a & 25b).

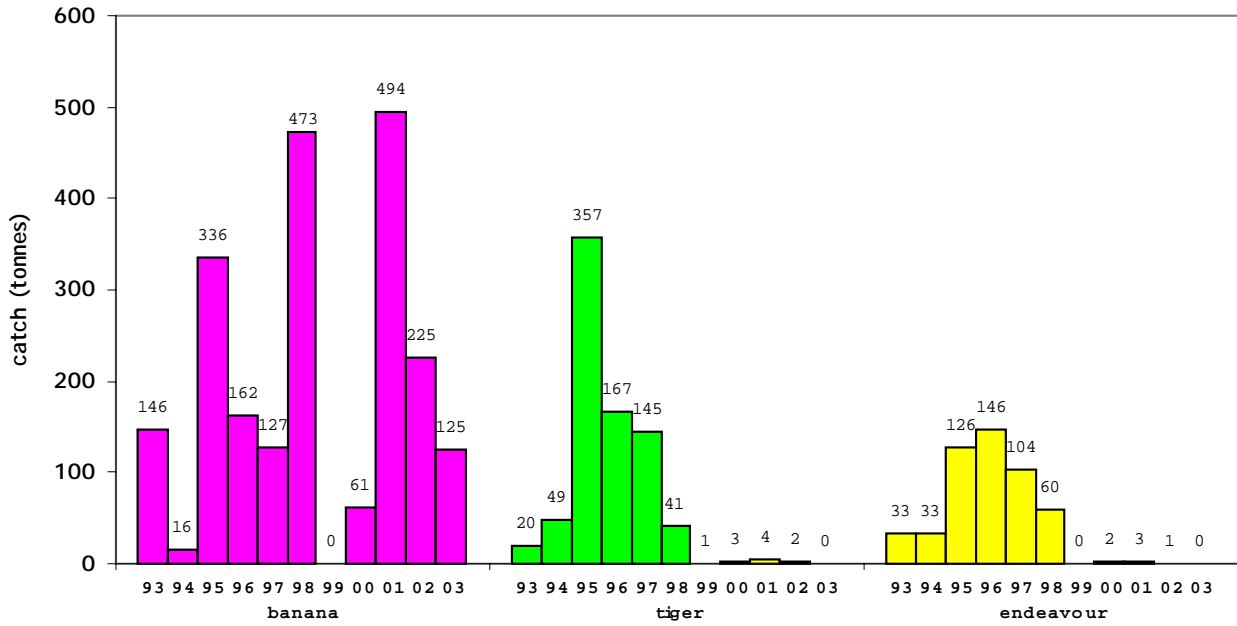


Figure 25a. Catch by species in the Sweers area between 1993 and 2003

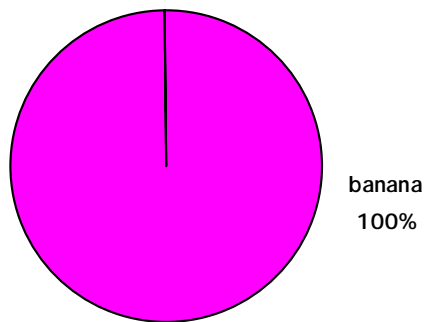


Figure 25b. Percentage catch by species in the Sweers area in 2003

Source: AFMA logbook data





Effort directed at the banana fishery in the Sweers area during the 2003 season decreased by 26% to 150 days. Effort in the tiger fishery remained low (Figure 26 a-c).

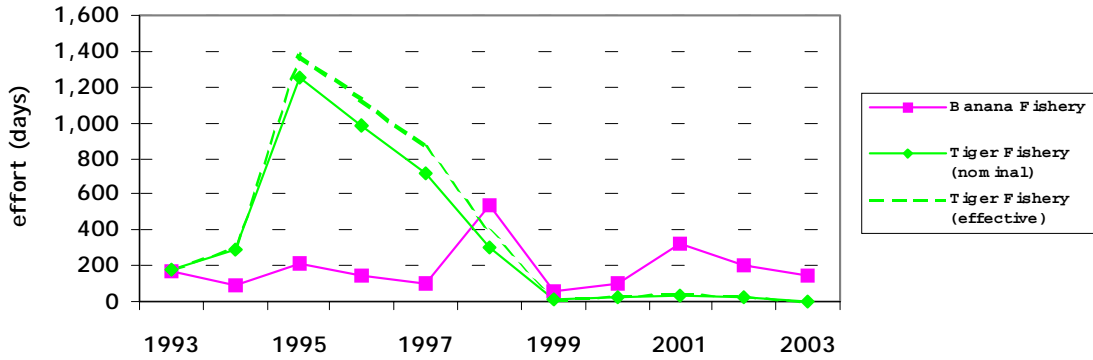


Figure 26a. Effort in the banana and tiger prawn fisheries in the Sweers area between 1993 and 2003

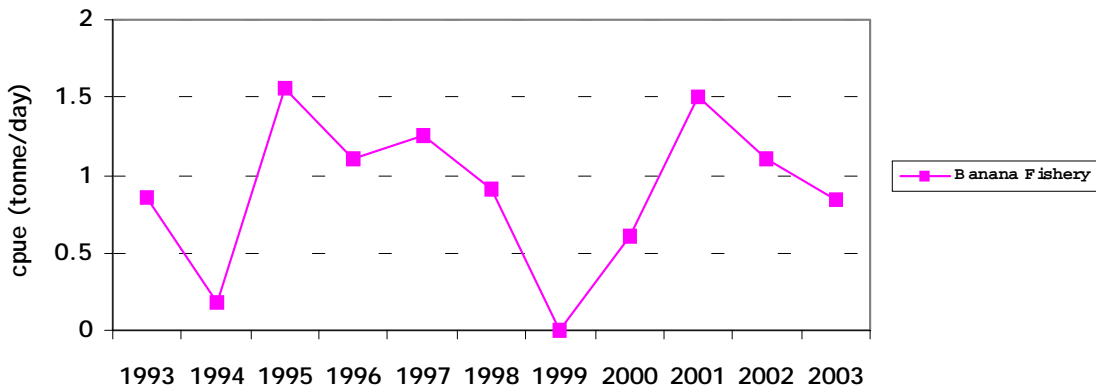


Figure 26b. Catch rate in the banana prawn fishery in the Sweers area between 1993 and 2003

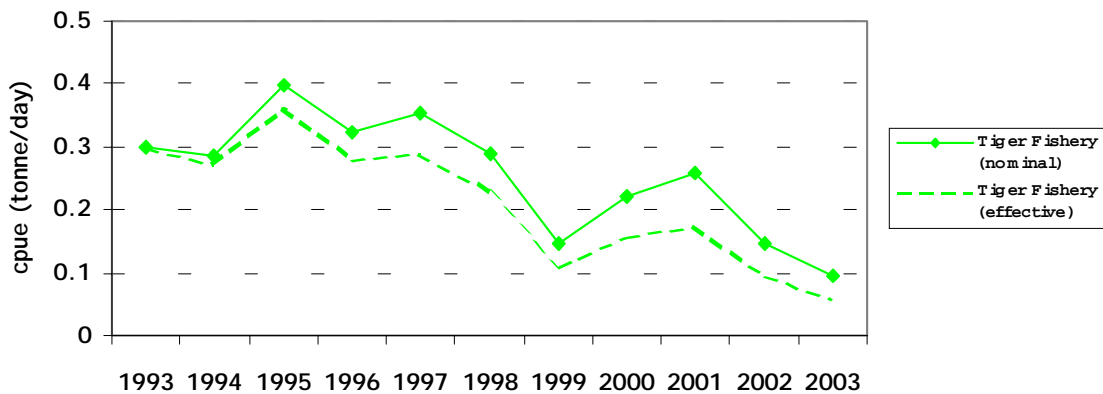


Figure 26c. Catch rate in the tiger prawn fisheries in the Sweers area between 1993 and 2003  
Source: AFMA logbook data



## Mornington

The 2003 banana prawn catch in the Mornington area increased to 102 tonnes, up from last seasons catch of 65 tonnes. Tiger prawn catch was also up to 163 tonnes. Catches of endeavour prawns fell in the 2003 season, down to 32 tonnes (Figures 27a & 27b).

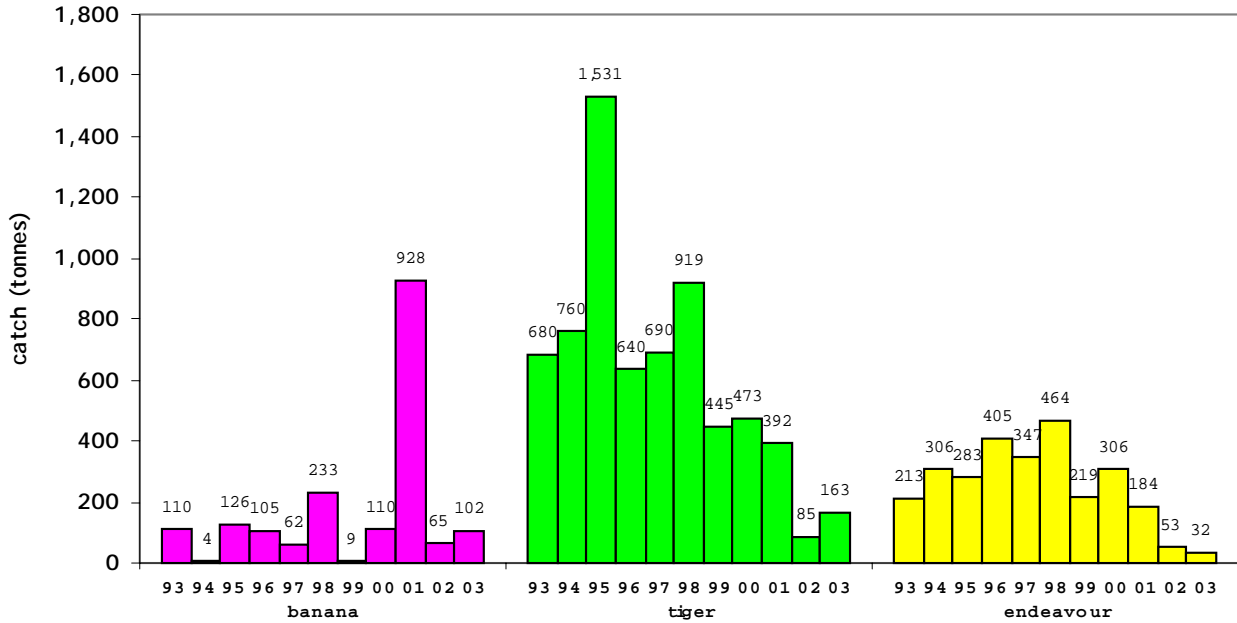


Figure 27a. Catch by species in the Mornington area between 1993 and 2003

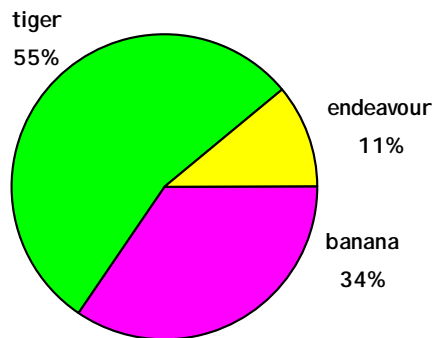


Figure 27b. Percentage catch by species in the Mornington area in 2003

Source: AFMA logbook data



Effort for the banana fishery in the Mornington area was down 28% to 127 days. Effort for the tiger fishery fell slightly (5%) to 645 days (Figure 28 a-c).

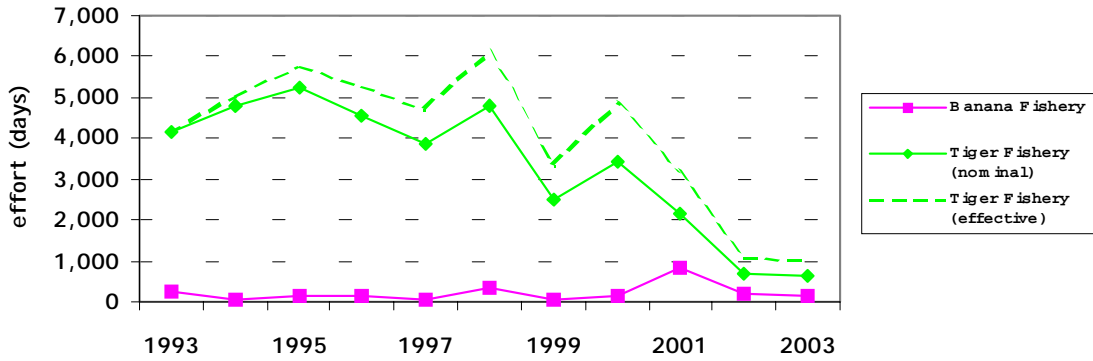


Figure 28a. Effort in the banana and tiger prawn fisheries in the Mornington area between 1993 and 2003

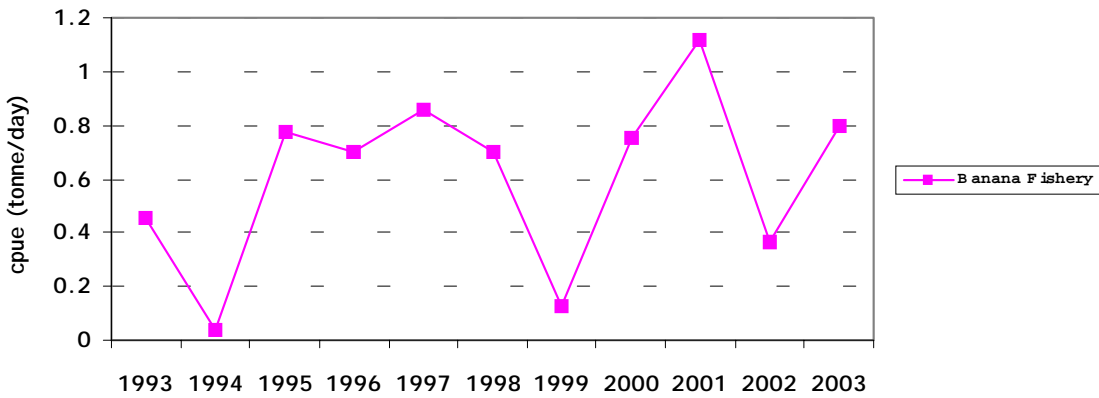


Figure 28b. Catch rate in the banana prawn fishery in the Mornington area between 1993 and 2003

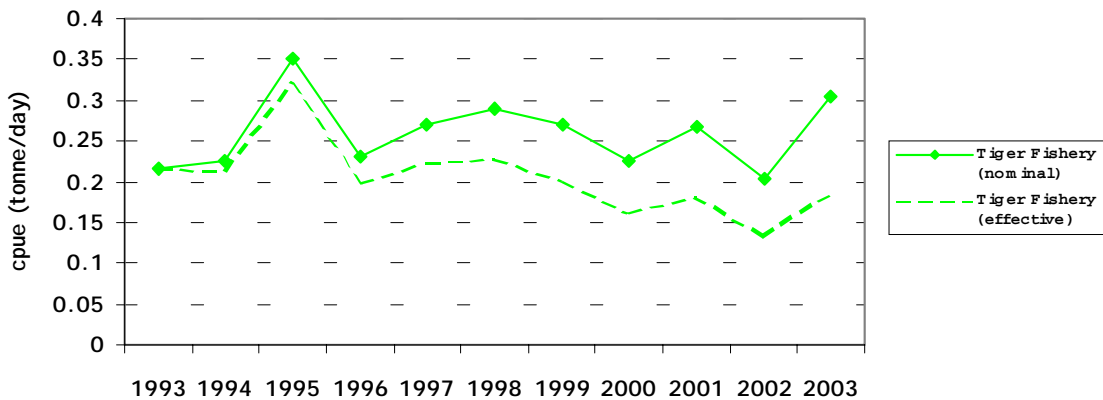


Figure 28c. Catch rate in the tiger prawn fisheries in the Mornington area between 1993 and 2003

Source: AFMA logbook data



## Limmen Bight

The catch of banana prawns in the Limmen Bight area increased significantly in the 2003 season to 420 tonnes. Catches of both tiger and endeavour prawns also increased, tigers to 848 tonnes and endeavours to 132 tonnes (Figures 29a & 29b).

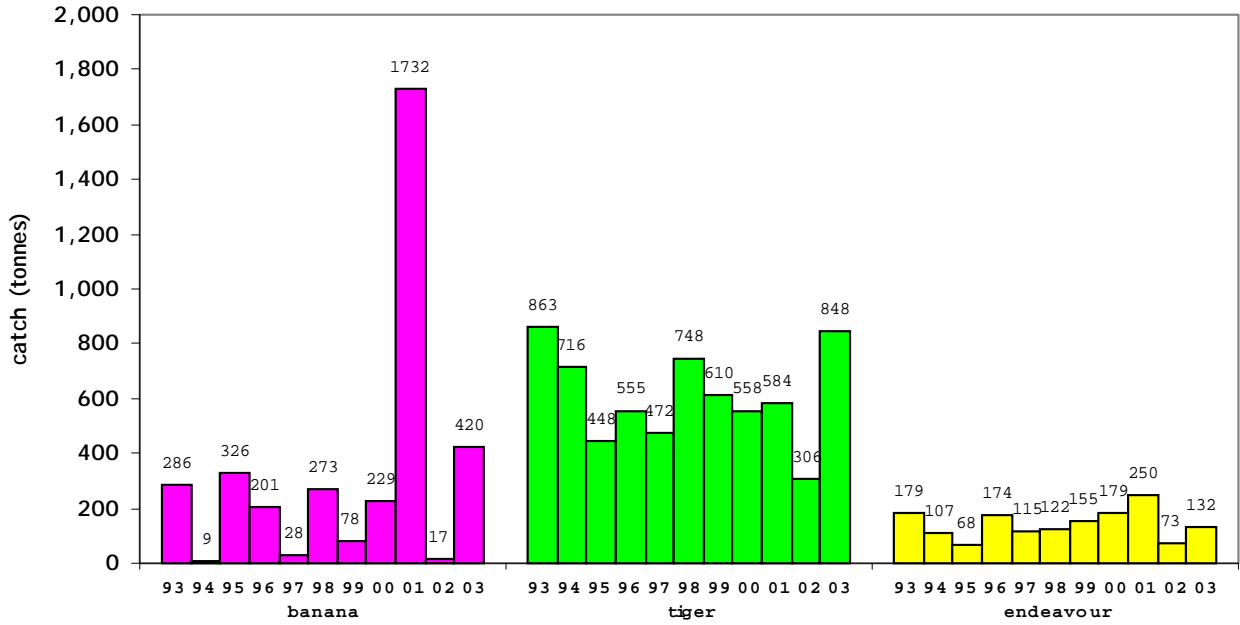


Figure 29a. Catch by species in the Limmen Bight area between 1993 and 2003

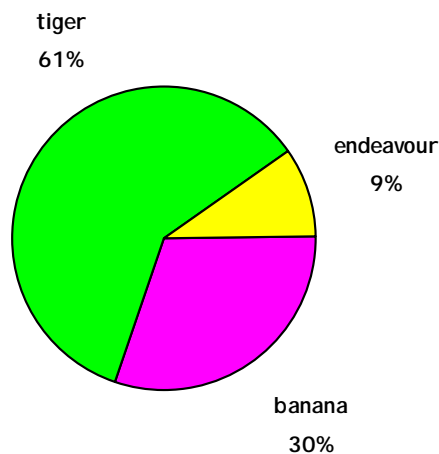


Figure 29b. Percentage catch by species in the Limmen Bight area in 2003

Source: AFMA logbook data



Effort for the banana fishery in the Limmen Bight area increased to 449 days. The tiger fishery effort also increased by 100% to 2749 days (Figure 30 a-c).

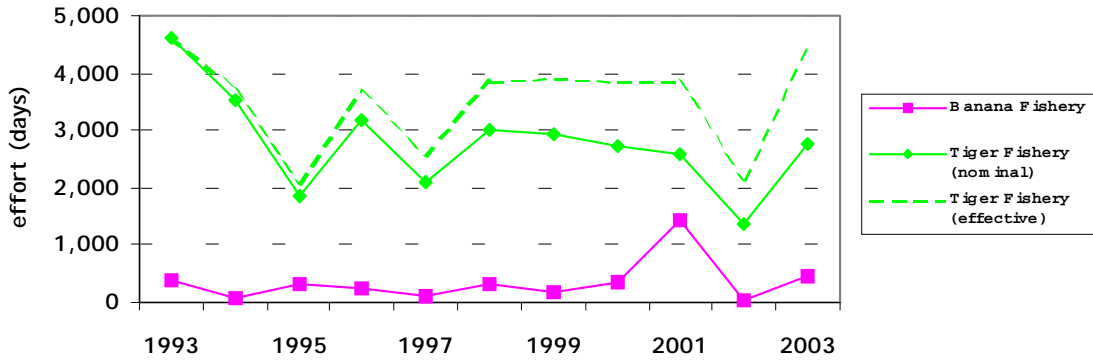


Figure 30a. Effort in the banana and tiger prawn fisheries in the Limmen Bight area between 1993 and 2003

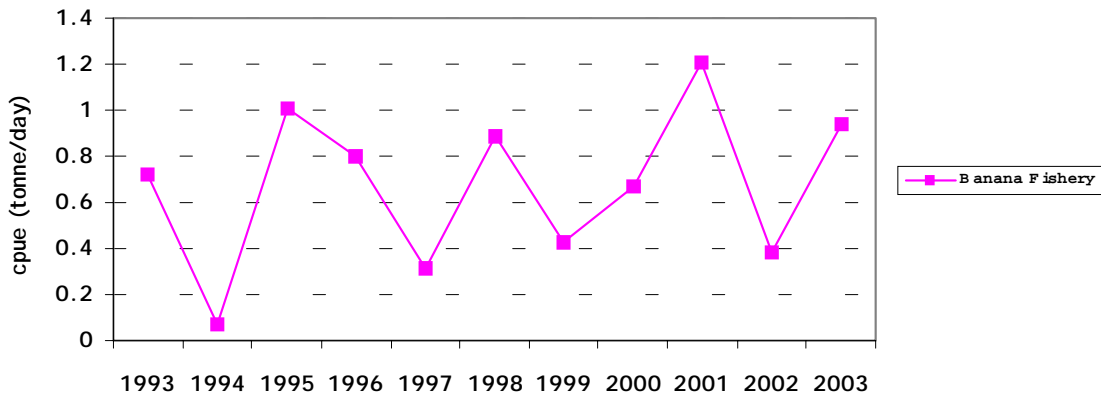


Figure 30b. Catch rate in the banana prawn fishery in the Limmen Bight area between 1993 and 2003

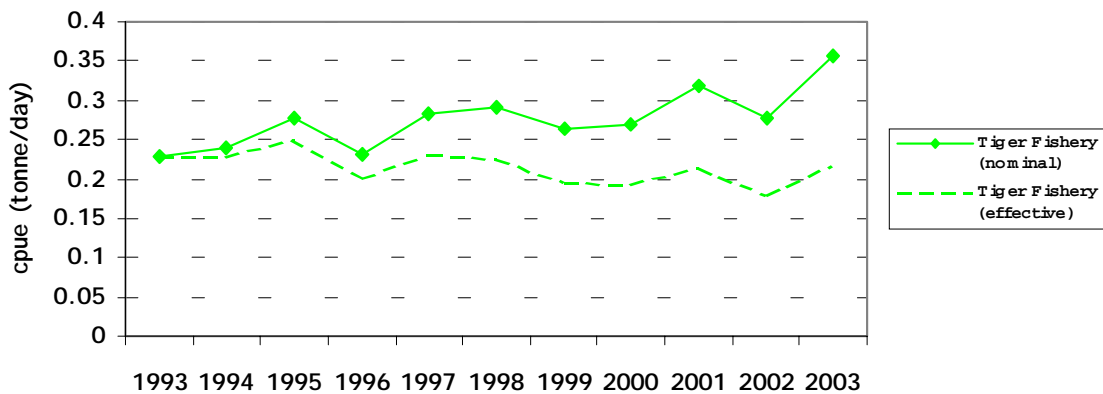


Figure 30c. Catch rate in the tiger prawn fisheries in the Limmen Bight area between 1993 and 2003  
Source: AFMA logbook data



## Groote

Banana prawn catches increased to 126 tonnes in the Groote area in 2003. Groote had the largest catch of tiger prawns in 2003 with 900 tonnes, down 13% from 2002. Endeavour prawn catches also increased 8% to 194 tonnes (Figures 31a & 31b).

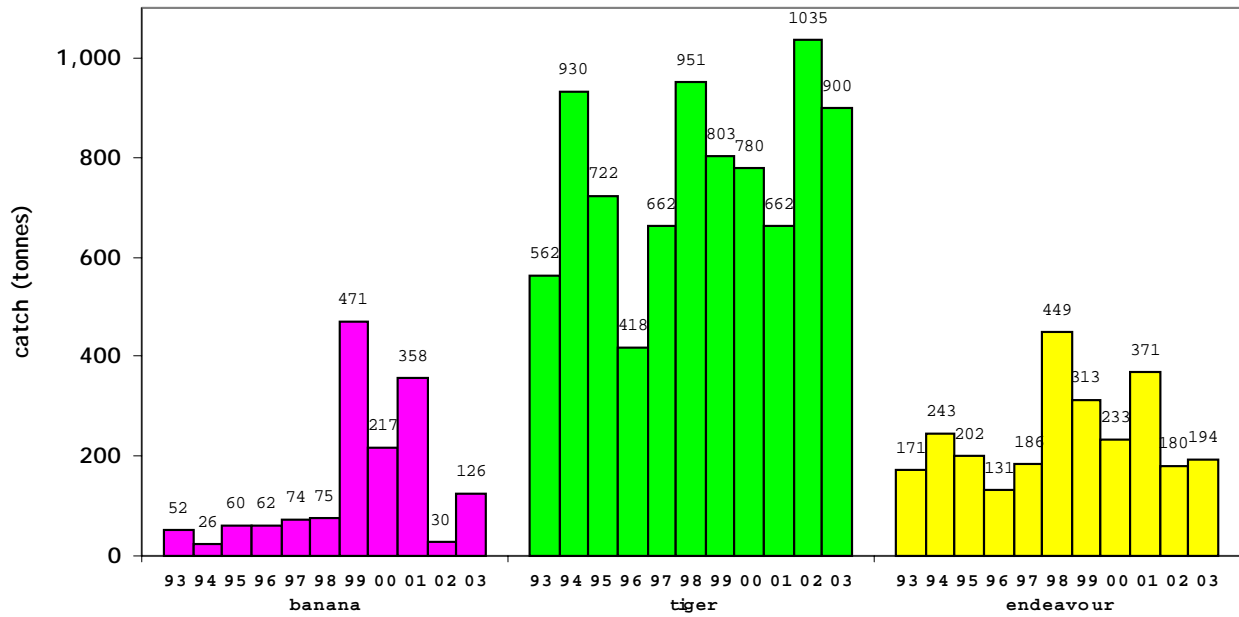


Figure 31a. Catch by species in the Groote area between 1993 and 2003

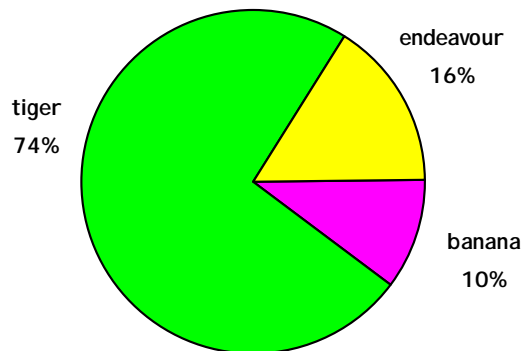


Figure 31b. Percentage catch by species in the Groote area in 2003

Source: AFMA logbook data



Effort in the banana fishery for the Groote area was up 92% to 121 days in 2003, but fell by 17% to 3459 days for the tiger fishery (Figure 32 a-c).

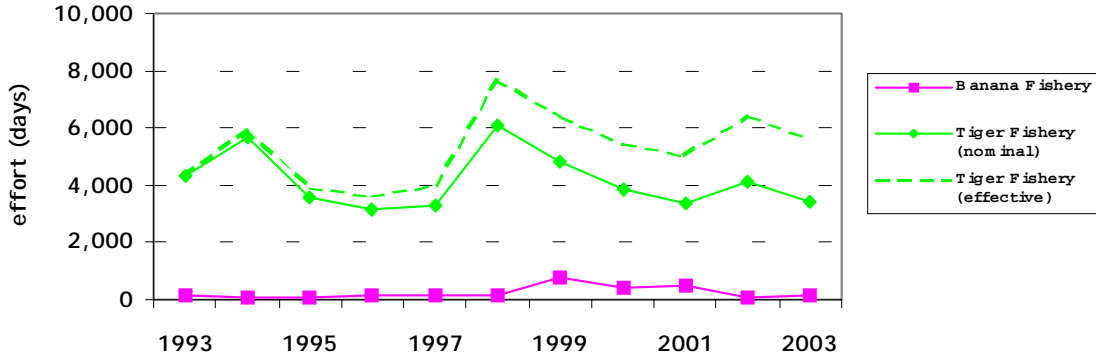


Figure 32a. Effort in the banana and tiger prawn fisheries in the Groote area between 1993 and 2003

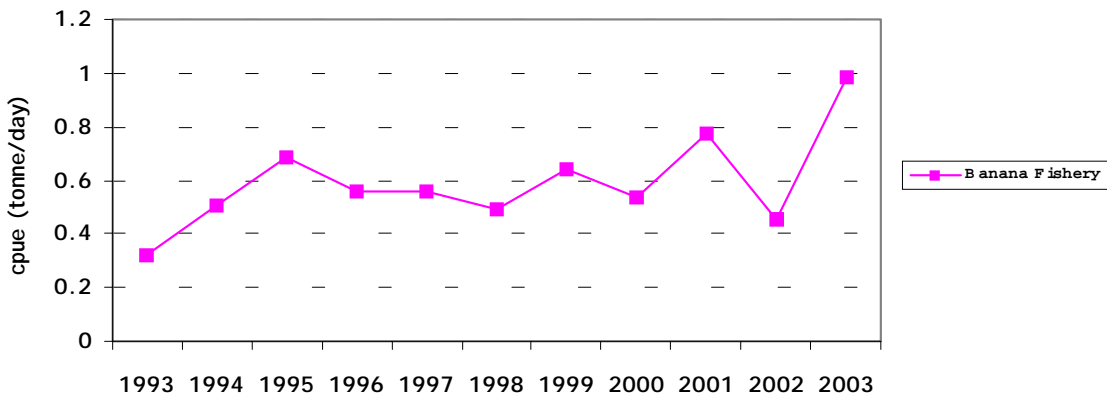


Figure 32b. Catch rate in the banana prawn fishery in the Groote area between 1993 and 2003

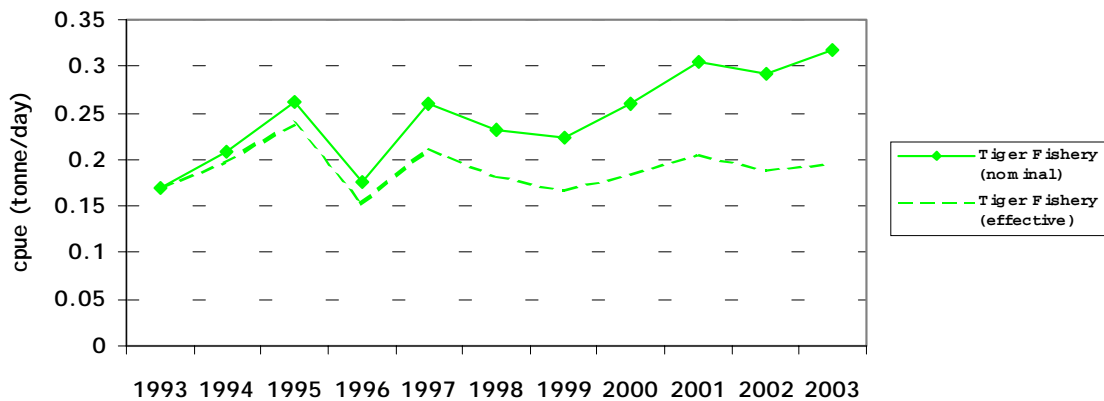


Figure 32c. Catch rate in the tiger prawn fisheries in the Groote area between 1993 and 2003  
Source: AFMA logbook data



## Gove

The catch of banana prawns in the 2003 season was up 9% to 84 tonnes. The catch of tiger prawns fell 36% to 205 tonnes and the catch of endeavour prawns was down slightly to 46 tonnes (Figures 33a & 33b).

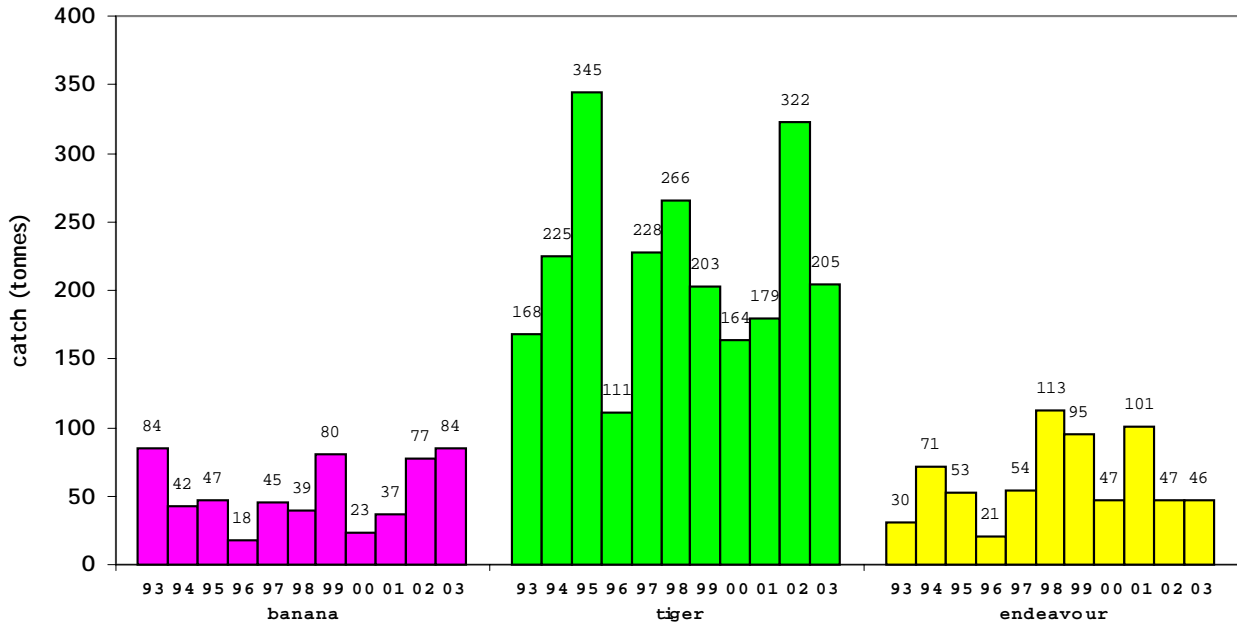


Figure 33a. Catch by species in the Gove area between 1993 and 2003

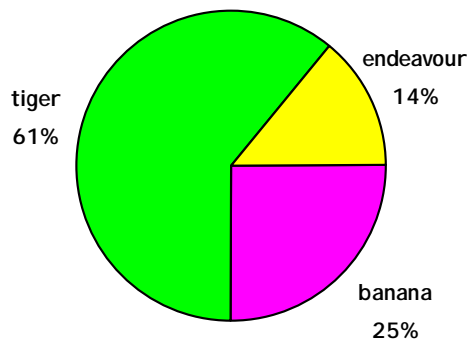


Figure 33b. Percentage catch by species in the Gove area in 2003

Source: AFMA logbook data





Effort for the Gove area was up 7% to 127 days for the banana fishery and down 37% to 893 days for the tiger fishery (Figure 34 a-c).

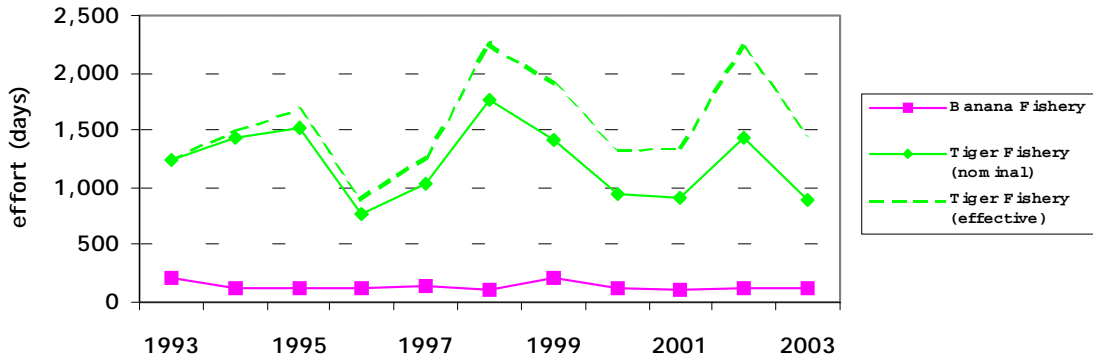


Figure 34a. Effort in the banana and tiger prawn fisheries in the Gove area between 1993 and 2003

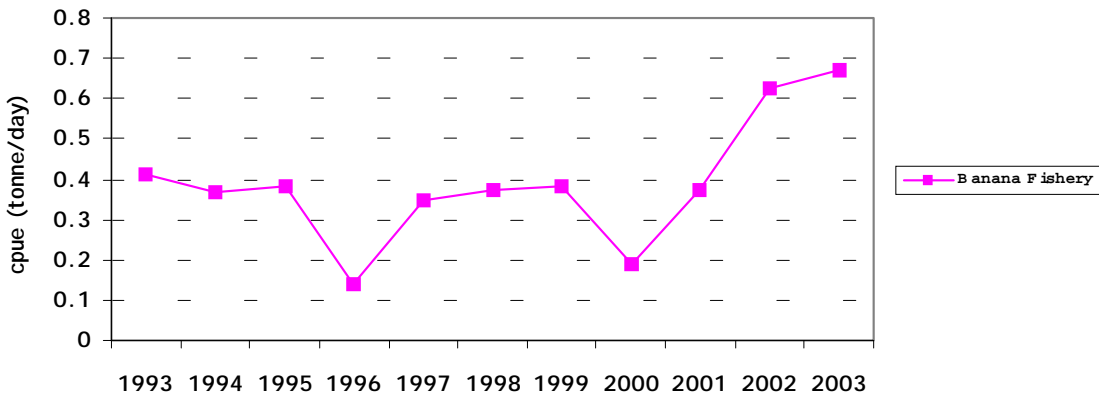


Figure 34b. Catch rate in the banana prawn fishery in the Gove area between 1993 and 2003

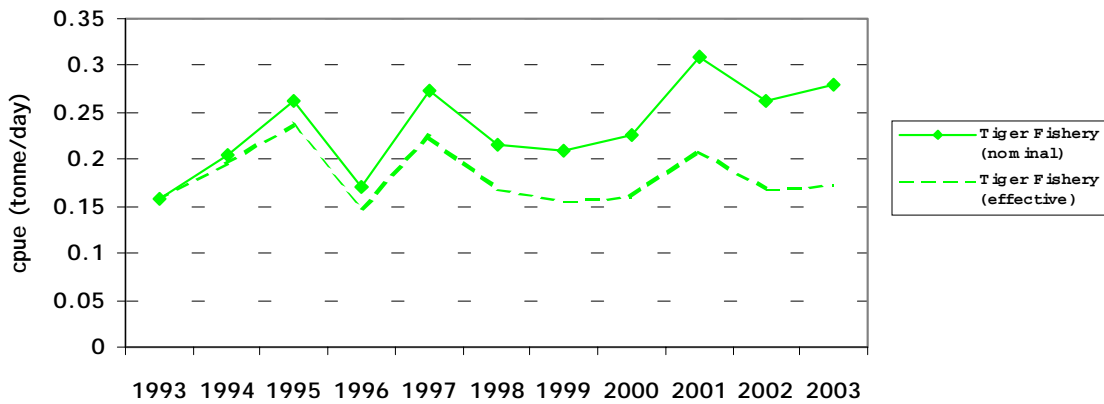


Figure 34c. Catch rate in the tiger prawn fisheries in the Gove area between 1993 and 2003

Source: AFMA logbook data



## Arnhem

The catch of banana prawns increased to 165 tonnes in the 2003 season and the catch of tiger prawns decreased 81% to 11 tonnes. The catch of endeavour prawns remained low at less than 1 tonne (Figures 35a & 35b).

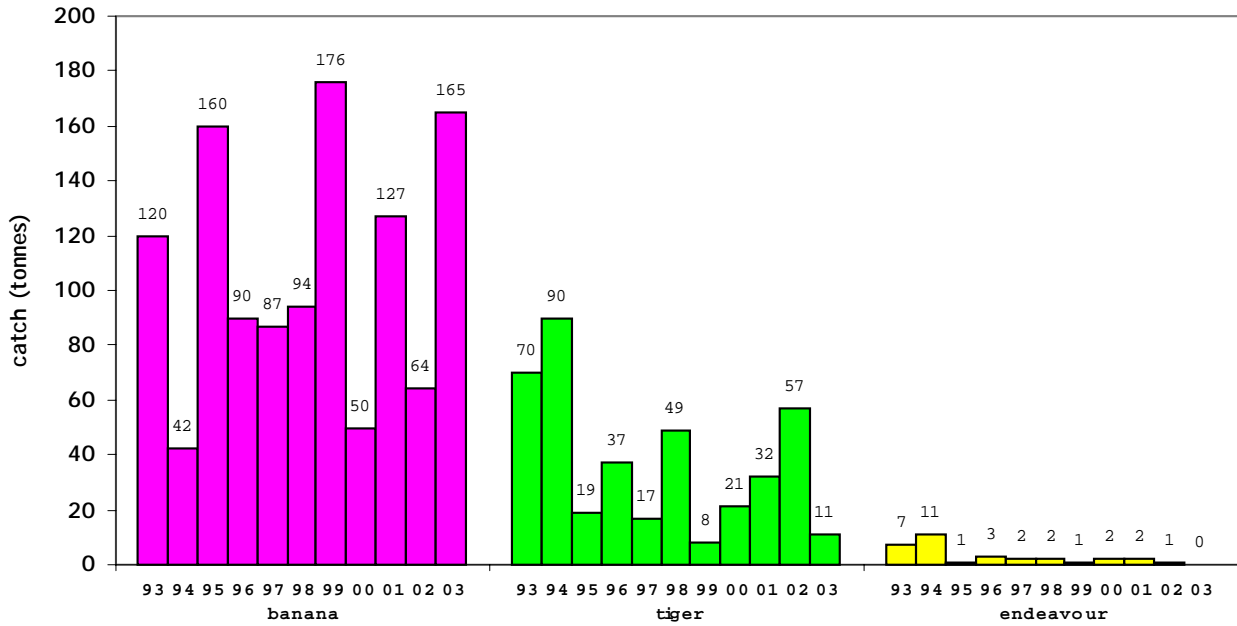


Figure 35a. Catch by species in the Arnhem area between 1993 and 2003

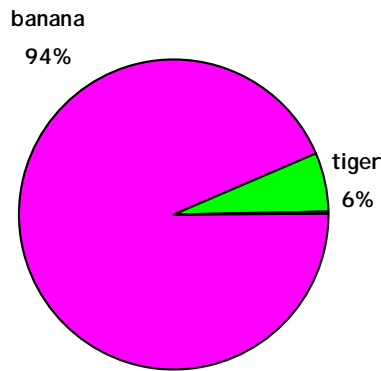


Figure 35b. Percentage catch by species in the Arnhem area in 2003

Source: AFMA logbook data



Effort for the Arnhem area increased by 24% to 183 days for the banana fishery and decreased 78% to 43 days for the tiger fishery (Figure 36 a-c).

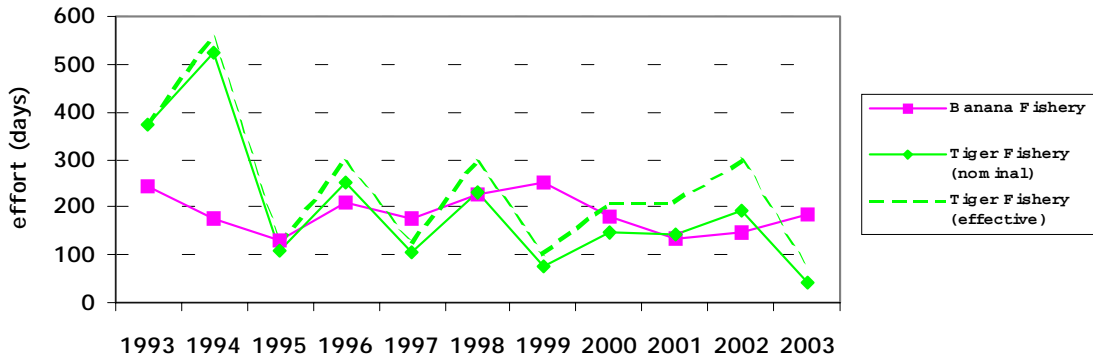


Figure 36a. Effort in the banana and tiger prawn fisheries in the Arnhem area between 1993 and 2003

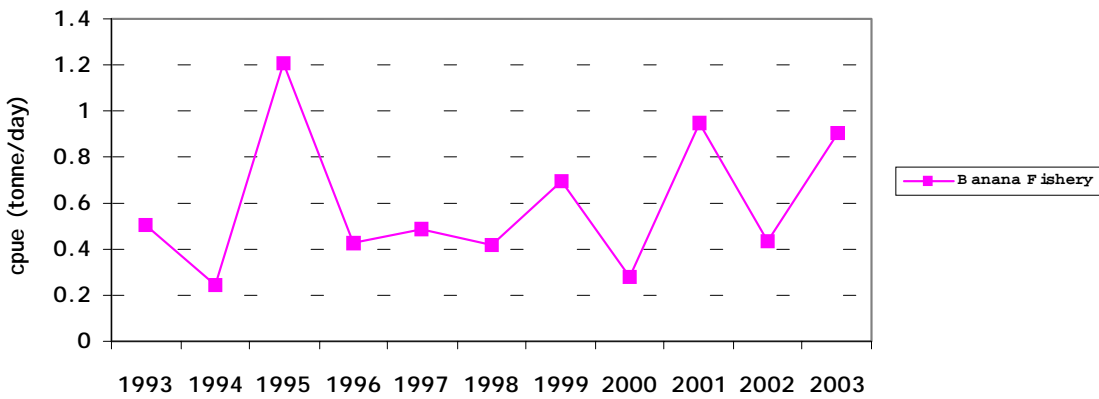


Figure 36b. Catch rate in the banana prawn fishery in the Arnhem area between 1993 and 2003

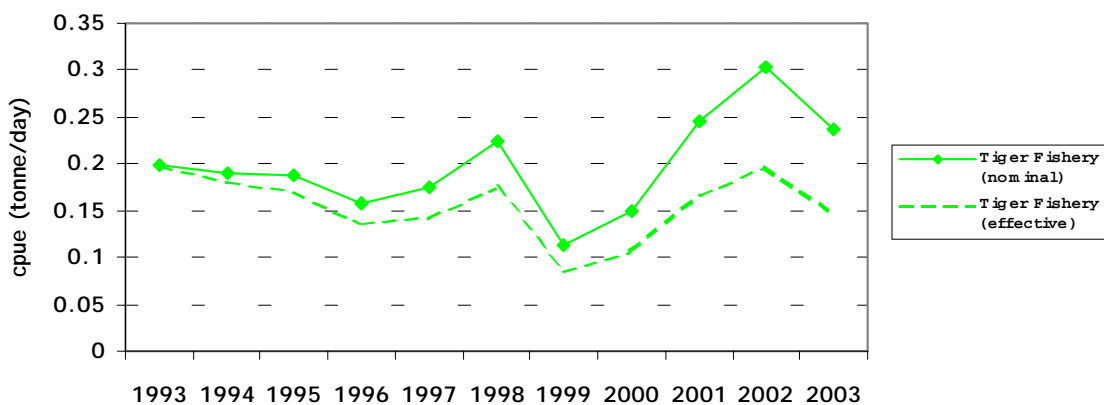


Figure 36c. Catch rate in the tiger prawn fisheries in the Arnhem area between 1993 and 2003

Source: AFMA logbook data



## Port Essington

Catches of banana prawns remained steady in the Port Essington area for the 2003 season at 212 tonnes. The catch of tiger prawns decreased by 87% to 12 tonnes, and endeavour prawns were down by 76% to 6 tonnes (Figures 37a & 37b).

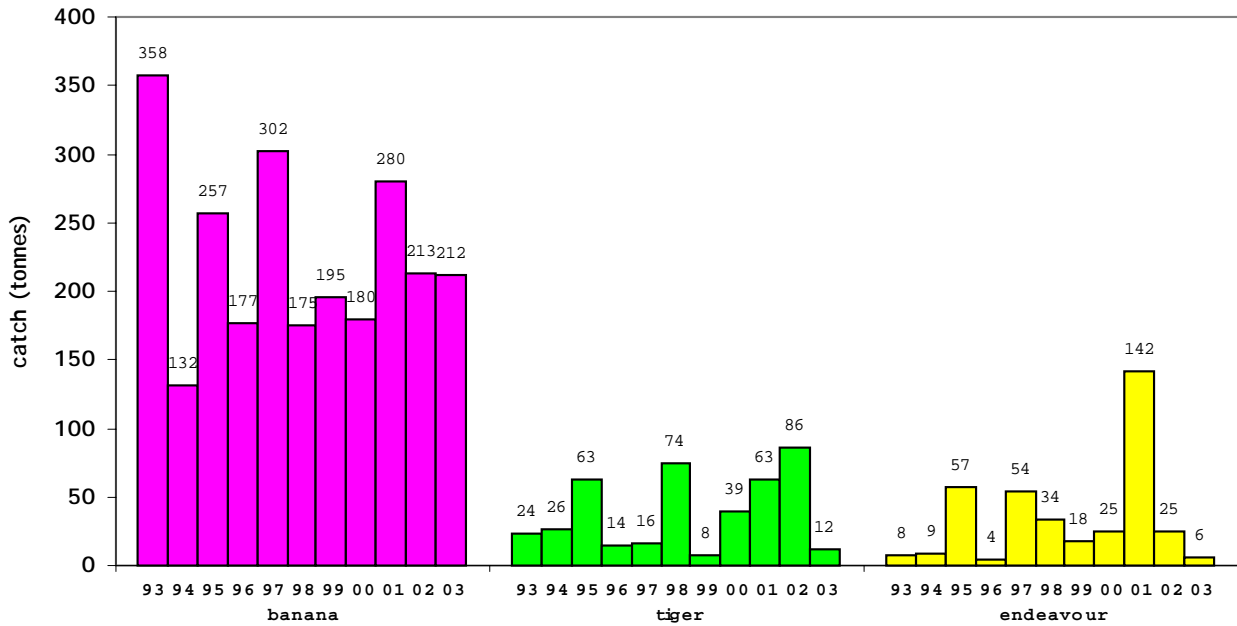


Figure 37a. Catch by species in the Port Essington area between 1993 and 2003

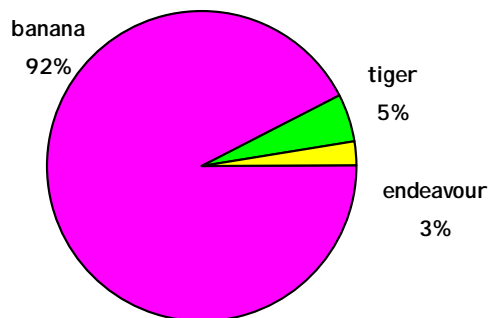


Figure 37b. Percentage catch by species in the Port Essington area in 2003

Source: AFMA logbook data



Effort in the banana fishery was increased by 8% to 367 days, while the tiger fishery was down 83% to 47 days (Figure 38 a-c).

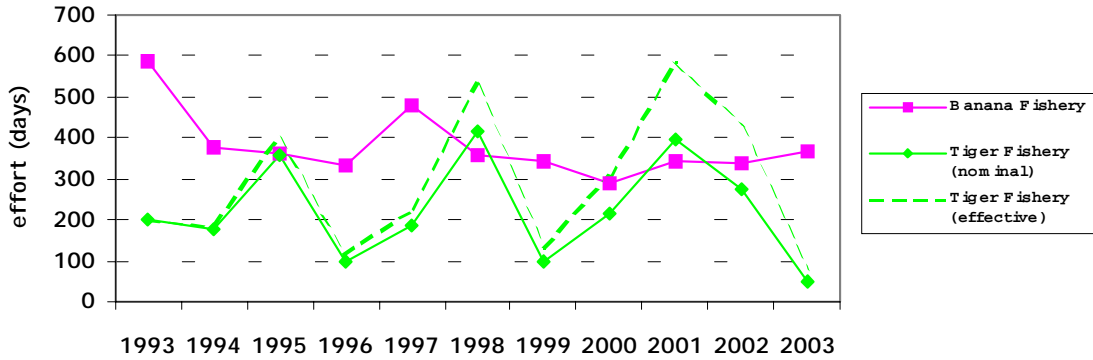


Figure 38a. Effort in the banana and tiger prawn fisheries in the Port Essington area between 1993 and 2003

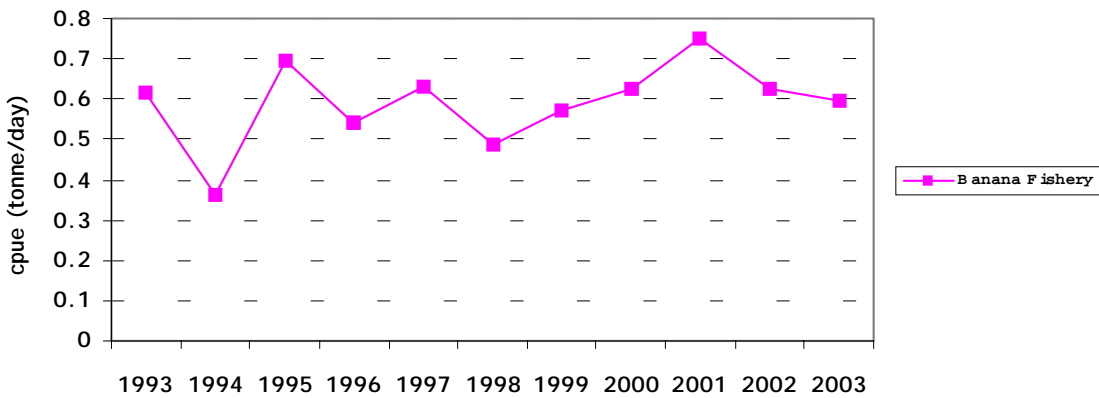


Figure 38b. Catch rate in the banana prawn fishery in the Port Essington area between 1993 and 2003

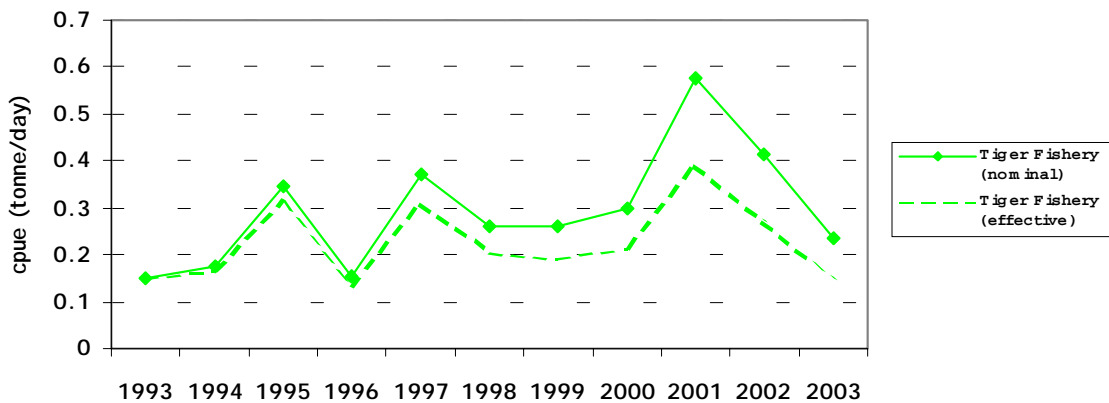


Figure 38c. Catch rate in the tiger prawn fisheries in the Port Essington area between 1993 and 2003  
Source: AFMA logbook data



## Melville

The banana prawn catch in the Melville area decreased by 12% to 253 tonnes. Catches of tiger and endeavour prawns decreased to 14 tonnes and 13 tonnes respectively in 2003 (Figures 39a & 39b).

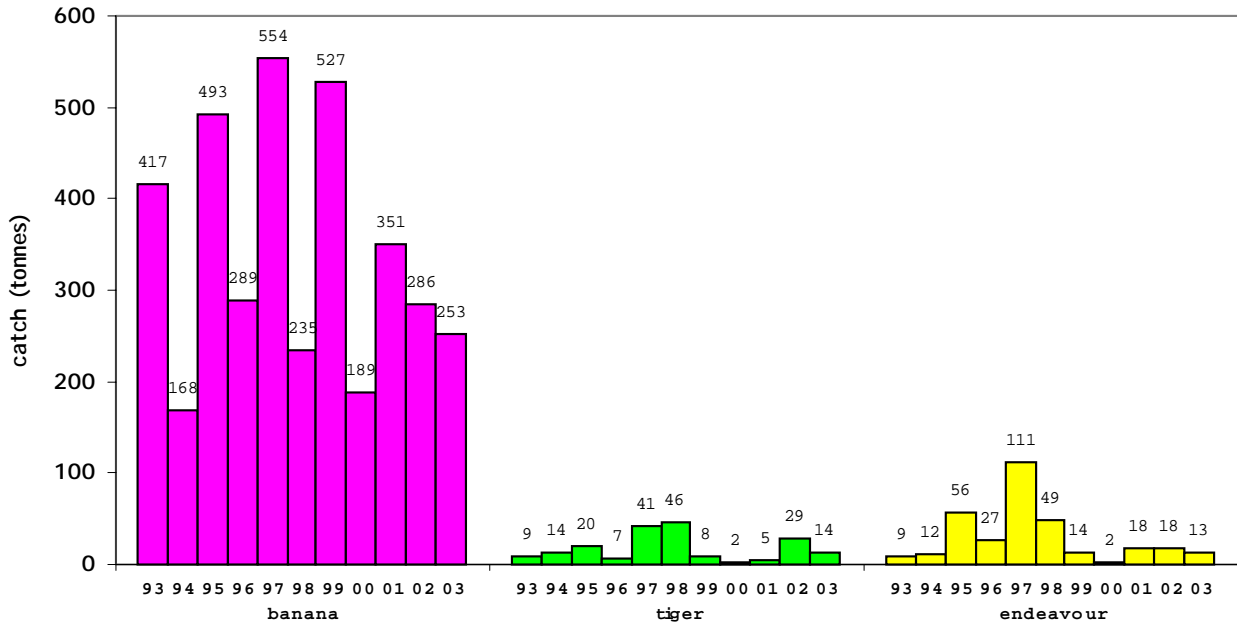


Figure 39a. Catch by species in the Melville area between 1993 and 2003



Figure 39b. Percentage catch by species in the Melville area in 2003

Source: AFMA logbook data



Effort for the Melville area in the banana fishery decreased 8% to 432 days during 2003. Effort in the tiger fishery was down 57% to 51 days effort (Figure 40 a-c).

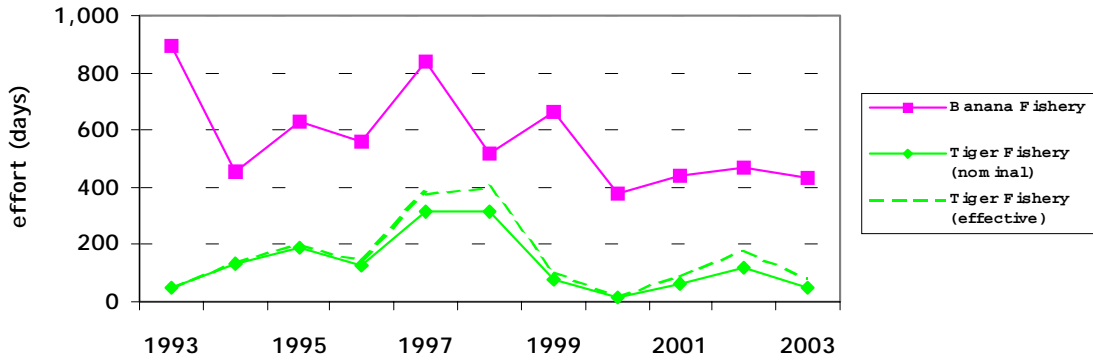


Figure 40a. Effort in the banana and tiger prawn fisheries in the Melville area between 1993 and 2003

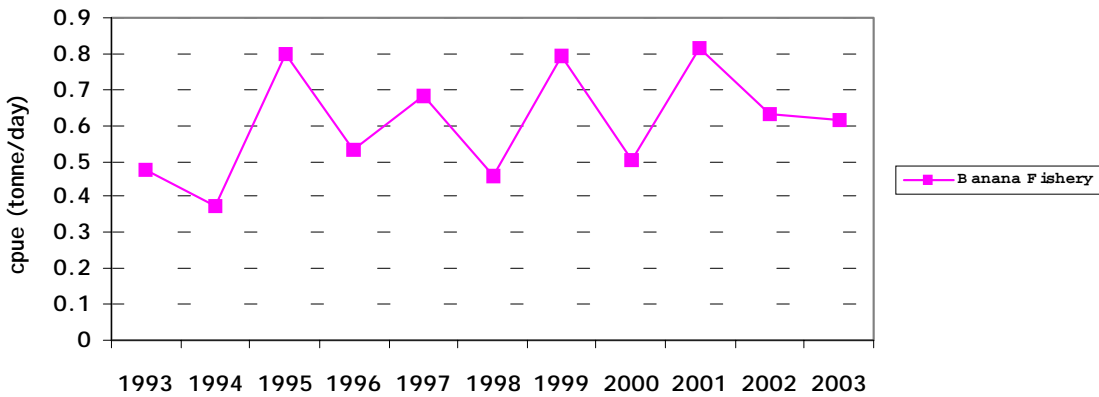


Figure 40b. Catch rate in the banana prawn fishery in the Melville area between 1993 and 2003

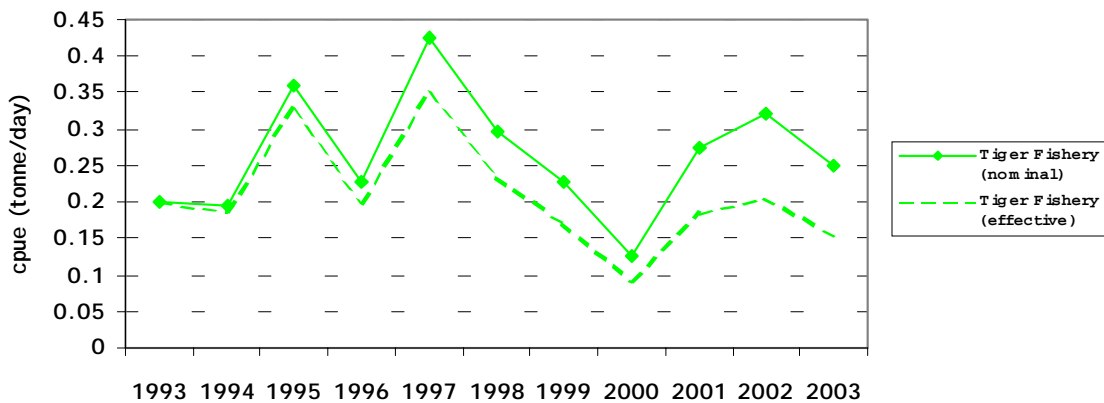


Figure 40c. Catch rate in the tiger prawn fisheries in the Mellville area between 1993 and 2003

Source: AFMA logbook data



## Fog Bay

The banana prawn catch in the Fog Bay area increased 25% to 259 tonnes in 2003. Catches of tiger and endeavour prawns remained very low (Figures 41a & 41b).

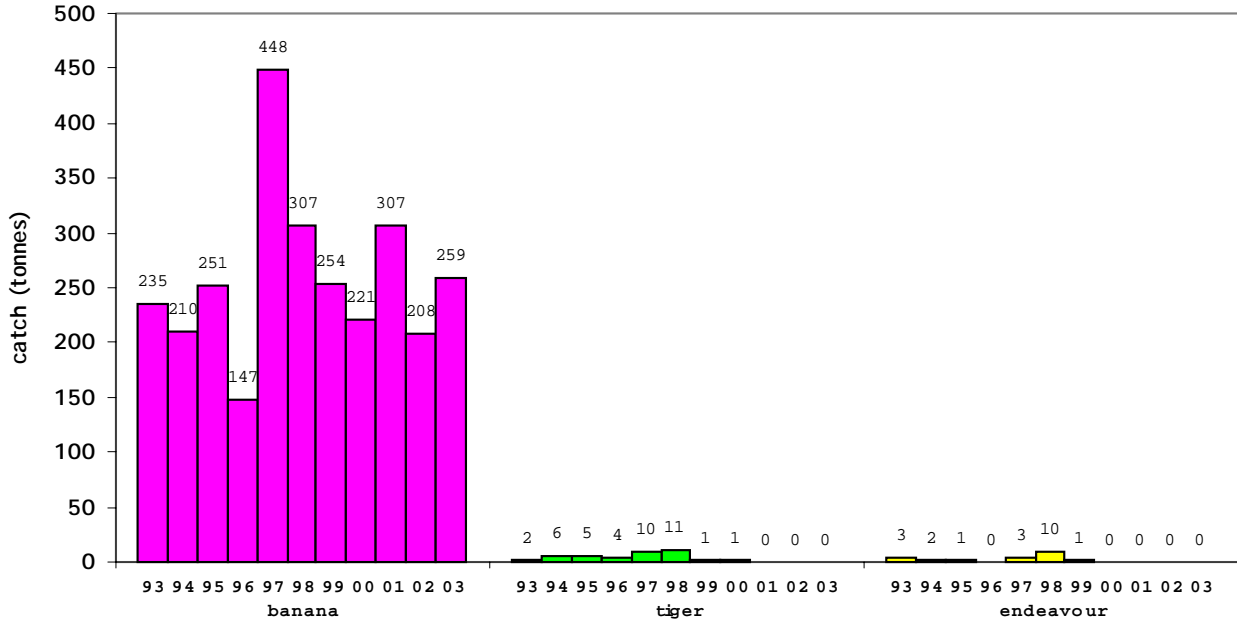


Figure 41a. Catch by species in the Fog Bay area between 1993 and 2003

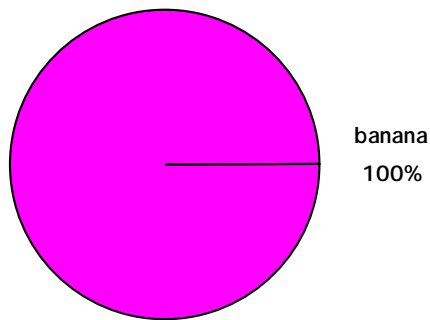


Figure 41b. Percentage catch by species in the Fog Bay area in 2003

Source: AFMA logbook data





Effort for the banana fishery in the Fog Bay area during 2002 was slightly higher than last year, up 10% to 324 days. Effort for the tiger fishery remained very low (Figure 42 a-c).

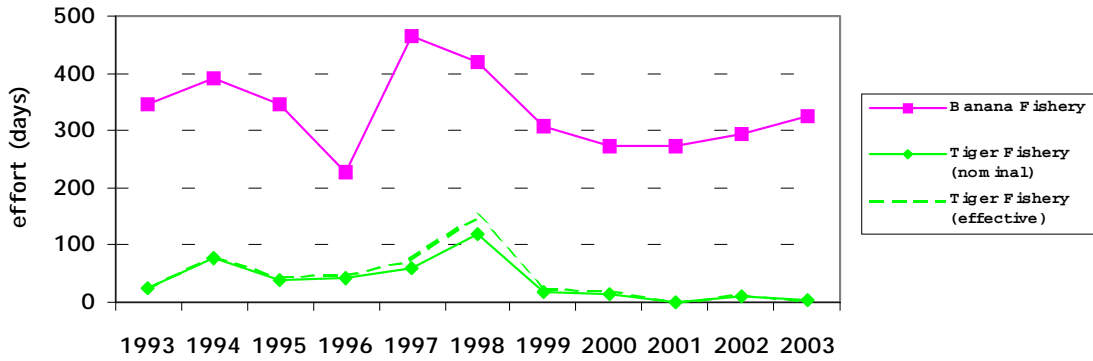


Figure 42a. Effort in the banana and tiger prawn fisheries in the Fog Bay area between 1993 and 2003

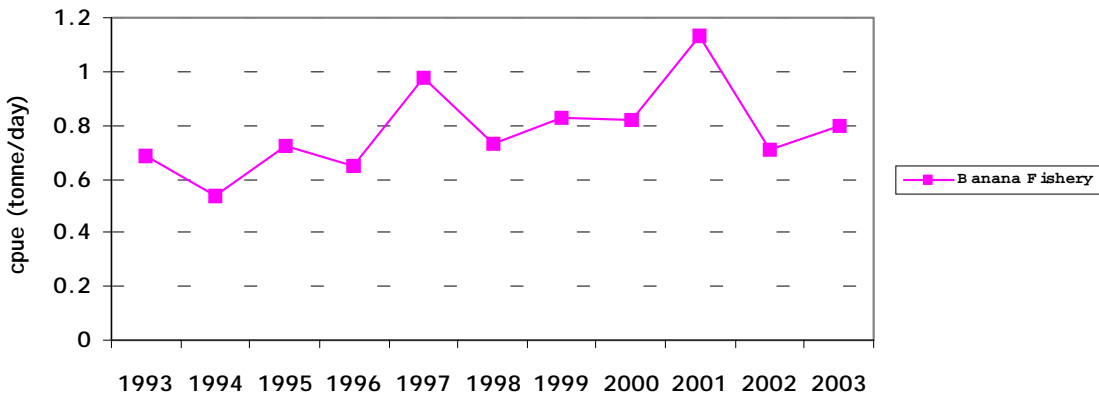


Figure 42b. Catch rate in the banana prawn fishery in the Fog Bay area between 1993 and 2003

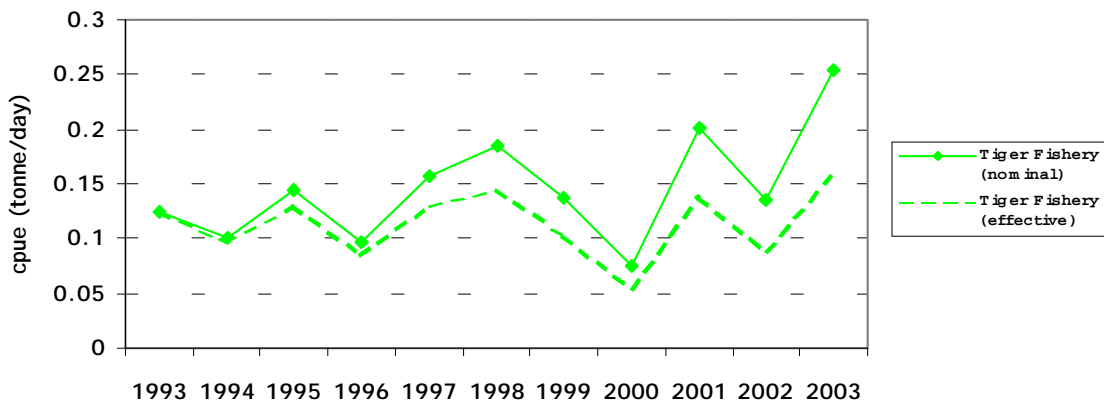


Figure 42c. Catch rate in the tiger prawn fishery in the Fog Bay area between 1993 and 2003

Source: AFMA logbook data



## Bonaparte

The banana prawn catch in the Bonaparte area decreased slightly to 411 tonnes in the 2003 season. Catches of tiger prawns were up to 103 tonnes, while endeavour prawns also increased slightly to 12 tonnes (Figures 43a & 43b).

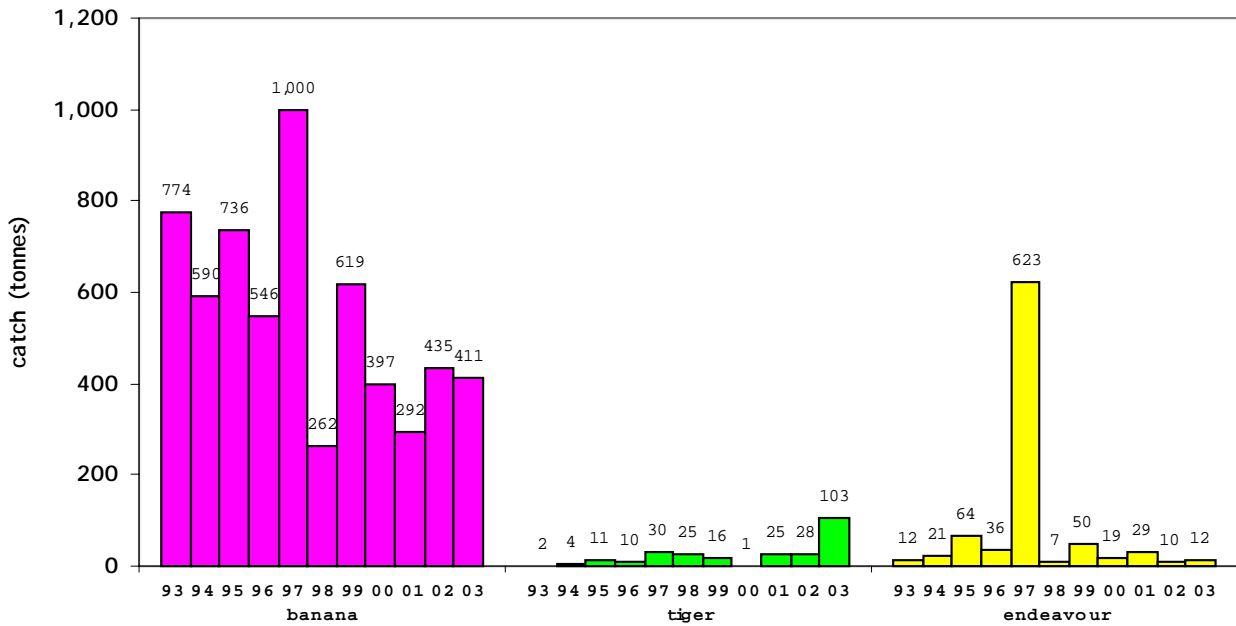


Figure 43a. Catch by species in the Bonaparte area between 1993 and 2003

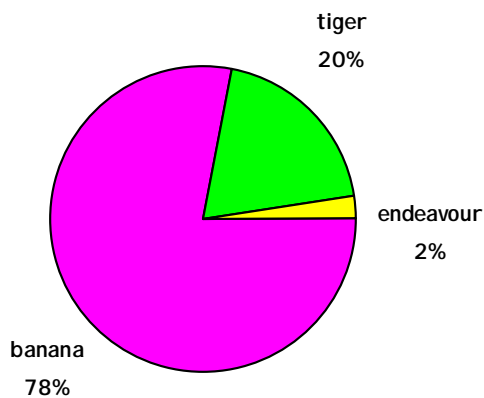


Figure 43b. Percentage catch by species in the Bonaparte area in 2003

Source: AFMA logbook data



Effort for the Bonaparte area was up 20% to 732 days for the banana fishery. The effort for the tiger fishery also increased to 566 days (Figure 44 a-c).

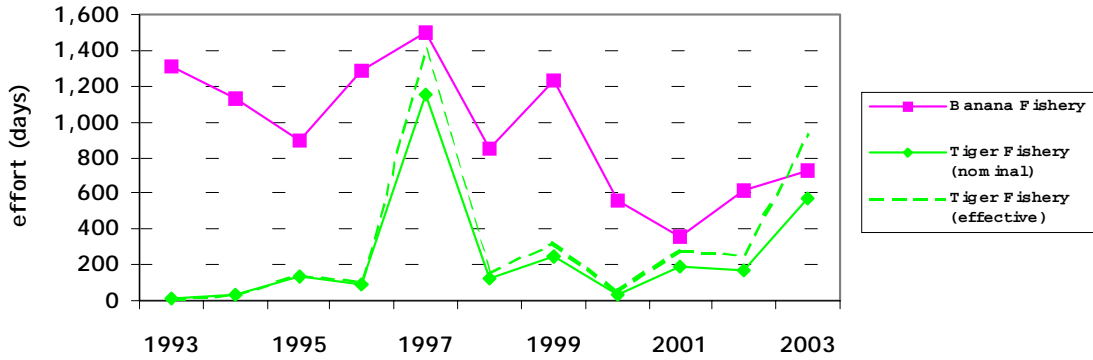


Figure 44a. Effort in the banana and tiger prawn fisheries in the Bonaparte area between 1993 and 2003

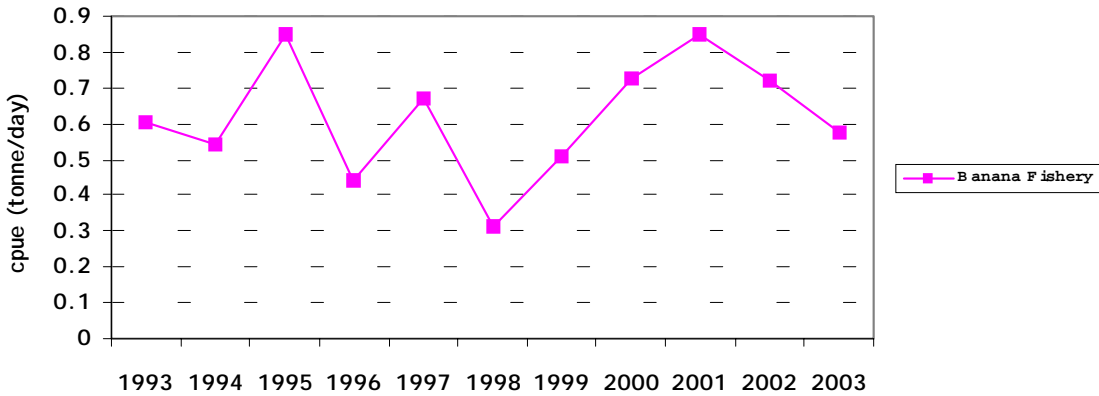


Figure 44b. Catch rate in the banana prawn fishery in the Bonaparte area between 1993 and 2003

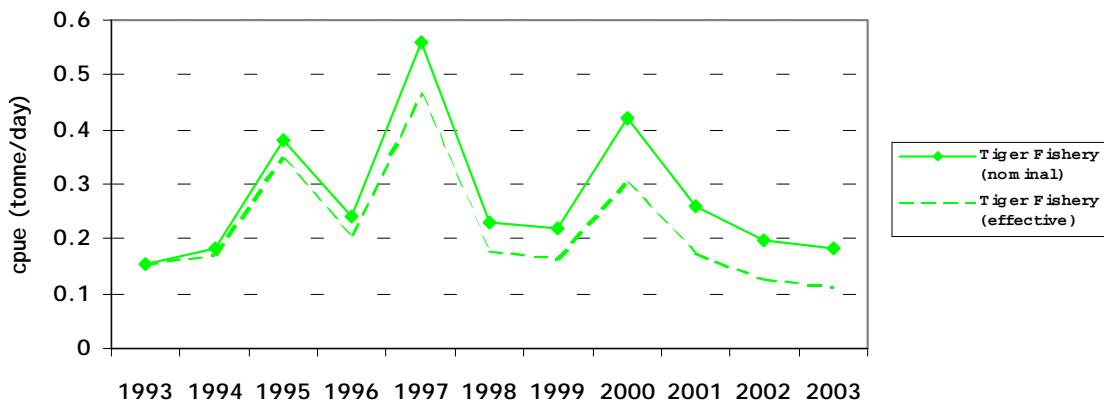


Figure 44c. Catch rate in the tiger prawn fisheries in the Bonaparte area between 1993 and 2003

Source: AFMA logbook data



## Bycatch in the Northern Prawn Fishery

### Turtle Bycatch

Turtle bycatch (and prawn nominal effort) by area is shown in Figures 45a and 45b and Table 6. Reported catch by species is shown in Figure 46. Overall, total reported turtle interactions remained steady when compared with the 2002 season (Table 6). **Note - The implementation of Turtle Exclusion Devices (TEDs) on all NPF vessels has been mandatory since 15 April 2000.**

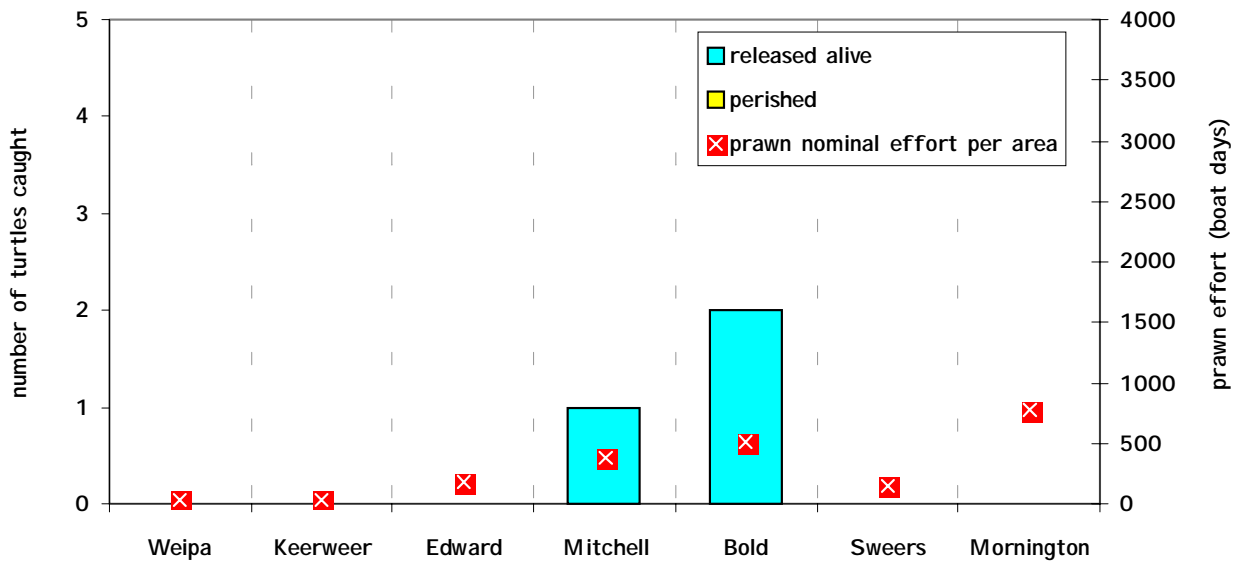


Figure 45a. Turtle Bycatch in the Northern Prawn Fishery by Statistical Area (Weipa - Mornington) in 2003.

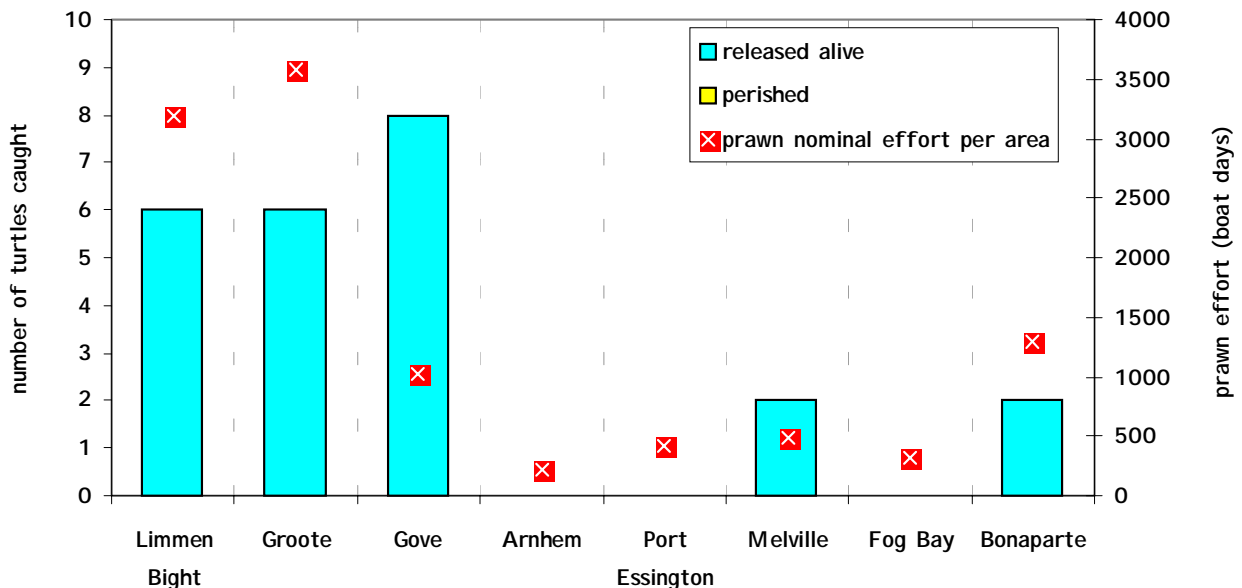


Figure 45b. Turtle Bycatch in the Northern Prawn Fishing by Statistical Area (Limmen - Bonaparte) in 2003.

Source: AFMA logbook data



**Table 6. Turtle Bycatch by Species in each Statistical Area, 2001-2003 (continued on next page)**  
 Source: AFMA logbook data

Statistical Area	Turtle Species	Released Alive			Perished			Condition Unknown		
		01	02	03	01	02	03	01	02	03
<b>WEIPA</b>	<i>Flatback</i>	2								
	<i>Green</i>	7								
	<i>Loggerhead</i>	1								
	<i>Pacific Ridley</i>	6								
<b>KEERWEER</b>	<i>Unidentified species</i>							1		
<b>MITCHELL</b>	<i>Flatback</i>			1				1		
	<i>Green</i>	1								
	<i>Loggerhead</i>	1								
	<i>Unidentified species</i>							2		
<b>BOLD</b>	<i>Flatback</i>	7	1	1	1					
	<i>Green</i>	2								
	<i>Hawksbill</i>	3				1		1		
	<i>Loggerhead</i>		1							
	<i>Leatherback</i>				1					
	<i>Pacific Ridley</i>	2		1						
	<i>Unidentified species</i>							1		
<b>SWEERS</b>	<i>Flatback</i>	4								
	<i>Green</i>	1								
	<i>Pacific Ridley</i>	1								
<b>MORNINGTON</b>	<i>Flatback</i>	2								
	<i>Leatherback</i>	1								
	<i>Pacific Ridley</i>	5			1					
<b>LIMMEN BIGHT</b>	<i>Flatback</i>	1	1							
	<i>Green</i>	3	5	4						
	<i>Hawksbill</i>	1								
	<i>Leatherback</i>	3								
	<i>Loggerhead</i>	1								
	<i>Pacific Ridley</i>	10	1	1						
	<i>Unidentified species</i>		1	1						
<b>GROOTE</b>	<i>Flatback</i>	5	3	1					1	
	<i>Green</i>	2	1	3				2		
	<i>Hawksbill</i>		1							
	<i>Leatherback</i>	1								
	<i>Loggerhead</i>									
	<i>Pacific Ridley</i>		1	1						
	<i>Unidentified species</i>	18		1						
<b>GOVE</b>	<i>Flatback</i>		1	5						
	<i>Green</i>			1						
	<i>Pacific Ridley</i>		1							
	<i>unidentified species</i>			2						
<b>ARNHEM</b>	<i>Flatback</i>	1								
	<i>Green</i>		1							
<b>PORT ESSINGTON</b>	<i>Flatback</i>									
	<i>Green</i>		2		1					
	<i>Pacific Ridley</i>	2	1							

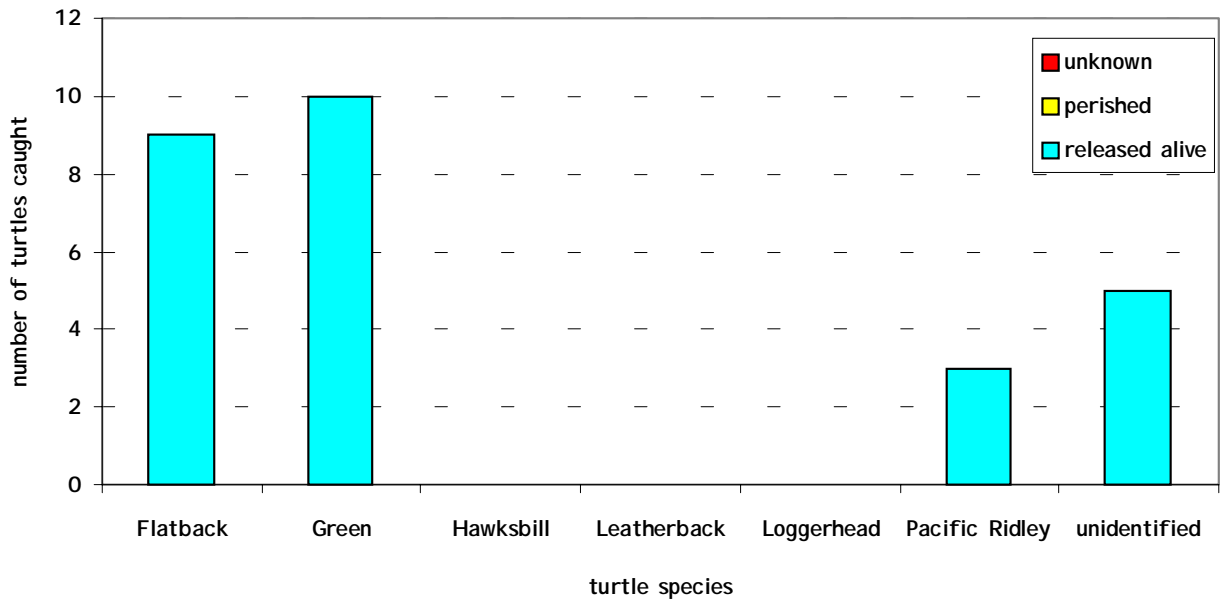


NORTHERN PRAWN FISHERY DATA SUMMARY 2003

Statistical Area	Turtle Species	Released Alive			Perished			Condition Unknown		
		01	02	03	01	02	03	01	02	03
MELVILLE	<i>Flatback</i>	1								
	<i>Green</i>			1						
	<i>Loggerhead</i>					1				
	<i>Unidentified species</i>			1						
FOG BAY	<i>Flatback</i>									
	<i>Green</i>				1					
	<i>Pacific Ridley</i>	1								
BONAPARTE	<i>Flatback</i>		1	1						
	<i>Green</i>	1		1						
	<i>Hawksbill</i>	1								
	<i>Pacific Ridley</i>				1					
	<i>unidentified species</i>	1	1							
TOTAL ALL AREAS	<i>Flatback</i>	23	7	9	1			1	1	
	<i>Green</i>	17	9	10	2			2		
	<i>Hawksbill</i>	5	1			1		1		
	<i>Leatherback</i>	5			1					
	<i>Loggerhead</i>	3	1			1				
	<i>Pacific Ridley</i>	27	4	3	2					
	<i>unidentified species</i>	19	2	5				4		
<b>GRAND TOTAL</b>	<b>ALL SPECIES</b>	99	24	27	6	2		8	1	

Source: AFMA Logbook data





**Figure 46. Turtle Bycatch in the Northern Prawn Fishery by Species in 2003.**

Source: AFMA logbook data



## State/Territory Specific Data

### Financial Year Catch of the NPF by State/Territory

Information on financial year catches taken in the waters of each State/Territory is included to meet Offshore Constitutional Settlement obligations with Queensland, the Northern Territory and Western Australia. The information is also used by the Australian Bureau of Agricultural and Resource Economics to calculate Gross Value of Product (GVP) figures.

Prawn catches in Queensland and the Northern Territory were lower during the 2002/2003 financial year than in the previous financial year. The catch in Queensland waters was down 2410 tonnes to 1459 tonnes, while the catch in the Northern Territory was down 603 tonnes to 3641 tonnes (Table 7). Catches in Western Australia rose by 196 tonnes to 592 tonnes.

### Byproduct of the NPF by State/Territory

Logbook recording of retained bycatch (byproduct) in the NPF has been required since 1995.

Bugs, squid, whiting, cuttlefish and goatfish were the most commonly retained bycatch species in 2003. Bugs were the major bycatch species in 2003, with 34 tonnes caught from a total catch of 71 tonnes. Most bugs were caught in waters off the Northern Territory (Table 8).



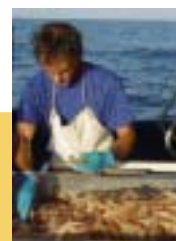


**Table 7. Financial year catch of the NPF by State from 1990/91 to 2002/03.**

Source: AFMA Logbook data.

<i>State</i>	<i>Financial year</i>	<i>banana (tonnes)</i>	<i>tiger (tonnes)</i>	<i>endeavour (tonnes)</i>	<i>king (tonnes)</i>	<i>total catch (tonnes)</i>
<b>Queensland</b>	1990/91	4646	1151	269	51	6117
	1991/92	1392	1710	548	30	3680
	1992/93	1857	968	357	18	3200
	1993/94	904	1032	416	8	2360
	1994/95	2540	1883	346	24	4791
	1995/96	2562	1570	761	23	4916
	1996/97	2050	1259	817	15	4141
	1997/98	1986	1318	878	11	4193
	1998/99	1548	634	335	5	2523
	1999/00	637	629	348	1	1614
	2000/01	3651	553	352	4	4560
	2001/02	3286	372	211	1	3869
	<b>2002/03</b>	<b>1307</b>	<b>97</b>	<b>54</b>	<b>1</b>	<b>1459</b>
<b>Northern Territory</b>	1990/91	1430	2156	380	46	4011
	1991/92	669	2332	434	27	3462
	1992/93	1639	1907	437	18	4000
	1993/94	697	1768	403	18	2886
	1994/95	1536	1855	423	19	3836
	1995/96	1072	1615	434	6	3127
	1996/97	1472	1184	387	9	3052
	1997/98	1241	1466	490	9	3206
	1998/99	1549	2141	778	6	4474
	1999/00	1247	1564	586	11	3408
	2000/01	2323	1546	489	3	4361
	2001/02	1789	1561	892	1	4244
	<b>2002/03</b>	<b>1509</b>	<b>1797</b>	<b>333</b>	<b>2</b>	<b>3641</b>
<b>Western Australia</b>	1990/91	579	86	42	0	707
	1991/92	231	8	11	0	250
	1992/93	498	5	6	0	508
	1993/94	828	4	13	0	845
	1994/95	414	2	16	0	432
	1995/96	713	18	65	0	796
	1996/97	1079	5	38	0	1122
	1997/98	756	66	686	1	1509
	1998/99	519	23	17	0	559
	1999/00	329	2	38	0	369
	2000/01	281	16	23	0	321
	2001/02	345	23	28	0	396
	<b>2002/03</b>	<b>509</b>	<b>75</b>	<b>8</b>	<b>0</b>	<b>592</b>

Source: AFMA Logbook data



**Table 8. Retained byproduct of the NPF by State of capture in 2003.**

Source: AFMA logbook data

<i>Species</i>	<i>Form Type</i>	<b>TOTAL wt (kg)</b>	<b>QLD wt (kg)</b>	<b>NT wt (kg)</b>	<b>WA wt (kg)</b>
<b>black pomfret</b>	<i>whole</i>	2510	128	1963	419
<b>bugs</b>	<i>tails</i>	637	7	630	0
	<i>whole</i>	33466	6283	26286	897
<b>crabs</b>	<i>whole</i>	13			13
<b>crayfish</b>	<i>whole</i>	128		29	99
<b>cuttlefish</b>	<i>whole</i>	5359	1022	4286	51
<b>flathead</b>	<i>whole</i>	51		51	
<b>goatfish</b>	<i>whole</i>	5010	731	4279	
<b>golden snapper</b>	<i>whole</i>	85	10	15	60
<b>herring</b>	<i>whole</i>	50		50	
<b>mackerel</b>	<i>whole</i>	622	30	592	0
<b>milkfish</b>	<i>whole</i>	1800		1800	
<b>mixed reef fish</b>	<i>whole</i>	1211	291	893	27
<b>mud scallop</b>	<i>whole</i>	1879	99	1780	
<b>octopus</b>	<i>whole</i>	536	98	428	10
<b>orange perch</b>	<i>whole</i>	90			90
<b>pike eel</b>	<i>whole</i>	25		25	
<b>Queensland halibut</b>	<i>whole</i>	136		136	
<b>red emperor</b>	<i>whole</i>	112		12	100
<b>saddle-tailed sea perch</b>	<i>whole</i>	442		42	400
<b>saucer scallop</b>	<i>whole</i>	1612		1612	
<b>scallop</b>	<i>whole</i>	120		120	
<b>scarlet sea perch</b>	<i>whole</i>	439		29	410
<b>sea perch</b>	<i>whole</i>	63		63	
<b>sole</b>	<i>whole</i>	92		92	
<b>Spanish mackerel</b>	<i>whole</i>	60	40	20	
<b>squid</b>	<i>whole</i>	7472	1686	4925	861
<b>whiting</b>	<i>whole</i>	6950	1388	5562	
<b>other</b>	<i>whole</i>	140	14	35	91
<b>TOTAL</b>		<b>71109</b>	<b>11828</b>	<b>55754</b>	<b>3528</b>

Source: AFMA Logbook data

