

NEWSLETTER NO. 2

NSW Research Angler Program

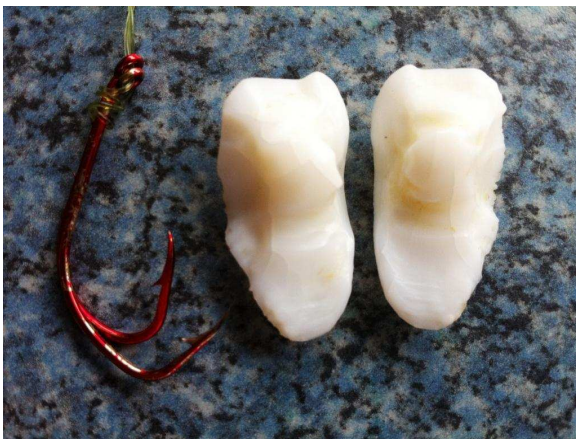
March 2014

Welcome to the NSW Research Angler Program newsletter – providing you, the research anglers and spearfishers of NSW, feedback on the data you are collecting by donating your frames to research.

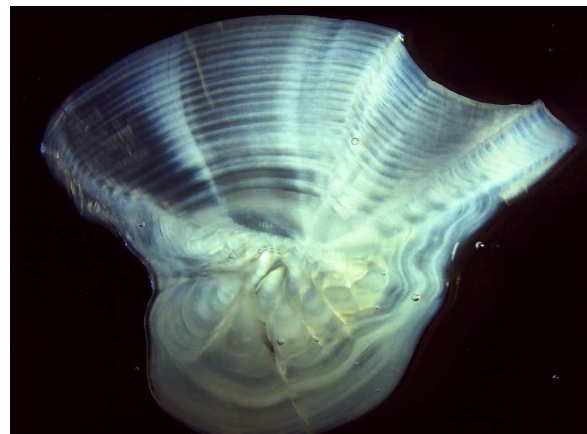
A couple of fine team efforts!

Brothers Jackson and Isaac Pettigrew kicked the New Year off in style when they landed a cracking 1.3 m mulloway from the Hawkesbury River on January 5. Reports of this fine capture even made it to the hallowed pages of the Daily Telegraph (<http://www.dailytelegraph.com.au/newslocal/central-coast/brothers-land-giant-42kg-jewfish-at-juno-point-near-patonga-creek/story-fngr8h0p-1226796695021>). We were fortunate enough to be able to track down the lucky anglers and secure one of the otoliths (also known as jewels) in order for us to estimate the age of the fish. As it turned out the fish had not only size on its side, but also plenty of experience as analysis of its otolith revealed it to be an impressive 18 years of age!

The otoliths from Jackson and Isaac's mulloway along with some of the lightweight terminal tackle which held together just long enough to land it!

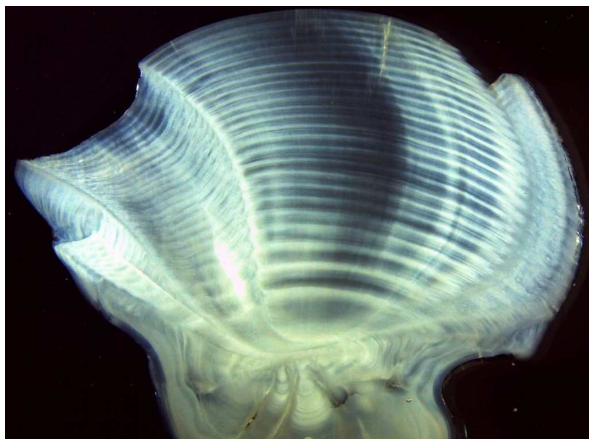


A microscope image of the sectioned otolith from the fish showing the 18 lovely growth rings (annuli) we used to estimate its age.



Another fantastic team effort and another belting fish donated to the program in summer was caught by father and son Scott and Graham Robson in Newcastle Harbour. At 154 cm and 41.5 kg, this was one the largest mulloway so far donated to the program. Willingly received by the boys at Tackle Power in Sandgate, this huge fish also turned out to be another extremely important individual for our knowledge of mulloway in NSW as it was estimated to be 26 years old, the second oldest mulloway so far recorded in NSW waters! Great work guys and many thanks for giving us access to data from such an important fish.

The otolith section from Scott and Graham Robson's 26 year old mega mulloway



Scott Robson does an excellent job of making a 154 cm 41.5 kg mulloway look light (left) whilst NSW RAP scientist Julian Hughes makes the frame from the same fish look very heavy (right)



Project Progress – Summer 2013/14

The donated frame from a trophy-sized mulloway is measured in the lab prior to having its otoliths extracted

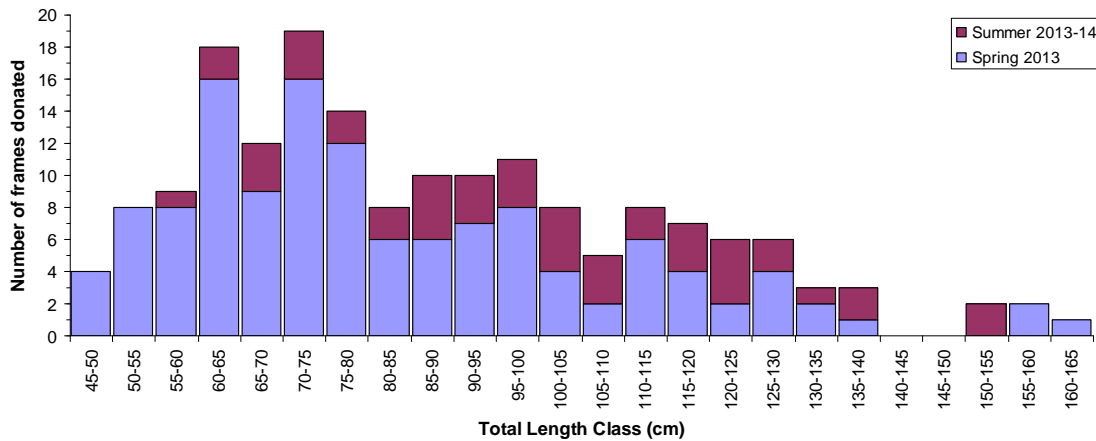


Whilst the changes to recreational size and bag limits for mulloway (<http://www.dpi.nsw.gov.au/fisheries/recreational/saltwater/sw-species/mulloway/rules>) certainly reduced the numbers of frames donated to the NSW Research Angler Program over summer, it was a case of quality over quantity with some seriously big fish donated to the program. Frames or otoliths from 24 mulloway over 1 metre in length were donated, including 7 fish over 130 cm and two larger than the magic 150 cm mark! These trophy-sized individuals are keenly sought after by rec fishers and are providing us with some incredible data from the largest, and sometimes oldest, mulloway in the population.

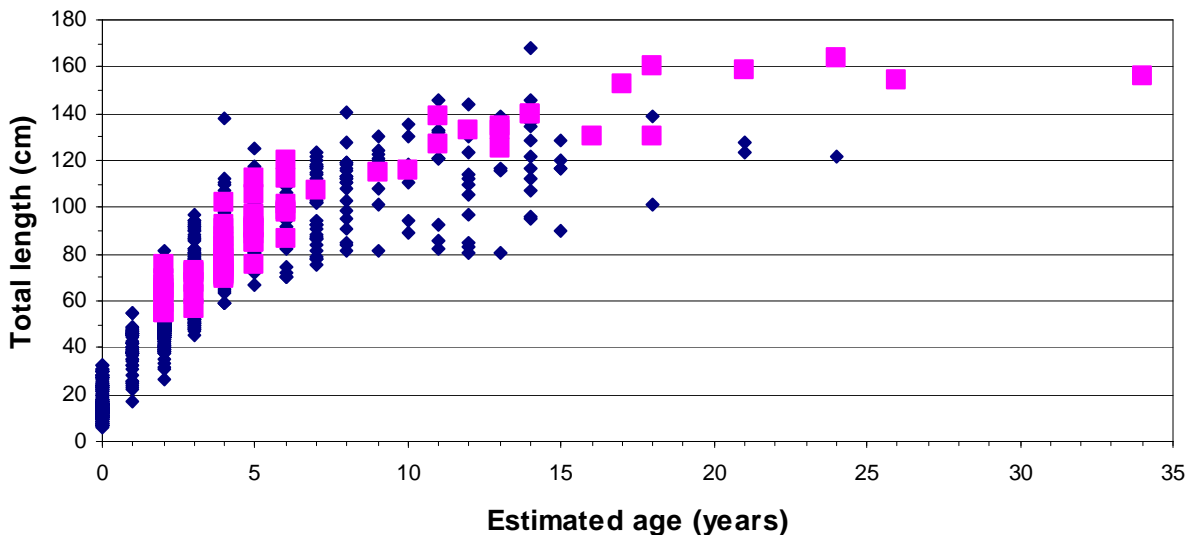
Prior to the commencement of the NSW Research Angler Program in September last year, Fisheries NSW had collected data from just 10 mulloway estimated to be greater than 15 years of age and none older than 24. Data collected as part of this program has since almost doubled the numbers of 15+ year old fish to 18, including another 24 year old, a 26 year old and a 34 year old. We simply would not have access to this information if not for the keen and enthusiastic anglers and spearfishers of NSW.

A total of 59 mulloway frames were donated to the program over summer ranging in size from 56 cm right up to a whopping 154 cm (don't worry, fish smaller than the new minimum legal size for mulloway of 70 cm were caught prior to the new legal limit coming into effect). You can see from the below figure that the good numbers of large fish donated to the program over summer make up a high proportion of large fish donated overall, particularly in the total length classes of fish bigger than 120 cm.

Length frequency of mulloway donated to the NSW Research Angler Program over spring 2013 and summer 2013-14.

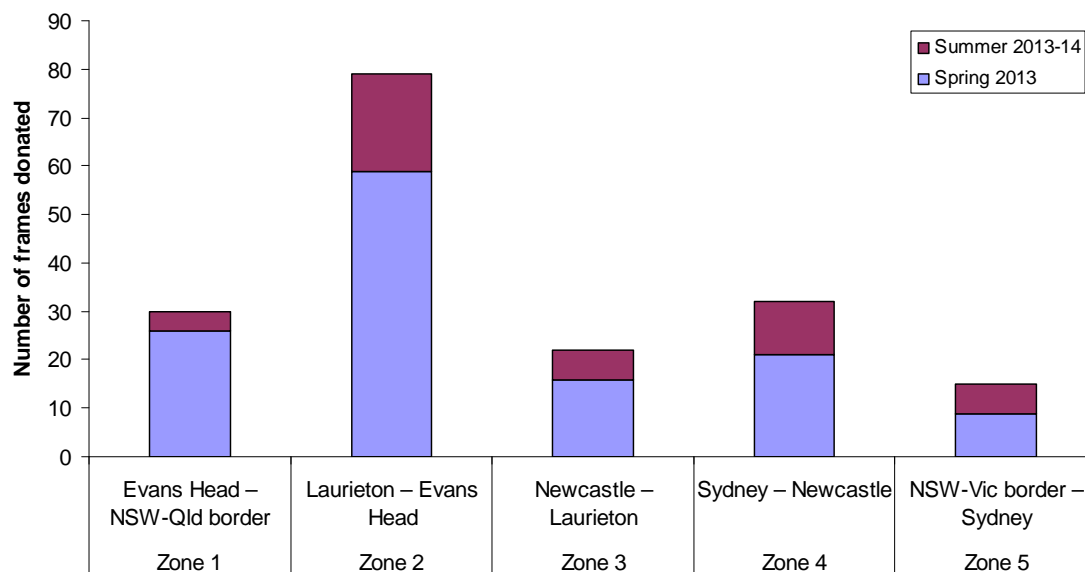


Size-at-age data for mulloway in NSW: the blue points represent the data Fisheries NSW had for mulloway prior to the start of the program (mainly from commercial sources). The purple points represent data from recreationally-caught fish donated to the program that have already significantly improved our overall understanding of the mulloway stock in NSW, especially for the largest and oldest fish.



The graph below shows the number of mulloway frames donated to the program by recreational fishers to the end of February 2014. We aim to collect data from at least 300 frames from each of the sampling zones along the NSW coast by the end of September 2015. Not surprisingly, we are on track to collect adequate numbers of mulloway frames from Zone 2 (Laurieton – Evans Head) but more frames are needed from Zones 1, 3, 4 and 5.

Number of mulloway frames donated by recreational fishers to the NSW Research Angler Program during spring 2013 and summer 2013-14.



Call for volunteers - Keen Angler Diary Program

To complement the excellent data we are collecting from the frame donation component of the Research Angler Program, we are currently seeking interest from recreational mulloway anglers in participating in a voluntary “Keen Angler Diary” program. This component is aimed at fishers who chase mulloway on a regular basis and will help us to estimate the numbers and sizes of fish caught by the most productive and keen mulloway hunters out there.

We will also be able to use the results obtained from the “Keen Angler Diary” to compare with results of state-wide survey of recreational fishing in NSW currently underway (<http://www.dpi.nsw.gov.au/fisheries/recreational/info/survey-2013-14>) to possibly confirm whether 10% of the people who fish for mulloway do indeed catch 90% of the fish!

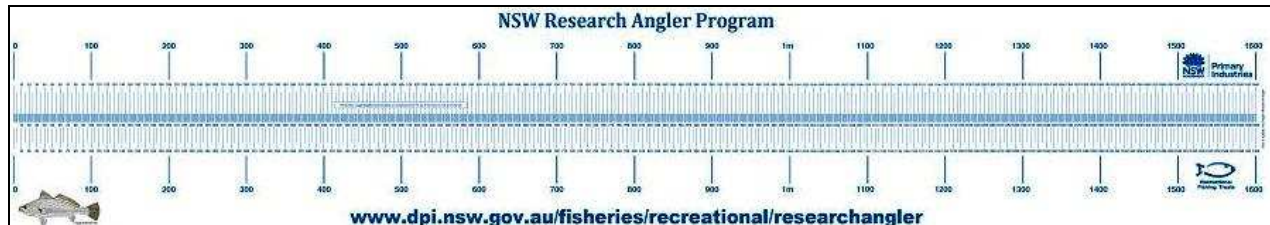
As with frame donations, the information we will be asking our Keen Angler Diarists to record will be very simple. Each time you fish for mulloway, all we would like to know is:

Research Angler Diary <small>IN STRICT CONFIDENCE</small>	NSW Research Angler Program																																																		
Species: Mulloway Angler name: _____ Please record the following details each time you fish for mulloway, even if you don't catch any: • Date • Location - can be approximate (e.g. Hawkesbury River, Sydney Northern Beaches, Yamba) • Zone - were the fish caught in an <i>estuary</i> , from shore (<i>beach/rocks/breakwall</i>) or <i>offshore</i> ? - if fishing session spans more than one zone, please use a new row • Total lengths of all mulloway caught (to the nearest cm) - if you catch more than 6 fish in a session, just use more rows • Record whether the fish caught were <i>kept</i> or <i>released</i> by writing "Yes" or "No" in the "Kept?" column • Please retain the <i>frame, head</i> or <i>otolith</i> (jewels) from any mulloway <i>kept</i> , along with label detailing date and location information	<table border="1"> <thead> <tr> <th>When & Where</th> <th>Zone</th> <th>Lengths (cm)</th> <th>Kept?</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td><i>Example</i> Date: 12 June 2014 Location: Port Stephens</td> <td>Estuary</td> <td>1. 51 2. 84 3. 130 4. 55 5. 6.</td> <td>No Yes Yes No</td> <td>All caught on live prawns mullet Released fish in good condition</td> </tr> <tr> <td>Date:</td> <td>Estuary</td> <td>1. 2. 3. 4. 5. 6.</td> <td></td> <td></td> </tr> <tr> <td>Location:</td> <td>Beach/Rocks Offshore</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Date:</td> <td>Estuary</td> <td>1. 2. 3. 4. 5. 6.</td> <td></td> <td></td> </tr> <tr> <td>Location:</td> <td>Beach/Rocks Offshore</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Date:</td> <td>Estuary</td> <td>1. 2. 3. 4. 5. 6.</td> <td></td> <td></td> </tr> <tr> <td>Location:</td> <td>Beach/Rocks Offshore</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Date:</td> <td>Estuary</td> <td>1. 2. 3. 4. 5. 6.</td> <td></td> <td></td> </tr> <tr> <td>Location:</td> <td>Beach/Rocks Offshore</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	When & Where	Zone	Lengths (cm)	Kept?	Notes	<i>Example</i> Date: 12 June 2014 Location: Port Stephens	Estuary	1. 51 2. 84 3. 130 4. 55 5. 6.	No Yes Yes No	All caught on live prawns mullet Released fish in good condition	Date:	Estuary	1. 2. 3. 4. 5. 6.			Location:	Beach/Rocks Offshore				Date:	Estuary	1. 2. 3. 4. 5. 6.			Location:	Beach/Rocks Offshore				Date:	Estuary	1. 2. 3. 4. 5. 6.			Location:	Beach/Rocks Offshore				Date:	Estuary	1. 2. 3. 4. 5. 6.			Location:	Beach/Rocks Offshore			
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- **When** the fish were caught – date.
- **Where** the fish were caught – so we can determine a rough geographic location and whether the fish were caught in an estuary, from the shore (rocks, beach or breakwall) or offshore.
- **Total lengths** of all mulloway caught (to the nearest cm) and whether the fish caught were **kept** or **released**
- The **frame, head** or a single **otolith** (jewel) from any mulloway **kept**

We will provide all Keen Angler Diarists with a 20 page waterproof diary to record information from 200 mulloway fishing trips along with a custom-made extra long 160 cm NSW Research Angler Program fish measuring mat for you to accurately measure the lengths of the mulloway you catch. Please contact us (E: research.angler@dpi.nsw.gov.au, T: 9435 4671) if you are interested in becoming a Keen Angler Diarist or would like more information on this component of the NSW Research Angler Program.

Custom-made NSW Research Angler Program fish measuring mat: extra long to accommodate even the largest mulloway our Keen Angler Diarists could encounter!



NSW Research Angler Program pilot mulloway tagging project

As part of the NSW Research Angler Program, Fisheries NSW in collaboration with the NSW branch of the Australian National Sportfishing Association (ANSA) have recently commenced a pilot tagging project for mulloway in NSW (<http://www.fishingworld.com.au/news/mulloway-tagging-underway-in-nsw>). As with the Keen Angler Diary program, the project is a component of the larger NSW Research Angler Program and will aim to increase our knowledge of the movements, growth rates and post-release survival of mulloway in NSW.

The guys from ANSA NSW are managing the project and have recently completed the task of hand-picking and training a team of dedicated mulloway anglers and fishing guides from the Northern Rivers to the South Coast to begin putting tags in recreationally-caught mulloway.

Next time you're out chasing mulloway, keep an eye out for one of our yellow NSW DPI Gamefish tags located just beneath the dorsal spines.



It will be a traditional external tagging program using simple pelagic-style streamer tags which will be inserted beneath the dorsal spines of mulloway larger than 60 cm.

If you are fortunate enough to catch a tagged mulloway, please record the tag number, measure the length of the fish, follow the instructions on the tag and contact the NSW DPI Gamefish Tagging Program (T: 4424 7411, E: gamefish.tagging@dpi.nsw.gov.au). The crucial data collected by this project will help us to learn more about the movements, growth and post-release survival of this iconic fish.

NSW Research Angler Program fishing club presentations

NSW Research Angler Program

- Collect biological data from recreationally-caught individuals for use in stock assessments
- Little data from largest (& potentially oldest) animals in population
- RFT funded (licence fees)
- Opportunity for recreational fishers to get involved in research
- 1 million rec fishers in NSW – an untapped resource



NSW Research Angler Program



Department of Primary Industries

Thanks to the Port Hacking Gamefishing Club who hosted a presentation by one of our researchers on March 4th. Despite some audience exhaustion as a result of exertions at the previous weekend's NSWGFA Interclub Tournament at Port Stephens, a small but

attentive group were on hand to hear about the program.

Upcoming presentations

- St George Sportfishing Club
June 5
- Tuross Heads Fishing Club
TBA
- Fish Outta Water- Tackle World Manly Vale
June

If you are a member of a fishing club (spearfishing or angling) and are interested in having a presentation on the program made at your club, please don't hesitate to get in contact with us (E: research.angler@dpi.nsw.gov.au, T: 9435 4671) and we'll send someone out to get you and your fishing club enthusiastic about getting involved in the program.

Drop-off Locations

Many thanks must once again go to all participating drop-off locations for their enthusiastic involvement in the program. This program would simply not be possible without your continued support. The list of drop-off locations for donated frames is changing regularly as more tackle retailers become involved in the program. Our most recent addition to our list of participating tackleshops is **Tuross Boatshed & Cafe (93 Trafalgar Rd, Tuross Heads, T: 4473 8127)**, so if you're picking up a few mulloway in beautiful Tuross Lake or surrounds, please drop in and visit John at the Boatshed. John and staff are ready to receive your frames (and maybe even make you a coffee!).

For the full and up-to-date list of places where you can drop-off your frames, please visit:

<http://www.dpi.nsw.gov.au/fisheries/recreational/researchangler/drop-off-locations>

The Top Fives!

Our sincerest thanks to the following dedicated mulloway Research Anglers who have made it into our “Top Five” lists of frame donors overall and those for Summer 2013-14. Once again, northern NSW seemed to be the place to be through summer with three out of six “Top Five” donors coming from Yamba, two from Coffs Harbour and one from Sydney. Of the 18 fish donated to the program by our “Top Five” for summer, 10 were over 1 m in length! Despite the changes to recreational size and bag limits for mulloway, Paul Blade from Coffs Harbour still managed to add to his already impressive number of frames donated to the program, whilst Scott Thornton from Batemans Bay and Chris Neville from Nowra continue to fly the flag for South Coast mulloway fishers.

Top Five donors summer 2013-14 (as of 19 March 2014):

Donor	No. frames donated	Region
Will Hamill	4	Yamba
Mark Pirie	4	Yamba
Keith Kneebone	4	Sydney
Paul Blade	4	Coffs Harbour
Josh Jackson	3	Yamba
James Sakker	3	Coffs Harbour

Top Five donors overall (as of 19 March 2014):

Donor	No. frames donated	Region
Paul Blade	18	Coffs Harbour
John St Vincent Welch	12	Evans Head
Cameron Doak	7	Port Macquarie
Mitch Burns	6	Coffs Harbour
Scott Thornton	6	Batemans Bay
Paul Butcher	6	Coffs Harbour
Chris Neville	5	Nowra

Two of the biggest mulloway to date were donated to the program this past summer. Scott and Graham Robson's 154 cm fish featured earlier in the newsletter was estimated to be 26 years old making it the second oldest mulloway so far recorded in NSW waters. Ben Kearney's 153 cm thumper was only narrowly shorter, but was estimated to be 17 years old. This well demonstrates the large variation in the age of a mulloway at a given size – despite being almost the same length, there was 9 years difference in the respective ages of these two trophy fish. Furthermore, the oldest mulloway so far recorded in NSW (34 years), which was donated to the program last spring, was just a couple of centimetres larger than these two fish at 156 cm.

Spearfishers continue to provide us with some quality data with Parry Gryllis' 140 cm mulloway from "somewhere on the Central Coast" and Andrew Moderer's 135 cm fish from "somewhere north of Coffs Harbour" estimated to be 14 and 13 years old, respectively.

Ben Doolan rounds out our "Top Five" for summer 2013-14 with a puny 139 cm fish from "somewhere near Port Stephens" estimated to be 11 years old.

Top Five largest fish donated and associated ages summer 2013-14 (as of 19 March 2014):

Donor	Total length (cm)	Estimated age (years)	Region
Scott Robson	154	26	Newcastle
Ben Kearney	153	17	Coffs Harbour
Parry Gryllis	140	14	Central Coast
Ben Doolan	139	11	Port Stephens
Andrew Moderer	135	13	Coffs Harbour

Top Five largest fish donated and associated ages overall (as of 19 March 2014):

Donor	Total length (cm)	Estimated age (years)	Region	Season
Adam Price	164	24	Sydney Northern Beaches	Spring 2013
Mark McCabe	159	21	Hawkesbury River	Spring 2013
Vaughan Little	156	34	Shoalhaven River	Spring 2013
Scott Robson	154	26	Newcastle	Summer 2013-14
Ben Kearney	153	17	Coffs Harbour	Summer 2013-14

A real surprise packet of a fish, not only for fishers Jackson and Isaac Pettigrew, but also for us was their 130 cm mulloway from the Hawkesbury River featured earlier in the newsletter. Despite being a modest length compared to some of the fish around it on the lists below, this individual was surprisingly old at an estimated 18 years of age and made it all the way to number five on our overall "Top Five" list of oldest fish donated to the program so far.

Top Five oldest fish donated and associated lengths summer 2013-14 (as of 19 March 2014):

Donor	Estimated age (years)	Total length (cm)	Region
Scott Robson	26	154	Newcastle
Jackson Pettigrew	18	130	Hawkesbury River
Ben Kearney	17	153	Coffs Harbour
Parry Gryllis	14	140	Central Coast
Andrew Moderer	13	135	Coffs Harbour
Scott Thornton	13	125	Batemans Bay

Top Five oldest fish donated and associated lengths overall (as of 19 March 2014):

Donor	Estimated age (years)	Total length (cm)	Region	Season
Vaughan Little	34	156	Shoalhaven River	Spring 2013
Scott Robson	26	154	Newcastle	Summer 2013-14
Adam Price	24	164	Sydney Northern Beaches	Spring 2013
Mark McCabe	21	159	Hawkesbury River	Spring 2013
Jackson Pettigrew	18	130	Hawkesbury River	Summer 2013-14

Monthly Prize Draw Winners!

The lucky monthly NSW Research Angler Program prize winners for spring were decided by randomly drawing one frame donor from each month.

Congratulations to the following Research Anglers:

December	Eric Lobb	(Sydney)
January	Parry Gryllis	(Sydney)
February	Scott Robson	(Newcastle)



Each winner will receive either:

- a \$50 gift voucher generously donated by **MO Tackle Coffs Harbour** (for use in-store or online),
- or a mullet-ready lure pack worth \$50 containing a selection of proven hardbody, soft plastic and blade-style mullet-catchers from Storm, Killalure, Berkley and Rupes.

Future winners will be published in upcoming newsletters and on our website. Don't forget to include your contact details (phone number, postal or email address) on the label accompanying your donated frame to ensure your chance of winning!

Remember, if you're going to catch and keep a mullet for a feed, please fillet your fish and donate the frame, head or a single otolith to research –

WE NEED THE DATA FROM YOUR FISH!

**THANK YOU FOR YOUR ONGOING SUPPORT.
KIND REGARDS AND HAPPY FISHING!**

The NSW Research Angler Program is part of the Resource Assessment & Monitoring Unit of the Fisheries NSW Research Branch and is generously funded by the NSW Saltwater Recreational Fishing Trust and the NSW Department of Primary Industries.

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (March 2014). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser.

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