

#### **NEWSLETTER NO. 4**

# **NSW Research Angler Program**

September 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.

#### The NSW Research Angler Program – fun for young and old (er)!

It doesn't matter if you've been chasing mulloway all your life or you're just starting out, every recreationally-caught mulloway donated to the NSW Research Angler Program helps NSW Fisheries researchers learn more about these awesome fish. An excellent case in point were two fine fish both estimated to be five years old donated to the NSW RAP over winter by one of our youngest, and one of our more experienced, NSW Research Anglers. After a tense tussle on the beach, nine year old Cam Beddoe (with assistance from dad Phil) managed to land the cracking 98 cm first-ever mulloway from the South Coast pictured below, whilst long-time mulloway addict Warren Forbes had a similarly dramatic time in his successful capture of 89 cm of prime Coffs Harbour mulloway on a very modest 1/0 hook! Thanks to the enthusiasm of both Cam and Warren, the information from these two five year old fish now make a small, but important, contribution to monitoring the health of the mulloway stock in NSW.

Below: Young NSW Research Anglers Cam Beddoe and Tim Sheppard with 98 cm of quality South Coast mulloway estimated to be 5 years old.



Right: Two-time frame donor Warren Forbes with his 89 cm 5 year old chrome beauty from Coffs. Inset: Some of Warren's extremely light terminal mulloway tackle!



#### **Notable donations from Winter 2014**

Winter is well-known as the prime season for catching big mulloway and this winter proved exactly that for the NSW Research Angler Program with several trophy-sized fish donated to research by our enthusiastic Research Anglers. Mid-North Coast mulloway magician Matt Timmins had an awesome early winter luring off the stones. In the first two weeks of June, Matt accounted for four great fish going 80, 94, 132 and 146 cm respectively. Remarkably, analysis of the otoliths from the two larger fish revealed both fish to be an estimated 13 years old, despite their differences in size. The larger fish at 146 cm was easily the largest 13 year old so far recorded in NSW waters. As you can see from the 'Size-at-age' graph (page 6), mulloway growth slows considerably from approximately age 5 onwards, nonetheless 146 cm in 13 years represents an average growth rate of over 11 cm per year – clearly it's a good paddock to be in if you're a mulloway up on the NSW Mid-North Coast!

Lucky 13: NSW Research Angler Matt Timmins with two epic early winter mulloway spun up off the Mid-North Coast rocks. The fish at left was 132 cm in length and the fish at right, caught just a week before, a whopping 146 cm and 27 kg. Inset: Analysis of their otoliths revealed that both fish were just 13 years old!





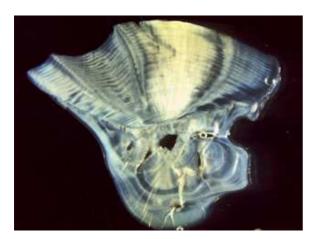
Mulloway up around the 150 cm mark don't come around often, but the NSW RAP was indeed fortunate to have not one, but two 146 cm fish donated to the program during winter. Nick Arkoudis has spent plenty of time on the beach trying to nail himself a trophy jewie off the sand. It all finally came together for him on a chilly Mid-North Coast beach one night recently landing a 146 cm 28 kg fish-of-a-lifetime which made all the time and effort spent well worth it. A mould of Nick's fish now sits proudly above his mantelpiece along with our NSW RAP Research Feedback Certificate detailing the impressive specs on his catch: at 146 cm, it was the (equal) tenth largest mulloway we so far had donated to the program, and at an estimated 18 years old, it was the (equal) seventh oldest mulloway so far recorded in NSW waters.

With the 'big-jew-off-the-beach' monkey finally off his back, a very proud Nick Arkoudis hoists his 146 cm 28 kg mulloway aloft for the camera.



Slightly less heavy, but no less impressive, Nick with the mould of his trophy mulloway prepared by master taxidermist Glenn Stewart.





Left: The otolith section from Nick's donated fish – at 18 years, it is the (equal) seventh oldest mulloway we have so far recorded from NSW waters. It wasn't so much a great winter, but a great year for everyone's favourite fishing couple Tom Laurence and Chloe Taylor. These guys did what the rest of us would like to do and packed in their day jobs for a year's solid fishing up and down the East Coast of Australia (www.shefishes.com.au/blog-a-year-long-fishing-adventure/). In between catching bluefin off Ulladulla, kingfish at Norfolk Island and golden trevally in Hervey Bay, they still found time to donate a thumper North Coast mulloway to the NSW RAP. The 120 cm fish was one of five mulloway larger than 120 cm that the guys caught in their time at Evans Head. Analysis of one of the jewels from the fish revealed it to be 6 years old giving it an average growth rate of 20 cm per year, again highlighting just how fast mulloway can grow in their first few years of life, especially up north! Thanks Tom and Chloe for getting involved in the NSW RAP.

An awesome fish from an awesome week: Chloe Taylor with a 120 cm of solid superfast-growing silver from a great week of winter mulloway fishing offshore from Evans Head. Photo courtesy Chloe Taylor and Tom Laurence.



## **Project Progress - Winter 2014**

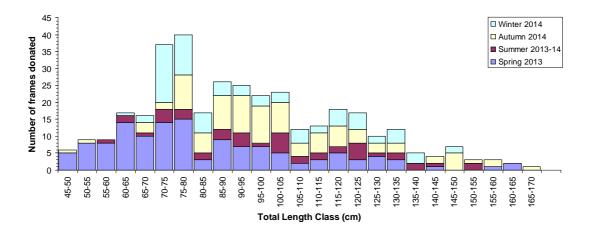
A total of 81 mulloway frames were donated to the program over winter by 44 dedicated research anglers and spearfishers. Whilst most fish donated were in the 70-80 cm range (~40%), we were fortunate enough to get info from fish of all sizes right through to two enormous 146 cm fish!

As has become expected from winter mulloway fishing, it was also another great season for donations of large fish. Frames or otoliths from 30 fish donated to the program over winter were from mulloway of greater than 1 metre in length, more than half of which were over 120 cm and five of which were larger than the 130 cm mark. These are the trophy fish which make winter mulloway fishing famous and the NSW RAP is indeed privileged to have access to data from such important individuals.

Right: NSW RAP scientist Julian Hughes at the Sydney Institute of Marine Science with the frame from a 134 cm northern NSW mulloway prior to processing.

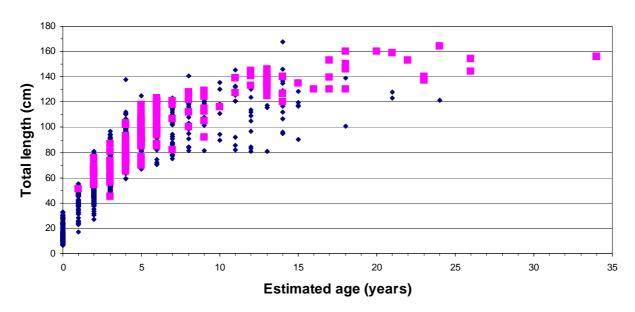


Length frequency of mulloway donated to the NSW Research Angler Program since the commencement of the program in September 2013.



Prior to the commencement of the NSW RAP in September 2013, Fisheries NSW had collected data from just <u>ten</u> mulloway estimated to be 15 years of age or older, and none older than 24, even though they have been recorded to live for over 40 years in both South Australia and South Africa. Since involving keen anglers and spearfishers in the collection of data on recreationally-caught mulloway via the NSW RAP, we have in <u>less than one year</u> significantly expanded our knowledge of the ages mulloway are capable of reaching in NSW. Thanks to you guys, we now have data from <u>thirty</u> mulloway 15 years of age or older. And our oldest fish, a 34 year old donated last year, is the second oldest mulloway so far recorded in Australia!

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 since the commencement of the NSW RAP in September 2013.



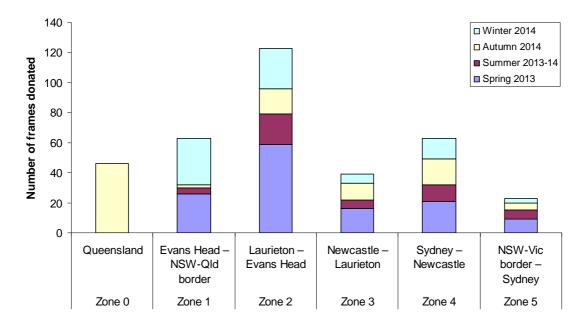
The graph below shows the number of mulloway frames donated to the program by recreational fishers to the end of August 2014. We aim to collect data from at least 300 frames from each of the sampling zones along the NSW coast by the end of September 2015. As you can see, we are on track to collect adequate numbers of mulloway frames from Zone 2 (Laurieton - Evans Head) where some of our most prolific research anglers live. For the first time since the commencement of the program, we had the highest number of frames (31) donated from Zone 1 (Evans Head - NSW-Qld border) reflecting some of the quality mulloway fishing that occurs around places like Evans Head, Ballina and Yamba each winter. Winter donations from the other zones were slightly down on autumn numbers, but with the approach of spring and some warmer water temperatures, we are hopeful of increased numbers of frames from anywhere and everywhere next season!

So if you're going to be out chasing mulloway in spring, especially in the southern half of the state, your frames will be received with open arms. Remember, even if it is only one frame, we want it!

Winter donated mulloway otoliths in clear fibreglass resin blocks ready for sectioning prior to age estimation.



Number of mulloway frames donated by recreational fishers to the NSW Research Angler Program since the commencement of the program in September 2013.



## Mail your jewels in to the NSW RAP

Whilst the popularity of the NSW RAP with recreational mulloway anglers and spearos is undeniable, sometimes it isn't a simple task getting the frame from a hard-won mulloway catch to one of our participating tackleshop drop-off points for donation to the program (www.dpi.nsw.gov.au/fisheries/recreational/rese archangler/drop-off-locations). Not all fishers live in close proximity to a drop-off point, and even for those who do; just transporting the frame from a 160 cm 40 kg mulloway around is no easy feat!

For this reason, you can now post the jewels from your mulloway catches to us. Each time you catch a mulloway and would like to donate the invaluable information from your catch to research, all you need to do is contact us at the NSW RAP (T: 9435 4671, E:

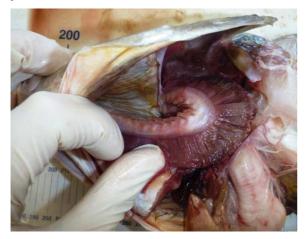
research.angler@dpi.nsw.gov.au) and we will send you out a reply-paid padded post pack and data label. Then it's simply a matter of filling out the data label and placing it, along with a single jewel from your fish into the post pack (right), seal it and stick it into the nearest Australia Post box. It's that easy!

Research ate of capture sher name:. Estuary-rive Fish length Ocation: Contact

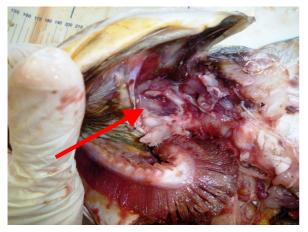
#### How to remove your jewie "jewels"

Otoliths exist within the skulls of all bony fishes where their primary function is in balance, allowing the fish to maintain upright orientation in the water column. Fortunately for fish biologists, otoliths also grow through the life of the fish allowing their age to be estimated by counting growth rings present in the otoliths. Apart from being one of the finest looking fish in the sea, delicious on the plate and a great all-round sportfish, mulloway are also revered for their impressive-sized otoliths, or "jewels". This fact is well-known to mulloway fishers many of whom seek out these bizarre shaped lumps of calcium carbonate as mementos of mulloway caught. In fact, the other name we commonly know mulloway by, "Jewfish" is a reference to presence of their large "jewels". If you are thinking that mailing your jewels in to the NSW RAP sounds like a good option, but haven't removed them from a mulloway before, the following is a brief "how to" guide to removing mulloway otoliths.

Step 1: Pull back the operculum (gill cover) and detach the gills from where they are attached to the underside of the skull. You can access both jewels from one side of the fish.



Step 3: Continue carefully removing pieces of bone until you have made a hole (indicated). You should now be able to see the jewels sitting in a fluid-filled cavity inside the skull. The jewels are bright white in colour.



Step 2: Scrape away any remaining tissue to reveal the underside of the skull. Using wire cutters, tin snips or similar, carefully dig into the bone where this slightly translucent depression is visible.



Step 4: Pull the jewels out through the hole. They will be inside a clear membranous sac. Often both jewels will come out together, but you may need to remove more bone pieces to get at the second jewel of the pair.



Step 5: Remove the jewels from the membranous sac, rinse in freshwater and allow to dry.



## "Keen Angler Diary" Component

The response from anglers to our request for voluntary "Keen Angler Diarists" has been awesome and at last count we have almost 70 "expert" mulloway anglers measuring their catches and diligently recording data on their mulloway fishing activities in one of our Keen Angler Diaries. As all mulloway fishers know, targeting mulloway successfully on a regular basis is no easy task and to get consistent results, countless hours of fishing and the patient recording of catches along with tides, moon phases, seasons, baits, lures, and a multitude of other factors must be made. It is this level of dedication which separates mulloway "experts" from the rest of us and by targeting these fishers, we hope to be able to get a better idea of the numbers and sizes of fish caught (retained as well as released) in the recreational mulloway fishery in NSW.



All "Keen Angler Diarists" are provided with a small 20 page waterproof diary to record information from 200 mulloway fishing trips along with a custommade extra long 160 cm NSW RAP fish measuring mat for you to accurately measure the lengths of the mulloway you catch. We are still seeking interest from recreational mulloway anglers in participating in this program so if you regularly chase mulloway and would like to contribute some crucial data on the recreational mulloway fishery, please contact us (T: 9435 4671, E: research.angler@dpi.nsw.gov.au) and we will send you out a Keen Angler Diary pack.

By way of a small incentive, the NSW Research Angler Program is offering a \$50 MO Tackle voucher (or a mulloway-ready lure pack worth \$50) to the <u>first five</u> Keen Angler Diarists to finish filling out their Keen Angler Diary!

Step 6: Contact the NSW RAP for a reply-paid padded post pack and let the postman do the rest!

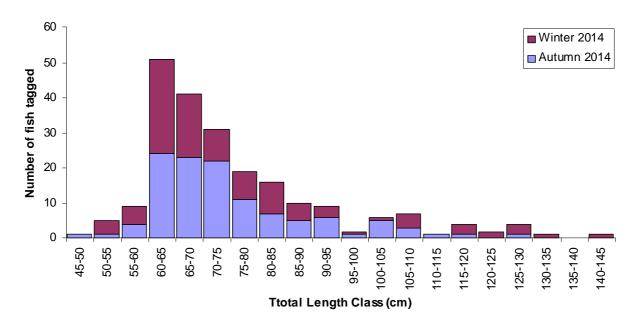


#### NSW RAP-ANSA pilot tagging project update

As of the end of August, a total of 220 mulloway have been tagged by NSW RAP-ANSA pilot mulloway project participants, the number of fish tagged over winter (104) only slightly down on the autumn tally of 116. Mulloway's increasing reputation as a lure-only target species is remarkably born out by our tagging results with more than 90% of tagged fish caught on lures with just 17 fish taken on bait.

A reminder of the quality mulloway fishing that exists right on Sydney's doorstep occurred over winter with an amazing 75 mulloway caught, tagged and successfully released in the Sydney Metro region alone. All the regular hotspots were included with the Hawkesbury and Georges Rivers accounting for most of the Sydney fish. A further 29 mulloway were also tagged north of Sydney, including 9 fish from Lake Macquarie thanks to Joel Edwards (Checkout a great little video featuring Joel's mulloway tagging exploits at: www.youtube.com/watch?v=MZ8Pp8Vn6ZE&fe ature=youtu.be). All our tagged fish from south of Sydney over winter were caught from Lake Illawarra by local jew-on-lure specialist, Benton Spinks. However, a man who gets to go fishing far too often topped the list of winter taggers with Dan Selby from Sydney Sportfishing Adventures (www.sydneysportfishing.com.au/) and lucky clients tagging and releasing 22 mulloway from the Hawkesbury River. It is Chris Cleaver, however, who remains our 'carry-over champion' with a ludicrous total of 60 mulloway tagged so far!

Length frequency of mulloway tagged as part of the NSW RAP-ANSA tagging project since its commencement March 2014.



Mulloway tagged once again nicely reflected the sizes of fish caught by most recreational mulloway anglers. Most fish tagged over winter were again in the 60-80 cm bracket (60%), but another 15 fish larger than one metre in length were tagged (including three of the five largest fish tagged so far). This brings the total number of 'metre-plus' fish tagged since the start of the project to almost 40! This, thanks in large part, to the predictably awesome exploits of Messrs Selby, Hickson and Cleaver once again!

To date, four tagged mulloway have been recaptured as part of the tagging program. Our latest recapture was a 72 cm lure-caught fish tagged and released by, you guessed it, Chris Cleaver, fishing in Botany Bay way back on March 18. One hundred and eight days later on July 4, this same fish was caught by Anthony Scaltrito in the Chipping Norton Lakes, travelling approximately 30 km upriver and growing by 2 cm in the process. Great stuff Chris and Anthony, and a special thanks to Stan Konstantaras and Chris Anagnostou from ANSA for managing this component of the NSW Research Angler Program...it is exactly this type of information that helps us learn more about the seasonal movements and growth rates of mulloway in NSW.

Chris Cleaver with 72 cm of tagged Botany Bay mulloway prior to release on March 18<sup>th</sup>.



Anthony Scaltrito with the same fish on July 4 in the Chipping Norton Lakes. In its 108 days at large, the fish had grown 2 cm and travelled some 30 km up the Georges River.



Young NSW Research Angler Max Edwards helped dad Joel catch, tag and release this handsome little school mulloway from Lake Macquarie.



Joel Edwards prepares to lovingly release one of nine Lake Macquarie mulloway he tagged over winter.



#### Top Five taggers for <u>winter 2014</u> (as of 31 August 2014):

Tagger	No. fish tagged	Region
Dan Selby	22	Sydney
George Armao	13	Sydney
Chris Cleaver	10	Sydney
Joel Edwards	9	Lake Macquarie
Kris Hickson	7	Port Macquarie

#### Top Five taggers <u>overall</u> (as of 31 August 2014):

No. fish tagged	Region
60	Sydney
34	Sydney
28	Sydney
13	Sydney
12	Coffs Harbour
	60 34 28 13

#### Top Five largest fish tagged for <u>winter 2014</u> (as of 31 August 2014):

Tagger	Total length (cm)	System
Dan Selby	132	Hawkesbury River
Kris Hickson	128	Manning River
Dan Selby	127	Hawkesbury River
Kris Hickson	123	Manning River
Chris Cleaver	116	Georges River

#### Top Five largest fish tagged <u>overall</u> (as of 31 August 2014):

Tagger	Total length (cm)	System	Season
Dan Selby	144	Hawkesbury River	Autumn 2014
Dan Selby	132	Hawkesbury River	Winter 2014
Kris Hickson	129	Manning River	Autumn 2014
Kris Hickson	128	Manning River	Winter 2014
Dan Selby	127	Hawkesbury River	Winter 2014

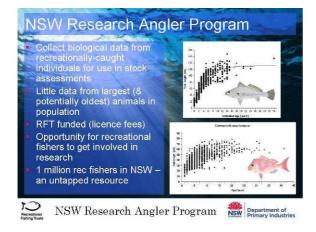
Next time you're out chasing mulloway, keep an eye out for one of our yellow NSW DPI Gamefish tags. The tag may be fouled by algae like this one found in a fish recaptured by Anthony Scaltrito.



If you are fortunate enough to catch a tagged mulloway, please record the tag number, measure the length of the fish, and contact either the NSW DPI Gamefish Tagging Program (T: 4424 7411, E: <u>gamefish.tagging@dpi.nsw.gov.au</u>) or the NSW Research Angler Program (T: 9435 4671, <u>research.angler@dpi.nsw.gov.au</u>). The tag will be yellow, approximately 12 cm long and located just beneath the dorsal spines.

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. Stay tuned for future updates in the Spring 2014 NSW RAP Newsletter.

## NSW RAP fishing club presentations



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

#### **Upcoming presentations**

Club Burwood RSL Fishing Club - October 13

## 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 Winter 2014.

For the second season in succession, a cracking effort from Coffs Harbour spearo James Sakker saw him top our list of frame donors for winter with 9 fish between 74 and 135.5 cm donated to the program from locations such as Crescent Head, Nambucca Heads, Sawtell and right up to Kingscliff. James' imperious form was again closely followed by consistent producer, Paul Blade with seven fish, who remains our overall number one frame donor (but the gap is closing!). First time donors, Chris Webb with five fish, and Geoff Kassulke with three fish, both had a productive winter of jewie fishing around Coffs Harbour. Regular donors Matt Timmins, Mark Pirie and Cameron Doak rounded out our top five for winter 2014, and in doing so kept them in our overall Top Five. We must also make special mention of Dan Selby who donated 6 fish over winter via his Sydney Sportfishing Adventures clients – all these guys will receive one of our Research Feedback Certificates to make their day out with Dan even more memorable. Fantastic work from all our dedicated Research Anglers over winter, please keep it up!

#### "Top Five" donors <u>winter 2014</u> (as of 31 August 2014):

Donor	No. frames donated	Region
James Sakker	9	Coffs Harbour
Paul Blade	7	Coffs Harbour
Matt Timmins	5	Crescent Head
Chris Webb	5	Coffs Harbour
Mark Pirie	4	Yamba
Geoff Kassulke	3	Coffs Harbour
Cameron Doak	3	Port Macquarie

#### "Top Five" donors <u>overall</u> (as of 31 August 2014):

Donor	No. frames donated	Region
Paul Blade	30	Coffs Harbour
James Sakker	18	Coffs Harbour
John St Vincent Welch	12	Evans Head
Mark Pirie	12	Yamba
Paul Butcher	11	Coffs Harbour
Matt Timmins	10	Crescent Head
Cameron Doak	10	Port Macquarie
Keith Kneebone	10	Sydney
Cameron Doak	10	Port Macquarie

Trent Fahey's massive 153 cm autumn fish from Forster wasn't processed when the last newsletter went to print, but we now know that this fish had an age to match it's size of 22 years taking it straight to our Top Five list of oldest fish so far donated overall. Our largest winter fish weren't quite as old as this, but Nick Arkoudis' 146 cm fish still topped the scales at 18 years old, Paul Blade's 130 cm fish was estimated to be 17 years old and George Sirianos' 135 cm fish came in at 15 years of age.

With the exception of the three fish just mentioned (and Sami Hamoui's 129 cm 9 year old from Cowan Creek), in what can only be described as a truly bizarre coincidence, <u>all</u> of the other fish in our Top Five largest <u>and</u> Top Five oldest winter donated fish were estimated to be 13 years old. That's six out of nine! Despite ranging in size from 130 cm all the way up to 146 cm and being caught from locations as far apart as Camden Haven and Iluka (~250 km), it really makes you wonder what was happening 13 years ago on the North Coast of NSW?!

# "Top Five" largest fish donated and associated ages <u>winter 2014</u> (as of 31 August 2014):

Donor	Total length (cm)	Estimated age (years)	Region
Nick Arkoudis	146	18	Newcastle
Matt Timmins	146	13	Crescent Head
Hari Corliss	137.5	13	Camden Haven
James Sakker	135.5	13	Nambucca Heads
George Sirianos	135	15	Sydney
Daniel Hughes	134	13	Laurieton
Mark Balmer	134	13	lluka
(Trent Fahey	153*	22	Forster)

\* donated in autumn, but processed with winter donations

# "Top Five" largest fish donated and associated ages <u>overall</u> (as of 31 August 2014):

Donor	Total length (cm)	Estimated age (years)	Region	Season
Adam Price	164	24	Sydney	Spring 2013
Keith Kneebone	160	20	Hawkesbury River	Autumn 2014
Mark McCabe	159	21	Hawkesbury River	Spring 2013
Vaughan Little	156	34	Shoalhaven River	Spring 2013
Scott Robson	154	26	Newcastle	Summer 2013-14

# "Top Five" oldest fish donated and associated lengths <u>winter 2014</u> (as of 31 August 2014):

Donor	Estimated age (years)	Total length (cm)	Region
Nick Arkoudis	18	146	Newcastle
Paul Blade	17	130	Coffs Harbour
George Sirianos	15	135	Sydney
Matt Timmins	13	146	Crescent Head
Hari Corliss	13	137.5	Camden Haven
James Sakker	13	135.5	Nambucca Heads
Daniel Hughes	13	134	Laurieton
Mark Balmer	13	134	lluka
Matt Timmins	13	132	Crescent Head
Sami Hamoui	9	129	Sydney
(Trent Fahey	22*	153	Forster)

\* donated in autumn, but processed with winter donations

# "Top Five" oldest fish donated and associated lengths <u>overall</u> (as of 13 June 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
Evan Leeson	26	144	Port Macquarie	Autumn 2014
Adam Price	24	164	Sydney	Spring 2013
Robert Thorpe	23	137	Newcastle	Autumn 2014
Mark Pirie	23	140	Yamba	Autumn 2014
Trent Fahey	22	153	Forster	Autumn 2014

# **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 off drop-off locations for donated frames is changing regularly as more tackle retailers become involved in the program. 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

## **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:

June	Matt Timmins
July	Dave Scurr
August	Warren Toy



(Crescent Head)
(Coffs Harbour)
(Yamba)

Each winner will receive either:

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

The NSW Resource Assessment & Monitoring Unit team:

Dr John Stewart –	Caitlin Young –
John.Stewart@dpi.nsw.gov.au	Cailtin.Young@dpi.nsw.gov.au
Dr Julian Hughes –	Anton Gould –
Julian.Hughes@dpi.nsw.gov.au	Antony.Gould@dpi.nsw.gov.au
Anne-Marie Hegarty –	Dr Ash Fowler –
Anne-Marie.Hegarty@dpi.nsw.gov.au	Ashley.Fowler@dpi.nsw.gov.au

Mail: NSW Research Angler Program, Fisheries NSW, Sydney Institute of Marine Science, 19 Chowder Bay Rd, Mosman NSW 2088

Phone: +61 (02) 9435 4671

Fax: +61 (02) 9969 8664

Website: http://www.dpi.nsw.gov.au/fisheries/recreational/researchangler

Email: research.angler@dpi.nsw.gov.au



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