



Welcome to the RAP Newsletter, giving you feedback on the data you are collecting and keeping you informed about what is happening at the Research Division of the Department of Fisheries.

Where do baby dhufish live?

A Western Australian National Resource Management funded project to identify the critical habitats for juvenile Western Australian dhufish (*Glaucosoma hebraicum*) is underway and due to be completed in June 2011. Juvenile dhufish less than 300mm in length are rarely seen by fishers, divers and researchers; the few collected in the past have come from trawling in a particular commercial trawl area. This raises an interesting and important question – where do juvenile dhufish live? The project was launched to fill this knowledge gap. Specifically, what are the critical habitat requirements for juvenile (zero – three-year-old) dhufish, and if this can be established, can juvenile dhufish be monitored to give an indication of how well dhufish replenish their stocks each year, much like the rock lobster puerulus?

The project kicked off in March this year with a workshop for stakeholders to gather all known biological and ecological information on juvenile dhufish and the related pearl perch (*Glaucosoma scapulare*). Juvenile pearl perch have been successfully caught through a range of sampling methods on the east coast of Australia. Participants at this workshop included recreational fishers and divers, commercial fishers, RecfishWest representatives, scientists from the Department of Fisheries, University of WA, Murdoch University, CSIRO, and Queensland DPI, plus fisheries managers. A research report was recently published

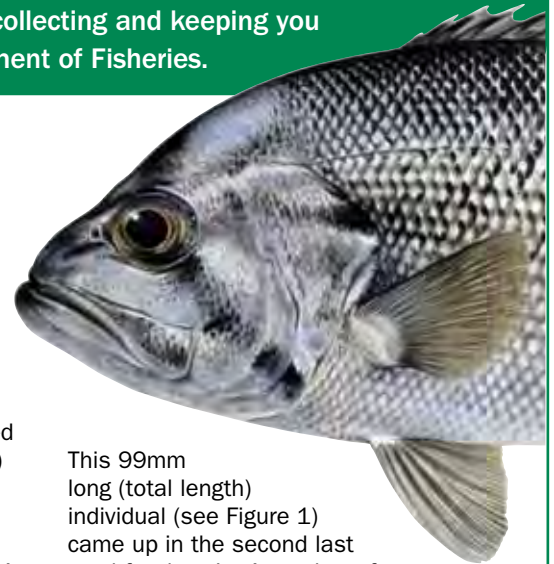
which summarises the discussions and includes the presentations given at this workshop. This report is available at <http://www.fish.wa.gov.au/docs/frr/frr210/frr210.pdf>.

The project is using a range of techniques including trapping, research trawling within selected commercial fishing grounds, baited remote underwater video cameras (BRUVs) during both day and night and towed video with 'MaxSea' seabed classification software to map habitat types. BRUVs use stereo video to give researchers a '3D view' that allows length estimates of individual fish. The project has also been reviewing historical BRUV footage from the University of WA to look for any juvenile dhufish and their preferred habitats.

As Queensland research demonstrated that small mesh traps are effective at capturing juvenile pearl perch, the project will trial a range of fish traps of different types and sizes (as well as different baits) for juvenile dhufish.

Our initial surveys concentrated on the trawl grounds where juvenile dhufish have been collected previously. In addition, habitats over a range of depths within the metropolitan area are being surveyed with underwater video, traps and BRUVs to identify habitat types and fish species present in each.

The result from the first field trip aboard the WA Department of Fisheries Research vessel the RV *Naturaliste* in September was...we got one!



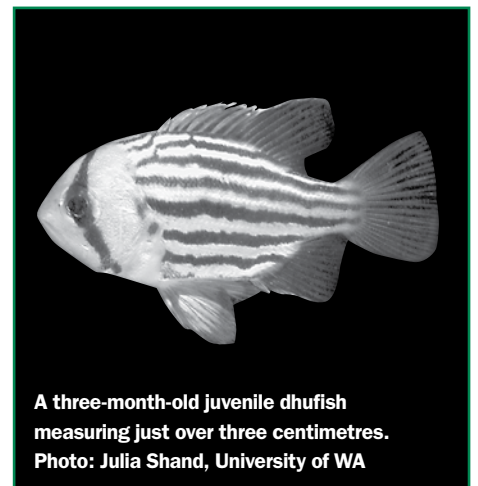
This 99mm long (total length) individual (see Figure 1) came up in the second last trawl for the trip. A number of other small dhufish (180-300mm total length) were captured in the trawls and detected in the towed video as well as being filmed in both day and night BRUV footage, but they are not as small as we hoped to find. During our field work we also surveyed the habitat types of the trawl areas by towed underwater video and acoustic seabed classification.

Further field work is planned over the coming months and more time on the RV *Naturaliste* in February 2011 will allow us to trial other techniques including night towed videos and unbaited stereo BRUVs with blue lights which attract zooplankton (food for juvenile dhufish). Meanwhile, if you happen to come across a very small dhufish or have previously seen one, then please let us know about it! (For contact details – see the back page of this newsletter).

Paul Lewis and Gabby Mitsopoulos



Figure 1. Juvenile dhufish (99mm total length).



A three-month-old juvenile dhufish measuring just over three centimetres.
Photo: Julia Shand, University of WA

Recreational Angler Program Update

Our Recreational Angler Program (RAP) log book scheme is now into its 7th year. Starting in 2004 with a focus solely on estuarine fishing, the program expanded to include ocean fishing in 2005 with the addition of an ocean edition log book. In 2009 these two books were combined to form the current Recreational Fisher's Log Book. There have now been over 1,400 log books issued to fishers all over the state. This is a great effort but we would love to see this number increase even more, so if you know any keen fishos let them know about the program and they can sign up.

Since the beginning of the year we have recorded over 1,000 fishing trips. One metro-based fisher has recorded 40 outings alone and a few more are not far behind in the high 30s. Over 70 per cent of this year's trips were in the west coast zone with the Gascoyne narrowly beating the south coast for second place and the north coast (Pilbara/Kimberley) with the least recorded number of fishing trips.

Over 370 different species have been recorded throughout the entire duration of the log book program. This includes species of bony fish, cartilaginous fish (sharks and rays), cephalopods (squid and octopus), gastropods (abalone) and crustaceans (crabs and lobster).

Australian herring (*Arripis georgianus*) are by far the most commonly caught species recorded, making up almost 22 per cent of the total catch (see Figure 2). This comes as no real surprise as they are found in three of the four zones, in ocean

and estuarine habitats, can be caught inshore and offshore, from the shoreline and boats and they're also often not picky when feeding, taking many different baits and lures.

Various whiting species are commonly caught in the southern half of Western Australia, with many metro fishers enjoying regular catches from both the shore and boats. There are a number of whiting species found in the southern half of WA, King George whiting (*Sillaginodes punctata*) being the most recognisable. The other species, particularly the southern and western school whiting, are not so easy to differentiate between. We are currently putting together a whiting ID guide that will be included in an upcoming newsletter that should shed some light on what can be a tricky matter.

Estuary and river fishing remain a popular pastime, with over 30 per cent of all fishing trips and over 37 per cent of the total catch being in these locations. Black bream (*Acanthopagrus butcheri*) is a popular species inhabiting these waters and is by far the most commonly caught species in the estuaries and rivers, making up over 30 per cent of that particular catch. Other common catches include Australian herring, blue manna/swimmer crabs (*Portunus pelagicus*), King George whiting, skipjack trevally (*Pseudocaranx georgianus*), tailor (*Pomatomus saltatrix*) and everyone's pet hate, the common blowfish (*Torquigener pleurogramma*). It is good to see everyone recording their blowfish catches - remember, we want you

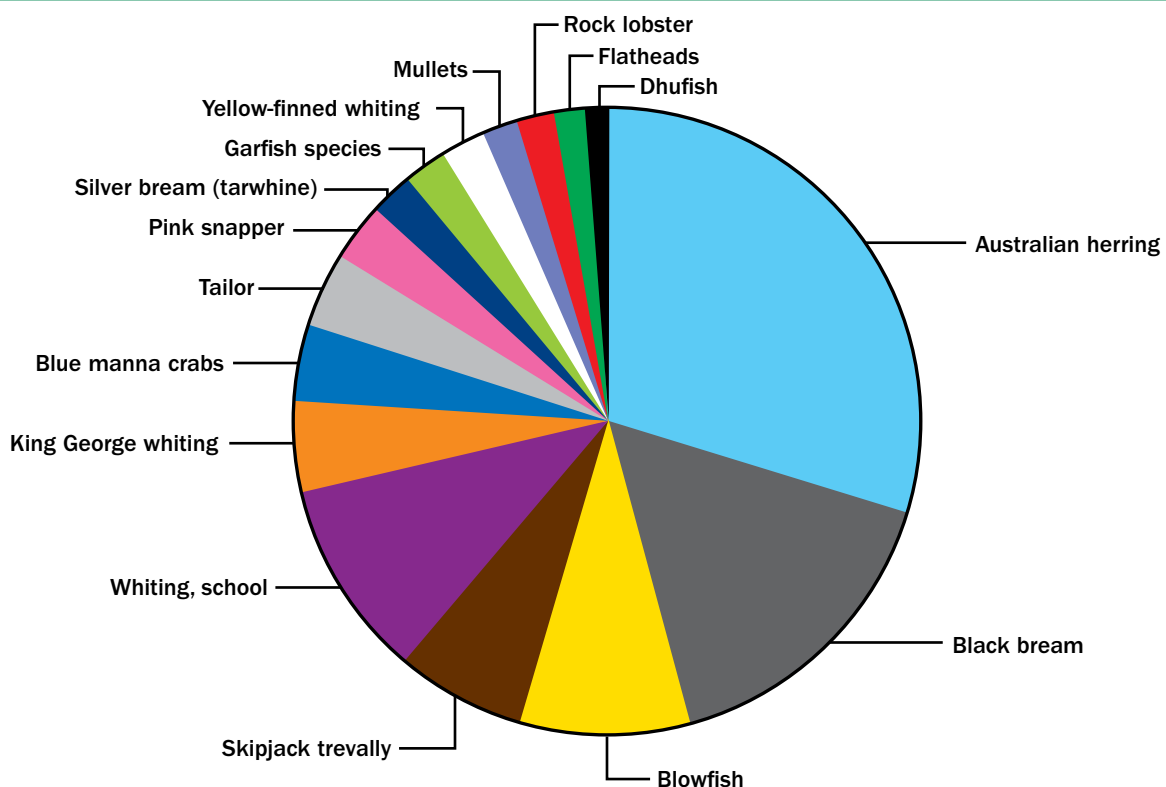
to record everything you land whether it is targeted or not.

Of the overall catch, 47 per cent has been returned to the water. In the estuaries this release rate is 61 per cent and in the ocean, 38 per cent. The high release rates of popular species such as black bream, skipjack trevally, tailor and blowfish contribute strongly to the higher rate of releases in the estuaries. Estuaries are used as breeding and nursery habitats for many species that can lead to high numbers of undersize or juvenile fish being caught.

There has been a gradual swing throughout the program towards an increase of boat usage. In the first two years of the program only 31 per cent of fishing trips involved a boat, whereas this year 58 per cent of all fishing sessions were undertaken using a boat. There are also more and more fishers using kayaks particularly around the river systems where a quiet approach is often best. An average session is just over three hours with boat sessions close to 45 minutes longer than shore-based sessions and no real difference between the length of estuarine and ocean-based trips.

The Recreational Angler Program log books provide an invaluable insight into recreational fishing activities in Western Australia. It is only possible with the ongoing input and support from recreational fishers like you. So on behalf of the team here, thanks for all your help and good luck with your fishing in 2011!

Silas Mountford



Commonly caught species recorded since the beginning of the Recreational Angler Program log book (whiting, school includes southern school, western school and unidentified whiting species, Garfish species includes southern sea, robust, river and snub-nosed species, Mullet includes all mullet species and flatheads, including all flathead species)

GIVE US YOUR SKELETONS!

GETTING DOWN TO THE BARE BONES OF FISHERY RESEARCH.

The Department of Fisheries is after your skeletons! Don't worry though, the Department hasn't turned into grave snatchers its your fish skeletons the Department wants.

With the West Coast Demersal Scalefish Fishery opening for fishing on the 16th December, the Department particularly wants your dhuie, pinkie and baldie skeletons – as well as the skeletons from the near shore species – tailor, herring, whiting and garfish – as publicised in the last RAP newsletter.

Analysing data collected from 'fish frames' – the skeleton of the fish left after filleting with the guts and the head still intact – can tell fisheries scientists an awful lot about the health of fish stocks.

Essentially, it can give a good indication of how sustainable or at risk these species are from fishing. It's especially important for research aimed at telling how well the West Coast demersal scalefish stocks are recovering since new recreational fishing rules were brought in last year.

These measures have successfully achieved their target of reducing the number of landed fish of these species by 50 per cent. But it's going to be a while until we are able to tell how well the stocks have recovered following these changes – and the only way we can do that effectively is by collecting fish frames.

That's why the Department is undertaking a major drive in 2011 to highlight the need for these skeletons and to encourage



fishos to play their part by donating their fish frames.

There's a number of promotional events planned to encourage fishos to donate their fish frames and a heap of prizes to win for fish skeleton 'donors'. Watch this space and the Department of Fisheries website for more information over the coming months, get involved and tell your mates.

The more frames you donate, the more chances you have to win a prize, plus you can be satisfied in the knowledge that you are doing your bit for your fishery and giving something back.

So get more from your days out on the water by going fishing for science and helping us help ensure there are fish for

the future and for yours and your mates' kids' future.

To find out more go to the Department of Fisheries website at www.fish.wa.gov.au and click on 'Send us your skeletons' or please call 9203 0111.



HOW YOU CAN HELP

As a Department of Fisheries participant in the RAP program, you can play a BIG role in helping the Department get the numbers of fish frames it needs and put yourself in the 'frame' – no pun intended – for some fabulous prizes.

Here's how:

Step 1 – catch your fish. Once back on land, fillet it and keep the skeleton with the head and guts still intact.

Step 2 – Bag and tag your fish frames with the following information (these details are essential for you to enter the prize draws).

Where the fish was caught (distance and bearing from port and name of port) or latitude/longitude.

When the fish was caught.

Who caught the fish, your address and phone number.

Step 3 – Put your bagged fish frame/s in the freezer – you can fold the fish in half if this makes it easier to get it into the freezer.

Step 4 – Drop off your frames at any one of the Department of Fisheries' or fishing tackle outlets listed overleaf:



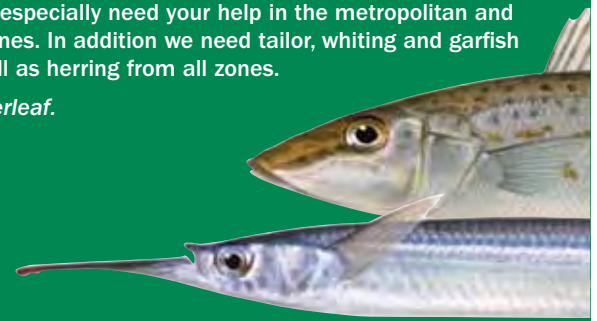
For each frame of demersal species donated with the correct details, you will gain an entry to quarterly prize draws and a grand prize draw in July 2011. Please keep donating frames in 2011/12 and we'll carry on giving out prizes quarterly. Individual prizes include tackle shop vouchers worth up to \$200 and a heap of other fabulous fishing tackle prizes. Winners will be notified by phone.

Entries end on 30 June 2011.

WHAT FISH FRAMES WE NEED THE MOST

Thank you to all who have already donated frames. We have collected good numbers of dhuies, pinkies and baldies in the Mid-West. But we especially need your help in the metropolitan and south-west zones. In addition we need tailor, whiting and garfish frames as well as herring from all zones.

Continued overleaf.



WHERE TO DROP YOUR FRAMES OFF:

Department of Fisheries offices are open during normal business hours on weekdays. Most tackle shops and other outlets are open on Saturdays. Please call or freeze your frames if you cannot provide them fresh during these times.

Metro – North of River

Department of Fisheries – Hillarys

39 Northside Dve, Hillarys.
Ph: 9203 0111

Bluewater – Scarborough

21 Scarborough Beach Road,
Scarborough.
Ph: 9245 1313

Bluewater – Morley

140 Russell Street, Morley.
Ph: 9375 9800

Bluewater – Mindarie

1 Saratosa Pass, Mindarie.
Ph: 9407 9766

The Fishing Shop – Woodvale

Woodvale Shopping Centre
2/923 Whitfords Ave, Woodvale.
Ph: 9409 2428

Metro – South of River

Bluewater – Melville

248 Leach Highway, Myaree.
Ph: 9330 7766

Department of Fisheries – Fremantle

14 Capo D'Orlando Drive,
South Fremantle.
Ph: 9335 6800

Rockingham Volunteer Sea Rescue (VN6KC)

Adjacent boat launching ramps
at Pt Peron.
Ph: 9527 9988

Mandurah

Department of Fisheries

107 Breakwater Parade,
Mandurah Marina.
Ph: 9583 7800

Geraldton

Department of Fisheries

69-75 Connell Rd, Geraldton.
Ph: 9921 6800

Geraldton Fish Market

365 Marine Tce, Geraldton,
weekdays and up to
12 noon Sat.

Barlo Firearms Tackle World & Camping

20 Anzac Tce, Geraldton.
Ph: 9921 6822

Bunbury

Department of Fisheries

96 Stirling St, Bunbury.
Ph: 9721 2688

Busselton

Department of Fisheries

48a Bussel Hwy, Busselton. Ph:
9752 2152
or contact:
Kim 0419 192 101

Hamelin Bay

Hamelin Bay Holiday Park

Hamelin Bay West Road.
Ph: 9758 5540

Fisher of the month prize!

The RAP 'fisher of the month' prizes for May, June, July and August were decided by randomly drawing one log sheet returned in each month.

Congratulations to the following 'fishers of the month':

May	Patrick Ackley	(West Coast)
June	James Hart	(South Coast)
July	Ian McLean	(West Coast)
August	John Hodder	(West Coast)

Each winner will receive a RAP floating key ring and stubby holder together with a family pass to the Naturaliste Marine Discovery Centre. Future winners will be published in upcoming newsletters. Make sure you fill out your log book and get your returns in to ensure your chance of winning!

Did you know.....

- Most RAP fishers fish in January. In July, not many of you throw a line in.
- 11 per cent of your fishing trips results in a 'nil catch'.
- 65 per cent of RAP fishers fish in the ocean, 35 per cent in an estuary.

We are happy to provide information on any fishy topic you are interested in. Do you want to know more about a particular fish or fish habitat? Are you interested in a particular area of fisheries research?

Email me at amber.howard@fish.wa.gov.au with any subjects or questions and we will endeavour to include it in our next newsletter.



THANK YOU FOR YOUR ONGOING SUPPORT.

THE RESEARCH ANGLER PROGRAM IS RUN BY THE NEARSHORE AND ESTUARINE FINFISH RESEARCH TEAM

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Fish for the future