THE MAGAZINE OF VICTORIA'S PEAK RECREATIONAL FISHING BODY WINTER 2017

fishing lines

Representing Victorian Recreational Fishers

VRFISH

In this issue...

INVESTING IN FISH FOR THE FUTURE

Mitta Mitta rehabilitation

Marine monitoring

Magnificent Mitchell River

Citizen Science

Living shellfish reefs

Follow us on...

facebook.com/vrfish twitter.com/vr_fish instagram.com/ vrfish/

Recreational Fishing Code of Conduct

Representing Victorian Recreational Fishers

VRFish has developed this Code of Conduct for recreational boat, shore, river, stream and jetty fishers in Victoria.

Recreational fishers have a responsibility to look after fisheries resources for the benefit of the environment and future generations of fishers. Recreational fishers should also show respect for other users of the aquatic environment. This Code of Conduct provides guidelines to minimise conflicts on the water, and should be adopted by all recreational fishers.

1 Awareness of and compliance with fishing regulations

2 Always seek permission when entering private property

3 Respect the rights of other anglers and users

4 Use established access roads and tracks

5 Protect the environment

6 Attend to your fishing gear and value your catch

7 Carefully return undersized, protected or unwanted catch back to the water

8 Education - pass on your knowledge

9 Fish species and other organisms must not be relocated/ transferred into other water bodies

10 Respect indigenous sites and values

For a full version of the Code of Conduct, please go to:
www.vrfish.com.au/Corporate_Documents

Savages Wharf PO Box 538 Williamstown VIC 3016

T 03 9397 6318
E info@vrfish.com.au
W www.vrfish.com.au
facebook.com/vrfish twitter.com/vr_fish

WINTER 2017

fishing*lines*

CONTENTS

Message from the Executive Officer	4
Message from the Chief Executive Officer	5
INVESTING IN FISH FOR THE FUTURE FEATURE	
Our licensing system - a five star model!	6
Putting life back into the Mitchell River	8
Monitoring marine fisheries – what's the catch?	10
The Mitta Mitta Rehabilitation Project	12
How to quantify the things you love?	15
Fishing for diversity ... a multicultural tale	16
Strategic Plan 2016 – 2021	18
Bringing a desert ... back to life	20
Wild Trout Fisheries Management Program	24
Citizen Science continues to capture important insights into Victoria's mulloway	26
What is Fishcare?	28
The King of Kings	30
King George whiting	31
Increasing released snapper survival	32
Fishing in Victoria – VRFish Member Directory	34

Representing Victorian Recreational Fishers

VRFISH

Savages Wharf
PO Box 538 Williamstown VIC 3016
Ph: 03 9397 6318
Email: info@vrfish.com.au
Web: www.vrfish.com.au

FISHING LINES

Published by VRFish
Victorian Recreational Fishing Peak Body

Chair: Rob Loats
CEO: Michael Burgess
Senior Programs & Partnership Manager: Michelle Wenner

Fishing Lines Editors:
Katie Fisher & Michelle Wenner

ADVERTISING

Ph: 03 9397 6318
Email: info@vrfish.com.au

Design: Grant Nelson Design

Message from the Chair

Welcome to the Winter 2017 edition of *Fishing Lines*.

The theme of this edition provides a great insight into the value of dispersing recreational fishers licence fees for the enhancement and management of recreational fishing.

Past history will identify when the introduction of the all waters fishing licence was implemented (Freshwater and Marine) there was a very positive management arrangement enshrined in the Fisheries Act that noted the funds received from recreational fishing licence (RFL) fees would be placed in a trust fund and distributed by a grant process for recreational fishing outcomes.

Other positive management included, funding a recreational fishing Peak Body, several fisheries compliance officers and the administration of an annual grants process.

The original Grant Committee was known as the Fisheries Allocation Committee (FRAC) and consisted of two representatives from Fisheries Victoria, two representatives from the Fisheries Co-Management Council and two representatives for the identified Fishing Peak Body, VRFish.

... you currently have a great opportunity to identify a project in your area that you believe will provide great fishing opportunities. If you believe your idea warrant's other agency or scientific input to achieve the desired outcomes, please approach your local Management Agency, Council, Catchment Management Authority, Water Authority and/or Fisheries Victoria, and promote your idea.

Following a review of the Fisheries Co-Management Council and recognition that it was no longer required, the grant assessment groups name was changed. Currently it is now recognised as the "Recreational Fishing Licence Working Group" with eight members and a chairman.

Of great importance to recreational fishers is the original concept has been retained. All RFL fees continue to be dispersed for recreational fishing outcomes by an annual grant process. The appointed Government Minister of the day responsible for Fisheries receives recommendations from the RFL Working Group and, following considerations, announces the successful grant recipients.

Currently there is a three tiered structure of the grants program where small grants are available year round. Commissioning Grants and Large Grants are called for every year and assessed following a defined application period.

Within the content of this edition of *Fishing Lines* there are many project articles that clearly identify the many benefits received from RFL fees being allocated towards recreational fishing outcomes.

Of particular importance to the wider recreational fishing organisations is you currently have a great opportunity to identify a project in your area that you believe will provide great fishing opportunities.

If you believe your idea warrant's other agency or scientific input to achieve the desired outcomes, please approach your local Management Agency, Council, Catchment Management Authority, Water Authority and/or Fisheries Victoria, and promote your idea. These Authorities and Agencies usually have the skills needed to submit grant applications and enhance the possibilities of achieving success.

In an ideal situation it would be great if a dedicated Project Officer could be appointed to consult with fishers across Victoria and develop suitable grant applications. I can only suggest VRFish has many links to fishers and fishing organisations and would be an appropriate, cost effective organisation to have a dedicated funded Project Officer as a team member.

Please take the time to read this valuable addition of Fishing Lines and note many of the successful outcomes contributed by those who have promoted and received many valuable grant applications that continue to lead to better fishing opportunities and enjoyment of our greatest pastime, recreational fishing.

Rob Loats
Chair
VRFish

Message from the Executive Officer

In this edition of *Fishing Lines*, we are excited to showcase the diverse and invaluable recreational fishing projects and initiatives that are being delivered in Victoria.

The articles have been selected to give you an idea about the wide array of work that is being implemented to improve recreational fishing. We hope to stimulate new and fresh ideas for future projects as you delve deeper into the magazine.

There really is a great deal happening across all corners of the State including research, improving access, enhancing fish habitat, growing fish stocks, better management and education. We apologise we could not literally fit all the good work into one issue!

Importantly, these projects have or are being funded by your recreational fishing licence fees through the Recreational Fishing Licence Trust. Every time you purchase a fishing licence, a percentage of your money has been directed to these projects. Without these funds, what you see in this edition would not have been possible.

Furthermore, recreational fishers are contributing more than just their licence fees. In actual fact, fishers are investing their ideas, time, passion, data and sometimes extra funds to enable these projects to come to fruition and make a significant contribution back to their pastime they love.

As a peak body we are an advocate for recreational fishing, not a lobby group or one that deals on single issues. This means VRFish operates through official processes and in partnership with fishery managers and policy makers to get the best outcome for you and fishing more generally.

While this edition of *Fishing Lines* is all about some fantastic recreational fishing projects, the underlying message is demonstrating what can be achieved when people work together.

As the new Executive Officer for the peak body for recreational fishing in Victoria I am extremely heartened with the progress towards co-management of our fishery here in Victoria – that it, recreational fishers working in partnership with Government, industry, researchers and community to deliver better outcomes and enhance our fishery into the future.

For all of us to continue improving and looking after our fishery it relies on everyone working together in partnership. This can be easier said than done, but what I am seeing on the ground in Victoria is that strong and effective partnerships are being formed for the greater good of achieving common goals and differences are being put aside.

For example, we have Catchment Management Authorities working with trout and native freshwater fishers to improve riparian and in-stream habitat, conservation organisations working with fishers to restore living shellfish reef, researcher collaborating with fishers to collect research data on our favourite species. Without this mature mind-set and trust as outlined above, the stark reality is it's difficult to get anything meaningful achieved, time is wasted going around in circles and innovative opportunities are missed.

In a similar vein, VRFish sometimes receives unfair criticism for always agreeing with Government. In actual fact, we often have robust discussions and debates as we respond to a plethora of issues and put forward the important interests of Victorian recreational fishers. As a peak body we are an advocate for recreational fishing, not a lobby group or one that deals on single issues. This means VRFish operates through official processes and in partnership with fishery managers and policy makers to get the best outcome for you and fishing more generally. Operating this way enables us to make significantly more progress.

Michael Burgess began in the role of Executive Officer in February this year. He has extensive fisheries experience, working with the Department of Fisheries in Western Australia for 12 years, was an elected Director of Recfishwest for 2 years and was the State Coordinator for Fishcare Victoria. Michael has loved fishing from an early age and is embarking on immersing himself 'one cast at a time' in the amazing fishing opportunities Victoria has to offer.

VRFish also has a very small operational staff of just two, with a network of volunteer members and fishing clubs providing most of the 'heavy lifting'. Again, this is performed in partnership, with VRFish staff and Board members operating at the strategic level and our members, clubs and fishers operating at the grassroots level. Together with a unified effort at both ends of the spectrum we are able to be effective and deliver outcomes. We know there is more we can be doing in the space and it simply comes downs to resources.

When I started in the role of Executive Officer at VRFish, 'people' was the answer to my question when I asked myself 'Who is VRFish?' Sure, we are focused on fish, but we as an organisation are all about people – people who love going fishing.

This means the needs and aspirations of passionate Victorian fishers must be at the forefront of everything we do. We must also acknowledge the recreational fishing sector is changing and evolving at a rapid rate. As your peak body, we need keep in step and evolve. Keeping you more informed with what is happing in your sector and how you can get involved is also fundamental to our success.

Please enjoy *Fishing Lines* and congratulations to everyone investing their time and efforts to improve our fishing future.

Michael Burgess
Executive Officer
VRFish

Our licensing system

BY MARC AINSWORTH
Fisheries Victoria, DEDJTR

We're pretty lucky in Victoria when it comes to recreational fishing and the way it's licensed.

Why? Because all money received from the sale of fishing licences goes into a dedicated Trust Account, not consolidated revenue.

That's very rare in government and a credit to anglers and fisheries managers who worked with government back in 1999 to introduce the 'All-Waters' licence.

more than $90 million
raised from the sale of fishing licences in Victoria since 1999.

326 projects
funded through the Large Grants Program.

300+ projects
funded through the Small Grants Program.

1.5 million spent
on artificial reefs in Port Phillip and off Torquay.

$1.1 million for Fishcare clinics over 5 years
to deliver hundreds of educational fishing clinics across the state.

A Trust Account means that millions of dollars are available to fund worthwhile projects every year. Not just any projects, but ones that improve fishing opportunities: in saltwater and in fresh, along the coast and in our inland rivers and lakes!

Examples include fishing platforms, fish cleaning tables and stiles over fences for better access to rivers. It's more than just facilities though! Fish habitat improvements are funded too, such as adding snags into rivers or installing recreational fishing reefs like those in Port Phillip and offshore, near Torquay.

Licence fees also pay for fish stocking, lots of it, and help us grow trout and native fish at our Snobs Creek hatchery.

Research and monitoring of our major fisheries and popular species is important too, as is education of children and adults, including those from other cultures who are less familiar with our ways.

Last but not least, licence fees fund extra Fisheries Officers - 13 positions right across the state.

Attracting great project ideas

Funding the right projects is important if we're to retain angler support for the Victorian licensing model.

To that end, once a year, the Large Grants Program is opened for several months. The aim is to attract funding bids for great projects that really make a difference to grass-roots anglers.

Fishing clubs apply, as do local and state government agencies, which are in a great position to deliver on the wishes of anglers in their patch. For example, catchment management authorities adding boulders to scour deep pools for river trout.

There's also a Small Grants Program for projects worth up to $5,000. It's open year-round, so is more responsive to anglers' needs. Lots of 'come and try' fishing days, run by clubs, are funded this way. They encourage newcomers to try fishing for the first time in a supportive environment and with the help of local experts.

Angler input

A Working Group helps determine the best projects to fund and it consists of anglers. The Group makes recommendations to the Minister and ensures alignment between anglers' wishes and those controlling the purse strings!

a five star model!

Above: Torquay reef structures.

Inset: A new stile on the southeast shore of Newlyn Reservoir.

Below: Yambuk Lake fishing platform.

Target One Million

Complementing dozens of licence funded projects underway at any one time in Victoria is the State Government's *Target One Million* plan to get more people fishing, more often. One million anglers by 2020 is the aim.

The key message here is that *Target One Million* brought new money to the 'fishing improvements' table. Tens of millions of dollars to build on licence-funded projects and do even more to make fishing even better.

More fish stocking, more facilities, new fisheries and most significantly of all, an end to commercial net fishing in Port Phillip by 2022. That'll mean more fish for families wetting a line and plenty of smiles from newcomers to the pastime who catch their first fish on the doorstep of Melbourne!

Thanks to fishing licence fees, we now have much better fishing in Victoria than we did in the 1970s and 1980s. More snapper, more whiting, family friendly trout lakes and fish stocking in rivers. Plus a huge recovery of Murray cod and golden perch, with Macquarie perch and trout cod bouncing back too.

Your licence fees mean kids growing-up today have more places to fish, and more fish to catch, than any time in the last 50 years. That's money well spent!

Learn more at www.vic.gov.au/targetonemillion

Want to know more? Visit www.vic.gov.au/licencefeesatwork

Putting *life* back into the Mitchell River

The magnificent Mitchell River of East Gippsland was listed as a Heritage River in 1992. It is the largest river without a dam in southeast Australia and, provides the Gippsland Lakes with 35 per cent of its freshwater inflows. These inflows are vital to the health of the fishery and to the internationally listed wetlands of the Lakes.

Its major tributaries include the, Wonnangatta, Wongungurra, Dargo and Wentworth Rivers, which drain Victoria's Southern Alps of the Great Dividing Range.

BY ROB CAUNE

Above: East Gippsland Catchment Authority preparing to install fish habitat log on the Mitchell River.

The river has a long estuary reach that starts upstream of Bairnsdale. Where it enters the Gippsland Lakes, the river has formed long finger like peninsulas that extend kilometres into the Lakes. These are known as the Silt Jetties. Reputably, one of the longest 'finger-delta' structures in the world.

In the last 100 years, the fishery and ecology of the Gippsland Lakes, as well as its river systems, have been enormously challenged by human development. The fishery was once unbelievably abundant.. The estuary and freshwater reaches of the Mitchell River once teemed with Gippsland perch which was how, at the time, the Australian bass and estuary perch were collectively named.

The overwhelming observation during the first half of the last century, from fisheries inspectors and anglers alike, was that the freshwater Gippsland perch, now described as Australian bass, were no longer breeding.

So great was the local affection for the species that their alarming decline sparked significant outcry. Fisheries Victoria responded by requesting local angling clubs provide brood stock for a proposed breeding program. The first of these requests was made as early as 1911. These early captive breeding programs, however, were all unsuccessful.

Australian bass were subsequently listed as 'rare' by the Victorian Government and became largely unfamiliar to many Victorian fishers.

It was only early this century when Fisheries Victoria was able to source a reliable supply of Australian bass to stock East Gippsland Rivers. Financed entirely by revenue obtained through the sale of recreational fishing licences, the first restocking of the Mitchell River occurred in 2010.

I was contacted early last year by a friend who operates a walnut farm on the Wonnangatta River; an arm of the Mitchell River. An important part of his business plan is renting out his old homestead to recreational anglers. He was concerned, however, that a 'new' type of fish was living in his favourite swimming hole on his section of the river. He knew that they were not trout, as water temperatures at that time of the year were too warm. Trout are normally only present during the colder months.

To cut a long story short, a subsequent lure casting session revealed that these 'new' fish were 18-20 centimetre long Australian bass, and were in great condition as well as large in numbers. Earlier this year, Fisheries' surveys of this part of the Mitchell catchment confirmed that large numbers of juvenile Australian bass were now present.

When recreational anglers buy a Victorian Recreational Fishing Licence they become a part of these great river restoration stories, *such as the one that is currently unfolding on the Mitchell River.*

A new era had begun for the Mitchell River that only passed generations would have experienced.

The launch of the *Target One Million* Plan initiative by the Victorian Labour Government, which aims to get one million Victorians recreationally fishing, is now further underpinning the revival of the Mitchell River fishery. Headed by Craig Ingram, further bass stocking of the Mitchell River catchment is now planned. The *Target One Million* funding, together with money provided by recreational anglers through their licence fees, will further consolidate the Australian bass's return to this catchment.

The Mitchell River fishing economy could be described as having two significant sectors that currently attract visitations from recreational anglers. The most significant sector is the estuary section, which provides the famous black bream, estuary perch, mullet, and other estuarine species. The second sector is the alpine area that has a trout fishery. The reintroduction of Australian bass will economically reenergize the long middle section of the river system which currently has no viable fishery to attract visitations from anglers. The historic record shows that it was this section of the river, when bass were abundant, that local anglers greatly coveted.

During the next couple of years, as the first of these stocked bass become legal size, Gippslanders and all Victorians will be able to renew the relationship that their great, great, grandparents once enjoyed with Australian river bass.

The ideal circumstances for the Mitchell River would be to restore the ecological services of the catchment to enable the Australian bass to naturally breed. This idea is shared by recreational fishers as well as the broader community. However, the cost of doing so and the economic dislocation it could cause is enormous. It would involve shutting down ports, abandoning current flood mitigation schemes, and profoundly changing the local agriculture industry. There appears to be little political appetite to undertake such a large economic reorganization.

However, recreational anglers, through their licence fees, are willing to pay for a breeding and stocking program to restore the Mitchell River's Australian bass population and, therefore, create a bass fishery for this important river. A key component of this strategy is to bring people back to the river and to allow them to be exposed to the magic of river bass fishing. If people enjoy and value something, then there is a greater likelihood that the river will be valued and cared for into the future.

Recreational anglers' involvement in restoring the ecological values in the Mitchell River also includes other dimensions. Over the past ten years', significant amounts of recreational licence fee money has been made available to the East Gippsland Catchment Management Authority to install woody habitat into the river.

The Mitchell River, like many other rivers, was systematically de-snagged to improve its navigability for water craft, which was of great detriment to fish habitat.

Woody habitat is an extremely important element in maintaining fish stocks in all river environments. With increased turbidity and nutrient runoff challenging aquatic vegetation, restoring the amount of woody habitat in the river system has never been more important than now. Woody habitat, like aquatic vegetation, increases the underwater surface area available for micro invertebrates to grow upon, thereby increasing the river's food supply.

The recreational angler contribution to the Victorian economy is significant. Recent studies have indicated that it provides $2.3 billion in direct expenditure and 5,200 jobs. Revenue from taxes and licence fees that come from the recreational fishing economy has financed the restoration of many fish species and their environments. In many ways the *Target One Million* initiative, if successful, will increase the amount of financial resourcing and human commitment coming to the aid of fishes and the environment.

When recreational anglers buy a Victorian Recreational Fishing Licence they become a part of these great river restoration stories, such as the one that is currently unfolding on the Mitchell River. These are great achievements that recreational fishing licence holders are entitled to hear, be proud of, and have the Victorian community recognise.

Large female bass captured by East Gippsland recreational anglers for the Victorian bass breeding program.

Monitoring marine fisheries – what's the catch?

BY SIMON CONRON
Leading Scientist, Fisheries Victoria

Melbourne's population is growing fast. The number of new residents annually moving into the big smoke would fill the MCG, or alternately, Port Phillip Bay and the Western Port fringe of Melbourne combined, so it's no great surprise that these two recreational fisheries are our largest in terms of participation and catches.

Like the population of Melbourne, the number of anglers is also growing, which is the aim of the State Government's *Target One Million* Plan - grow participation to one million anglers by 2020. So how will Fisheries Victoria monitor and maintain the health of fish stocks in the future to ensure recreational fishing remains sustainable and enjoyable?

New data sources

For more than 100 years, commercial fishing was undertaken in most Victorian bays and inlets. It provided catch statistics to track the sustainability of fish stocks. However, with the phasing-out of commercial netting in many Gippsland estuaries, Western Port and, most recently, Port Phillip Bay, fisheries managers could no longer rely on commercial catch information as an indicator of what was happening with stocks. A new way of collecting information about stocks was needed. The answer was angler-based monitoring programs, which were developed in the late 1990s and have been running ever since.

For the last 20 years, recreational fishery monitoring and assessment approaches using creel surveys have been undertaken for Victoria's three largest recreational fisheries: Port Phillip Bay; Western Port and; the Gippsland Lakes. All boast populations of popular species such as, snapper, King George whiting, sand flathead and black bream.

The Creel Survey Program involves Fisheries staff counting and interviewing anglers at boat ramps and shoreline access points to record catch and effort (time spent fishing), social and opinion information. The outcome? A reliable set of information to monitor trends over time and help assess our key fisheries.

Measures include:

- Catch rate trends of key fish stocks over several years to indicate fish abundance and the sustainability of fishing;
- Fishing pressure and boat trailer counts;
- The level of angler satisfaction; and
- Effectiveness of bag and size limits based on catch and release rates and fish size data.

Smaller fisheries such as black bream, estuary perch, mulloway and dusky flathead in regional rivers and inlets are assessed using catch data provided by volunteer anglers participating in the Citizen Science Diary Program, along with local knowledge.

Western Port

Since netting Western Port was stopped in 2003, Fisheries Victoria has relied on the creel survey results to monitor the status of fish stocks.

Information provided by more than 12,000 surveys, with anglers at Western Port boat ramps, show King George whiting stocks and the recreational fishery are in great shape. Catch rates are above the long-term average in nine of the last 13 years!

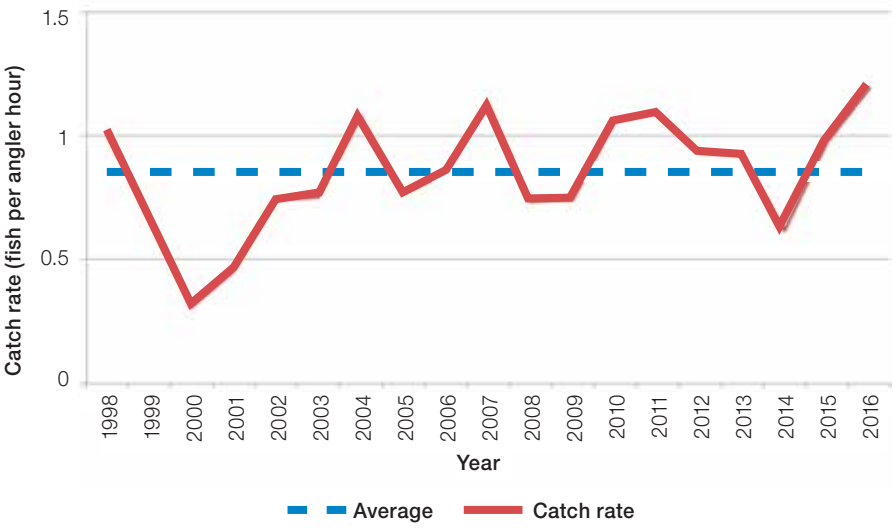
When fishers were asked to rate their satisfaction level with fishing in Western Port, during last year, about 90 per cent said they were 'very' or 'quite' satisfied.

These survey results show the fishery is ticking all the boxes for both anglers and Fisheries Victoria. A 90 per cent satisfaction rate and heathy fish stocks are great reasons for more Victorians to go fishing!

Later this year, results from the Port Phillip Bay creel survey and the Gippsland Lakes will also be reported as part of this project, which has been funded by recreational fishing licence fees.

Catches by dedicated angler diarists also help inform fisheries managers about trends in the composition of fish stocks.

The trend in King George whiting catch rates by anglers fishing in Western Port from 1998 to 2016.



King George whiting.

Top 5 species caught and kept by anglers in Western Port 2014-2017.

King George whiting	60%	Snapper	12%
Flathead	7%	Calamari	5%
Garfish	4%	Gummy shark	2%

Levels of angler satisfaction in Western Port 2014-2017.

Level of Satisfaction	Percentage
Very Satisfied	33
Quite Satisfied	55
Not very Satisfied	10
Not at all Satisfied	2

The *Mitta Mitta* Rehabilitation

BY MICHAEL BROUGHTON Project Officer, North East Catchment Management Authority

The Mitta Mitta River in northeast Victoria flows through Dartmouth, Mitta Mitta and Eskdale. There are two large storages located on the river; Lake Dartmouth and, Lake Hume. Both are known as great recreational fishing waters.

The Mitta Mitta River is known for fish species including, trout in the upper reaches and, cod in the lower. The Mitta is a highly regulated system with flows generally held back during winter and then, during the demand season for irrigation and power generation, the river can run quite high for several months. These unnatural flow regimes can make it hard for our native fish to survive so adding habitat to this system is highly beneficial.

The North East Catchment Management Authority (CMA) has a long running program along the Mitta Mitta River, working in conjunction with the Murray Darling Basin Authority (MDBA) and Goulburn Murray Water (GMW), to maintain bed and bank health.

The Mitta Mitta Rehabilitation Program involves discussions with landholders and other users of the Mitta. These stakeholders have supported works to promote the health of the Mitta, along with attempting to see more habitat placed back into the river to improve the native fish population.

In stream woody habitat, plays a vital role in a range of ecological functions for native fish, including habitat, spawning sites, refuge from predators and connecting home ranges for migrating species. Increasing the amount of woody debris in the system is recognised as a priority by key stakeholders and the community.

Several studies were undertaken, by both the North East CMA, MDBA and the Arthur Rylah Institute, to monitor and study the impacts of the Dartmouth Dam on the Mitta Mitta River. These studies included, investigation of cold water releases from Lake Dartmouth, channel change, instream habitat and, fish numbers. Investigations also have been undertaken through electro-fishing and tagging of native fish to monitor their movement along the river as well as, a 2015 “snag” census of the lower reaches which showed

habitat in this part of the river to be severely depleted.

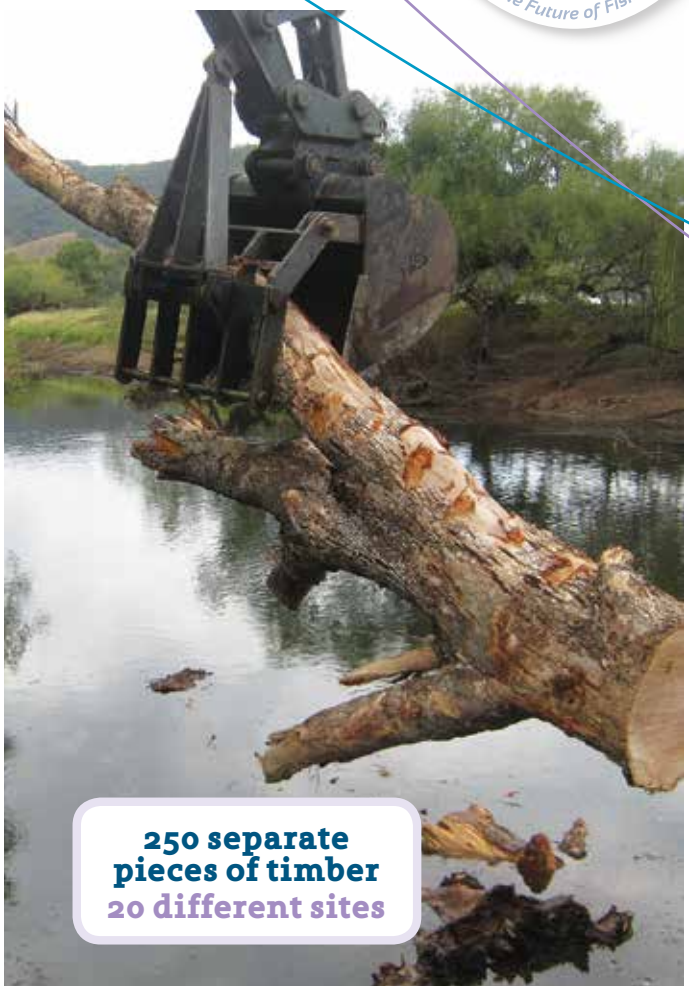
These studies, along with meetings held with landholders and local fishing clubs, continue to inform the direction of future works along the Mitta Mitta River.

With the support of the MDBA and GMW, the North East CMA successfully applied for the Recreational Fishing Grants Program in 2014, where a three-year project was funded to implement instream fish habitat works starting in 2015. The project will work from Eskdale down-stream to the high-water mark of Lake Hume. The project also aims to increase instream habitat within the Mitta River to maximize survival rates and to provide spawning opportunities for native species in the system, in particular cod, with follow-up monitoring to evaluate the effectiveness of the installed habitat.

Finding the right type and size of timber was difficult. *Over the years fallen timber along the river flats has been used either for fence posts or firewood, and what is left is generally important habitat best left on the ground.*

A meeting was held with the local fishing group and interested landholders to create a small committee and to select sites for the project. Local knowledge, combined with Arthur Rylah Institute's depth and habitat load maps, was used to pinpoint the areas that would benefit most from adding habitat.

The project committee identified sites where timber was already in place but with gaps that could be filled to create large sections of timbered water. It also placed timber in areas totally devoid of habitat to provide comparison sites which would obtain a better



Project

With the support of the MDBA and GMW, the North East CMA successfully applied for the Recreational Fishing Grants Program in 2014, a three-year program funded to implement instream fish habitat works starting in 2015.

picture of how the fish moved through the system and, to improve fishing in the areas without current habitat available to hold fish.

Finding the right type and size of timber was difficult. Over the years fallen timber along the river flats has been used either for fence posts or firewood, and what is left is generally important habitat best left on the ground.

When sourcing, we needed to be mindful of not taking timber in certain areas along the Mitta Mitta River where the threatened native Booroolong tree frog habited. Fortunately, through word of mouth, members of the fishing clubs and good publicity on the radio, we sourced timber from many areas. Timber was sourced from; a cleared part of a new housing estate, six semi loads from a large centre pivot at a Lucerne farm, from a supplier in NSW, a Pine plantation and, even the local council helped the program. We found that social media was a great way of engaging with the community and to ask for ideas or help, and had great feedback using Facebook and Twitter.

Once sites were identified and timber sourced, the works began. The North East CMA combined the habitat project with the Channel Capacity Program on the river with MDBA and GMW. This helped to minimize costs associated with heavy machinery. We found that the

Continued...

Zeb Tonkin with a fish caught where the semi loads of timber were placed.

The *Mitta Mitta* Rehabilitation Project

addition of fence and re-vegetation at these sites complemented the in-stream habitat works by adding value and increased awareness of both projects! This helped save some money that could then be used for more timber or more sites and, for more fish.

During the project more than 250 separate pieces of timber were placed into the river to create extra areas of habitat for our native fish at more than 20 different sites. We developed signage to let people know what we were doing and, to help deliver the message, to the community, that these grants were funded by the Victorian Government through revenue raised from fishing licenses.

As part of site planning and preparation it was also necessary to be mindful of any possible impacts these habitat loads may have on bed or bank erosion along with impacts to flows. Thankfully there has been a lot of study done to investigate these concerns and, if placed and secured correctly, it has been demonstrated that reinstating timber has great benefits to waterway health. Benefits include, helping move sediments through the system by creating roughage in the bed of the waterway or, simply by creating a new home for macro-invertebrates which in turn is a food source for fish and other animals in the water.

Most importantly, the placement of timber involved work to 'pin' in place smaller timber or 'link' it in with larger, heavier timber that would ensure it doesn't float away and cause issues for assets located further downstream.

In March of this year, Arthur Rylah Institute completed the final monitoring run for the project While the data has yet to be formally collated, all new habitat sites held fish and, as can be seen from the pictures, there was a good spread of large and small cod throughout the sites. Whilst cod were the focus of the monitoring, trout, redfin

Timber was sourced from from multiple sources.

and freshwater crayfish were also found. Currently, I can't give solid data on what or why, but it certainly shows that, "… if you build it, they will come".

In the future, the North East CMA hopes to receive another Recreational Fishing Grant to further monitor these sites and gain a better understanding of how and where to place timber that best satisfies the fish's requirements. While there is some basic knowledge on the science of placing timber, such as the cod like deep slow velocity areas closer to the banks and trout cod like habitat in the middle of the bed of the waterway, we never stop learning nor trying to find better ways to do these types of works.

The landholders and local fishing groups have been extremely supportive of this program and would like to see it continue. The North East CMA is also again keen to be part of the program, therefore, we will work together and make another application that addresses further and future areas of this iconic angling waterway.

Most importantly, the placement of timber involved work to 'pin' in place smaller timber or 'link' it in with larger, heavier timber that would ***ensure it doesn't float away and cause issues for assets located further downstream.***

Pinning in place , lighter timber.

How to *quantify* the things you love?

The Ernst & Young *Economic Study of Recreational Fishing in Victoria*

BY MICHELLE WENNER Senior Programs & Partnership Manager, VRFish

Every once in a while someone comes along in an attempt to put a price tag on something. "How much do you love fishing", they ask? "How much would you pay to spend a day in nature, catching a meal for your family, and hanging out with your mates", they query.

Inevitably, these queries and probing questions are met with a variety of responses ("Rack off" or variations of this being one of the anticipated responses if you are on the enquiring end of the transaction).

Regardless, economists and resource managers are not deterred from asking the question and attempting to put a price on everything from nature (or "ecosystem services", "natural capital" or "assets" as they have become known) to the atmosphere and space. For this, economists are often criticised for knowing the cost of everything but the value of nothing.

However, it is with good reason that these questions are asked. A wise sage of economics once explained to me that if you don't attempt to value something, at least in economic terms, you don't have much hope protecting it when someone tries to take away that very thing or replace it with something else that can be valued or quantified.

The study, undertaken for the period 2013-14, attempts to place a value on something of enormous value to many Victorians ...

This is exactly what the *Economic Study of Recreational Fishing in Victoria*, completed by Ernst & Young and commissioned by VRFish, attempts to do. The study, undertaken for the period 2013-14, attempts to place a value on something of enormous value to many Victorians (838,000 in fact) – being the passion, the pastime and the sport of fishing.

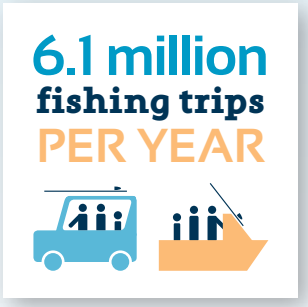
Whilst the report may have received criticism by some, it does navigate some fairly unchartered territory were others dare not venture. In doing so, the report goes towards understanding the economic contribution recreational fishing makes to the Victorian economy and establishing a common methodology for valuing recreational fisheries. The study, in attempting to value recreational fishing in economic terms, also recognises that the value and community benefit of fishing goes well beyond purely counting what fishers catch and other catch-based estimates of value. And whilst estimates of economic contribution don't reveal the true total benefit and value of recreational fishing to each individual nor to the community, they do go a long way in providing an incredibly valuable, one-of-a-kind benchmark which highlights the economic value and significance of the recreational fishing sector to Victoria.

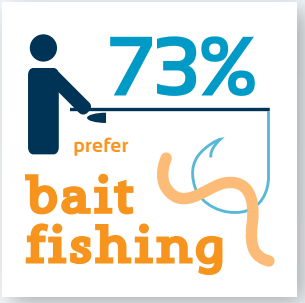
The report and its headline results also highlight the value in investing in recreational fishing, not only in economic terms, but also for the social, health and wellbeing benefits that are experienced by those that go fishing, and are oft quoted, but are hard to quantify.

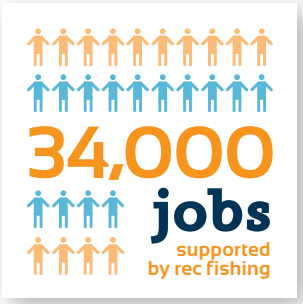
The report outlines the value of fishing and its value to regional economies and communities. Whilst the majority of fishers (73%) reside in Port Phillip Bay, over half of all fishing trips are made in regional areas. Beneficiaries of the report, including Government agencies, water and land managers, researchers and recreational fishing service providers, will no doubt find this and other data on participation and expenditure of great value in future planning and decision-making.

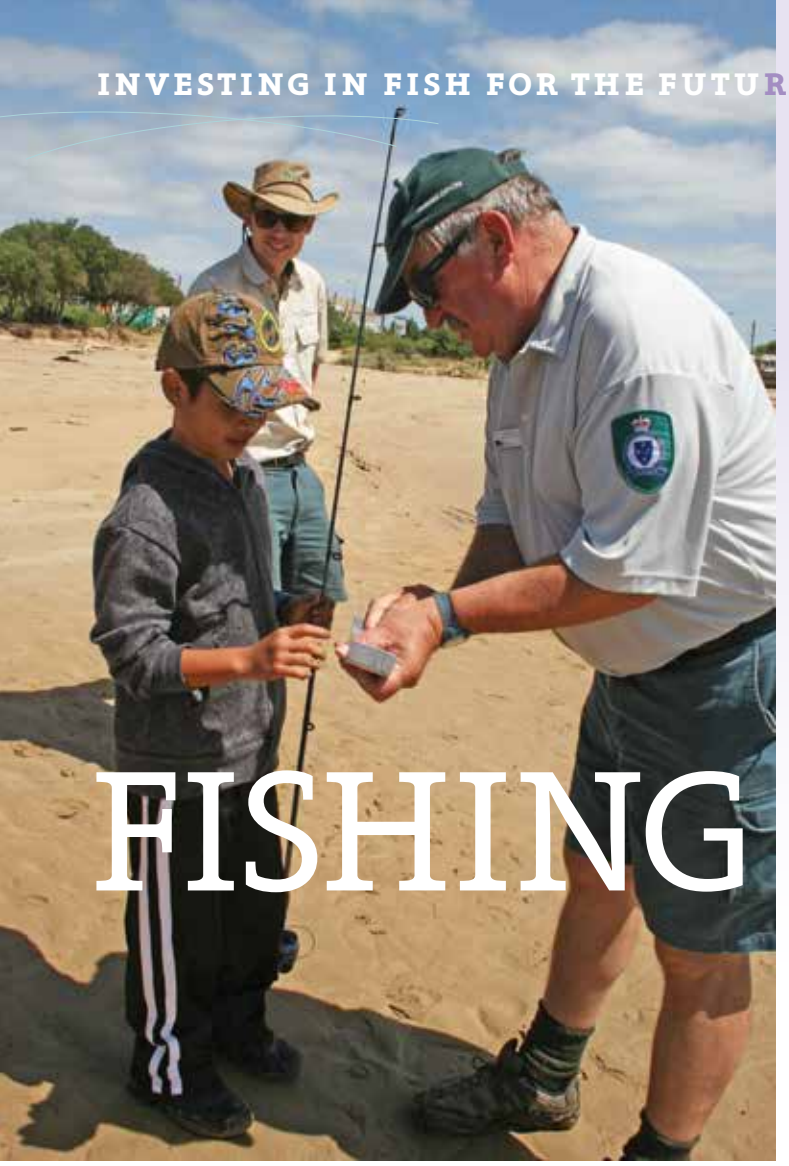
And it is to you, the fisher, that we can say thanks for this wealth of knowledge. It is through your licence fees and through your participation in such studies that valuable data can be collected which can only serve to better protect and enhance the magnificent range of fishing to be experienced in Victoria.

To view the full report, including the complete survey results and methodology, go to the VRFish website: http://www.vrfish.com.au/









FISHING *for diversity*

BY MADDIE GLYNN
Manager, Community Liaison & Education
Barwon Coast

The Barwon Coast Committee of Management is appointed by the Department of Environment, Land, Water and Planning (DEWLP) to manage 13 kilometres of coastal Crown land along the coastal zones of Ocean Grove and Barwon Heads.

The Barwon Coast Committee believes that on-ground works must be supported with engagement programs to maximise greater protection of coastal and marine environments. How does, however, an engagement program on Crown land management link to fisheries?

Through the support of the Victorian Recreational Fishing Grants Program, Barwon Coast conducted educational hands-on activities for newly arrived multicultural communities to the Geelong region to learn about our amazing environments.

The program received funding across a number of years and was delivered in partnership with; Fisheries Victoria, Parks Victoria, Bellarine Police, Ocean Grove Angling Club, Diversitat, and Fishcare Volunteers.

Participants were from a range of communities such as Karen, Karenni, Sudanese, the Congo, Burma, Afghanistan, Iraq, and included family days, men's days, and multicultural youth days.

Newly arrived communities to the region are amongst the highest at risk of danger when visiting the coastline. Many have little, or no, understanding of fishing regulations or safe fishing practices. Most of them were keen anglers in their homeland, but do not understand why fishing regulations exist, or how cool temperate waters affect fish growth rates, nor the dangers our coastlines present.

Many had never felt sand, seen the sea or swam in the ocean before which has the potential to expose them to life threatening situations. Some were so concerned about their fishing line being snagged and, without thought, would walk into the water to retrieve it rather than leaving it to harm wildlife and aquatic life.

The program offered a range of skill sets and knowledge sharing, and included activities on fishing regulations, fish habitats, the importance of 'no take' zones, beach safety, sand dunes and wildlife ecology; leaving participants with simple actions on how to

... a multicultural tale

care for the environment and its resources so it remains for future generations.

Activities included; hands-on fishing along the Barwon estuary, coastal dune awareness walks around the Bluff, exploring the Barwon Estuary Heritage Centre and, rock pool rambles in the Barwon Bluff Marine Sanctuary.

The program was also about social inclusion. For many participants, uniformed personnel were a threat in their home land. Engaging, however, with uniformed members from different organisations, during the program, was a positive way to break down social barriers and provide them with appropriate contacts to seek further information and assistance.

Most of them were keen anglers in their homeland, ***but do not understand why fishing regulations exist, or how cool temperate waters affect fish growth rates, nor the dangers our coastlines present.***

Each session finished off with a BBQ lunch, games and general interactions.

Whilst most of us take our natural environment and freedom for granted, some participants have embraced their new experiences by joining angling clubs and surf lifesaving clubs, or have become a voice for responsible fishing as mentors within their own communities.

Barwon Coast continues to work with multicultural groups through the next phase of environmental programs with members of the Mandarin, Thai and Tagalog communities of Victoria.

For more information contact:
Maddie Glynn
Manager Community Liaison & Education, Barwon Coast
T: 03 5254 11118 M: 0400 931 893

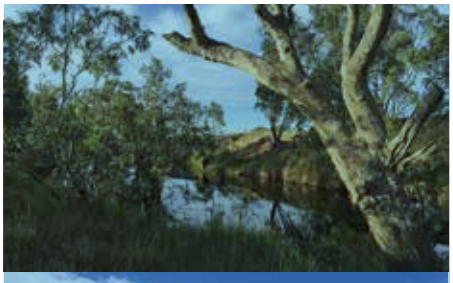
Representing Victorian Recreational Fishers

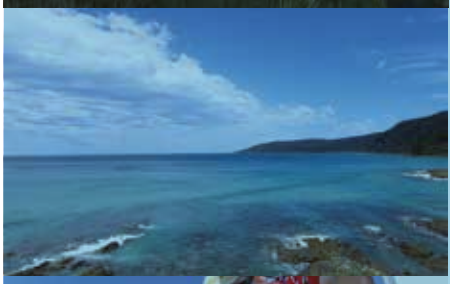
strateg

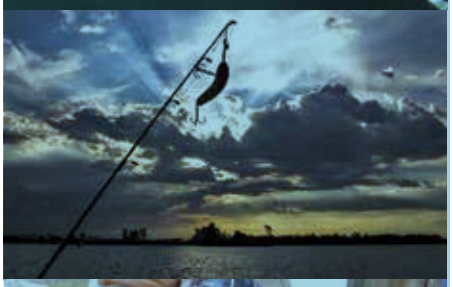
OUR 5-YEAR VISION >

Enjoyable, responsible recreational fishing from abundant fish populations and safe, ongoing ac

OUR PRIORITIES >







IMPROVE FISH HABITAT

- Habitat protection, restoration and enhancement
- Co-management of natural resources
- Secure water allocations for recreational fishing
- Shared benefits for recreational fishing from environmental flows

SAFE, EASY & ONGOING ACCESS

- Maintain and extend access to fisheries
- Improved pier and land-based fishing opportunities
- Better boating infrastructure, governance and investment
- Safer harbours for ocean fishing

gic plan 2016 – 2021

n healthy habitat supporting
ccess to fishing grounds.

OUR GOAL >

Recreational fishing, for everyone, *...forever!*

INCREASE PARTICIPATION & RECOGNITION OF BENEFITS

- > Promote and grow participation amongst non-fishers, especially youth
- > Affordable fishing opportunities
- > Quality fishing experiences and catch rates
- > Improved recognition of social and economic benefits
- > Stronger fishing clubs and associations

BEST PRACTICE FISHERIES MANAGEMENT & INFORMED FISHERS

- > Adoption of responsible fishing practices and behaviours
- > Prioritised fish stocking
- > Science-based and responsible fisheries regulation
- > Greater investment into research, development and extension
- > Legislative recognition of recreational fishing
- > Improved aquatic pest management

ORGANISATIONAL EXCELLENCE, ADVOCACY & PARTNERSHIPS

- > Quality governance and organisational processes
- > Greater accountability to stakeholders
- > Improved recognition and support from recreational fishers
- > Strategic and effective communications and engagement
- > Strong and constructive relationships with Government and stakeholders
- > Well tested and credible policy positions reflecting diverse membership

Bringing a desert ... back to life

BY BOB PEARCE

Commencement of out-placing of shellfish in late April 2017.

"Don't it always seem to go that you don't know what you've got till it's gone?" (Joni Mitchell – "Big Yellow Taxi," 1970) – a fairly apt description of what has happened to our cherished Port Phillip Bay.

It would not, of course, be necessary to be re-building the Bay's lost shellfish reefs if they had not been destroyed in the first place. Whilst there is now a general awareness of our project, it is probably fair to say less is known about what we once had but has been lost due to past over exploitation. This article will provide some background information about the problems we have inherited, how the project commenced and the new shellfish reefs that have been restored.

When you mention the word 'oyster' most people will immediately think about the oysters that you can purchase at the local supermarket or fresh fish outlet. These are mostly Pacific oysters, which are a species introduced into Australia and are endemic to Japan. It is a sad fact that the majority of people are not aware of the fact that we have a native oyster species that grow right here in our own Port Phillip Bay. Our native oysters have been known as 'mud oysters' or 'flat oysters' but have the scientific name of *Ostrea Angas*i.

When you mention the word 'oyster' most people will immediately think about the oysters that you can purchase at the local supermarket or fresh fish outlet. These are mostly Pacific Oysters, which are a species introduced into Australia and are endemic to Japan. It is a sad fact that the majority of people are not aware of the fact that we have a native oyster species that grows right here in our own Port Phillip Bay. Our native oysters have been known as 'mud oysters' or 'flat oysters' but have the scientific name of *Ostrea Angasi.*

Pacific oysters were first introduced into southeastern and western Australian waters for aquaculture in the 1940s and, as is often the case with introduced species, they have proven to be fairly hardy with the ability to out compete native shellfish.

By the 1980s they had found their way into New South Wales (NSW) waters, where they spread and invaded the intertidal habitats of many coastal waterways. There, they are generally regarded as a pest species and have caused significant problems for oyster farmers who culture native Sydney Rock oysters (*Saccostrea glomerata*). As the two species live and spawn in the same locations, Pacific oysters can settle on and smother farmed Sydney Rock oysters.

...and the fish love it!

This article has not been written to demonise Pacific Oysters, but more to promote the profile of our own native species and the many benefits that will result if we can re-establish them in Port Phillip Bay, where they once existed in great numbers.

In so doing, a multitude of benefits will be achieved. Just as there was once a dense population of oyster reefs spread throughout the bay, so too there were beds of mussels and these mussel beds have also been depleted by over exploitation.

While this article does not want to demonise Pacific oysters, it does want to ***promote the profile of Australia's own native species and the many benefits that will result*** *if they can be re-established back into Port Phillip Bay - where they once existed in great numbers.*

In the case of our native oysters, the over exploitation seems to have originated in the 19th Century due to an oyster dredge fishery in the bay, where oyster shells were harvested for both consumption and lime production. In fact, it is probable that by the late 1800s, flat oyster fisheries in Victoria and other states were largely fished out. The heavy fishing pressure by oyster dredgers in colonial times lead to the first Fisheries Bill to protect oyster populations. But it seemed to have been a case of too little, too late.

Also, in the 1960s a dredge fishery for scallops commenced and after a number of years of excessive exploitation, scallop beds became seriously depleted. In northern Port Phillip Bay, dredging activities then turned to shallow water shellfish reefs which were still

Minister for Agriculture, Jaala Pulford, with (left) Pat Hutchinson (Albert Park Yachting and Angling Club and (right) Rich Gilmore (The Nature Conservancy) at the announcement of the $147,000 Grant approval to expand the shellfish reef sites.

fairly intact until the early 1980s. Around this time, I recall witnessing some of the carnage that occurred, where I saw some very large boats fill hundreds of sacks with mussels and oysters. They did this on a regular basis, but no-one seemed to care much at the time, even though this destructive fishing method would ultimately decimate marine habitat in a way that it has never been able to recover. Eventually, dredge fishing was banned and there has been some recovery of scallop beds, but the damage to oyster and mussel reefs was so severe they have not been able to re-establish themselves naturally.

In my case, I was fortunate to have been born in Albert Park and lived right on Beaconsfield Parade, just across the road from the beach and, from an early age, developed an affinity with the beach, the salt water and all of the things that went with it. Mussels were extremely prolific and easy to access from the local jetties. After a storm, millions of mussels and oysters were washed off the (then prolific) reefs, so a feed of fresh oysters was easily collected from the shallow water.

Continued...

Bringing a desert ... back to life

Albert Park Yachting and Angling Club (APYAC) was established in 1909, so there is a lot of knowledge within the Club of what we once had in northern Port Phillip Bay, but has been lost. APYAC has a strong history of supporting the local community, so when we had a discussion about the lost shellfish reefs at one of our Club meeting nights, it was hardly surprising that a decision was taken to approach Fisheries Victoria to see if there was some way that we could work together to do something about the problem.

It was pleasing to receive a prompt positive response and, thanks to the personal support for the project from Fisheries Victoria's Senior Manager, Anthony Forster, the project was able to get off to a great start. It should not be overlooked that, this was the first project of its type in Australia and we have led the way for other states to follow.

In placing native oysters and mussels on the two sites, it is just like building a block of apartments for a myriad of marine creatures and, thereby, ***achieving a massive increase in marine bio diversity.***

Photo: Museum Victoria: https://collections.museumvictoria.com.au/species/8638

Native flat oyster (Ostrea Angasi)

A lot of what has happened to get us to where we are with the project is now water under the bridge, but there have been a number of developments and milestones reached along the way, some examples being:

- We have been fortunate to have the initial and ongoing support from both Anthony Forster and Dr Paul Hamer (PIR Vic), without whom, we might not have progressed as far as we have with the project.
- The ability of the Victorian Shellfish Hatchery in Queenscliff, to produce oyster spat, without which we would not have been able to initiate the project.
- The involvement of The Nature Conservancy (TNC) in the project. TNC is a truly great organisation which has supported the project in terms of technical know-how, the services of highly skilled staff and a substantial financial contribution to the project ($200,000 plus significant "in Kind" contribution).
- A substantial government financial contribution from The Recreational Fishing Initiative funds ($120,000).
- APYAC's successful funding application to the Recreational Fishing Licence Trust Account ($147,000). This successful grant application was announced by the Minister for Agriculture, Jaala Pulford, on the 12th February.
- A direct financial contribution to the project by APYAC ($40,000 so far).
- Support for the project from some aquaculture farmers.
- Quite a lot of support in terms of volunteer labour from APYAC members and the general community through the Restore The Bay Network.
- Support from restaurants and seafood wholesalers as part of the Shell Recycling Project whereby cured shells are being used as reef substrate and in the hatchery process.
- Greatly appreciated support from VRFish throughout the course of the project.

The project is being managed by the Foundation Partners being, Fisheries Victoria, TNC and Albert Park Yachting and Angling Club. The University of Melbourne is also playing a vital role with the project.

Currently, the project has moved into the Stage 2 scale-up phase, which has been possible because of the above mentioned $147,000 grant from the Recreational Fishing Licence Trust Account and the $50,000 contribution from TNC, as well as in-kind project coordination and monitoring.

Current phase of the project involves
360 tonnes of limestone
at Margaret's Reef, off St Kilda, and at Wilsons Spit near Geelong
= more than 600 m² in total

Delivering limestone to the site off St Kilda in early April, 2017.

The current phase of the project involves the deployment of 360 tonnes of limestone at Margaret's Reef, off St Kilda in Hobson's Bay, and at Wilsons Spit near Geelong, covering over 600 square meters in total across both reefs. The limestone will provide the foundation for over 300,000 juvenile native Angasi oyster hatchlings that divers will spread evenly over the limestone.

Gabion elevation units have also been deployed surrounding the new reefs to further test oyster growth and survival and help create natural recruitment hotspots. This part of the project is being led by The University of Melbourne.

Victorian Shellfish Hatchery Manager, Michael Shipley, showing scallop shells to which oyster spat will attach while in the tank.

Shellfish are filter feeders and are, therefore, the Bay's natural cleaners.. A single oyster can filter hundreds of litres per day. ***Just imagine what hundreds of thousands of them can do.***

In placing native oysters and mussels on the two sites, it is just like building a block of apartments for a myriad of marine creatures and, thereby, achieving a massive increase in marine bio diversity.

Since the commencement of the project, a variety of fish and various other forms of marine life have quickly been attracted to these areas and this is expected to increase significantly, ultimately including the beloved snapper.

Additionally, we can expect to see improved water quality in the Bay as shellfish numbers increase. Shellfish are filter feeders and are, therefore, the Bay's natural cleaners. A single oyster can filter hundreds of litres per day. Just imagine what hundreds of thousands of them will do. Eventually, there will be millions of them, as over time, it is expected that the oysters and mussels being deployed will reach maturity and begin to recruit naturally.

As success is being seen to be achieved with this project, it is logical to expect that it will be expanded at the current two sites. It is also logical to expect that further sites will be found within the Bay for the commencement of similar projects.

As we start to positively demonstrate the project's success with key deliverables such as increased marine biodiversity, cleaner water and more fish, the future will look very bright for our beloved Port Phillip Bay.

Wild Trout Fisheries Management

Mansfield fly fishers provided fantastic support by fin clipping thousands of trout as part of the stocking trial.

BY ANTHONY FORSTER

Freshwater Fisheries Manager, Fisheries Victoria

Brown and rainbow trout were introduced into Victoria during the 1860s by homesick early settlers pining for a connection to their English motherland. The legacy of this work endures with trout now widespread through most of Victoria's highland rivers. Today, trout remain among our most popular species and make an enormous social and economic contribution to regional Victoria.

In 2013/14, trout fishers reported poor wild trout fishing in our iconic brown trout rivers. While most avid trout fishers acknowledge trout fishing is often not great in the height of summer, this season was different - catch rates were really disappointing. Follow-up surveys confirmed that trout numbers were down in many rivers. Concerned trout fishers rallied for action and answers.

The Trout Reference Group, a coalition of trout fishing representative organisations was established. They led a successful Recreational Fishing Licence grant that gave birth to the Wild Trout Fisheries Management Program. The three-year program looked to better understand the cause(s) of the decline in wild trout fisheries and the population health of our most valued wild trout fisheries. By involving trout fishers and sharing information, we hoped to be able to improve the management response to this pressing issue.

The outcomes of this work were presented to about 360 trout fishers at *Talk Wild Trout 2015* and *Talk Wild Trout 2016* conferences in Mansfield. Here are some of the highlights of the Wild Trout Fisheries Management Program, so far:

Climate change and wild trout

It doesn't matter whether you call it climate change, climate variability, long-term drought or a run of hot summers, trout simply don't like warm water and the summer of 2013/14 was one the hottest on record. During the last few summers, researchers regularly recorded stream temperatures above 25°C. To put this in context, at 19°C trout feed less often and catch rates markedly fall. At 25°C they almost stop feeding. If these conditions continue and they can't find cooler water refuge, like shade or higher altitude, they eventually die.

Based on a review of climate scientific literature, Melbourne University's Dr John Morrongiello found the distribution of Victorian brown trout could decline by as much as 35 to 50 per cent by 2030. Other trout fishing countries are also concerned about the impacts of climate on wild trout populations.

Our trout tracking study in the Delatite River showed a trend for larger trout to move upstream to cooler and forested reaches when water temperatures reached 22°C. Our science and monitoring is telling us Victoria's wild river trout fisheries are among the most vulnerable to climate change of any in Australia.

Streamside shading

One of the key findings of the Wild Trout Fisheries Management Program was that streamside shading provides critical temperature relief for trout in summer conditions (up to 10°C in some streams).

We also learned rivers that flow east/west receive more sunlight and tend to heat-up more than those flowing north/south. Unfortunately, streamside cover in many of our trout streams has been degraded by livestock grazing and at the larger scale by extreme bushfire events.

Program

One of the direct outcomes of the Trout Management Program was the establishment of a new Angler Riparian Partnerships Program ($1 million over three years across 10 catchment management areas). It will allow anglers to work with Catchment Management Authorities to identify important fishing locations on trout streams that need urgent riparian and instream habitat restoration.

Brown trout stocking trial

Fish stocking is a great fisheries management tool but it's not always effective. At the *Talk Wild Trout 2016 Conference*, delegates learned that after fin-clipping and stocking 20,000 yearling trout across two years in the upper Goulburn and Howqua Rivers, then surveying 18.5 kilometres of river, very few (11 stocked trout) were found.

Similar findings have been recorded overseas. The results suggest hatchery-reared trout have poor survival in these rivers because they are out-competed by wild fish for space and food, while they waste away by using too much energy in high flow environments. There is little, if any, value in stocking trout in rivers when water temperatures don't support their survival and performance.

A direct outcome of the Trout Management Program was the establishment of a new ***Angler Riparian Partnerships Program ($1 million over three years across 10 catchment management areas).***

Is fishing effort impacting trout abundance?

Anglers often highlight examples of recreational overfishing and or poaching as a potential reason to explain low trout abundance. To test this, we looked at angler catch rates, angler compliance levels and the results of the Tag and Reward Capture Program. After surveying more than 1,400 summer campers along trout streams of the upper Goulburn River basin, we found only around five per cent of fishers were harvesting trout.

Our Fisheries Officers told us that compliance amongst 1,300 fishers was around 97 per cent. After tagging and releasing 100 trout with high reward tags ($100) in the Howqua River, to date, only three tags have been reported. These results collectively suggest there is only low exploitation of trout in these rivers.

Wild trout report cards

A key part of the Wild Trout Fisheries Management Program was to assess the population health of our most important wild trout fisheries. Priority wild trout rivers were nominated by the Trout Reference Group. Researchers using electrofishing equipment (walking or boating) recorded trout abundance and size. A scorecard approach was used to assess 12 priority trout rivers each year and provide health status and useful fishing information in an angler-friendly format. The report card looked at key health indicators including recent recruitment (juvenile fish), multiple size classes, presence of mature fish and an overall rating; recovering, good, very good and excellent. A summary of the 2015 and 2016 results are outlined in Table 1.

Wild trout population abundance can vary widely from year to year in the same river, but can quickly recover when more favourable conditions return.

Table 1. Wild trout fishery health report card summary.

Priority wild trout rivers	*2015*	*2016*
Aire River	Excellent	Not sampled
Dargo River	Moderate	Good
Upper Goulburn River	Good	Moderate
Howqua River	Very good	Excellent
Jamieson River	Moderate	Low
Kiewa River	Excellent	Excellent
King River	Good	Good
Mitta Mitta River	Excellent	Very good
Nariel Creek	Low	Good
Ovens River	Recovering	Moderate
Toorongo River	Excellent	Not sampled
Yarra River	Good	Not sampled
Barkly River	Very Good	Not sampled
Merri & Hopkins Rivers	Excellent	Not sampled
Morass Creek	Very good	Not sampled

A partnership approach

Beyond science and discovery, the Wild Trout Fisheries Management Program finds common ground between the interests of fishery/environmental management agencies and trout fishers like never before. The conferences have been so successful at engaging trout fishers and sharing information, this approach is now being rolled-out as a model to engage other recreational sectors including Murray cod, tuna and Port Phillip Bay.

The Wild Trout Fishery Management Program has managed our collective expectations that the performance of our trout fisheries is almost wholly dependent on environment and climatic conditions. There will be good and bad years, but that's the nature of wild fisheries. By working together we can build resilience in our wild trout fisheries by, keeping cattle out of streams, planting trees along rivers and monitoring our iconic trout fisheries into the future. This will enable us to be more informed and responsive as we look to sustain and develop our trout fisheries into these challenging times.

Stay tuned for details on Talk Wild Trout 2017. We hope to see you there. For an electronic copy of the Talk Wild Trout 2015 and 2016 proceedings, E: taylor.hunt@ecodev.vic.gov.au

The Wild Trout Program led to a new Angler Riparian Partnerships Program that will see more fishers help restore streamside shading.

(Photo: Dr John Morriengello).

Citizen Science continues

Warren Carter with his 148cm mulloway caught from Western Port Bay, which was aged at just 16 years (see otolith section).

Since my previous article in the summer 2015 edition of *Fishing Lines,* our Citizen Science Project has continued to provide new insights into Victorian mulloway populations. Funded by Recreational Fishing License Fees, the success of this research project has been attributed to the support and involvement of Victorian recreational anglers. This partnership between fishers and scientists continues to enhance our knowledge on the life history of one of Victoria's most sought after species.

Since the program began in late 2014, over 120 anglers have collectively donated almost 500 mulloway frames to the research. The highest number of frames has come from the Barwon and Glenelg Rivers, while other key areas include, the Hopkins River, Patterson River and, Western Port Bay.

Donated mulloway range in total length from 51 to 150 centimetres, and have been aged between three and 25 years. The majority of mulloway caught from Victorian estuaries have been juveniles, below the approximate length at maturity (85 cm). This highlights the importance of estuarine systems as key nursery areas. It's therefore presumed that mulloway recruit into estuaries early in life, where they remain until reaching maturity. The older life stages of Victorian mulloway remain largely unknown, with few anglers targeting the species in the open ocean.

Over 120 anglers have donated almost 500 mulloway frames to the research.

Length and age data collected over the past three years has provided important information on population structures. In 2014 when the project began, the fishery was largely dominated by mulloway aged at three plus years. This cohort of fish remained prevalent throughout 2015 (four plus years) and 2016 (five plus years), suggesting the Victorian mulloway fishery has largely been supported by one dominant cohort of fish over the past three years.

There is strong evidence to suggest that mulloway recruitment is positively influenced by increased freshwater flows. It is therefore no surprise that this dominant cohort is the progeny of spawning in spring-summer 2010/11 when significant flooding occurred across catchments in southeast South Australia (SA) and Victoria.

In addition to providing important data on length and age structures, frame donations have provided the necessary samples for us to undertake sophisticated genetic analyses that allow us to better understand Victorian stock structures.

Using powerful genomic sequencing, we have assessed the spatial extent and frequency of gene exchange and the recruitment migration between mulloway stocks in Victoria and interstate. Over 300 tissue samples representing 14 locations (from Victoria, SA and New South Wales (NSW)) were used for genomic analysis.

to capture important insights into Victoria's mulloway

BY LAUREN VEALE
Nature Glenelg Trust

The analyses revealed that mulloway, occurring between the Coorong in SA and Western Port Bay, form a single randomly mating stock. This is consistent with acoustic tagging work by the Arthur Rylah Institute that showed connectivity between the Coorong and the Glenelg River.

The mulloway Citizen Science Project has provided critical information on age structures and growth rates, the first estimates of length/age at maturity for Victorian mulloway and, has recently redefined stock boundaries through genomics. … ***A huge thank you to all those anglers involved in the research program.***

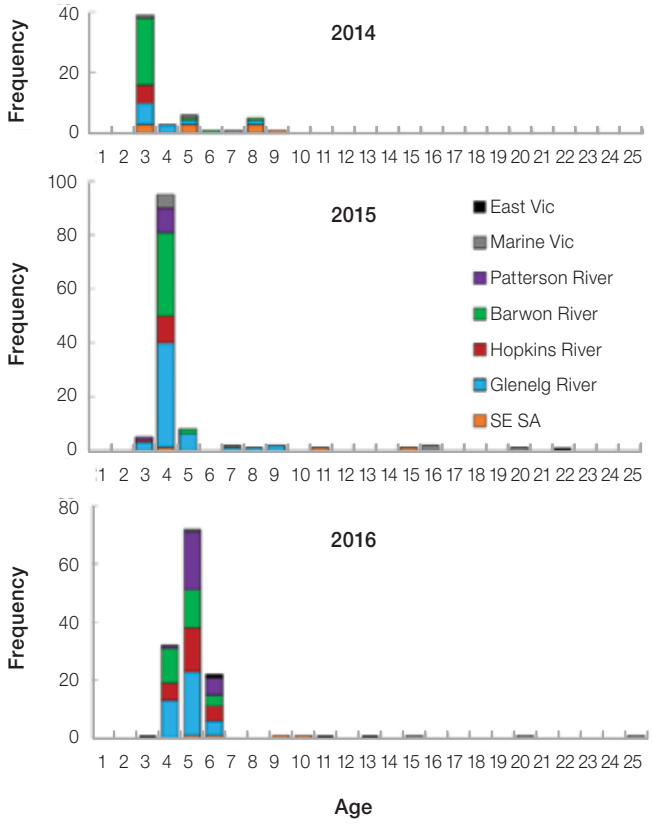
We detected weak but significant genetic differentiation between far west SA, Victorian/southeast SA and NSW mulloway stocks, suggesting that gene flow is limited between these regions. The potential genetic isolation of Victorian/southeast SA and NSW populations is possibly due to their separation by the well-recognised biogeographic divide in eastern Victoria. Here, the contemporary physical conditions of Bass Strait, associated with the Bassian Isthmus, present a continuing barrier to the dispersal for many marine species, including fish and invertebrates. However, further intermediate geographic sampling of mulloway stocks between Western Port Bay and Eden is required to determine if the stocks either side of Bass Strait are truly isolated.

The Mulloway Citizen Science Project has provided critical information on age structures and growth rates, the first estimates of length/age at maturity for Victorian mulloway and, has recently redefined stock boundaries through genomics. Equally important, is the opportunity of engaging with anglers and allowing them to contribute to increased knowledge and ultimately improved species management. A huge thank you to all those anglers involved in the research program.

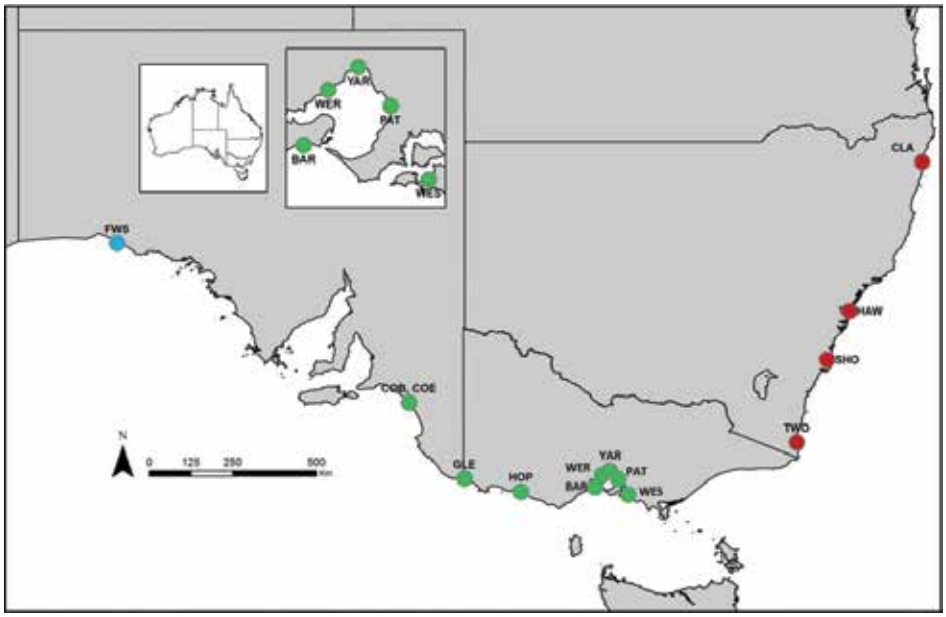
If you are passionate about catching mulloway, please get involved in the project by becoming a citizen scientist. We are particularly keen to hear from anglers that catch mulloway in Victorian marine waters to help address the current knowledge gap surrounding the older life stages.

For more information, contact Lauren Veale at the Trust by E: lauren.veale@ngt.org.au or M: 0439 034 390. You can also join our Facebook Page: www.facebook.com/groups/mullowaycitizenscience for a list of drop-off points where you can donate your frames.

Age frequencies of mulloway donated by mainly recreational anglers from the various regions in 2014 (Aug-Dec), 2015 (Jan-Dec) and 2016 (Jan-Feb).



Map showing the location of sampling sites and the three genetically distinct populations: 1) far west SA (blue); 2) southeast SA/Victoria (green) and; 3) NSW (red).



Fishcare Victoria.
We fish. We care.

Fishcare is a volunteer based organisation aimed at educating the next generation of recreational anglers in safe and sustainable fishing practices that will ensure the future of our waterways and fish stocks. Fishcare is strongly supported through the Recreational Fishing License Trust and works with other organisations, government, service providers, schools and the broader community, to deliver sustainable fishing education programs as well as how to fish clinics.

SARAH VAN STOKROM
State Coordinator, Fishcare Victorian

Above: How to Fish clinic at Portsea Pier as a part of the Portsea Camp holiday activities.

Many people who attend workshops have either never been fishing and don't know where to start; or have been once or twice but their experience was marred by no fish or catastrophic fishing line tangles.

At our workshops, we cover all the basics such as, fishing rules, fish friendly tackle, simple rigs, baiting up and how to cast. We discuss the importance of fish habitat and the environmental issues of the area being fished and, address the biological aspects of locally important recreational species. Combined with the fishing expertise of our staff and volunteers and some safety tips, children and their families finish with a new found confidence and an enthusiasm for fishing.

At each session, we have plenty of fishing rods and reels for people to loan or, people can bring their own fishing gear. The latter option is a good idea as we can give the equipment a once over (especially if it has been sitting in the shed for a year or two) and they finish with a properly rigged fishing rod to continue their angling exploits.

Besides the thrill of catching a fish, the best thing about fishing is the opportunity to spend time with your family and friends alongside some of the most beautiful beaches, estuaries lakes and rivers anywhere in the world.

Fishcare Victoria has had an exciting summer season, working with multiple partners to deliver fishing clinics and workshops across the state. From, Mallacoota to Portland, Shepparton to Cowes, we have hosted over 200 workshops that have reached 4500 participants, spreading the message of sustainable recreational

Above: Partnering with Parks Victoria at Wilsons Promontory to deliver How to Fish clinics during school holidays.

***At our workshops,** we cover all the basics such as, fishing rules, fish friendly tackle, simple rigs, baiting up and how to cast. We discuss the importance of fish habitat and the environmental issues of the area being fished...*

fishing and promoting the stewardship of our aquatic environments across Victoria.

We have also had a changing of the guard with a farewell to Mike Burgess and a welcome to Sarah Van Stokrom as the new State Coordinator.

"I am amazed at the contribution Fishcare Victoria makes to the community and to sustainable recreational fishing," Sarah said.

"I am looking forward to working with the staff and state committee and meeting the dedicated groups and volunteers around the state. I feel Fishcare is in an ideal position to build on its successes and further explore funding opportunities to increase staffing resources, memberships and on-ground outcomes.

"I would really love to see Fishcare Victoria grow as a trusted and respected partner, and further invest in relationships and networks to build the future of sustainable recreational fishing across Victoria."

Want to get involved?

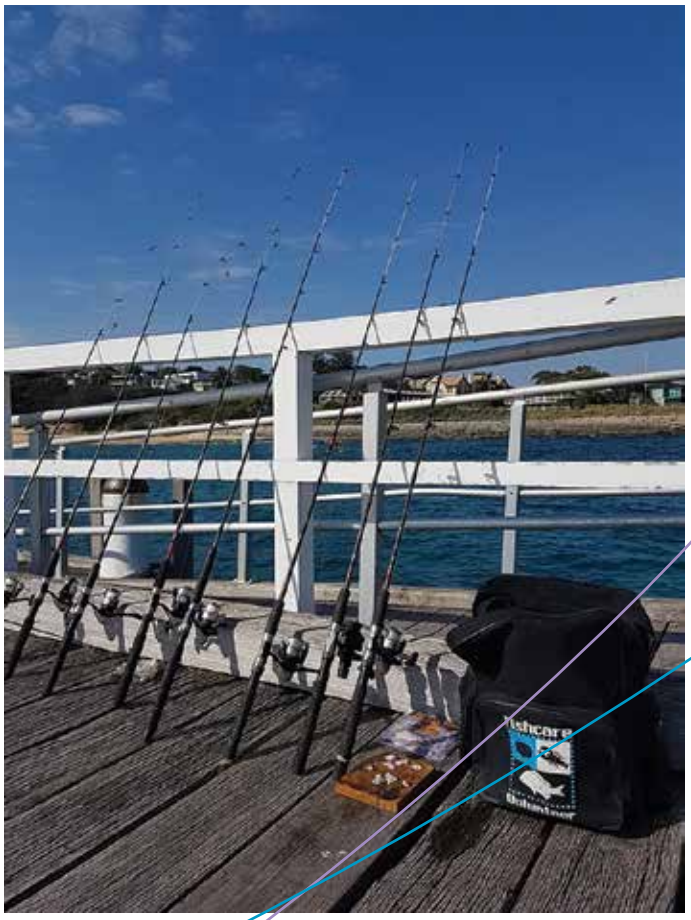
Fishcare Victoria is always on the lookout for more volunteers to assist in spreading the message of the stewardship of our fisheries and sustainable fishing practices and, we would love to hear from clubs or individuals who are interested in becoming involved.

Should you want to know more about Fishcare visit: www.fishcare.org.au or contact the State Coordinator at E: svanstokrom@fishcarevictoria.org.au or M: 0437 672 242.

WE FISH. WE CARE

If you would like more information, please contact the Fishcare Victorian State Coordinator, Sarah Van Stokrom on M: 0437 672 242 or E: svanstokrom@fishcarevictoria.org.au

Above: Fish Puzzles - teaching fish anatomy at Envirowee, Mt Martha.
Below: Portsea Camp How to Fish clinic - rods are ready to go!



The King of Kings

BY DR COREY GREEN
Project Lead Fisheries Scientist

Recreational anglers are taking advantage of exceptional opportunities to target gamefish along Victoria's coastline. Landing southern bluefin tuna, albacore and swordfish in small boats is no longer a rare occurrence. Similarly, yellowtail kingfish have once again become a popular target species over summer and offer an alternative to snapper, whiting, calamari and flathead.

Victoria's yellowtail kingfish have made a resurgence since their demise in size and numbers during the early 1990s. Since around 2010, targeting yellowtail kingfish increased in Victoria and a wide size-range of fish were reportedly taken.

Research required to effectively manage such a popular species has been applied to fish caught off New South Wales (NSW) and South Australia (SA), however in Victoria, basic population characteristics are largely unknown. Information such as spatial and temporal stock, spawning age and growth data are basic knowledge requirements used to assess the status of fish populations like kingfish. This information helps us understand the productivity of the fishery and improve our management strategies.

Funded by Victorian recreational fishing licence fees, the objectives of this two-year project are to:

- Determine whether yellowtail kingfish caught in Victorian waters are from a single or multiple stocks;
- Define population characteristics (age and growth, size structure, spawning characteristics) of Victorian yellowtail kingfish;
- Determine the future potential of this fishery using historical recreational catch information;
- Trial the use of satellite tags as one method to understand movement characteristics (spatial, depth, temperature preference); and
- Trial otolith chemistry analyses as a method to investigate yellowtail kingfish temperature preference.

The success of this research project is largely due the involvement of recreational anglers and the charter boat industry. Scientific clerks (Scott Gray and Tara Hicks) have actively liaised with both groups to obtain catch statistics and collect more than 450 kingfish frames. All frames have been dissected, otoliths (earbones) removed for ageing and reproductive conditions assigned.

Researchers from NSW and Tasmania have collaborated with Fisheries Victoria to define the genetic stock structure. Initial results reveal they are likely a single stock, which is indicative of a species that move large distances and whose eggs are larvae, distributed widely by oceanic currents. It is well known that kingfish are fast growing, so it will be interesting to analyse growth information, compared with fish from other states, and determine their size at maturity.

The study will reveal whether kingfish caught in Victorian waters are from a single or multiple stock.

During May 2017, a 'rat' kingfish (about 65 centimetres long) was satellite-tagged off Julia Percy Island (near Port Fairy). The tag is set to be automatically released from the fish at the end of June and may indicate whether kingfish move from Victorian waters during winter. It will also show depth and water temperature preferences during its time at liberty.

Full results will be provided at the end of 2017. For more information contact Dr Corey Green, the study's lead fisheries scientist on T: (03) 5258 0275 or E: corey.green@ecodev.vic.gov.au

Top: More than 450 kingfish frames have been donated to the study by anglers. (pic Scott Gray).

Above left: Corey dissecting a kingfish head to remove the otoliths.

Above right: The two otoliths reveal the age of each kingfish.

Kingfish populations have rebounded in Victoria and anglers have been quick to get onto them.

Recreational fishers are tagging to unlock the secret lives of King George whiting

BY GREGORY JENKINS
Professor, University of Melbourne

2000 tags
distributed to fishers from nine Victorian fishing clubs.

One of the unanswered questions about the life cycle of King George whiting is where fish from Victorian waters spawn. Research over the past 30 years has found little evidence of spawning in, or near, the main bays (Port Phillip, Western Port or Corner Inlet).

Most fish in the bays are juveniles, up to four years of age, while adults in the known spawning areas of South Australia (SA) and Tasmania can be up to 20 years old.

Recent research has also shown that older Victorian whiting are not migrating to the known SA (north of Kangaroo Island) or Tasmania (north-west coast) spawning areas. Scientists believe the most likely spawning area for Victorian whiting is along the coast west of Portland into south-eastern SA. To confirm this, Melbourne University scientists are collaborating with recreational fishers to tag whiting as part of a new three year grant project from the recreational fishing licence funding program.

The project has been underway since the start of the year and tagging kits, including about 2000 tags, have been distributed to fishers from nine Victorian fishing clubs.

Fishers are asked to look out for the yellow tags when they are catching whiting. Each tag has a unique number, as well as a phone number (03) 5258 3686 and E: (whitingtag@gmail.com) to report the recapture.

Tagging, so far, has been focussed around Port Phillip Bay and Western Port. Some anglers have already managed to tag 30 to 40 whiting, with many larger fish around the 40 centimetre mark. These larger whiting are likely to be four years old and would be expected to move out of the bays during the next six months, or so, and start migrating along the coast.

Remarkably, there has already been six recaptures of tagged whiting, with times from tagging, to recapture, ranging from 45 minutes to three months! So far recaptures have been close to the tagging location, even after a few months, indicating that fish tend to stay in the same area. The high recapture rate gives us confidence that the tags aren't affecting the health of the fish and also that the tags are not being shed.

Fishers are asked to look out for the yellow tags when they are catching whiting. Each tag has a unique number, as well as a phone number (03) 5258 3686 and E: (whitingtag@gmail.com) to report the recapture.

Fishers are asked to measure the recaptured fish (fork length or total length) as well as the date and location of capture. If possible, it would be good if tagged whiting could be re-released after the information is recorded so that they might continue to provide information into the future!

Scientists are expecting that as tagged fish grow and leave the bays, recaptures may start to be reported from the coast, providing information on potential spawning areas. A dedicated web-page has been developed tracking the progress of the project and detailing the movement results as they come in, visit http://blogs.unimelb.edu.au/fisheries-ecology/king-george-whiting-tagging-project/.

The results of the project will contribute greatly to the understanding of the biology and life history of King George whiting and, potentially for the first time, confirm the spawning area for Victorian whiting. This will help give a more complete understanding of the life cycle of this iconic species.

Increasing released snapper survival

BY FRANZ GRASSER

During the snapper seasons of 2011 and 2012, there were a number of reported instances of dead and dying snapper floating on the surface in the Port Phillip and Westernport Bays. Clearly mortality snapper rates released by recreational fishers was a key part of the problem. Subsequently, VRFish decided to find a way to implement an information and education campaign that would increase released snapper survival.

In 2013, a grant for just under $40,000 from the Recreational Fisheries License fund was approved, and work commenced on the planning of a campaign to roll-out, ahead of and, during the 2014 snapper season. Right from the outset, the concept of this project resonated with anglers and the initiative was supported by a range of stakeholders..

This support was to have profound positive effects throughout the project. While the initial plan was limited advertising in fishing related media, the scope of this advertising, eventually, more than doubled due to the fact that media partners and suppliers provided significantly discounted costs as well as voluntary inputs at no cost. Similarly other suppliers such as printers of the stickers, brochures and posters offered significantly reduced costs which, in turn, led to the ability to divert these savings into the increased exposure of the campaign.

Furthermore, professional advice and intellectual property was freely given by a range of stakeholders at either no cost or mates' rates. Notable communication advice came from: Marc Ainsworth of Fisheries Victoria; snapper science from Paul Hamer at Fisheries Victoria; veterinary science from Paul Hardy-Smith and; images and footage by Alistair McGlashan.

There were also significant volunteer and mates' rates contributions from a range of other stakeholders which offered many tangible inputs. These included; boats by Matt Boulton of Fish On Charters; Trevor Hogan of Launching Way and; a snapper filming cage by Lawrence Moore.

Many others supported the project, but there are too many to list here, including other members of VRFish and VRFish staff and members of various fishing clubs etc... We also obtained great support from Fishing Tackle Stores. Point-of-sale posters, brochures and stickers were embraced by dozens of tackle stores who helped to spread the message and, in some cases, still do.

We were also able to promote the campaign at numerous events and the striking design and images used in the campaign ensured that it captured the attention of attendees and visitors. The project also used many forms of electronic and social media to extend distribution of the message to snapper fishers. This included; websites, emails, e newsletters, Facebook and YouTube.

The money saved due to the high level of volunteer input towards the project meant that it was possible to continue the campaign, not just for the 2014 snapper season but also, for the 2015 season and beyond. This means that the reach obtained in making snapper fishers aware of the techniques that improve released snapper survival was higher by many multiples than what was originally planned.

Greater use of lures and circle hooks, as well as improved fish handling and awareness of barotrauma, are being observed ...

The campaign was not just about quantity but also quality. The skills of the participants and suppliers and the quality of images available led to the design and implementation of quality messaging and media. When ARFF was developing a new recreational fishing code of practice, they employed as a consultant Adam Smith of Ecologic who conducted a literature search and review of relevant codes of practice from around the world. In this review the snapper survival project was raised as a positive example of the way that messaging needs to be developed to be adopted by fishers.

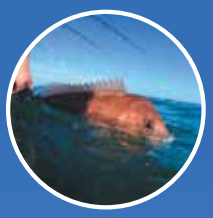
Finally, and most importantly, what has been the result of the campaign? The overall result has been positive because in the snapper seasons since the initial roll-out of the campaign, in 2014, there have been no reports of dead or dying snapper floating in the areas observed in earlier years. While it is not possible to be certain that this outcome is a direct result of the snapper survival project, it is highly probable that the campaign contributed significantly to the result.

It is also notable that many snapper fishers have modified their approach to fishing since the project began. Greater use of lures and circle hooks, as well as improved fish handling and awareness of barotrauma, are being observed and this is something that the project participants can be proud of.

Help released snapper survive

Fish shallow water to avoid barotrauma

Leave snapper in the water for release



Minimise handling and netting

Use circle hooks or lures

Release snapper quickly

Snapper fishers can help the survival of released snapper by following these key points.

For further information on these points go to www.vrfish.com.au/snappersurvival

Representing Victorian Recreational Fishers

VRFISH

This project was funded by the Victorian Government using Recreational Fishing Licence fees

Your fishing licence fees at work

State Government Victoria

Representing Victorian Recreational Fishers

Fishing in Victoria – something for everyone

Victorian fishers are a blessed lot – the fisheries across the State provide ample opportunities to ply your skill and feed your family.

Over 838,000 Victorians share a passion for recreational fishing, and there are fishing clubs scattered all over the State catering to fishers whether they be hooked on feeding 'old man' cod or like to chase the big reds as they come into our bays to spawn.

There are many reasons a large segment of VRFish members belong to fishing clubs:

- Fishing clubs give fishers access to a fantastic group of people who love to talk about fishing as much as they do.
- They give a sense of contributing to the local community.
- Club membership provides an opportunity to participate in social and competitive events.
- They give the ability to improve fishing by learning from more experienced fishers or to share your own knowledge.
- Club membership also provides a means to contribute to the political landscape of fishing, and have your say in issues that affect you and your favourite fisheries.

Contact one of our member clubs below for more information:

Albert Park Yachting & Angling Clubs Association
Contact: Patrick Hutchinson
Phone: 03 9329 8200
Email: info@apyac.org.au
Web: apyac.org.au

Association of Geelong & District Angling Clubs
Contact: John Hotchin
Phone: 03 52486817
Email: jhotchin@bigpond.net.au
Web: fishinggeelong.com

Australian Anglers Association (VIC)
Contact: Tim Hose
Phone: 0428 521 449
Web: aaavic.org

Australian National Sportfishing Association (VIC)
Contact: Darren Wloch
Phone: 0414 383 477
Email: dwloch@borcor.com.au
Web: ansavic.com.au

Ballarat & District Anglers Association
Contact: Geoff Cramer
Phone: 0418 320 139
Email: gcaramer@chw.net.au

Beaumaris Motor Yacht Squadron
Contact: Brian Wright
Phone: 0421 764 370
Email: bwgardening@optusnet.com.au
Web: bmys.com.au

Boating Victoria
Contact: Wallace Nicholson
Phone: 03 9585 1330
Email: boating@yachtingvictoria.com.au
Web: boatingvictoria.com.au

Council of Victorian Fly Fishing Clubs
Contact: Doug Braham
Phone: 03 5174 4606
Email: ddbraham@bigpond.com

Fishcare Victoria
Contact: Sarah Van Stokrom
Phone: 0437 672 242
Email: svanstokrom@fishcarevictoria.org.au
Web: fishcare.org.au

Game Fishing Association of Victoria
Contact: Geoff Fisher
Phone: 0412 005 850
Email: secretary@gfav.com.au
Web: gfav.com.au

Gippsland Angling Clubs Association
Contact: Robert Caune
Phone: 03 5155 1505
Email: robert@net-tech.com.au

Goulburn Valley Association of Angling Clubs
Contact: Wally Cubbin
Phone: 0428 942 744
Email: wcubbin@bigpond.net.au

Howqua Angling Clubs Fish Protection Association
Contact: Steven Relf
Phone: 0417 553 249
Email: srelf@optusnet.com.au

Metropolitan Anglers Association
Contact: Pat Hutchinson
Phone: 0425 701 385
Email: pjh@donkyatt.com.au

Midland & North Central Angling Association
Contact: Greg Hellsten
Phone: 0401 984 323
Email: gregh.ogp@hotmail.com

Mid Northern Association of Angling Clubs
Contact: Alan Digby
Phone: 03 5492 2822
Email: alasue@hotmail.com

Native Fish Australia
Contact: Tim Curmi
Phone: 0417 419 765
Email: timbo42b@yahoo.com.au
Web: nativefish.asn.au

North East Angling Association
Contact: Stafford Simpson
Phone: 0419 564 319
Email: vk2ast@tpg.com.au

Scuba Divers Federation of Victoria
Contact: Priya Cardinaletti
Phone: 0414 310 727
Email: priya@sdfv.org.au
Web: sdfv.org.au

South Gippsland Angling Clubs Association
Contact: Allister Dowling
Phone: 0429 001 984
Email: Jodie_dowling@bigpond.com

South West District
Association of Angling Clubs
Contact: Gary Cronin
Phone: 0417 125 127
Email: gbear@hotmail.com

Southern Freedivers
Contact: Clint Engel
Phone: 0409 613 804
Email: info@brimbosports.com
Web: southernfreedivers.org.au

Torquay Angling Club
Contact: Paul Rebbechi
Phone: 0423 209 563
Email: prebbech@gmail.com
Web: www.torquayfish.com.au

Victorian Piscatorial Council
Contact: Peter Milley
Phone: 0419 537 082
Email: pmilley@bigpond.net.au

Wimmera Anglers Association
Contact: Barry Williams
Phone: 0402 352 006
Email: barry3422@bigpond.net.au

Representing Victorian Recreational Fishers

Victoria's peak body representing 838,000 fishers.

protecting and growing inland fishing in Victoria

Making your fishing better!

Recent achievements & ongoing projects include:

A review leading to:

The removal of closed season on Murray cod in Lake Eildon

given the lack of breeding and reliance on stocking.

✔ DELIVERED

Angler access to be maintained through the River Red Gum Management Plan.

✔ WORK IN PROGRESS

Prolonging the Toolondo boom trout fishery by:

Acquiring and holding 5000 megalitres of water at Lake Toolondo

held by Iluka Resources.

✔ DELIVERED

The closed season on south west trout rivers to be removed

given lack of breeding trout and reliance on stocking.

✔ WORK IN PROGRESS

A total ban on opera house nets in all Victorian waters

due to ongoing compliance issues and impacts on wildlife such as platypus.

✔ WORK IN PROGRESS

1 million Murray cod stocked in Lake Eildon.

✔ DELIVERED

Conducting a broad survey of fishers to:

Help establish a minimum legal size limit on trout.

✔ WORK IN PROGRESS

A review supporting:

The reduction of yellow belly bag limits in lakes and impoundments.

✔ DELIVERED

Murray cod and yellow belly to be stocked into Rocklands Reservoir.

✔ WORK IN PROGRESS

www.vrfish.com.au

Follow us on... facebook.com/vrfish Twitter.com/vr_fish

Representing Victorian Recreational Fishers


EXPLORE OUR RANGE AT PATAGONIA.COM.AU
April Vokey. JEREMY KORESKI ©2014 Patagonia, Inc.
patagonia®