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A summary of data collected by the Angler's Daily Log Book and Fishing Tournament Monitoring Programs in 2004-2006

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PART 1 – ANGLER'S DAILY LOG BOOK

INTRODUCTION

Catch information and biological samples collected by recreational anglers in daily log books can provide valuable information about local fish stocks. The numbers and lengths of important recreational target species can be used to monitor their abundance and population structure, which can form the basis of fishery stock assessments. In addition, the total composition of the catch and observations about fish health provide measures of local biodiversity and ecosystem health.

The Department of Fisheries (DoF) Recreational Angler's Daily Log Book Program was launched in March 2004 as part of the DoF Research Angler Program (RAP). The current log book format was based on an earlier version issued by the Department of Fisheries. All anglers still participating in the old version of the log book program were contacted and supplied with new versions during 2004/05.

The current log book is available in 2 formats – "Ocean Edition" and "Estuary Edition". The Ocean Edition is designed for all types of ocean beach and offshore fishing, while the Estuary Edition is designed for all types of estuary and freshwater fishing. Both editions accommodate data on finfish and invertebrate catches. Current log book formats are illustrated in Appendices 1 and 2.

This report summarises the data reported by logbook anglers in 2004 and 2005.

LOG BOOK ANGLER PARTICIPATION RATES

The Estuary Edition of the log book was launched in early 2004 as a 'pilot study' mainly involving estuarine anglers in the metropolitan area. Between March 2004 and June 2005, the number of estuary log books issued to anglers gradually increased from zero to 70 (Fig. 1). During June 2005, the Ocean Edition of the log book was launched. At the same time, a media statement, brochures and other material were released to promote the log book program in general. As a result, angler recruitment to the program increased significantly after this time. Between June 2005 and December 2005, the number of estuary log books issued to anglers increased from 70 to 193 and the number of ocean log books increased from 0 to 231.

FISHING EFFORT

Prior to June 2005, the total number of fishing days reported by log book anglers was approximately 40 days per month (all regions combined). From July to December 2005, the total number of reported fishing days was approximately 150 days per month.

In 2004 and 2005, the majority of fishing effort (in hours) by estuary/river anglers was reported in the West Coast (82%) and South Coast (15%) regions (Table 1). Popular fishing locations included the Swan-Canning, Peel-Harvey estuaries and the Warren and Capel Rivers (Fig. 2). There was no fishing effort by estuary/river anglers in the Gascoyne and only 3% of the reported estuary/river effort was in the North Coast. Fishing effort in each region was proportional to the number of log books issued in each region, with 85% of estuary log books issued to anglers residing in the West Coast, 11% to anglers residing in the South Coast, 1% to anglers residing in the Gascoyne and 3% to anglers residing in the North Coast region. In 2004 and 2005, the majority of fishing effort (in hours) by ocean anglers was reported in the West Coast (67%) (Table 1). Relatively low levels of effort were reported from the South Coast (14%), Gascoyne (14%) and North Coast (5%) regions. Fishing effort by ocean anglers in each region was also proportional to the number of log books issued in each region, with 80% of ocean log books issued to anglers residing in the West Coast, 15% to anglers residing in the South Coast, 2% to anglers residing in the Gascoyne and 3% to anglers residing in the North Coast. Ocean fishing mainly occurred on ocean beaches or in offshore waters near Perth and Mandurah (Fig. 3, 4 and 5).

CATCH COMPOSITION BY SPECIES

Species listed in this report are as identified by log book anglers. Obvious errors are corrected before being entered into the log book database but, otherwise, no attempt has been made by the authors to verify these identifications.

North Coast

In 2004 and 2005, 9 finfish and 2 invertebrate taxa were recorded from estuaries/rivers in the North Coast region (Table 2). The total estuary/river catch contained 185 individual finfish. Seventy five percent of the total catch comprised sea mullet (*Mugil cephalus*). In ocean waters, 20 finfish, 1 invertebrate and 2 elasmobranch (sharks/rays) taxa were reported (Table 3). The total ocean catch contained 67 individual finfish, including estuary cod (*Epinephelus coioides*) (13%) and fingermark bream (*Lutjanus johnii*) (10%).

Gascoyne

In 2004 and 2005, no logbook catches were reported from estuaries/rivers in the Gascoyne region. In ocean waters, 32 finfish, 2 invertebrate and 2 elasmobranch taxa were reported (Table 4). The total ocean catch contained 356 individual finfish, including pink snapper (*Pagrus auratus*) (34%) and yellow-finned whiting (*Sillago schombergkii*) (23%).

West Coast

In 2004 and 2005, a total of 43 finfish, 2 invertebrate and 1 elasmobranch taxa were reported from estuaries/rivers in the West Coast region (Table 5). The total estuary/river catch contained 5808 individual finfish, including black bream (*Acanthopagrus butcheri*) (31%) and blowfish (*Torquigener pleurogramma*) (24%). In ocean waters, 78 finfish, 2 invertebrate and 5 elasmobranch taxa were reported (Table 6). The total ocean catch contained 2747 individual finfish, including Australian herring (*Arripis georgianus*) (36%) and various whiting (*Sillago* spp.) (13%).

South Coast

In 2004 and 2005, a total of 13 finfish taxa were reported from estuaries/rivers in the South Coast region (Table 7). No invertebrates or elasmobranchs were reported. The total estuary/ river catch contained 803 individual finfish, including black bream (66%) and King George whiting (*Sillaginodes punctata*) (14%). In ocean waters, 28 finfish, 2 invertebrate and 2 elasmobranch taxa were reported (Table 8). The total ocean catch contained 510 individual finfish, including Australian herring (28%), King George whiting (20%) and silver trevally (*Pseudocaranx dentex*) (14%).

PROPORTION OF RETAINED AND RELEASED FISH IN CATCH

In 2004 and 2005, log book anglers reported the retained/released status of the majority of catches. Only 2% of estuary/river catches and 6% ocean catches were of unknown status.

In all regions, estuary/river anglers tended to release a higher proportion of their catch than ocean anglers (Fig. 6). More than 50% of the total estuary/river catch was released in each region. Less than 50% of the ocean catch was released in the West Coast and South Coast regions (where the majority of the ocean catch was taken in 2004/05).

LENGTHS OF KEY SPECIES

Lengths described in this section are those of all fish measured by log book anglers, including retained and released fish. In 2004 and 2005, logbook anglers provided a size measurement for 51% of the total reported catch.

Australian herring. The majority of fish were between 180 and 280 mm TL (Fig. 7). Fish caught in estuaries on the West Coast exhibited a slightly wider size range than ocean-caught fish. The length distributions of ocean-caught fish from the West Coast and South Coast were similar, with modal sizes of 230 and 220 mm, respectively. The modal size of estuary-caught fish (~ 250 mm) was greater than ocean-caught fish.

The majority of fish were above the length-at-maturity (~196 mm for males, ~215 mm for females). The maximum lengths reported by log book anglers were well below the maximum size (~410 mm) recorded for this species. There is currently no legal minimum length for this species.

Tailor. The majority of fish were between 200 and 400 mm TL (Fig. 7). On the West Coast, ocean-caught fish were slightly larger than estuary-caught fish. The modal size of ocean-caught fish was \sim 300 mm, which coincides with the length-at-maturity and the legal minimum length for this species. Overall, approximately half of all fish hooked by log book anglers were below the legal minimum length and were probably immature.

The maximum lengths reported by log book anglers were well below the maximum size (\sim 1200 mm) recorded for this species.

Pink snapper. Only a small number of fish were reported by log book anglers, mainly from ocean waters in the Gascoyne region (Fig. 7). Fish were between 350 and 700 mm TL. Almost all of these fish were above the length-at-maturity (~380 mm in Gascoyne ocean waters) and the legal minimum length (410 mm) for this species in this region. The maximum lengths reported by log book anglers were well below the maximum size (~1300 mm) recorded for this species.

Common blowfish. Despite not being targeted, a large number of this species were hooked by log book anglers in ocean and estuary waters of the West Coast region. Fish were mostly between 60 and 200 TL mm, although the average size was larger in estuarine waters (Fig. 8). The length distribution of the total catch, including fish at the maximum length (~230 mm) for this species, suggested that anglers in estuarine and ocean waters hooked all size/age classes of this species. Approximately 50% of the total catch were below the length-at-maturity (~125 mm).

Sea garfish. Fish caught in ocean waters of the West Coast and South Coast regions were mostly between 300 and 450 TL mm (Fig. 8). Almost all fish were above the length-at-maturity (~250 mm) for this species. There is currently no legal minimum length for this species.

Tarwhine. Most fish were caught in estuarine and ocean waters of the West Coast region. Estuary-caught fish were mostly between 100 and 260 mm TL (Fig. 8). The average size of ocean-caught fish was slightly larger, typically ranging between 180 and 320 mm. Most fish caught were above the length-at-maturity (~175 mm). However, >50% of ocean-caught fish and almost all estuary-caught fish were below the legal minimum length (~250 mm).

The maximum lengths reported by log book anglers were well below the maximum size (~800 mm) recorded for this species.

Trumpeter. At least 2 species of trumpeter (Family: Teraponidae) were reported by log book anglers, primarily from estuarine waters in the West Coast region. Six-lined trumpeter ranged between 100 and 240 mm TL, while yellowtail trumpeter were mostly between 120 and 260 mm (Fig. 9). A significant proportion of yellowtail trumpeter hooked by log book anglers were below the length-at-maturity (~150 mm). Size at maturity for six-lined trumpeter is unknown. There is currently no legal minimum length for these species.

King George whiting. Fish were reported from ocean and estuarine waters of the West Coast and South Coast. The lengths of fish hooked by log book anglers tended to be smaller on the West Coast (ranging from 160 to 320 mm TL) than on the South Coast (200 to 400 mm). Most fish hooked by log book anglers from ocean and estuarine waters of the South Coast were above the legal minimum length (280 mm). A higher proportion of undersized fish were hooked by log book anglers from the West Coast, especially in estuarine waters where >50% of fish hooked were undersized (Fig. 10).

Virtually all fish hooked by log book anglers in all areas were below the length-at-maturity (~410 mm) (Fig. 10). The exception was a small number of large fish taken in ocean waters of the West Coast.

Yellow-finned whiting. Fish were mainly reported from estuarine and ocean waters of the West Coast region. The majority of estuary-caught fish were between 180 and 330 mm TL, while ocean-caught fish were 150 to 260 mm (Fig. 10). A small proportion of landings were below the length-at-maturity (~200 mm). There is currently no legal minimum length for this species.

Silver Trevally. Fish were reported from estuarine and ocean waters of the West Coast and South Coast regions. The length of fished hooked by log book anglers ranged from 100 to 400 mm, with most fish between 200 and 300 mm. Almost half of fish hooked by log book anglers were below the legal minimum length for silver trevally (250 mm). All fish were well below the maximum reported size (~940 mm) for this species.

Some sand trevally (*Pseudocaranx wrightii*) may have been misidentified and reported as silver trevally by anglers. These two species are very similar in appearance and it would be difficult to verify the individual catches of these species. However, it is likely that the majority of fish were silver trevally. Firstly, the maximum size of sand trevally is only ~220 mm, suggesting that the larger fish were indeed silver trevally. Also, other evidence (anecdotal reports and fishery-independent surveys) have found silver trevally to be the more common species in coastal waters in recent years.

Black bream. Data reported in log books suggests that the size structure of black bream stocks vary considerably between estuaries. The average size of fish hooked by anglers was smaller in West Coast estuaries than in South Coast estuaries (Fig. 12). Most fish in South Coast estuaries were between 200 and 400 mm TL, whereas fish in West Coast estuaries were mostly between 150 mm and 350 mm. Exceptions were the Murchison River stock, where fish were mostly between 200 and 400 mm and the Blackwood River/Hardy Inlet stock, where fish were mostly 100 mm to 200 mm. Interestingly the data suggests differences in size structure over relatively small spatial scales. In particular, the average length of fish hooked in the Canning River was smaller than in the Swan River, despite these two rivers being part of the same estuarine system.

Overall, the majority of fish hooked by log book anglers were above the length-at-maturity (~220 mm), except in the Blackwood River/Hardy Inlet where nearly all hooked fish were immature. In West Coast estuaries (except the Murchison River), approximately half of fish were below the legal minimum length (250 mm) whereas in South Coast estuaries most fish were above the legal length.

CATCH RATES OF SELECTED SPECIES

The limited quantity of log book data available to December 2005 precludes the calculation of meaningful catch rates for most species in this report. The catch rates of three relatively abundant species (black bream, Australian herring, common blowfish) at selected locations are illustrated in Figure 13. These preliminary data suggest that, in future, log book data will be useful to identify temporal and spatial differences in recreational angler catch rates of numerous species. For example, data suggest a seasonal trend in the catch rate of Australian herring in West Coast estuaries with catch rate peaking in winter/spring.

FISH HEALTH

Log book anglers recorded the occurrence of seasonal outbreaks of 'red-spot' disease in the Swan-Canning Estuary in 2004 and 2005 (Fig. 14). The disease was mainly recorded in black bream. Catch rates of infected fish peaked in spring.

PART 2 – FISHING TOURNAMENT MONITORING

INTRODUCTION

Catch information and biological samples collected by recreational anglers during fishing tournaments can provide an excellent 'snapshot' survey of local fish stocks. The numbers and lengths of important recreational target species caught during tournaments can be used to monitor their abundance and population structure, which can form the basis of fishery stock assessments. In addition, the total composition of the catch during each tournament provides a measure of local biodiversity and ecosystem health.

The Recreational Fishing Tournament Monitoring program commenced in summer 2004/05, as part of the DoF Research Angler Program (RAP). The main objective of the program is to encourage and assist fishing tournament organisers and competitors to collect research data, and thus contribute to the sustainable management of their local fish stocks.

Research data was collected by RAP from 4 tournaments in 2004/05 and from 8 in 2005/06 (Fig. 14). This is a relatively small number of events compared to the total number of fishing tournaments that occur annually in Western Australia. However, 2004/05 was the first year of this monitoring program and it is anticipated that the number of annual events will increase in future years.

Prior to each event, tournament organisers were contacted by RAP and asked whether researchers would be permitted to collect 'catch card' data and/or biological samples at the event. RAP worked in collaboration with DoF research staff, university students, Volunteer Fisheries Liaison Officers (VFLO's) and other volunteers to attend events and collect information.

This report summarises the data reported by anglers on RAP catch cards during fishing tournaments in 2004/05 and 2005/06. It also summarises catch card data collected by the Melville Amateur Angling Club Inc. (MAAC) between 2000 and 2006 at their 'Swanfish' tournament. Since 2000, the club has issued their own catch cards (in consultation with the Department of Fisheries) to individual competitors as part of the tournament registration package.

Finally, this report provides a brief summary of the biological samples collected during tournaments in 2004/05 and 2005/06. These samples contribute to numerous DoF and university research projects and it is beyond the scope of this report to fully describe the outcomes of these projects. Further information can be obtained from the researchers responsible for each project.

ISSUING OF CATCH CARDS

At each event, a catch card was issued per competitor (shore-based tournaments) or per boat (boat-based tournaments). On each occasion, the format of the catch cards was modified to suit the individual event.

The RAP catch cards asked competitors to record their name, fishing location, the total number of each species caught and the size (length or weight) of the first 4 or 5 individuals of each species. Unlike RAP cards, Swanfish cards issued between 2000 and 2006 did not ask anglers to report the length of any fish. All catch cards recorded information on all fish caught

- regardless of whether kept or released.

Examples of catch cards are illustrated in Appendices 3 to 6.

To encourage tournament competitors to complete and return catch cards, all returned cards went into a random draw for a prize valued between \$50 and \$300. Prizes for returned catch cards were either donated by local sponsors (e.g. tackle shops) or funded by RAP. Prizes were usually in the form of a tackle shop gift voucher.

The number of RAP catch cards issued per event varied from approximately 50 to 3400, depending on the size of the event (Table 9). The proportion of cards returned by competitors was relatively low at all events, but tended to be higher at shore-based tournaments (Fig. 15). The higher proportion of returned catch cards at shore-based events may partly reflect the comparative ease with which shore-based fishers can complete a catch card compared to those operating at sea. However, the return rates probably also reflected the varying degree to which tournament organisers were able to promote the catch card program at each event.

Experience gained at tournaments in 2005 and 2006, along with further consultation with tournament organisers, will be used to develop new strategies to increase the proportion of catch cards returned at future events. Options such as allowing anglers to mail catch cards to RAP after a tournament and alternative methods of promotion at each event will be investigated.

CATCH COMPOSITION AND CATCH RATES

Species in this report are reported as identified by anglers. Obvious errors are corrected before being entered into the fishing tournament database but, otherwise, no attempt has been made by the authors to verify these identifications.

North Coast

No data were obtained from North Coast tournaments in 2005 or 2006.

Gascoyne

In the Gascoyne region, catch cards were issued at one tournament (the Shark Bay Fishing Fiesta) in 2005. No data were obtained in 2006.

At the 2005 Shark Bay Fishing Fiesta, a total of 309 finfish and 2 squid from a total of 35 taxa were reported on catch cards. This represented an average of 31 fish hooked per vessel during this 6 day, boat-based event. The most commonly reported species at this tournament were blue-lined emperor (*Lethrinus laticaudis*) (28 % of the total reported catch), pink snapper (*Pagrus auratus*) (17 %), western butterfish (*Pentapodus vitta*) (12 %) and tuskfish (*Choerodon* spp.) (9%) (Table 10).

West Coast

Swanfish

Catch cards were issued to all competitors at Swanfish from 2000 to 2006. This shore-based event is held each February in the Swan-Canning Estuary. The total number of finfish reported at Swanfish ranged between 1,199 in the 2000 tournament and 10,180 in the 2005 tournament, including between 17 and 24 taxa per year (Table 11). Toadfish (*Torquigener pleurogramma*)

represented 37, 61 and 54% of these annual catches in 2004, 2005 and 2006, respectively. Prior to 2004, most competitors did not report toadfish (and not all competitors reported toadfish in later years) and so catch cards provided incomplete data on this species. Excluding toadfish, the total annual reported catch at Swanfish was between 1,174 and 4,002 fish. This represented an average of between 2.7 and 3.6 finfish hooked per catch card during this 2 day event.

From 2004 onwards, competitors were asked to report the number of fishers associated with each card. Up to 10 fishers were reported per card but >90% of cards listed 1-4 fishers and approximately 50% cards listed only 1 fisher (Fig. 16). For most cards, the average catch rate (total number of fish per card) was similar regardless of the number of fishers listed on the card.

The following 12 species comprised 97-98% of the total finfish catch (excluding toadfish) at Swanfish each year: black bream (*Acanthopagrus butcheri*), yellowtail trumpeter (*Amniataba caudavittata*), bar-tailed flathead (*Platycephalus endrachtensis*), tarwhine (*Rhabdosargus sarba*), whiting (*Sillaginidae*) (various), tailor (*Pomatomus saltatrix*), six-lined trumpeter (*Pelates sexlineatus*), small-toothed flounder (*Pseudorhombus jenynsii*), Australian herring (*Arripis georgianus*), cobbler (*Cnidoglanis macrocephalus*), pink snapper and silver trevally (*Pseudocaranx dentex*) (Table 11). The annual catch rates of these species were estimated by two methods: i) the total reported number of individuals of each species expressed as a percentage of the total reported catch of finfish, and ii) the average number of individuals of each species reported per catch card. Both methods yield similar trends in annual catch rates for all species.

The 7-year period spanned by Swanfish catch cards is relatively short and so, not surprisingly, few clear directional trends are evident among the catch rates of key species. A decline in the catch rate of pink snapper and an increase in the catch rate of tailor between 2000 and 2006 were the exceptions (Fig. 17).

Other tournaments

In 2005, RAP catch cards were issued at one tournament in the West Coast region - the Australian Anglers Association (AAA) State Rock and Beach Angling Championship. This is a shore-based tournament that is held at different times and locations each year. In 2005, the event was held in the 'Capes' region (i.e. from Busselton to Blackwood River) during May. A total of 659 finfish from a total of 20 taxa were reported on catch cards, representing an average of 14.3 fish hooked per fisher during this 2 day event. The most commonly reported species were Australian herring (58% of total reported catch), silver trevally (10%), western rock blackfish (*Girella tephraeops*) (7%), wrasse (Labridae) (5%) and whiting (Sillagindae) (4%) (Table 12).

In 2006, RAP catch cards were issued at 5 tournaments in the West Coast region - the Kalbarri Sports Fishing Classic (shore- and boat-based), the Bunbury Offshore Fishing Classic (boat-based), the Naturaliste Bluewater Classic (shore- and boat-based, held in Busselton), the AAA State Rock and Beach Angling Championship (shore-based, held in Jurien) and the AAA State Boat Angling Championship (boat-based, held in Jurien).

In Kalbarri, a total of 181 finfish from 26 taxa were reported on catch cards by boat-based fishers. A further 44 fish from 2 taxa were reported by shore-based fishers. These data represented average boat- and shore-based catch rates of 12.1 and 6.3 fish hooked per catch card, respectively, during this 3 day event. The species most commonly reported by boat-based

fishers were red-throat emperor (*Lethrinius miniatus*) (27% of the total reported offshore catch), pink snapper (25%), dhufish (*Glaucosoma hebraicum*) (9%), north-west snapper (Lethrinidae) (8%) and tuna (Scombridae) (Table 13). Shore based river fishers reported black bream (98% of reported shore-based catch) and yellowtail trumpeter (2%).

In Bunbury, a total of 202 finfish from a total of 31 taxa were reported on catch cards, representing an average of 6.5 fish hooked per fisher during this 1 day, boat-based event. The most commonly reported species were whiting (Sillaginidae) (16%), Australian herring (13%), silver trevally (12%), dhufish (10%), flathead (Platycephalidae) and southern fiddler ray (*Trygonorhina fasciata*) (7%) & Table 14).

At the Naturaliste Bluewater Classic (in the Busselton to Blackwood River region), a total of 74 finfish from 11 taxa were reported on catch cards by shore-based fishers, and further 61 fish from 18 taxa were reported by boat-based fishers (Table 15). Average catch rates were 14.8 fish hooked per shore-based fisher and 12.2 fish hooked per vessel during this 3 day event. The species most commonly reported by shore-based fishers were whiting (Sillaginidae) (59% of total shore-based catch), Australian herring (9%), silver trevally (7%) and flathead (Platycephalidae) (7%). The main species reported by boat-based anglers were tailor (15% of total boat-based catch), dhufish (15%), breaksea cod (*Epinephelus armatus*) (11%) and pink snapper (10%).

At the AAA State Rock and Beach Angling Championship in Jurien Bay, 387 finfish from 15 taxa were reported on catch cards, representing an average of 13.3 fish hooked per fisher during this 2 day event. The dominant species in the catch were Australian herring (56% of total shore-based catch), tailor (11%) and southern sea garfish (*Hemirhamphus melanochir*) (11%) (Table 16).

At the AAA State Boat Angling Championship in Jurien Bay, only one catch card was returned, which listed dhufish and pink snapper as the main species caught (Table 16).

South Coast

In the South Coast region, RAP catch cards were issued at 1 tournament (Esperance) in 2005 and 2 tournaments (Esperance and Bremer Bay) in 2006.

In 2005, a total of 309 finfish from 23 taxa were reported on catch cards at the Esperance Archipelago Offshore Angling Classic, representing an average of 19.3 fish hooked per vessel during this 1 day, boat-based event. The most commonly reported species were Australian herring (17% of total reported catch), bight redfish (*Centroberyx gerrardi*) (11%), swallowtail (*Centroberyx lineatus*) (10%), bonito (*Sarda orientalis*) (10%), breaksea cod (9%), queen snapper (*Nemadactylus valenciennesi*) (8%) and whiting (Sillaginidae) (8%)(Table 17).

In 2006, 142 finfish from 11 taxa were reported on catch cards in Esperance, representing an average of 20.3 fish hooked per vessel. The main species caught in 2006 were bight redfish (39% of total catch), breaksea cod (24%), queen snapper (13%) and swallowtail (10%) (Table 17). Australian herring, bonito and numerous other species were absent from the reported catch in 2006, probably reflecting a difference in fishing location between years. Poor weather forced most competitors to fish close to the shore in 2005.

In 2006, a total of 269 finfish from 26 taxa were reported on catch cards at the Bremer Bay Offshore Fishing Classic, representing an average of 33.6 fish hooked per vessel during this 2

day, boat-based event. The most commonly reported species were silver trevally (19% of total reported catch), bight redfish (19%), Australian herring (13%), breaksea cod (13%), queen snapper (7%) and pink snapper (6%) (Table 18).

LENGTHS OF KEY SPECIES

Lengths of fish described below were recorded on catch cards by competitors during fishing tournaments in 2005 and 2006. Lengths include both retained and released fish.

Australian herring. Fish measured by anglers at tournaments in 2005 and 2006 ranged in size from 150 to 320 mm TL (Fig. 19). The size ranges of fish caught on the South Coast and the West Coast were similar, although few fish were measured on the South Coast. The majority of fish caught in both regions were above the length-at-maturity (~196 mm for males, ~215 mm for females). All fish were well below the maximum size (~410 mm) recorded for this species. There is currently no recreational legal minimum length for Australian herring. The average length of fish reported on the West Coast was slightly smaller in 2006 than in 2005.

Pink snapper. Fish ranged in size from 230 to 900 mm TL (Fig. 19). The size range of pink snapper reported in the Gascoyne (230 to 900 mm) was greater than that reported on the West and South Coasts. The majority of all fish reported in all regions were above the length-at-maturity (~400 mm) and the legal minimum length (410 mm). The largest fish (900 mm), reported from the Gascoyne region, was well below the maximum size (~1300 mm) for this species.

Breaksea cod. Fish ranged in size from 150 to 500 mm TL (Fig. 20). The size range reported on the South Coast (150 to 500 mm) was greater than that reported on the West Coast (300 to 500 mm). The majority of all fish reported from both regions were above the length-at-maturity (~250mm for males and ~300 mm for females) and the legal minimum length (300 mm) for this species. The average length of fish caught on the South Coast was similar in 2005 and 2006.

Silver trevally. Fish ranged in size from 100 to 500 mm TL (Fig. 20). The average size of fish caught on the South Coast was slightly larger than on the West Coast, although the largest fish (500 mm) caught on the South Coast was well below the maximum size for this species (~940 mm). On the West Coast, approximately 50% of reported fish were below the length-atmaturity (~280 mm) in 2005 and 2006.

Some sand trevally (*Pseudocaranx wrightii*) may have been misidentified and reported as silver trevally by anglers. These two species are very similar in appearance and it would be difficult to verify the individual catches of these species. However, it is likely that the majority of fish were silver trevally. Firstly, the maximum size of sand trevally is only ~220 mm, suggesting that the larger fish were indeed silver trevally. Also, other evidence (anecdotal reports and fishery-independent surveys) have found silver trevally to be the more common species in coastal waters in recent years.

Bight redfish. Reported landings of this species mostly occurred on the South Coast. Fish ranged in size from 150 to 600 mm TL (Fig. 20). While the average lengths of fish were similar between Esperance and Bremer Bay, a far greater size range of redfish was reported by anglers in Esperance during 2005 and 2006 (150 to 600 mm) than by anglers in Bremer Bay during 2006 (270 to 430 mm). The majority of fish caught at both tournaments were above the length-

at-maturity (~225mm) and the legal minimum length (300 mm) for this species. Fish reported from Esperance were relatively large (up to 600 mm), approaching the maximum recorded size for this species (660 mm).

Dhufish. Reported landings of this species mostly occurred on the West Coast. Fish ranged in size from 200 to 770 mm TL (Fig. 20). The majority of fish caught at tournaments were above the length-at-maturity (~320mm) but a significant proportion were below the legal minimum length (500 mm). All reported fish were well below the maximum reported size (122 cm) for dhufish.

Queen snapper. Reported landings of this species mostly occurred on the South Coast. Fish ranged in size from 300 to 900 mm TL (Fig. 20). A similar size range was reported in 2005 and 2006. All fish were above the legal minimum length (300 mm). The largest fish (900 mm) was approaching the maximum reported size (100 cm) for this species.

BIOLOGICAL SAMPLE COLLECTION

In 2005 and 2006, biological samples were collected by RAP-affiliated researchers at numerous fishing tournaments. Researchers included DoF staff, Volunteer Fisheries Liaison Officers and Murdoch University students. Samples comprised either i) filleted fish frames that were donated by competitors after a tournament, or ii) otoliths and/or gonads extracted from fish that were 'loaned' to researchers by competitors during tournaments. Samples were generally collected by researchers at the 'weigh-in' of each tournament.

Information gathered from each fish included length, reproductive status and age. In 2005, biological information from 3 species were collected from one tournament West Coast region (Table 19). In 2006, information from a total of 10 species were collected from 7 tournaments in the West Coast and South Coast regions. At each event, samples were obtained from between 1 and 89 individuals per species.

To facilitate the collection of samples, RAP published a poster in August 2005 entitled "*Wanted! Researchers need filleted frames of these species*..." (Appendix 7). The poster was updated and re-issued in March 2006 to include species being studied by Murdoch University students (Appendix 8). Posters were distributed to tournament organisers to display at the event and were also posted at various locations including boat ramps, fishing clubs and tackle shops in the area of the tournament. The latest version of this poster is available from the DoF website http://www.fish.wa.gov.au.

Note: additional biological samples that are not listed in this report may have been collected in 2005 and 2006 at fishing tournaments by researchers not affiliated with RAP.

Table 1.Total fishing effort (hours) reported by log book anglers in 2004 and 2005 and proportion
of effort spent in each region.

| | Angler log | book effort 2004- | 05 | |
|-------------|------------|-------------------|-------|-----|
| | Estuar | y/river | Oce | an |
| Region | Hours | % | Hours | % |
| North Coast | 101 | 3 | 58 | 5 |
| Gascoyne | 0 | 0 | 147 | 14 |
| West Coast | 2427 | 82 | 727 | 67 |
| South Coast | 448 | 15 | 158 | 14 |
| Total | 2976 | 100 | 1090 | 100 |

Table 2.Total estuary/river catch reported (including retained and released fish) by log book
anglers in North Coast region, 2005 (no catch in 2004).

| Common Name | Species | Total | % of catch |
|---------------------------------|--------------------------|-------|------------|
| Mullet, Sea | Mugil cephalus | 153 | 75 |
| Catfish, Fork-Tailed | Arius spp. | 14 | 7 |
| Cods, general | Serranidae | 8 | 4 |
| Blowfish, Common | Torquigener pleurogramma | 4 | 2 |
| Salmon, Giant threadfin | Polydactylus macrochir | 2 | 1 |
| Barramundi | Lates calcarifer | 1 | < 1 |
| Bottom Fish | | 1 | < 1 |
| Hardyheads/Silversides, general | Atherinidae | 1 | < 1 |
| Herring, Giant | Elops hawaiensis | 1 | < 1 |
| Prawn, River | Metapenaeus dalli | 18 | 9 |
| Crab, Mud Green | Scylla serrata | 2 | 1 |

Table 3.Total ocean catch reported (retained and released) by log book anglers in North Coast
region, 2005 (no catch in 2004).

| Common Name | Species | Total | % of catch |
|--|---------------------------------|-------|------------|
| Estuary Cod | Epinephelus coioides | 10 | 13 |
| Bream, Fingermark | Lutjanus johnii | 8 | 10 |
| Queenfishes, general | Scomberoides spp | 6 | 8 |
| Seaperch, Stripey (Spanish Flag) | Lutjanus carponotatus | 6 | 8 |
| Trevally, Giant | Caranx ignobilis | 6 | 8 |
| Tarwhine | Rhabdosargus sarba | 4 | 5 |
| Queenfish, Talang | Scomberoides commersonnianus | 4 | 5 |
| Emperor, Spangled | Lethrinus nebulosus | 3 | 4 |
| Trout, Coral | Plectropomus leopardus | 3 | 4 |
| Tuskfish, Blue | Choerodon cyanodus | 3 | 4 |
| Catfish, Fork-Tailed | Arius spp. | 2 | 3 |
| Emperor, Red | Lutjanus sebae | 2 | 3 |
| Mackerels, general | Scombridae | 2 | 3 |
| Trevally, Silver | Pseudocaranx dentex | 2 | 3 |
| Barracuda | Sphyraena barracuda | 1 | 1 |
| Emperor, Blue-Lined (Black Snapper) | Lethrinus laticaudis | 1 | 1 |
| Mackerel, Frigate | Auxis thazard | 1 | 1 |
| Mangrove Jack | Lutjanus argentimaculatus | 1 | 1 |
| Rankin Cod | Epinephelus multinotatus | 1 | 1 |
| Sweetlips, general | Haemulidae | 1 | 1 |
| Crab, Mud Brown | Seylla olivacea | 9 | 11 |
| Shark, Tawny Nurse | Nebrius ferrugineus | 2 | 3 |
| Rays, Shovelnose & general | Rhinobatidae | 1 | 1 |

Table 4.Total ocean catch reported (retained and released) by log book anglers in Gascoyne
region, 2005 (no catch in 2004).

| Common Name | Species | Total | % of catch |
|--------------------------------|------------------------------|-------|------------|
| Snapper, Pink | Pagrus auratus | 144 | 34 |
| Whiting, Yellow-Finned | Sillago schomburgkii | 96 | 23 |
| Mackerel, Queensland School | Scomberomorus queenslandicus | 24 | 6 |
| Tailor | Pomatomus saltatrix | 12 | 3 |
| Trevally, Golden | Gnathanodon speciosus | 9 | 2 |
| Wrasse/Gropers, general | Labridae | 9 | 2 |
| Butterfish, Western | Pentapodus vitta | 6 | 1 |
| Emperor, Blue-spotted | Lethrinus punctulatus | 6 | 1 |
| Snappers/Bream, general | Sparidae | 5 | 1 |
| Cod, Black-Tipped | Epinephelus fasciatus | 4 | 1 |
| Emperor, Red | Lutjanus sebae | 4 | 1 |
| Emperor, Sweetlip (Red Throat) | Lethrinus miniatus | 4 | 1 |
| Groper, Baldchin | Choerodon rubescens | 4 | 1 |
| Emperor, Spangled | Lethrinus nebulosus | 3 | 1 |
| Mackerel, Australian Spotted | Scomberomorus munroi | 3 | 1 |
| Other Finfish (17 taxa) | | 23 | 6 |
| Crab, Blue manna | Portunus pelagicus | 41 | 10 |
| Squids, general | Cephalopodidae | 19 | 5 |
| Elasmobranchs (2 taxa) | - | 3 | 1 |

Table 5.Total estuary/river catch reported (retained and released) by log book anglers in West
Coast region, 2004 and 2005.

| Common Name | Species | Total | % of catch |
|---|-----------------------------|-------|------------|
| Bream, Black | Acanthopagrus butcheri | 1814 | 31 |
| Blowfish, Common | Torquigener pleurogramma | 1397 | 24 |
| Herring, Australian | Arripis georgianus | 568 | 10 |
| Bream, Silver (Tarwhine) | Rhabdosargus sarba | 399 | 7 |
| Tailor | Pomatomus saltatrix | 327 | 6 |
| Whiting, Yellow-Finned (Western Sand) | Sillago schomburgkii | 198 | 3 |
| Trumpeter, Yellowtail | Amniataba caudavittatus | 193 | 3 |
| Trumpeter, Six Lined (Striped Trumpeter) | Pelates sexlineatus | 139 | 2 |
| Trevally, Skipjack/Silver | Pseudocaranx dentex | 120 | 2 |
| Mackerel, Blue | Scomber australasicus | 102 | 2 |
| Whiting, King George | Sillaginodes punctata | 88 | 2 |
| Whiting, general/Sand | Sillaginidae | 70 | 1 |
| Flathead, Bar-tailed | Platycephalus endrachtensis | 59 | 1 |
| Snapper, Pink | Pagrus auratus | 57 | 1 |
| Trumpeters/Grunters, general | Teraponidae | 30 | 1 |
| Salmon, Australian | Arripis truttaceus | 27 | <1 |
| Flatheads, general | Platycephalidae | 16 | <1 |
| Trout, Rainbow | Oncorhynchus mykiss | 16 | <1 |
| Whiting, Trumpeter | Sillago maculata | 13 | <1 |
| Cod, Estuary/Slimy Cod | Epinephelus coioides | 10 | <1 |
| Other Finfish (23 taxa) | | 93 | 2 |
| Crab, Blue manna | Portunus pelagicus | 69 | 1 |
| Other Invertebrates or Elasmobranchs (2 taxa) | | 3 | <1 |

Table 6.Total ocean catch reported (retained and released) by log book anglers in West Coast
region, 2005 (no catch in 2004).

| Common Name | Species | Total | % of catch |
|------------------------------------|--------------------------|-------|------------|
| Herring, Australian | Arripis georgianus | 1012 | 36 |
| Trevally, Skipjack/Silver | Pseudocaranx dentex | 342 | 8 |
| Whiting, general/Sand | Sillaginidae | 207 | 7 |
| Blowfish, Common | Torquigener pleurogramma | 177 | 6 |
| Tailor | Pomatomus saltatrix | 135 | 5 |
| Garfishes | Hemiramphidae | 132 | 5 |
| Tarwhine | Rhabdosargus sarba | 116 | 4 |
| Whiting, Yellow-Finned | Sillago schomburgkii | 64 | 2 |
| Whiting, King George | Sillaginodes punctata | 60 | 2 |
| Dhufish, Western Australian | Glaucosoma hebraicum | 53 | 2 |
| Whiting, Western School | Sillago vittata | 34 | 1 |
| Snapper, Pink | Pagrus auratus | 27 | 1 |
| Flatheads, general | Platycephalidae | 26 | 1 |
| Pufferfishes, Toadfishes & Tobies | Tetraodontidae | 26 | 1 |
| Cod, Breaksea | Epinephelides armatus | 23 | 1 |
| Trumpeters/Grunters, general | Teraponidae | 22 | 1 |
| Wrasse/Gropers, general | Labridae | 20 | 1 |
| Sweep, Banded | Scorpis georgianus | 18 | 1 |
| Sergeant Baker | Aulopus purpurissatus | 17 | 1 |
| Whiting, School Southern / Silver | Sillago bassensis | 17 | 1 |
| Butterfish, Western | Pentapodus vitta | 16 | 1 |
| Rockcod, Rankin's (White-Blotched) | Epinephelus multinotatus | 15 | 1 |
| Emperor, Sweetlip (Red Throat) | Lethrinus miniatus | 14 | < 1 |
| Scad, Yellowtail | Trachurus novaezelandiae | 13 | < 1 |
| Sweep, Sea | Scorpis aequipinnis | 12 | < 1 |
| Wrasse, Western King | Coris auricularis | 10 | < 1 |
| Other Finfish (52 taxa) | | 139 | 5 |
| Crab, Blue manna | Portunus pelagicus | 51 | 2 |
| Squids, general | Cephalopodidae | 33 | 1 |
| Elasmobranchs (5 taxa) | | 12 | 1 |

Table 7.Total estuary/river catch reported (retained and released) by log book anglers in South
Coast region, 2004 and 2005.

| Common Name | Species | Total | % of catch |
|---------------------------------|-----------------------------|-------|------------|
| Bream, Black | Acanthopagrus butcheri | 528 | 66 |
| Whiting, King George | Sillaginodes punctata | 114 | 14 |
| Trout, Rainbow | Oncorhynchus mykiss | 57 | 7 |
| Flathead, Southern Blue-Spotted | Platycephalus speculator | 52 | 7 |
| Redfin Perch | Perca fluviatilis | 14 | 2 |
| Flatheads, general | Platycephalidae | 13 | 2 |
| Herring, Australian | Arripis georgianus | 7 | 1 |
| Snapper, Pink | Pagrus auratus | 6 | 1 |
| Trout, Brown | Salmo trutta | 6 | 1 |
| Tailor | Pomatomus saltatrix | 3 | < 1 |
| Flathead, Bar-tailed | Platycephalus endrachtensis | 1 | < 1 |
| Herring, Giant | Elops hawaiensis | 1 | < 1 |
| Trevally, Skipjack/Silver | Pseudocaranx dentex | 1 | < 1 |

Table 8.Total ocean catch reported (retained and released) by log book catch in South Coast
region, 2005. (no catch in 2004).

| Common Name | Species | Total | % of catch |
|---|----------------------------|-------|------------|
| Whiting, King George | Sillaginodes punctata | 147 | 28 |
| Herring, Australian | Arripis georgianus | 102 | 20 |
| Trevally, Skipjack/Silver | Pseudocaranx dentex | 80 | 14 |
| Garfishes | Hemiramphidae | 33 | 6 |
| Cod, Breaksea | Epinephelides armatus | 23 | 4 |
| Snapper, Red (Nannygai) | Centroberyx gerrardi | 19 | 4 |
| Salmon, Australian | Arripis truttaceus | 15 | 3 |
| Swallowtail | Centroberyx lineatus | 14 | 3 |
| Leatherjackets, general | Monacanthidae | 12 | 2 |
| Wrasse/Gropers, general | Labridae | 11 | 2 |
| Snapper, Pink | Pagrus auratus | 8 | 2 |
| Snapper, Queen (Blue Morwong) | Nemadactylus valenciennesi | 7 | 1 |
| Sweep, Sea | Scorpis aequipinnis | 6 | 1 |
| Samson Fish/Sea Kingfish | Seriola hippos | 5 | 1 |
| Other Finfish (14 taxa) | | 28 | |
| Squids, general | Cephalopodidae | 6 | 1 |
| Other Invertebrates or Elasmobranchs (3 taxa) | | 4 | |

| Year | Tournament | Date(s) held | Cards issued | Cards returned |
|------|--|--------------|-----------------|-------------------|
| 2004 | Swanfish | 28-29 Feb 04 | ~3435 | 976 |
| 2005 | Swanfish | 26-27 Feb 05 | 3413 | 1408 |
| | Esperance Archipelago Offshore Angling Classic | 1 Mar 05 | ~80 | 16 |
| | Shark Bay Fishing Fiesta | 7-13 May 05 | ~80 | 10 |
| | AAA State Rock and Beach Angling Championship | 28-29 May 05 | ~80 | 46 |
| 2006 | Swanfish | 25-26 Feb 06 | ~3330 | 864 |
| | Kalbarri Sports Fishing Classic | 3-5 Mar 06 | ~50 | 22 |
| | Bremer Bay Offshore Fishing Classic | 4-5 Mar 06 | ~45 | 8 |
| | Bunbury Offshore Fishing Classic | 5 Mar 06 | ~140 | 29 |
| | Naturaliste Bluewater Classic | 10-12 Mar 06 | ~50 | 10 |
| | Esperance Archipelago Offshore Angling Classic | 19 Mar 06 | ~80 | 7 |
| | AAA State Boat Angling Championship | 4 Mar 06 | ~80 | 1 |
| | AAA State Rock and Beach Angling Championship | 25-26 Mar 06 | ~50 | 29 |

Table 9.Numbers of catch cards issued and returned at recreational fishing tournaments in 2004-
2006.

| Table 10. | Total catch of all species reported on catch cards by anglers at the 'Shark Bay Fishing |
|-----------|---|
| | Fiesta', May 2005. (n = 10 cards). |

| Common Name | Species | Total |
|----------------------------|------------------------------|-------|
| Blue-lined emperor | Lethrinus laticaudis | 89 |
| Pink snapper | Pagrus auratus | 52 |
| Western butterfish | Pentapodus vitta | 36 |
| Tuskfish (combined) | Choerodon spp. | 29 |
| Whiting (combined) | Sillaginidae | 11 |
| Chinaman fish | Symphorus nematophorus | 10 |
| Unidentified | | 10 |
| Flathead | Platycephalidae | 8 |
| Trumpeter | Teraponidae | 8 |
| Tailor | Pomatomus saltatrix | 7 |
| Spangled emperor | Lethrinus nebulosus | 5 |
| Sweetlips | Haemulidae spp. | 5 |
| Yellowtail scad | Trachurus novaezelandiae | 4 |
| Five banded wrasse | Hemigymnus fasciatus | 3 |
| Garfish | Hemiramphidae | 3 |
| Queensland school mackerel | Scomberomorus queenslandicus | 3 |
| Rankin cod | Epinephelus multinotatus | 3 |
| Estuary cod | Epinephelus coioides | 2 |
| Mulloway | Argyrosomus hololepidotus | 2 |
| Slender suckerfish | Echeneis naucrates | 2 |
| Spanish mackerel | Scomberomorus commerson | 2 |
| Stripey seaperch | Lutjanus carponotatus | 2 |
| Wrasse | Labridae | 2 |
| Bronze whaler | Carcharhinus brachyurus | 1 |
| Brown banded catshark | Chiloscyllium punctatum | 1 |
| Coral trout | Plectropomus leopardus | 1 |
| Goatfish | Mullidae | 1 |
| Leatherjacket | Monacanthidae | 1 |
| Lizardfish | Synodontidae | 1 |
| North-west blowfish | Lagocephalus sceleratus | 1 |
| Snook | Sphyraena novaehollandiae | 1 |
| Tarwhine | Rhabdosargus sarba | 1 |
| Tiger shark | Galeocerdo cuvieri | 1 |
| Western yellowfin bream | Acanthopagrus latus | 1 |
| Squid | Loliginidae | 2 |

| Common Name | Species | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-------------------------|---|------|------|------|------|------|------|------|
| Toadfish | Torquigener pleurogramma | 22 | 107 | 369 | 67 | 1541 | 6190 | 2834 |
| Black bream | Acanthopagrus butcheri | 701 | 821 | 788 | 1610 | 889 | 1755 | 1401 |
| Yellowtail trumpeter | Amniataba caudavittatus | 124 | 429 | 392 | 527 | 577 | 739 | 265 |
| Bar-tailed flathead | Platycephalus endrachtensis | 103 | 306 | 471 | 474 | 250 | 243 | 121 |
| Tarwhine | Rhabdosargus sarba | 28 | 135 | 289 | 392 | 192 | 387 | 186 |
| Whiting (combined) | Sillaginidae | 43 | 205 | 260 | 222 | 268 | 242 | 70 |
| Tailor | Pomatomus saltatrix | 10 | 114 | 81 | 82 | 115 | 375 | 183 |
| Unidentified | | 27 | 130 | 181 | 327 | 108 | 23 | 17 |
| Six-lined trumpeter | Pelates sexlineatus | 25 | 109 | 48 | 142 | 131 | 35 | 45 |
| Small-toothed flounder | Pseudorhombus jenynsii | 22 | 70 | 93 | 64 | 29 | 40 | 23 |
| Australian herring | Arripis georgianus | 7 | 36 | 17 | 29 | 18 | 47 | 65 |
| Cobbler | Cnidoglanis macrocephalus | 46 | 30 | 40 | 52 | 7 | 9 | 19 |
| Pink snapper | Pagrus auratus | 14 | 24 | 18 | 22 | | 33 | 13 |
| Silver trevally | Pseudocaranx dentex | 1 | 5 | 8 | 28 | 1 | 9 | 19 |
| Mulloway | Argyrosomus hololepidotus | 12 | 10 | 20 | 12 | 11 | 3 | |
| Gobbleguts | Apogon rueppellii | 6 | 1 | 4 | 2 | 13 | 12 | 16 |
| Mullet | Mugil cephalus, Aldrichetta forsteri | 3 | 4 | 29 | 1 | 4 | 3 | 1 |
| Western butterfish | Pentapodus vitta | | | 6 | 8 | 11 | 4 | |
| Wrasse | Labridae | | 2 | 1 | 1 | 1 | 17 | 1 |
| Yellowtail scad | Trachurus novaezelandiae | 2 | 2 | 12 | | | 6 | |
| Snook | Sphyraena novaehollandiae | | 7 | | | | | |
| Ray | Rajiformes | | | 1 | 3 | 1 | 1 | 1 |
| Whitebait | Hyperlophus vittatus | | | | | | | 5 |
| Garfish | Hemiramphidae | | | | 1 | 2 | | 1 |
| Blue mackerel | Scomber australasicus | | | 1 | | | 2 | |
| Bonito | Sarda orientalis | | | | | | | 3 |
| Pilchard | Sardinops neopilchardus | | | | | | 2 | |
| Gurnard | Triglidae | | | | | | 2 | |
| Shark | Elasmobranchii | | | | 1 | 1 | | |

Table 11.Total catch of all species reported by anglers on catch cards at 'Swanfish', held in
February each year, 2000 to 2006.

Table 11 (cont).

| Common Name | Species | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-----------------------|--------------------------------|------|------|------|------|------|------|------|
| Port Jackson shark | Heterodontus portusjacksoni | | | | | | 1 | |
| Giant herring | Elops hawaiensis | | | | 1 | | | |
| Long finned pike | Dinolestes lewini | | 1 | | | | | |
| Sampson fish | Seriola hippos | | | 1 | | | | |
| Leatherjacket | Monacanthidae | | | | 1 | | | |
| Blue swimmer crab | Portunus pelagicus | 3 | 9 | 1 | 2 | 10 | 6 | 1 |
| Squid | Loliginidae | | | 1 | | | | |
| Number of cards | | 436 | 694 | 823 | 1119 | 976 | 1439 | 864 |

Table 12.Total catch of all species reported by anglers at the 'Australian Anglers Association State
Rock and Beach Angling Championship - Cape to Cape', May 2005 (n = 46 cards)

| Common Name | Species | Total |
|------------------------|--------------------------------------|-------|
| Australian herring | Arripis georgianus | 383 |
| Silver trevally | Pseudocaranx dentex | 65 |
| Western rock blackfish | Girella tephraeops | 43 |
| Wrasse (combined) | Labridae | 32 |
| Whiting (combined) | Sillaginidae | 27 |
| Australian salmon | Arripis truttaceus | 19 |
| Tarwhine | Rhabdosargus sarba | 19 |
| Sea trumpeter | Pelsartia humeralis | 18 |
| Yellowtail trumpeter | Amniataba caudavittatus | 12 |
| Sweep | Scorpididae | 13 |
| Bullseye | Pempherididae | 10 |
| Western wirrah | Acanthistius serratus | 5 |
| Rock cod | Serranidae | 3 |
| Wobbegong | Orectolobus spp. | 3 |
| Leatherjacket | Monacanthidae | 2 |
| Western blue devil | Paraplesiops meleagris | 2 |
| Mullet | Mugil cephalus, Aldrichetta forsteri | 1 |
| Pike | Dinolestes lewini | 1 |
| Port Jackson shark | Heterodontus portusjacksoni | 1 |

Table 13.Total catch of all species reported on catch cards by anglers at the 'Kalbarri Sports
Fishing Classic', March 2006. (n = 22 cards).

| Common Name | Species | shore (river) | offshore |
|----------------------|----------------------------|---------------|----------|
| Red throat emperor | Lethrinus miniatus | | 49 |
| Pink snapper | Pagrus auratus | | 46 |
| Black bream | Acanthopagrus butcheri | butcheri 43 | |
| Dhufish | Glaucosoma hebraicum | | 16 |
| North-west snapper | Lethrinidae | | 14 |
| Tuna (combined) | Scombridae | | 8 |
| Tuskfish (combined) | Choerodon spp. | | 5 |
| Blue spotted emperor | <i>Lethrinus</i> sp. | | 5 |
| Chinaman fish | Symphorus nematophorus | | 5 |
| Baldchin groper | Choerodon rubescens | | 4 |
| North-west blowfish | Lagocephalus sceleratus | | 4 |
| Spanish mackerel | Scomberomorus commerson | | 4 |
| Shark | Elasmobranchii | | 3 |
| Breaksea cod | Epinephelus armatus | | 2 |
| Western wirrah | Acanthistius serratus | | 2 |
| Wrasse | Labridae | | 2 |
| Coral trout | Plectropomus leopardus | | 1 |
| Estuary cod | Epinephelus coioides | | 1 |
| Grass emperor | Lethrinus laticaudis | | 1 |
| Queen snapper | Nemadactylus valenciennesi | | 1 |
| Red emperor | Lutjanus sebae | | 1 |
| Rock cod | Serranidae | | 1 |
| Samsonfish | Seriola hippos | | 1 |
| Sergeant baker | Aulopus purpurissatus | | 1 |
| Silver trevally | Pseudocaranx dentex | | 1 |
| Tarwhine | Rhabdosargus sarba | | 1 |
| Yellowtail trumpeter | Amniataba caudavittatus | 1 | |
| Octopus | Octopus sp. | | 2 |

| Table 14. | Total catch of all species reported on catch cards by anglers at the 'Bunbury Offshore |
|-----------|--|
| | Fishing Classic', March 2006. (n = 21 cards). |

| Common Name | Species | Total |
|-------------------------|----------------------------|-------|
| Whiting (combined) | Sillaginidae | 33 |
| Australian herring | Arripis georgianus | 27 |
| Silver trevally | Pseudocaranx dentex | 24 |
| Dhufish | Glaucosoma hebraicum | 20 |
| Flathead | Platycephalidae | 15 |
| Southern fiddler ray | Trygonorhina fasciata | 15 |
| Pink snapper | Pagrus auratus | 8 |
| Wrasse | Labridae | 8 |
| Breaksea cod | Epinephelides armatus | 7 |
| Parrot fish | Scaridae | 5 |
| Leatherjacket | Monacanthidae | 4 |
| Western foxfish | Bodianus frenchii | 4 |
| Blue mackeral | Scomber australasicus | 3 |
| Sea sweep | Scorpis aequipinnis | 3 |
| Sergeant baker | Aulopus purpurissatus | 3 |
| Baldchin groper | Choerodon rubescens | 2 |
| Gurnard | Triglidae | 2 |
| Harlequin fish | Othos dentex | 2 |
| Queen snapper | Nemadactylus valenciennesi | 2 |
| Samson fish | Seriola hippos | 2 |
| Bight redfish | Centroberyx gerrardi | 1 |
| Cod | Serranidae | 1 |
| Eel | Muraenidae | 1 |
| Garfish | Hemiramphidae | 1 |
| Goatfish | Mullidae | 1 |
| Hammerhead shark | <i>Sphyrna</i> sp. | 1 |
| Shark | Elasmobranchii | 1 |
| Snook | Sphyraena novaehollandiae | 1 |
| Tailor | Pomatomus saltatrix | 1 |
| Western red scorpioncod | Scorpaena sumptuosa | 1 |
| Squid | Cephalopodidae | 3 |
| Cuttlefish | Sepiidae | 1 |

Table 15.Total catch of all species reported on catch cards by anglers at the 'Naturaliste Bluewater
Classic', March 2006. (n = 6 shore + 4 offshore cards).

| Common Name | ommon Name Species | | |
|--------------------|-------------------------------|----|---|
| Whiting (combined) | Sillaginidae | 44 | |
| Tailor | Pomatomus saltatrix | 2 | 9 |
| Dhufish | Glaucosoma hebraicum | | 9 |
| Flathead | Platycephalidae | 5 | 4 |
| Silver trevally | Pseudocaranx dentex | 5 | 4 |
| Australian herring | Arripis georgianus | 7 | |
| Breaksea cod | Epinephelus armatus | | 7 |
| Pink snapper | Pagrus auratus | | 6 |
| Tarwhine | Rhabdosargus sarba | 2 | 4 |
| Australian salmon | Arripis truttaceus | 2 | 2 |
| Bight redfish | Centroberyx gerrardi | | 3 |
| Samsonfish | Seriola hippos | | 3 |
| Wobbegong | Orectolobus sp. | 3 | |
| Toadfish | Torquigener pleurogramma | 2 | |
| Port Jackson shark | Heterodontus portusjacksoni | | 2 |
| Shovel nose ray | Rhinobatidae & Rhynchobatidae | | 2 |
| Bronze whaler | Carcharhinus brachyurus | 1 | |
| Eel | Anguillidae | | 1 |
| Gurnard | Triglidae | | 1 |
| Mulloway | Argyrosomus hololepidotus | | 1 |
| Queen snapper | Nemadactylus valenciennesi | | 1 |
| Scorpionfish | Scorpaenidae | | 1 |
| Sea sweep | Scorpis aequipinnis | | 1 |
| Stingray | Elasmobranchii | 1 | |
| Squid | Cephalopodidae | | 1 |

Table 16.Total catch of all species reported on catch cards by anglers at the 'Australian Angling
Association State Rock and Beach Championships' (shore) and the 'Australian Anglers
Association State Boat Angling Championship' (offshore) Jurien Bay, March 2006. (n =
29 shore + 1 offshore cards).

| Common Name | Species | shore | offshore | |
|----------------------|----------------------------|-------|----------|--|
| Australian herring | Arripis georgianus | 217 | | |
| Tailor | Pomatomus saltatrix | 44 | | |
| Southern sea garfish | Hyporhamphus melanochir | 43 | | |
| Silver trevally | Pseudocaranx dentex | 18 | | |
| Whiting (combined) | Sillaginidae | 18 | | |
| Flathead | Platycephalidae | 13 | | |
| Flounder | Bothidae | 10 | | |
| Mulloway | Argyrosomus hololepidotus | 9 | | |
| Dhufish | Glaucosoma hebraicum | | 9 | |
| Pink snapper | Pagrus auratus | | 7 | |
| Western butterfish | Pentapodus vitta | 5 | | |
| Wrasse | Labridae | 3 | | |
| North-west blowfish | Lagocephalus sceleratus | 2 | | |
| Striped sea pike | Sphyraena obtusata | 2 | | |
| Dart | <i>Trachinotus</i> sp. | 1 | | |
| Snook | Sphyraena novaehollandiae | 1 | | |
| Yellowtail scad | Trachurus novaezelandiae | 1 | | |
| Baldchin groper | Choerodon rubescens | | 1 | |
| Breaksea cod | Epinephelus armatus | | 1 | |
| Queen snapper | Nemadactylus valenciennesi | | 1 | |

Table 17.Total catch of all species reported on catch cards by anglers at the 'Esperance
Archipelago Offshore Angling Classic', March 2005 and 2006. (n = 16 + 7 cards).

| Common Name | Species | 2005 | 2006 |
|------------------------|----------------------------|------|------|
| Bight redfish | Centroberyx gerrardi | 34 | 55 |
| Breaksea cod | Epinephelus armatus | 28 | 34 |
| Australian herring | Arripis georgianus | 53 | |
| Queen snapper | Nemadactylus valenciennesi | 26 | 18 |
| Swallowtail | Centroberyx lineatus | 30 | 14 |
| Bonito | Sarda orientalis | 30 | |
| Whiting (combined) | Sillaginidae | 25 | |
| Harlequin fish | Othos dentex | 11 | 7 |
| Sergeant baker | Aulopus purpurissatus | 18 | |
| Snook | Sphyraena novaehollandiae | 5 | 5 |
| Wrasse | Labridae | 10 | |
| Silver trevally | Pseudocaranx dentex | 8 | 1 |
| Rock cod | Serranidae | 8 | |
| Samsonfish | Seriola hippos | 4 | 4 |
| Pike | Dinolestes lewini | 4 | |
| Sweep | <i>Scorpis</i> sp. | 2 | 2 |
| Western rock blackfish | Girella tephraeops | 3 | |
| Australian salmon | Arripis truttaceus | 2 | |
| Gummy shark | Mustelus antarcticus | 2 | |
| Western blue devil | Paraplesiops meleagris | 2 | |
| Western foxfish | Bodianus frenchii | 2 | |
| Blue groper | Achoerodus gouldii | | 1 |
| Dhufish | Glaucosoma hebraicum | 1 | |
| Pink snapper | Pagrus auratus | 1 | |
| Yellowtail kingfish | Seriola lalandi | | 1 |

Table 18.Total catch of all species reported on catch cards by anglers at the 'Bremer Bay Offshore
Fishing Classic', March 2006 (n = 8 cards)

| Common Name | Species | Total |
|-------------------------|----------------------------|-------|
| Silver trevally | Pseudocaranx dentex | 52 |
| Bight redfish | Centroberyx gerrardi | 51 |
| Australian herring | Arripis georgianus | 36 |
| Breaksea cod | Epinephelides armatus | 34 |
| Queen snapper | Nemadactylus valenciennesi | 19 |
| Pink snapper | Pagrus auratus | 17 |
| Whiting | Sillaginidae | 15 |
| King George whiting | Sillaginodes punctata | 9 |
| Flathead | Platycephalidae | 8 |
| Horseshoe leatherjacket | Meuschenia hippocrepis | 3 |
| Striped sea pike | Sphyraena obtusata | 3 |
| Yellowtail kingfish | Seriola lalandi | 3 |
| Australian salmon | Arripis truttaceus | 2 |
| Dhufish | Glaucosoma hebraicum | 2 |
| Goatfish | Mullidae | 2 |
| King wrasse | Coris auricularis | 2 |
| Samsonfish | Seriola hippos | 2 |
| Blue groper | Achoerodus gouldii | 1 |
| Bonito | Sarda orientalis | 1 |
| Gummy shark | Mustelus antarcticus | 1 |
| Harlequin fish | Othos dentex | 1 |
| Leatherjacket | Monacanthidae | 1 |
| Snook | Sphyraena novaehollandiae | 1 |
| Western blue devil | Paraplesiops meleagris | 1 |
| Western foxfish | Bodianus frenchii | 1 |
| Wrasse | Labridae | 1 |

| Location | Date | Researcher | Species | No. of samples |
|----------------------|----------|--------------|------------------------|----------------|
| Swan-Canning Estuary | Feb 2004 | DoF | Black bream | 59 |
| | | | | |
| | Feb 2005 | DoF, Murdoch | Black bream | 33 |
| | | | Bar-tailed flathead | 24 |
| | | | Mulloway | ? |
| | Feb 2006 | DoF, Murdoch | Black bream | 29 |
| | | | Bar-tailed flathead | ? |
| | | | Mulloway | ? |
| Jurien Bay | Mar 2006 | DoF | Dhufish | 23 |
| | | | Pink snapper | 22 |
| Kalbarri | Mar 2006 | DoF | Dhufish | 21 |
| | | | Pink snapper | 89 |
| Bussleton | Mar 2006 | DoF, Murdoch | Dhufish | 52 |
| | | | Pink snapper | 15 |
| | | | Western foxfish | 4 |
| | | | Redthroat emperor | ? |
| | | | Breaksea cod | ? |
| | | | Samsonfish | ? |
| Bunbury | Mar 2006 | DoF | Dhufish | 27 |
| | | | Pink snapper | 10 |
| Bremer Bay | Mar 2006 | DoF, Murdoch | Dhufish | 6 |
| | | | Bight redfish | 72 |
| | | | Queen snapper | 56 |
| | | | Blue groper | 4 |
| | | | Western foxfish | 10 |
| | | | Harlequin fish | 15 |
| | | | Samsonfish | ? |
| Esperance | Mar 2006 | DoF, Murdoch | Bight redfish | 38 |
| | | | Queen snapper | 33 |
| | | | Blue groper | 1 |
| | | | Western foxfish | 10 |
| | | | Harlequin fish | 10 |
| | | | Samsonfish | ? |

Table 19.Species and number of fish sampled at fishing tournaments in 2005 and 2006 (DoF
– Department of Fisheries, Murdoch – Murdoch University).

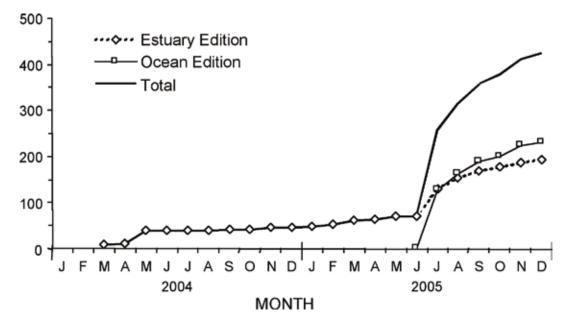


Figure 1. Number (cumulative total) of estuary and ocean log books issued in 2004 and 2005.

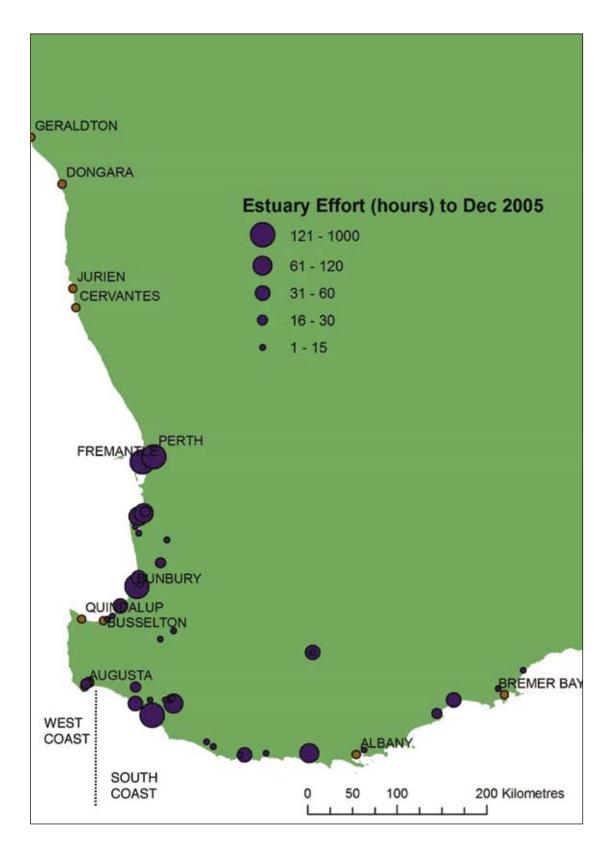


Figure 2. Distribution of fishing effort reported by estuary/river log book anglers in south-western estuaries and rivers, 2004 and 2005.

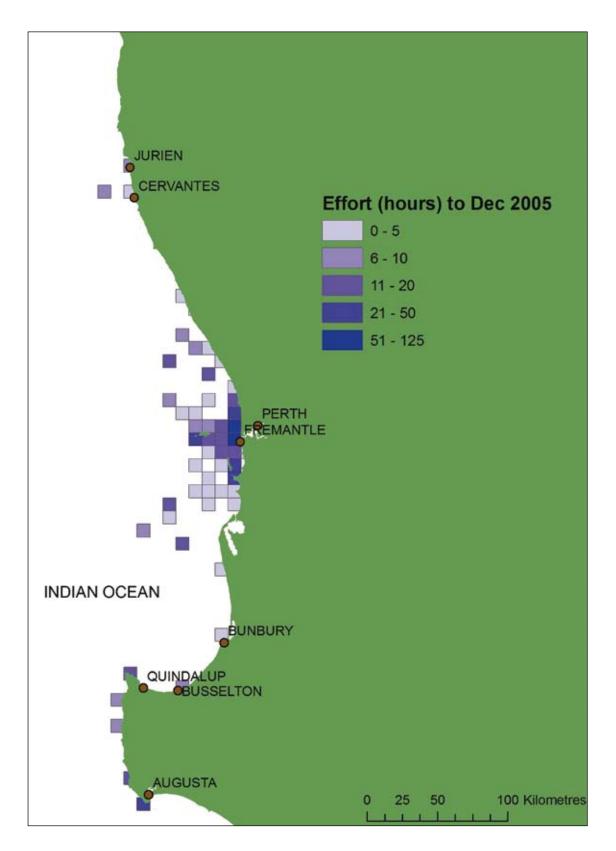


Figure 3. Distribution of fishing effort reported by ocean log book anglers in West Coast ocean waters in 2005 (no fishing in 2004).

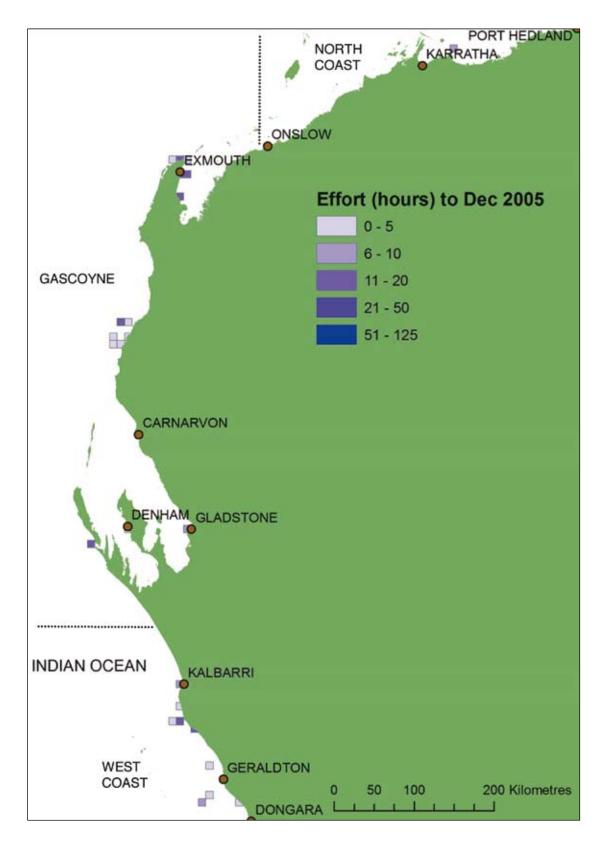


Figure 4. Distribution of fishing effort reported by ocean log book anglers in North Coast and Gascoyne ocean waters in 2005 (no fishing in 2004).

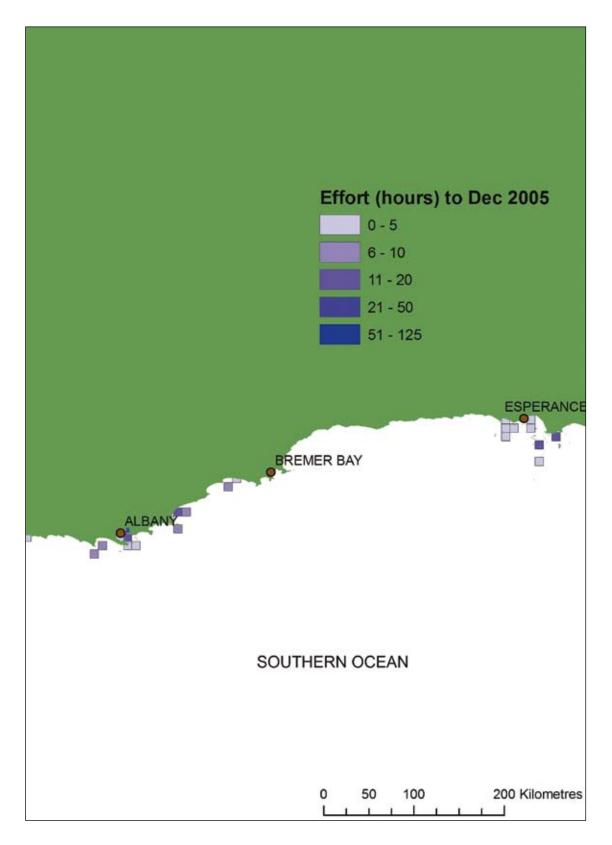


Figure 5. Distribution of fishing effort reported by ocean log book anglers in South Coast ocean waters in 2005 (no fishing in 2004).

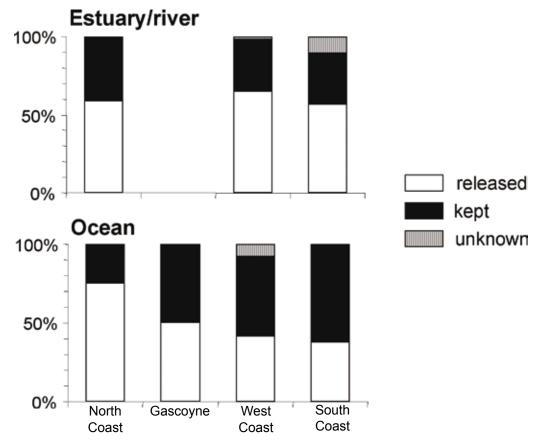


Figure 6. Proportions of released and retained fish in the total catch reported by log book anglers each region, in 2004 and 2005 (all species combined).

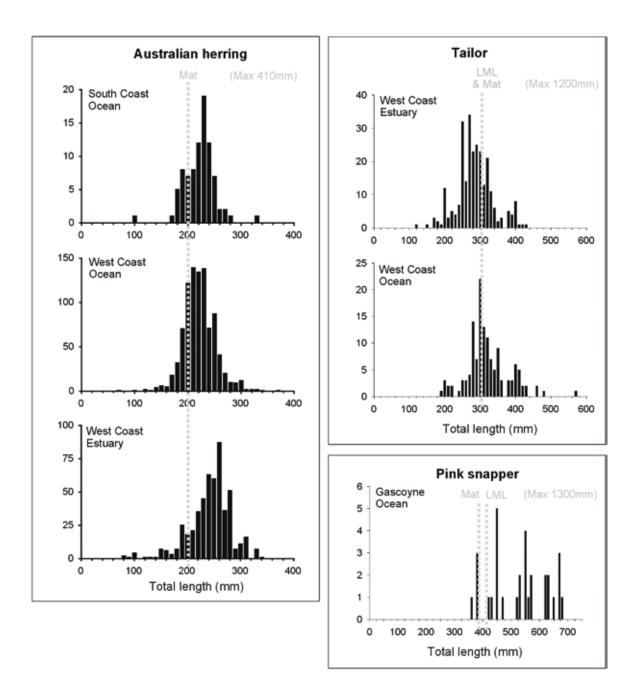


Figure 7. Length frequency distributions of Australian herring (*Arripis georgianus*), tailor (*Pomatomus saltatrix*) and pink snapper (*Pagrus auratus*) (recorded by log book anglers in 2004/05, including retained and released fish (Max – maximum recorded length for this species; Mat – approximate length at maturity; LML – legal minimum length).

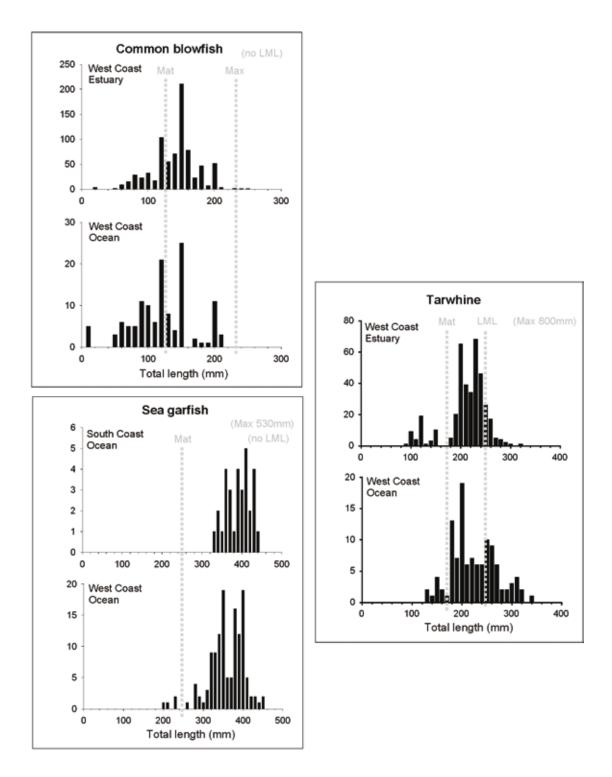


Figure 8. Length frequency distributions of common blowfish (*Torquigener pleurogramma*), sea garfish (*Hyporhamphus australis*) and tarwhine (*Rhabdosargus sarba*) recorded by log book anglers in 2004/05, including retained and released fish (Max – maximum recorded length for this species; Mat – approximate length at maturity; LML – legal minimum length).

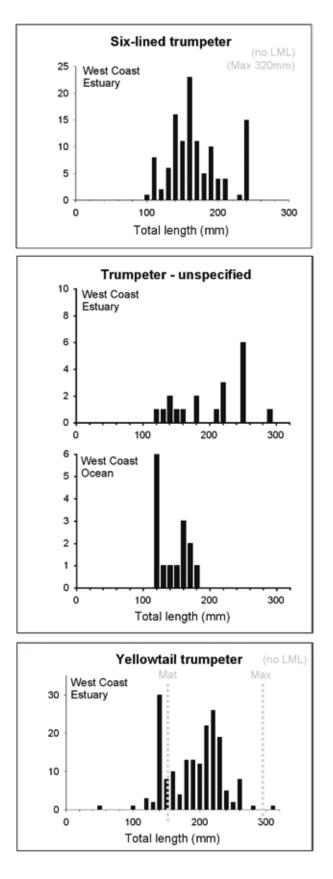


Figure 9. Length frequency distributions of six-lined trumpeter (*Pelates sexlineatus*), unspecified trumpeter (Teraponidae) and yellowtail trumpeter (*Amniataba caudavittatus*) recorded by log book anglers in 2004/05, including retained and released fish (Max – maximum recorded length for this species; Mat – approximate length at maturity; LML – legal minimum length).

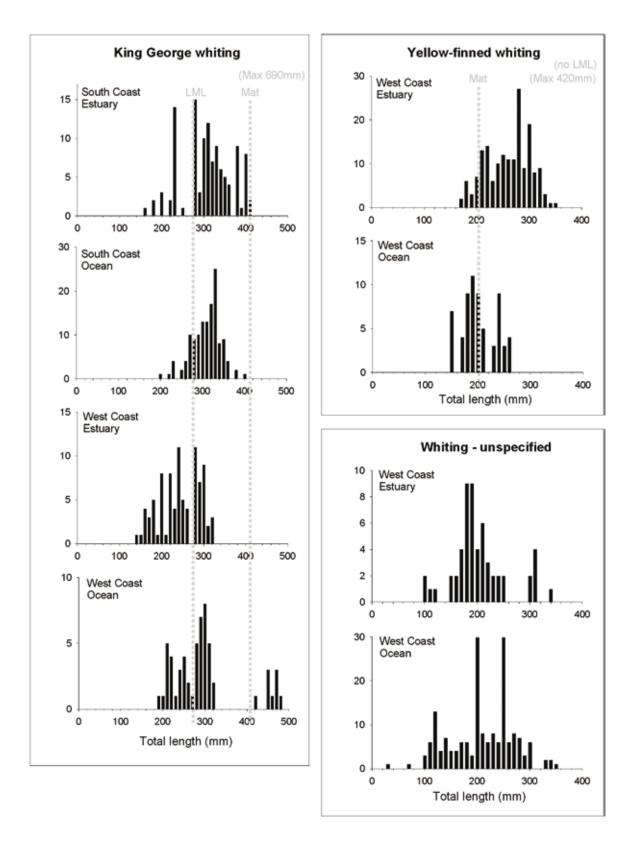


Figure 10. Length frequency distributions of King George whiting (*Sillaginodes punctata*), yellowfinned whiting (*Sillago schomburgkii*) and unspecified whiting (Sillaginidae) recorded by log book anglers in 2004/05, including retained and released fish (Max – maximum recorded length for this species; Mat – approximate length at maturity; LML – legal minimum length).

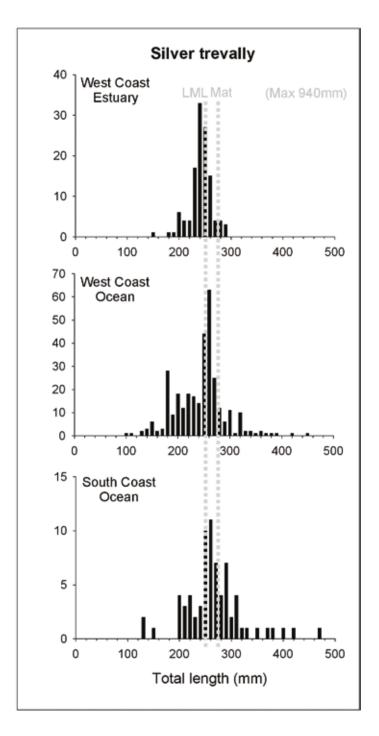
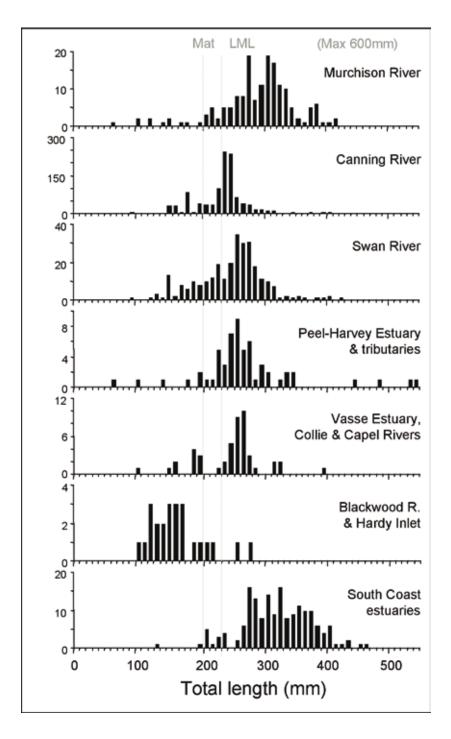


Figure 11. Length frequency distributions of silver trevally (*Pseudocaranx dentex*) recorded by log book anglers in 2004/05, including retained and released fish (Max – maximum recorded length for this species; Mat – approximate length at maturity; LML – legal minimum length).



- Figure 12. Length frequency distributions of black bream (Acanthopagrus butcheri) recorded by log book anglers from estuaries in the West and South Coast regions in 2004/05 (South Coast estuaries have been grouped), including retained and released fish (Max - maximum recorded length for this species; Mat - approximate length at maturity; LML
 - legal minimum length).

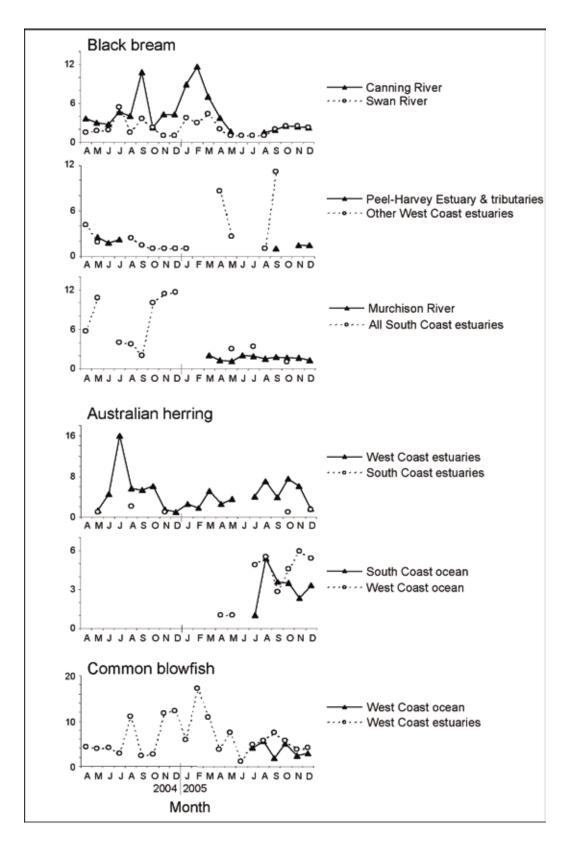


Figure 13. Average catch rate (number of fish per angler day) of selected species by log book anglers in 2004 and 2005 (missing data indicate no recorded fishing effort in month).

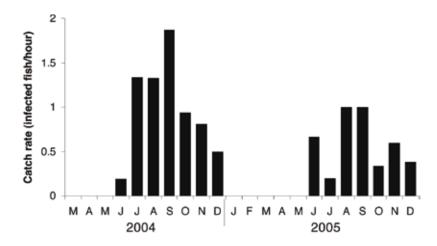


Figure 14. Log book angler catch rate of black bream infected with Epizootic Ulcerative Syndrome (EUS or 'redspot' disease) in the Swan-Canning Estuary, March 2004 to December 2005.

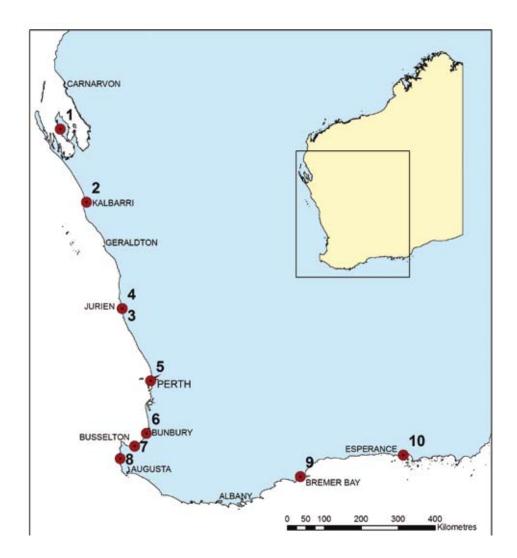


Figure 15. Location of fishing tournaments attended by RAP in 2004-2006.¹ Shark Bay Fishing Fiesta; ² Kalbarri Sports Fishing Classic; ³ AAA State Rock and Beach Angling Championship; ⁴ AAA State Boat Angling Championship; ⁵ Swanfish; ⁶ Bunbury Offshore Fishing Classic; ⁷ Naturaliste Bluewater Classic; ⁸ AAA State Rock and Beach Angling Championship; ⁹ Bremer Bay Offshore Fishing Classic; ¹⁰ Esperance Archipelago Offshore Angling Classic.

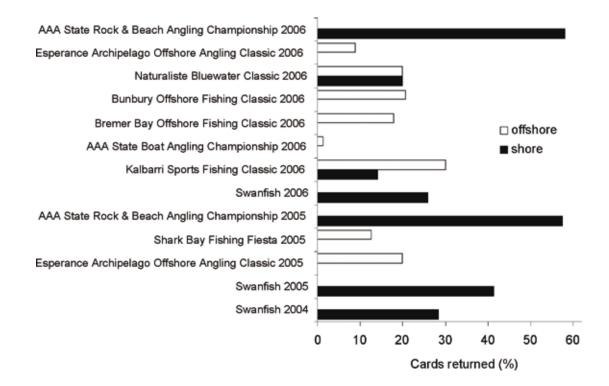


Figure 16. Proportion (%) of catch cards returned by competitors at fishing tournaments, 2004-2006.

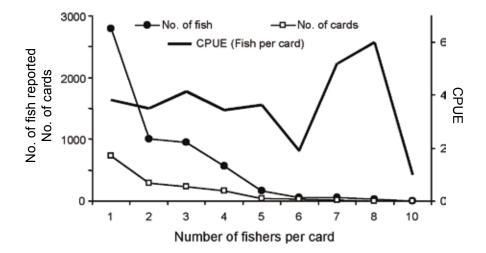


Figure 17. Total number of fish caught, total number of catch cards returned and catch rate (no. of fish per card) for cards listing between 1 and 10 fishers per card at 'Swanfish', 2004 to 2006 (Catch excludes toadfish).

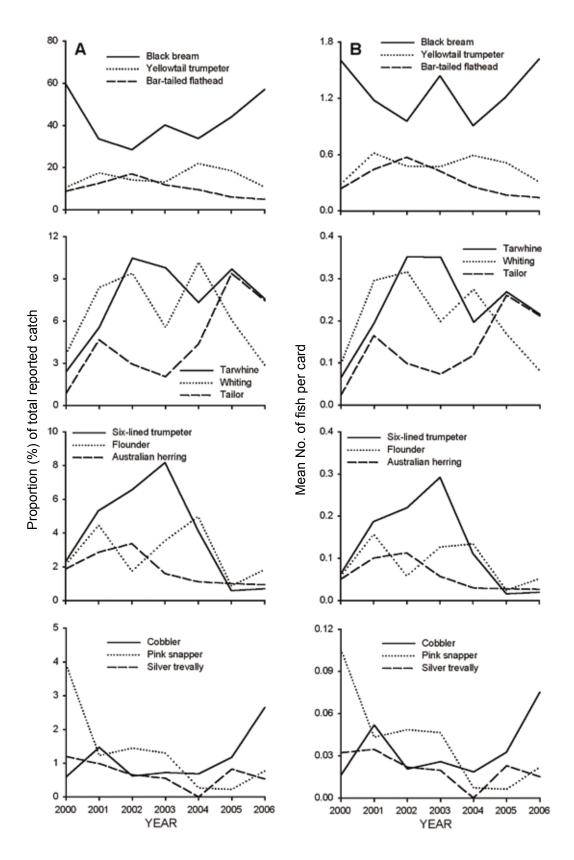


Figure 18. Catch rates of the key species caught at 'Swanfish' from 2000 to 2006, expressed A) as a percentage of the total number of finfish reported and B) by average number reported per catch card.

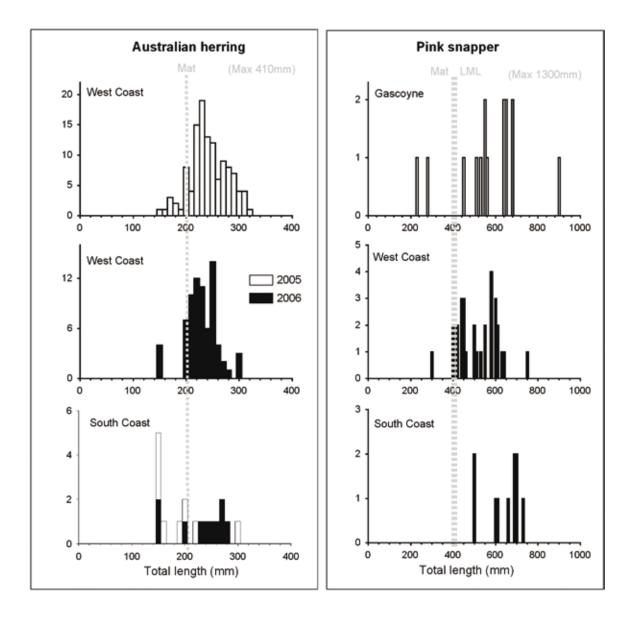


Figure 19. Length frequency distributions of Australian herring (*Arripis georgianus*) and pink snapper (*Pagrus auratus*) reported on catch cards at fishing tournaments in 2005 and 2006, including retained and released fish (Max – maximum length recorded for this species; Mat – approximate length at maturity; LML – legal minimum length).

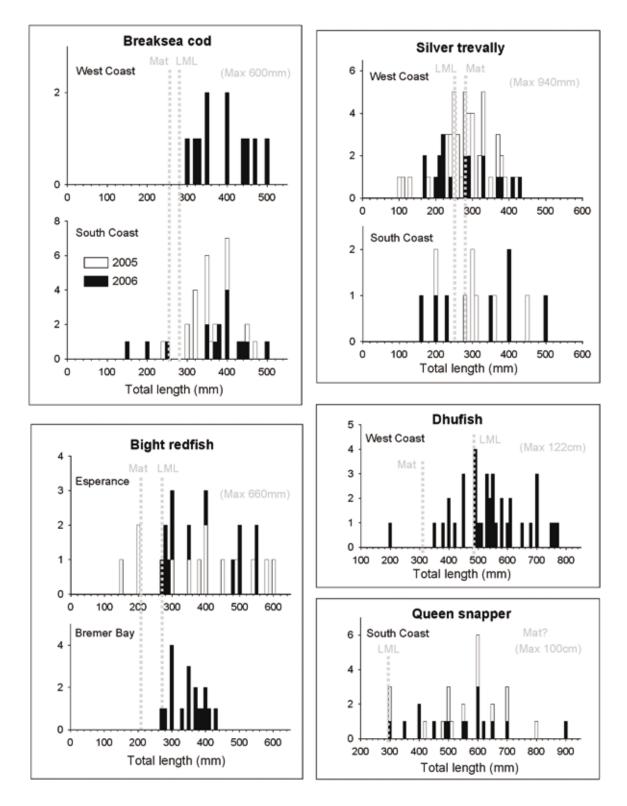
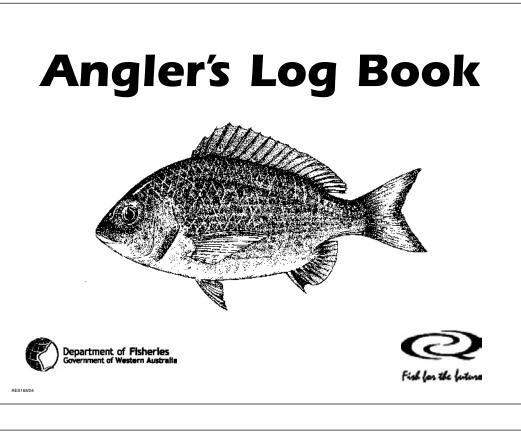


Figure 20. Length frequency distributions of breaksea cod (*Epinephelus armatus*), bight redfish (*Centroberyx gerrardi*), silver trevally (*Pseudocaranx dentex*), dhufish (*Glaucosoma hebraicum*) and queen snapper (*Nemadactylus valenciennesi*) recorded by anglers at tournaments in 2005-2006, including retained and released fish (Max – maximum length recorded for this species; Mat – approximate length at maturity; LML – legal minimum length).

APPENDICES

Appendix 1. Format of Estuary Edition of Anglers Daily Log Book

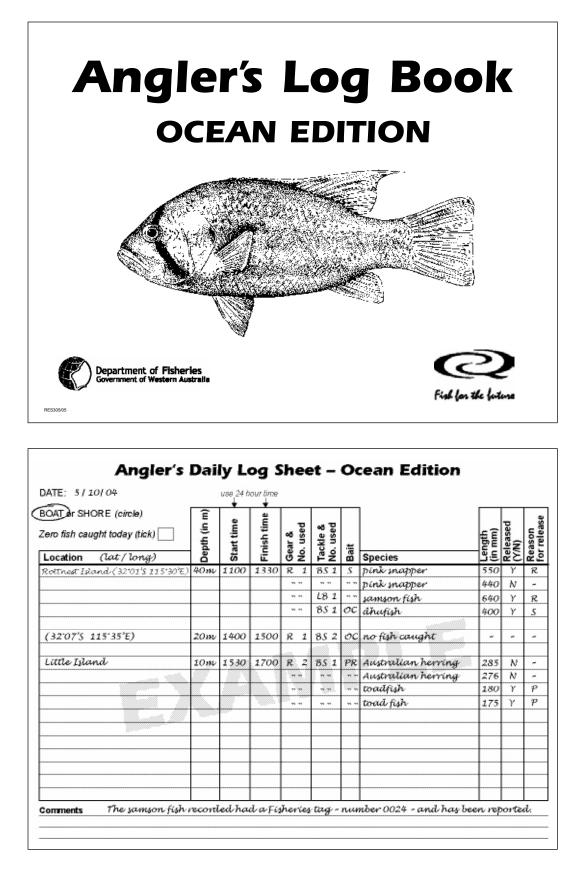


| DATE: 5/10/03 | use 24 h | | | | | | | | | _ |
|---|------------|-------------|-------------------------|--------|------------|---------------------|--------|-------------------|-------------------|--------|
| BOAT of SHORE (circle) Zero fish caught today (tick) | Start time | Finish time | Gear type & No. used | Tackle | Bait | Species | Health | Length (in mm) | Released (Y/N) | Reason |
| Swan R, Causeway | 1500 | 1630 | R 1 | 8 | ΡI | striped trumpeter | H | 190 | γ | 1 |
| | | | | × ·· | | błack bream | Ħ | 305 | N | |
| | | | | ~ " | | black bream | H | 210 | Y | |
| | | | | ~ " | | yellowtad grunter | H | 180 | Y | |
| Swan R. Narrows | 1700 | 1930 | R Z | 8 | PI | black bream | 0 | 290 | N | - |
| Sauter, nutrowy | 4700 | 4930 | | | P L = 0 | bar tailed flathead | H | 285 | Y | 1 |
| | | | | n u | | vellowtail grunter | 76 | 225 | Ŷ | |
| | | - 20. | | | | tailor | # | 310 | N | - |
| | | | | | | yellowtail grunter | H | 210 | γ | |
| | | | | | | black bream | 76 | 310 | N | |
| | | | | | | blowfish | 76 | 150 | N | |
| | | | | ·• ·· | ~ " | blowfish | Ħ | 165 | N | |
| | | | | | | | | | | |
| Canning R, Canning Bridge | 2000 | 2100 | R 2 | 8 | PR | nofish | | | - | - |
| | | | | | | | | | | |

Appendix 1 (continued).

| Instru | ctions |
|---|--|
| THIS LOG BOOK IS FOR ESTUARY AND RIVER FISHING ONLY. ONLY RECORD YOUR OWN PERSONAL FISHING INFORMATION. DO <u>NOT</u> RECORD CATCHES OF OTHER ANGLERS IN THIS LOG BOOK. | Record the code for the type of Tackle used to catch each fish. Record the code for the type of Bait used to catch each fish. |
| Start a new page for each day of fishing. You can use more than 1 page per day. If you use several pages in one day, make sure you write the date on all pages. | Record the Species of each fish caught, e.g. "black bream", "rainbow trout", etc. |
| If you went fishing and caught zero fish, record this by ticking the box at top of log sheet. Then record location, start/finish times, gear, tackle and bait used. | Record the code for the Health of each fish that you kept or released. Use the comments section at bottom of page if you need to add extra details. If the fish appears healthy, then write "H". |
| Complete a separate line for each fish caught. Record details of <u>all</u> fish caught, whether retained or released fish, including details of 'trash' fish such as blowfish. Include as many details as possible about each fish, whether retained or released. • Start time is when you actually started fishing, i.e. | Record the total Length of each fish caught. For finfish, measure from snout tip to tail tip. For crabs, record carapace width. Use millimetres. |
| | Record whether each fish was Released by writing "yes" if released, and "no" if retained. |
| put a line in the water. Use 24 hour time, e.g. 3 am = 0300, 6:45 pm = 1845, etc. | If you released the fish, then record the code for the Reason for release. |
| Record the code (see inside front cover) for the Gear used to catch each fish and the number of this gear being used at the time, e.g. if you were using 2 handlines, then write "H 2". | See inside front cover for codes. |

| | | CODES | | |
|------------------|----------|-------------------|---------------------------------|-----------------------|
| GEAR | TACKLE | BAIT | FISH HEALTH | REASON FOR RELEASE |
| R = rod | B = bait | PR = prawn | H = appears | |
| H = handline | L = lure | PI = pippy | healthy | S = size limit |
| D = drop net | F = fly | W = worms | R = fin/tail rot | B = bag limit |
| · | • | | U = ulcer | R = prefer to |
| S = scoop net | | M = maggots | P = parasites | release |
| N = set, haul or | | F = small fish | · | P = poor eating |
| throw net | | C = crab | O = other (specify in | |
| O = other | | e – oquid | comments | |
| | | S = squid | section) | |
| | | O = other | | |

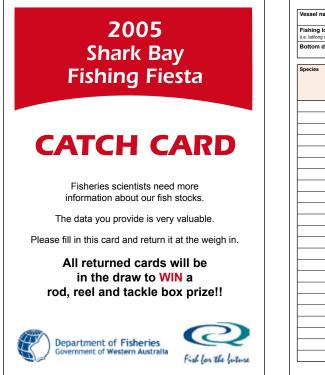


Appendix 2 (continued).

| Instru | ctions |
|--|--|
| THIS LOG BOOK IS FOR OCEAN BEACH AND OFFSHORE FISHING ONLY. ONLY RECORD YOUR OWN PERSONAL FISHING INFORMATION. DO <u>NOT</u> RECORD CATCHES OF OTHER ANGLERS IN THIS LOG BOOK. | • Record the code (see inside front cover) for the Gear used to catch each fish and the number of this gear being used at the time, e.g. if you were using 2 handlines, then write "H 2". |
| Start a new page for each day of fishing. You can use more than 1 page per day. If you use several pages in one day, make sure you write the date on all pages. | Record the code for the type of Tackle used to catch each fish and the number of sets of tackle used on the line, e.g. if you have two sets of gange baited hooks, then write "BG 2" |
| If you went fishing and caught zero fish, record this by ticking the box at top of page. Then record location, depth, start/finish times, gear, tackle and bait used. Complete a separate line for each fish caught. Record | • Record the code for the type of Bait used to catch each fish. |
| | Record the Species of each fish caught, e.g. "dhufish", "Australian herring", etc. |
| details of <u>all</u> fish caught, whether retained or released, including details of 'trash' fish such as blowfish. Include as many details as possible about each fish. | Record the total Length of each fish caught. For finfish, measure from snout tip to tail tip. For crabs record carapace width. Use millimetres. |
| Location can be recorded as latitude/longitude or as a well-recognised, precise name (e.g. Halls Head, Mandurah). | Record whether each fish was Released by writing "yes" if released, and "no" if retained. |
| Record the Depth of where you are fishing in metres. | If you released the fish, then record the code for the Reason for release. |
| Start time is when you actually started fishing, i.e. put a line in the water. Use 24 hour time, e.g. 3 am = 0300, 6:45 pm = 1845, etc. | See inside front cover for codes. |

| | CO | DES | |
|---|--|--|--|
| GEAR R = rod H = handline N = set, haul or throw net D = drop net S = scoop net J = jig PN = prawn net O = other | TACKLEBS = bait on single hookBG = bait on gang of hooksL = lureLB = lure plus barbless hookF = fly | BAITPR = prawnPI = pippyW = wormsM = maggotsF = small fishC = crabS = squidML = mulieOC = octopusLB = live baitSB = strip baitMU = multipleO = other | REASON FOR RELEASE S = size limit B = bag limit R = prefer to release P = poor eating |

Appendix 3. Catch card from the 2005 Shark Bay Fishing Fiesta.



| Vessel name: | | | | | | | |
|---|--|--|--------|--------|--------|----------------------------------|--|
| Fishing location(s): (i.e. lat/long or name of region) | | | | | | | |
| Bottom depth range(s) | : | | | | | | |
| Species | Total number of this species | Size (length or weight) of the first 4 of this species caught | | | | | |
| | captured (include all retained and released fish) | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Measure used (cm kg. etc.) | |
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Appendix 4. Catch card from the 2006 Naturaliste Bluewater Classic.



| Vessel or competitor n | ame: | | | | | | |
|---|--|---------------------------------|--------|--|--------|--|-----------------------|
| Fishing location(s): (i.e. lat/long or name of region) | | | | | | | |
| Species | Total number of this species | becies 5 of this species caught | | | | | |
| | captured (include all retained and released fish) | Fish 1 | Fish 2 | | Fish 4 | | Meas used kg, e |
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Appendix 5. Catch card from the 2006 Kalbarri Sports Fishing Classic.



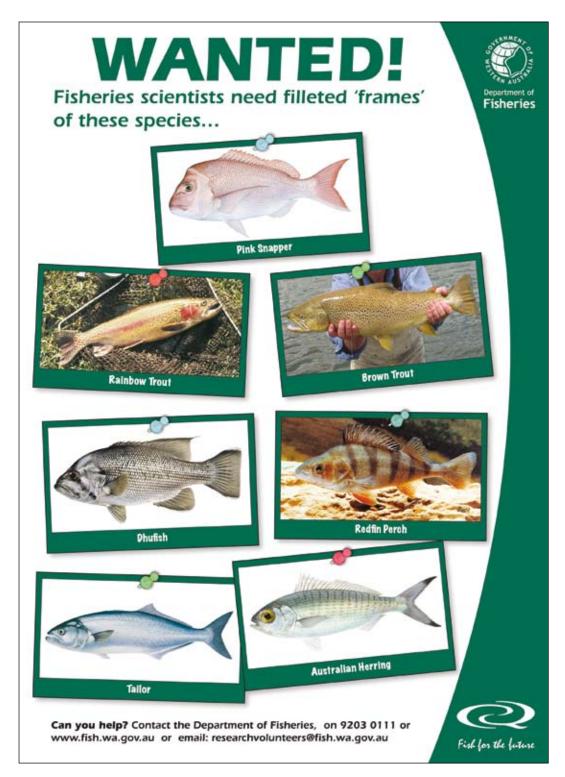
| Fishing location(s): (i.e. lat/long or name of region) | | | | | | | |
|---|--|--|--------|--------|--------|----------------------------------|--|
| (i.e. latitiong or name of region) Bottom depth range(s): | | | | | | | |
| 3 (1) | | | | | | | |
| Species | Total number of this species captured | Size (length or weight) of the first 4 of this species caught | | | | | |
| | (include all retained and released fish) | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Measure used (cm kg. etc.) | |
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Appendix 6. Catch card from the 2006 Swanfish tournament.

| Your competition number | Getaway |
|---|--|
| Total number of fish caught | Camping & Outdoor |
| Would you have fish the river and weekend had Swanfish not been on? | Fishing & Boating Equipment |
| Fisher Fish for the future of the future | sponsors of SWANFISH 'Catch Count Card' |
| Please include blowfish. | This is your 'Catch Count Card'. |
| Giant Herring will not be considered for the most unusual prize. Please enjoy the experience of capturing this great little fighter and return it to the water unharmed. | Return this to the weigh-in - you may win a prize valued at \$200.00 |
| Thank you, | in the Special Catch Count Card Draw |
| Melville Amateur Angling Club Inc. | Please complete & return your 'Catch Count Card. |
| Conservationally Concerned - Recreationally Responsible SWANFISH ORGANISERS | The information will be used by the Department of Fisheries for Research on fish stocks in the Swan & Canning Estuary |

| Species | Number Caught | Number Kept | Number Undersize Released | Number Legal Size Released |
|----------------------|---------------|-------------|---------------------------------|----------------------------------|
| Black Bream | | | | |
| Flathead | | с. С | | |
| Flounder | | | | |
| Yellowtail trumpeter | | | | |
| Mulloway | | | | |
| Tailor | | | | |
| Tarwhine | | | | * |
| Toadfish (blowfish) | | | | |
| Whiting | | | | |
| Other | | | | |
| Other | | | | |
| Other | | | | |

Appendix 7. 'Frames wanted' poster, August 2005 edition.



Appendix 8. 'Frames wanted' poster, March 2006 edition.

