



VICTORIAN MULLOWAY TAGGING

Newsletter- February 2019

Welcome to the third edition of the Victorian Mullet Tagging Newsletter. The purpose of this newsletter is to provide anglers with a summary of the tag and recapture data collected across the Victoria and interstate. This recreational tagging program is funded by the Victorian Fisheries Authority through Recreational Fishing License Fees and relies on the involvement of anglers.

It's been a very busy spring and summer, with plenty of Mullet caught across the state. We have quite a few anglers on the waiting list to receive a tagging kit, so at this stage we unfortunately can't recruit any more anglers. This is likely to change in the future however, so please stay posted! If you have a kit and find yourself no longer using it, please consider sending it back to us (see address on last page) and we can send it out to others.



Rob Jeffery is one of our recently recruited taggers. He's already been quite busy – this is Mullet #1082 which was tagged a few weeks ago in the Glenelg River, at 79.5 cm.

Tagged Fish

Since the last newsletter in May 2018, a further 148 fish have been tagged, bringing the current total to just under 300 (Figure 1). A huge thank you to all the anglers involved! Over the past few months we've seen Mulloway tagged in new areas of Victoria, including Western Port Bay (thanks to Dom Gillot) and the Moyne River (thanks to Peter McCallum). The majority of tagged fish however, are still being caught from the Glenelg River and nearby beaches in South East SA.

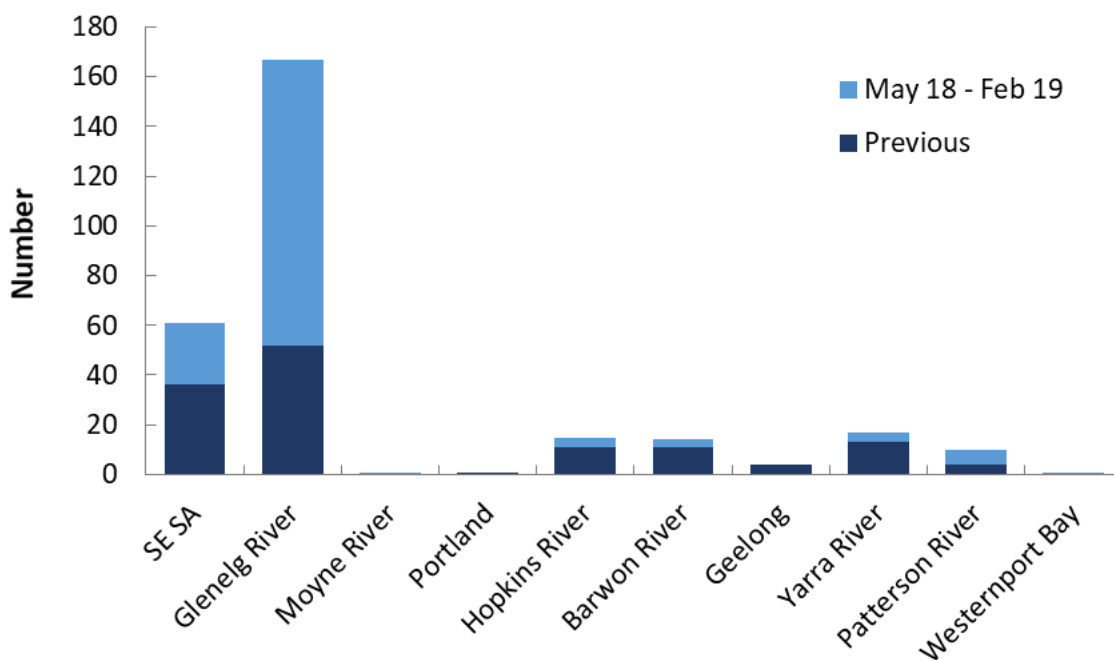


Figure 1. Numbers of Mulloway tagged across the various regions/waterways.

Top taggers (as of Feb 2019)

Michael Gordon continues to hold the lead for the most Mulloway tagged at 49 fish. Tim Murrell and Aron Coleman have also been busy over the past few months, mainly tagging Mulloway from the Glenelg River. Bodhi, Nigel and Shane have tagged quite a number of Mulloway from beaches along South East SA, with Bodhi even sneaking in a few from the Coorong. While the Yarra River has been a bit quiet, I'm sure we'll see some more Mulloway tagged in this system by Steve and other anglers, as we move into autumn and winter. Great work to all these anglers!

Angler name	Number of fish tagged
Michael Gordon	49
Tim Murrell	29
Aron Coleman	26
Bodhi Pannenburg	20
Nigel Telford	17
Shane Murrell	17
Steve Kovacevic	11
Brad Spiden	9
David Moulden	9
Barry Starling	9

There has been a great range of size classes tagged, with Mulloway ranging in length from 38.5 to 118 cm (Figure 2). The majority however, have been between 50 and 80 cm. George Gabriel now holds the lead for the largest Mulloway tagged, with his 118 cm fish caught from the Yarra River last June. A close second, was the 110 cm Mulloway tagged from the Glenelg River last month by Tim Murrell. Fish of this size are pretty rare for the Glenelg, so well done to Tim for releasing the fish.

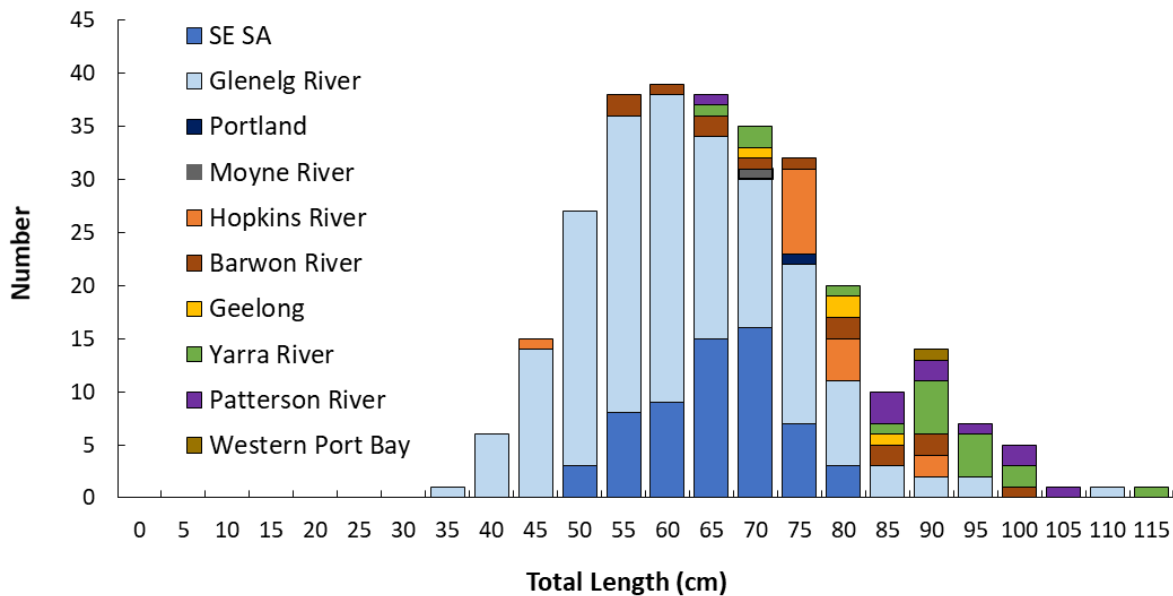


Figure 2. Length frequency of Mulloway tagged by anglers from the various regions.



At 118 cm, this is the largest Mulloway to be tagged so far. The fish was caught from the Yarra River by George Gabriel last June.

A reminder to all Mulloway taggers, please ensure that you only tag Mulloway above 50 cm. This is to maximise survival rates and to also ensure we obtain the most amount of information possible during the next two years of funding (i.e. most fish won't leave our estuaries until they reach maturity around 80 cm).

Largest Mulloway Tagged as of Feb 2019

Location	Angler	Total Length (cm)
South East SA	Shane Murrell / Bodhi Pannenburg	84
Glenelg River	Tim Murrell	110
Moyne River	Pete McCallum	73
Hopkins River	Andrew Primmer	94
Vic Marine waters	Dom Gillot (Western Port Bay)	90
Barwon River	Jaryd McDowall	101
Yarra River	George Gabriel	118
Patterson River	Shane Swain	95.5



Simon Wright (with help from Aron Coleman) tagged this 73 cm Mulloway from Browns Bay, SA in January.



Shane Greaves tagged this 103 cm Mulloway from the Patterson River in June last year.



Aron Colman was pretty pleased to catch this 91 cm Mulloway from the mouth of the Glenelg River. Caught on the second last day of 2018, it became his new PB!



Jaryd McDowall broke into triple digits with this 101 cm Mulloway caught from the Barwon River last June.



Above: Brad Spiden with the 109 cm Mulloway he tagged from the Patterson River last June- his largest so far.



Right: This 99 cm Mulloway was tagged and released by Kobi Rothall from the Glenelg River in December last year.

Tagging recaptures

It's fair to say the past six months have been the busiest in terms of recaptures. In May last year when the second Newsletter was distributed, we had recorded nine recaptures. Since this time, we have recorded a further 38, bringing the total to 47. The recapture rate for the program is now 16 %, which is considerably high. Of these 47 recaptures, 27 were recorded in the last 3 months, reflecting the increased fishing activity over summer.

The Mulloway recaptures can be categorised into one of the five different movement patterns:

1. Within estuarine movement (movement within the same estuary)
2. Between estuarine movement (movement from one estuary to another estuary)
3. Movement from an estuary to the ocean
4. Movement from the ocean to an estuary; and
5. Movement within nearshore marine waters

Movement between estuaries and the ocean are particularly insightful, as they highlight important connectivity and improve our understanding on the way in which Mulloway use these different environments throughout their life.

Table 1 provides a summary of the recaptures in terms of these different movement patterns.

Table 1. Summary of Mulloway recaptures, grouped into the different movement patterns.

Movement type	Specific movement	Recaptures	
		Sub-total	TOTAL
1. Within estuary	Glenelg River	27	34
	Hopkins River	3	
	Moyne River	1	
	Patterson River	1	
	Yarra River	2	
2. Between estuary	Patterson River → Yarra River (mouth)	1	1
3. Estuary to ocean	Glenelg River → South East SA beaches	3	4
	Barwon River → South East SA beaches (Coorong)	1	
4. Ocean to estuary	South East SA (Port Mac) → Glenelg River	5	7
	Barwon Coast → Barwon River	2	
5. Ocean	South East SA (Port Mac) → South East SA (Port Mac)	1	1

More than half of the total recaptures (34) have been Mulloway tagged in one estuary and later recaptured in the same system. This has mostly been within the Glenelg River, but have also been recorded for the Hopkins, Moyne, Yarra and Patterson rivers. One of the highest growth rates observed in an estuary has come from a 65 cm Mulloway tagged in the Glenelg River last May that was recaptured 8 months later at 79 cm.

Distances travelled within the Glenelg River range from 1 km up to 14 km, with most Mulloway moving upstream. Elsewhere in western Victoria, three Mulloway have been tagged and later recaptured in the Hopkins River, with one individual moving at least 10 km upstream during its 320 days at liberty. Finally, two Mulloway tagged in the Yarra River were also recaptured in the same vicinity between 10 and 40 days later.



After being tagged by Michael Gordon at the Glenelg River mouth, this Mulloway (#VIC0004) travelled at least 14 km upstream to the Princess Margaret Rose Caves during its 40 days at liberty. The fish was subsequently released.

The only record of a Mulloway moving between two different estuaries, has been recorded in central Victoria. In May 2018, Shane Greaves tagged an 85 cm Mulloway in the Patterson River, which was later recaptured at the entrance to the Yarra River – see map. The fish was at liberty for 218 days, during which time it underwent a growth of 5 cm and travelled at least 40 km. This supports anecdotal evidence of Mulloway moving between the major river systems in Port Phillip Bay at different times of year. Hopefully a few more recaptures will help shed some light on the drivers behind these migrations.



This Mulloway (#VIC0001) was tagged in the Patterson River in May last year, and recaptured at the entrance to the Yarra River in early December 2018.

Perhaps the most interesting recaptures are those that show Mulloway moving between estuaries and the ocean. These account for 14 of the total recaptures, with seven representing ocean → estuary movement and five representing estuary → ocean movement. A total of five Mulloway were tagged off beaches near Port MacDonnell (South East SA), and later recaptured in the Glenelg River, approximately 15 km east. Shane Murrell was lucky enough to tag a Mulloway in Browns Bay and recapture the same fish just 25 days later in the Glenelg - what are the chances!

Four of these fish were tagged as sub-adults (<80 cm), and therefore their migration into the Glenelg River supports the theory that estuaries provide an important nursery area for Mulloway. It also confirms important connectivity between western Victorian estuaries and beaches along South East SA. Other recaptures showing movement from the ocean to an estuary were two Mulloway tagged off the Barwon coast (by Blake Reekie and Shaun O'Brien) that were recaptured 300+ days later in the Barwon River, around 18 km's away.

From the biology project (which has now come to a close), we know that Mulloway do not reach sexual maturity in Victoria until approximately 80-85 cm. Anglers who fish the Glenelg River and other western Victorian waters, will know that over the past 6-12 months, a large proportion of the Mulloway in the estuaries have been approaching this length. I have been eagerly expecting to see some of these larger fish commence spawning migrations out to sea, in the lead up to the spring-summer breeding season.

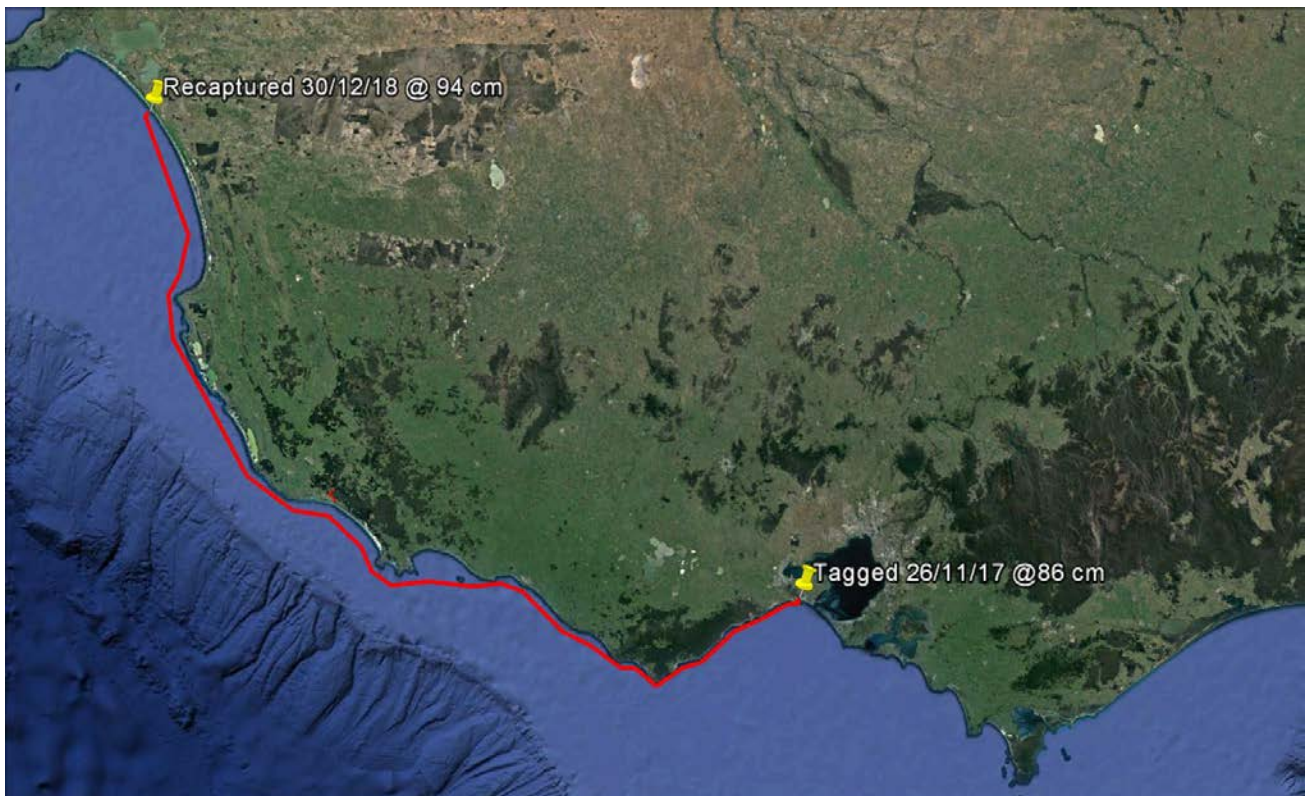
I was therefore very excited to hear of a tagged Mulloway recaptured off Port MacDonnell last December, which had been tagged in the Glenelg River back in November 2017. The Mulloway showed some pretty impressive growth, going from 59 to 75 cm during its 400 days at liberty. It's likely that the fish moved out into coastal waters to breed for the first time. Since December, a further two Mulloway that were tagged in the Glenelg, have been recaptured off Port MacDonnell.

Dylan Broad (right), with the first tagged Mulloway (#VIC0001) to move from South East SA into the Glenelg River.



In November 2017, not long after the project kicked off, Ray Bertram tagged an 86 cm Mulloway from the Barwon River. It was recaptured by Craig Johnson (left) on the 30th December 2018, north of the Tea-tree Crossing along the Coorong in South East SA. Unfortunately Craig did not see the tag in the fish until the next morning.

In the 399 days the fish was at liberty, it grew 8 cm and covered at least 700 km of coastline! It is likely that the fish migrated to the Coorong to breed, perhaps for the first time, this spring-summer. This significant recapture supports results from our genetics work, which show that Victorian Mulloway (as far east as Western Port Bay) are part of the same sub-population as Mulloway in South East SA. It also suggests that Victorian Mulloway stocks may be somewhat dependent on recruitment from interstate waters along the Coorong.



Mulloway #VIC0023, travelled 700 km from the Barwon River to the Coorong in SA, during its 399 days at liberty.

Please tell your friends to look out for yellow tags!

If you are fortunate enough to catch a tagged mulloway, please record the tag number and total length of the fish and get in touch with us at Nature Glenelg Trust either by phone (0448 139 690) or email (mullowaytag@ngt.org.au). The tags are yellow, approximately 10 cm in length and should be located along the top of the body, just below the fourth dorsal spine.

Once again, thanks to all anglers that have got on-board with this tagging project. If you have any comments or questions, feel free to get in contact with Lauren Brown at the Trust – see below.

Contacts

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<https://www.facebook.com/groups/MullowayTaggersVictoria/>

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Little Evie was very excited to catch this Mulloway while out fishing with her father Jamie Coates- one our taggers.



Brad Spiden releasing one of his tagged Mulloway.



Bodhi Pannenburg travelled to the far west coast of SA last year and caught some nice fish. These Mulloway are part of a different genetic subpopulation than those in Victoria and South East SA.