

August 2023 NEWSLETTER

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IMPORTANT DATES

Board Meeting 6th October 2023 ECSC Meeting 22nd September 2023 RDTSC Meeting 27th October 2023 MFCAP Q4 31st October 2023

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President's Comment

Thank you to all that attended our recent AGM and conference day at the Queen Charlotte Yacht Club, I'm sure you will all agree it was another very successful day topped off by an even better evening. I need to give a big shout out to our many sponsors, as without you we wouldn't be able to run it.

It was great to have the MSQP team kick-off the day and to even have Coli Johnston in attendance to explain some of the changes to their program and answer questions from members.

Thanks to those who presented during the day, there was a wide variety of topics discussed with a lot of information to digest. All the speakers did a great job having to condense years of experience and learnings into a short time slots!

Particular thanks goes out to Mike Moy and Andrew Selby for making the trip down from the Coromandel and also speaking on our future focus panel, it was great to have our CMFA brothers attend the event, and we extend a welcome invitation to any other CMFA members or indeed any other marine farmers from around the country that wish to make the trip next year.

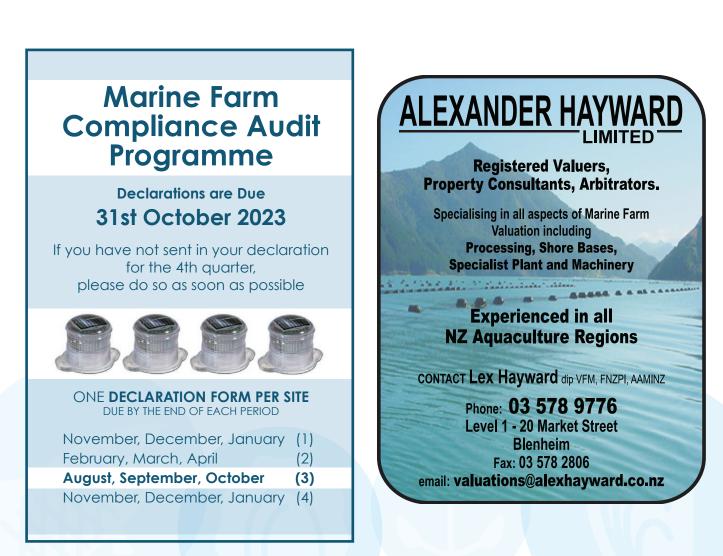
Congratulations goes out to all the recipients of the annual awards (details of which are covered in this Newsletter) but of particular note this year's Merit Award was given to Andy Joines for his many years of service in the industry. All of us know Andy well and know that his contribution to the industry has been huge with the invention of Mussock and then the machines to knit it. However what many of us didn't know was he also invented the original "xmas tree" rope! Two key components of mussel farming that we still use today and without either one of them our industry would be quite different. It was a highlight to have Andy, Lorraine and Tiffany there with us to enjoy this moment and it was even better to see the smile on Andy's face for the rest of the night, I hope it's still there Andy.

This season has already presented us with one of its first challenges - that being the late and somewhat sporadic arrival of GLM9 spat. At the time of writing and only 3 weeks out from the end of the quota season, we have only just started to receive a few small landings and they seem to be spread across the top half of the beach. This has unfortunately only heaped pressure on to farmers, ACE holders and the collectors on the beach. I urge you all to have a conversation with your collector and to reiterate the importance of abiding by the Code of Practice. To ensure future access to the resource, this is more important than ever given the brick wall looming that is the quota season ending on the 30th of September. Furthermore, we need to remember that we have very active and vocal groups against our activity on the beach and like it or not they have the ear of officials also.

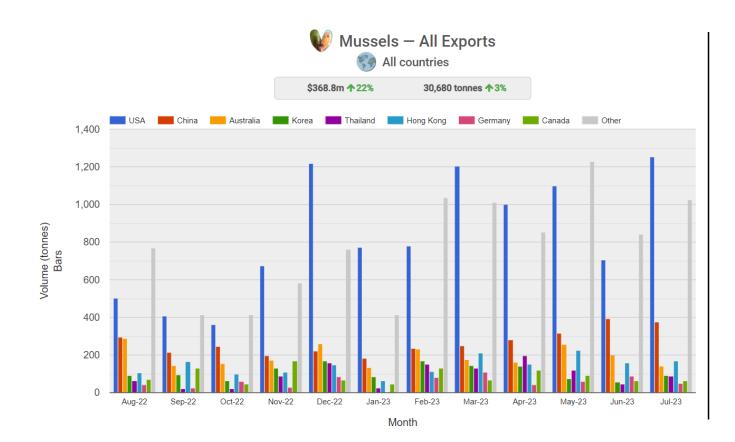
This will however be the last time we will have a quota season that finishes at the end of September - from the 1st of October 2023 there will be a six month transitional season, with a full season commencing the 1st of April 2024.

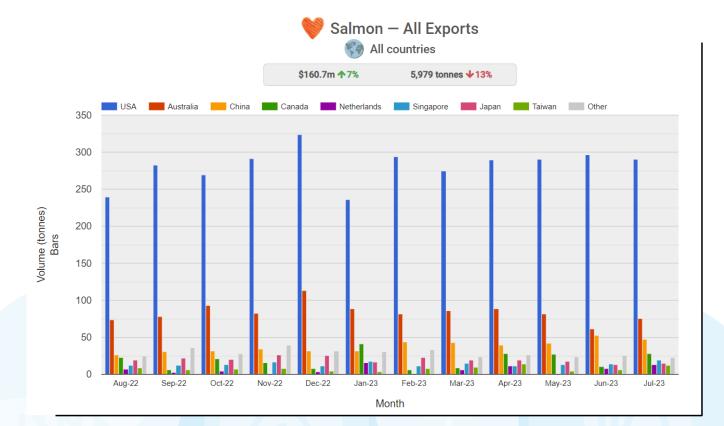
Let's hope for some large landings of spat over the coming weeks and all the best for spring.

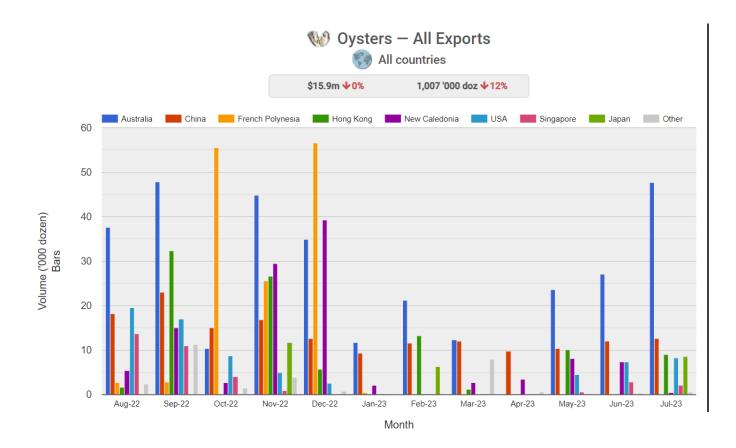
Jono



AQNZ Export Data







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Our future in the sea - Toitu a tangaroa

Marine biosecurity action ramping up

New funding for Biosecurity NZ is launching a national campaign for behaviour change amongst boaties. This same funding is also enabling better tools and processes for the aquaculture industry.

The TOS Marine Biosecurity Partnership is firmly part of the new campaign. This will see us better connected nationally. The reference group that we are part of includes most regions in the country, importantly those that have yet to initiate marine biosecurity programmes.

The new funding is already delivering useful products for us in the region. Social research has segmented the boating population to allow messaging to be delivered with more impact. It has also revealed the proportions of people in categories from champions to those resistant to doing anything. In the middle ground are those who are ignorant, lazy, or sceptical. We can build the effectiveness of the champions while persuading and informing the others.

The national campaign is forecast to launch in the first quarter of 2024. We will keep you updated on progress.

banda Banda

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Congratulations to all the 2023 MFA award winners!

Recent Entrant Award – Matt Pigou from Marlborough Oysters/FlipFarm Sponsored by Skipper Training New Zealand



Matt with Milo Coldren of Skipper Training NZ

Matt came to aquaculture from the tourism industry where he was working in vessel operations. He started as an ops manager last December and learned the role in no time at all. A big part of his success comes down to his direct, but positive communication style. Matt has recently transitioned from growing oysters to sales manager of Flip Farm, and his on-water/ operation experience is said to have turned him into a deadly negotiator.

Research and Development Award – Mike Holland from Clearwater Mussels

Sponsored by MacLab

Despite a demanding day job as Operations Manager for Clearwater Mussels, Mike Holland is working on a float attachment system that could transform mussel growing. Ahead of an MFA workshop dedicated to float loss held in Havelock in 2022, Mike had a lightbulb moment at approximately 3.48am. When the day came, he didn't just bring along an idea – it was a machined prototype that probably would have lasted a crop cycle or two. The design has since been further refined and protypes built and deployed with all companies/skippers challenged to hook up to the trial lines and test things out. This product could be transformational for the industry - alleviating float loss and lashing use, improving efficiency, extending the life of backbones, and leaving crew with extremities that could almost pass for human hands, as opposed to salt-encrusted oven mits.



Mike Holland (right) with MacLab Aquaculture Manager Mark Burnaby

Environment Award – Dean Higgins, previously with Kono, now Marlborough Oysters.

Sponsored by Cinch



Dean Higgins with Cinch Managing Director Amber McNamara

As a longstanding member of the MFA Environment Committee, Dean was never shy of 'clearly' communicating company expectations around environmental performance to crews. He was instrumental in setting up cross-company efforts to stage an expedition to the west coast of D'Urville Island which saw large amounts of non-industry debris recovered. He also played a starring role in the MFA environment programme induction video - taking off his kit off and diving into the Sound to shock audiences into compliance. The award recognizes outstanding commitment over a long period of time to a wide range of environmental initiatives.

Community Award – Johnny Arbuckle from Clearwater Mussels

Sponsored by Aquaculture Direct Limited



Johnny with MFA GM Ned Wells

This award marks an individual who is an ambassador for the industry within the communities in which we operate. Despite working long hours for Clearwater Mussels and raising two young children, Johnny is also a passionate advocate for mental health initiatives for young people in our communities. His legendary exploits support 'Gumboot Friday' – which each November raises funds

to provide counselling for young people, with the ultimate aim of reducing youth suicide rates. In 2021, he walked 67.5km, nonstop in a 12-hour period in knee-high gumboots, raising more than \$5,000. Last year he spent 24 hours pedalling a stationary bike, as part of a team which raised well over \$20,000 for the charity.

Outstanding Marine Farmer – Greg Smith, formerly Kono, now Clearwater Mussels

Sponsored by Donaghy's

Greg is considered one of the most knowledgeable people in the industry when it comes to arowing mussels, from spat procurement to seeding, right through to harvest. He still spends considerable time on the water and is more in tune with variations seasonal and environmental conditions than most. This award recognizes an individual



Greg Smith and Ned Wells

who has dedicated their working life to the art of growing mussels, someone who has been at the top of their game for many decades, and who is always willing to share this exceptional knowledge with others.

Merit Award – Andy Joines Sponsored by MFA



Andy Joines was supported by his wife Lorraine and daughter Tiffany in receiving the Merit Award from Jono Large. Rob Pooley was wearing one of Andy's free hats that he gifted to industry many years ago.

MFA's Holy Grail the Merit Award for 2023 was given to Andy Joines in recognition of his distinguished service to the industry, including providing the stocking used for seeding mussels.

Attending his first conference in the mid-70s Andy's relationship with the industry pre-dated most people at the 2023 AGM so it was left to greybeards Bruce Hearn, Graeme Clarke and Rob Pooley to share snippets of the history spanning 45 years.

Andy's desire to accommodate the industry's needs saw him work with literally every company and family over this time. Always willing to go the extra mile, Andy carried out so much R and D for the benefit of industry, he will always be remembered as a true pioneer, and most definitely deserves

his place in the MFA Hall of Fame. - Brendon Burns



Welcome back Kiah

Kiah Holdaway grew up near Port Lincoln, known as the "Seafood Capital of Australia", so she's feeling right at home working for the Marine Farming Association.

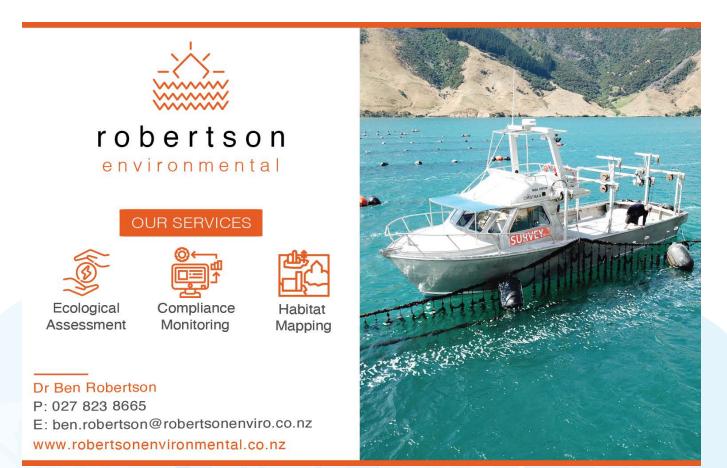
She has re-taken on the role as office administrator but she'll already be known to some marine farmers through her earlier work doing spat count.

Her parents were oyster farmers for a time and she was never far from the water. That included swimming in a tuna farm with feed pellets thrown in, when the famous "Swim with the tuna" was in its infancy.

She spent a lot of her childhood on beaches near her home in Coulta on South Australia's Eyre Peninsula, where the coastline is not only famous for its surf but for its sea lions – and its Great White sharks.

"I remember as a kid seeing dark shadows in the water and being called in by mum and dad until it passed, but that was just apart of life."

It didn't put her off. She went on to Adelaide University to do a degree in Marine Biology and on discovering there was then little work available for graduates, started travelling and teaching scuba diving.





She's lived in Thailand, Vietnam and Borneo, returning regularly to Australia.OnonestintinPerth, she met Marlborough's Kent Holdaway who was working in the West Australian mines as an Auto Electrician.

They paired up, returning to Blenheim in 2014 and are now they are proud parents to Poppy, 4 and Cohen, 2.

Kiah first worked here with E-koTours in the Sounds doing nature guiding and dolphin swims before moving on to help Lochmara Lodge set up its popular Underwater Observatory.

She's then spent the last four years working for MFA doing the Pelorus spat counts, which involved washing the spat rope, getting the resulting spat under the microscope, determining the blues to greens ratio and sharing the results with farmers for potential spat catching deployment.

Kiah also did some admin work so when Alex decided to move on, she was an obvious candidate. "Data entry can be tedious work – but I love it and



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the spat analysis gives me an opportunity to use my previous laboratory experience".

When she's not helping the MFA, Kiah also has small business – ILY Events which hires out hoops and backdrops for weddings and events and sells macrame. "It's come back in I swear!"

Her real passion, however, remains the ocean. She loves spearfishing in the Sounds including taking part in the Sounds Summer Slam, NZ's biggest spearfishing competition which draws 300 entrants every December, right here in Marlborough.

Butterfish and crays are her favourites when not competing, but the Scuba Instructor in her prefers to watch and observe the abundance of marine life NZ water have to offer. - Brendon Burns



BUNDLING FLOATS

Best practice to aviod loosing floats

- Use >24mm Rope
- Use tight bunches

 Tie first and last float securely to >24mm rope (This will ensure if the rope chafes off the backbone or warp, the bundle will stay together)





Fish Predation on New Zealand's Greenshell™ Mussel Farms

The Greenshell[™] industry frequently reports fish predation as a major problem for the industry, but a comprehensive understanding of the relative contribution of fish predation to crop losses throughout the production cycle is still lacking. Evidence of the species responsible, the timing of predation events, and the magnitude of crop losses due to fish predation remain entirely anecdotal. Reports suggest that fish predation can lead to significant losses, possibly even reaching 100%. This is substantiated by instances of torn mussock, stripped spat, and, in more severe cases, lines becoming entangled on the surface. Fish predation is thought to pose a greater threat during the initial production stages, especially to seed and juvenile mussels, which are considered particularly susceptible. Despite its severity, we have only limited knowledge about fish predation's true extent and impact on the Greenshell[™] mussel industry. To comprehensively evaluate the influence of fish predation on Greenshell[™] farms and to develop successful strategies for minimising its impact within the Greenshell[™] mussel industry, additional research is imperative.

Therefore, our research aims to quantify crop losses due to fish predation and determine when they occur throughout the production cycle, identify the species responsible for these losses and document the associated evidence of fish predation on mussel farms. To achieve this, we are conducting a series of fish exclusion experiments in conjunction with underwater camera deployments on Greenshell[™] farms throughout the Coromandel region. These experiments will determine exactly when in the production cycle fish predation occurs and the relative impact at each stage, whether size-selective feeding occurs within crops and if exclusion works at preventing the effects of fish predation. Preliminary findings demonstrate the effectiveness of exclusion measures. In situations where fish are not excluded, the impact of fish predation becomes evident, leading to substantial losses of up to 46% over a 63-day period. Underwater cameras have captured Snapper and Parore in feeding frenzies in various farm locations (*Figure 1*).

(B)

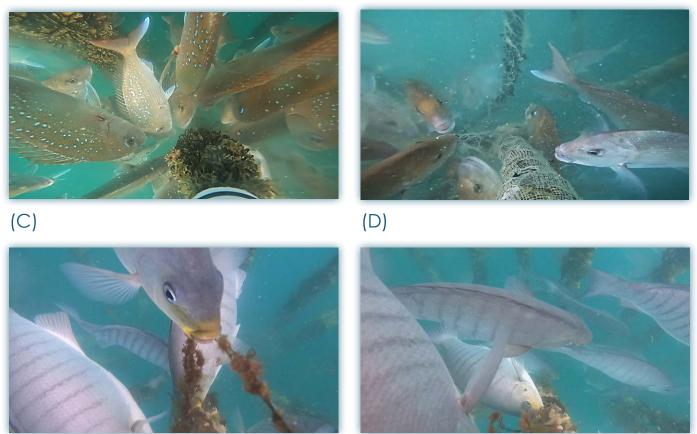


Figure 1: Snapshots from underwater videos showing a) snapper at Esk Point feeding on spat ~20mm b) snapper at Kereta tearing mussock c) parore in Hautapu pulling on biofouling d) parore feeding directly off the dropper line.

Evidence of predation on mussels was observed, including chewed and patchy rope and broken shells. Snapper are clearly the dominant species responsible however, observations of parore preying directly of the lines requires further investigation as to whether they are preying on the mussels themselves or the associated biofouling. Initial results suggest that fish may be selectively targeting the largest mussels within the crop, potentially because they protrude more, however, further investigation is required to confirm this.

Now that we have identified which species are responsible, the subsequent step involves confirming the precise stage of production during which these events occur. This will enable us to begin to develop targeted approaches for limiting fish predation. This ongoing research is primarily being conducted in the Coromandel, where the findings are invaluable for developing effective mitigation strategies. Notably, as water temperatures rise and fish migrate southward, the applicability of these findings will progressively extend to the regions situated at the top of the South Island.

Rebecca Stobart

PhD Student, The University of Auckland

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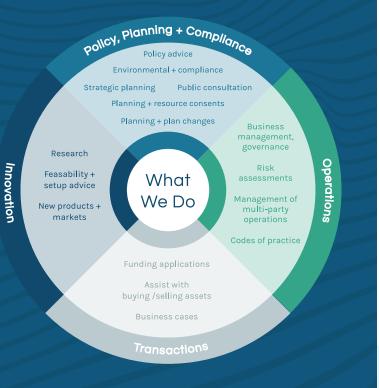
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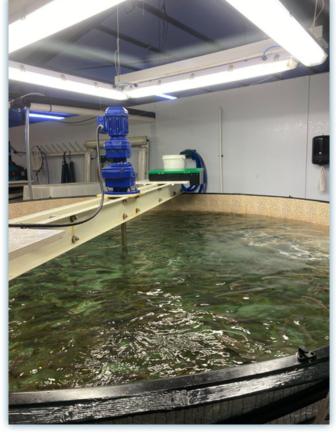
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Bream Bay aquaculture trip MFA scholarship.

Kia ora, my name is Finn Stichbury and I was the fortunate recipient of the 2022 Marine Farming Association scholarship for Aquaculture, at Queen Charlotte College in Picton. This grant enabled me to visit the NIWA Marine research Centre at Bream Bay which is just south of Whangarei. We were met by manager Steve Pether and he introduced us to Jamie Lee Lamb who showed us around this very cool facility.





One of the tanks kingfish move through during their two years life here at the farm

With Jamie lee next to one of the fish tanks

The Bream Bay facility conducts research to help grow NZs aquaculture industry. They have a team of around 33 people including scientists, technicians and maintenance crew who have among other things developed a land-based self-contained aquaculture facility. When finished, the farm will be able to produce 600 tons of kingfish a year.

Thim novation esearchand development that has gone into this project is mind blowing. The fish spawn on site, are incubated, then are moved through multiple tanks as they grow. The young fish start with live food and move to pellets as they grow older. Something I found really interesting was that the inside of the tanks had specially designed surfaces to help the young kingfish catch their live prey. Another surprising fact was that the growth of the fish could be controlled depending on food, water temperature and how much light they are exposed to.

Some of the ongoing research includes growing algae to help keep the tank water clean and using dye to identify spinal and jaw defects in fish as young as 25 days. Fish are currently graded by hand but systems are being developed to try and automate this process.



A special oil is used as an anaesthetic so fish can be checked, handled and moved.

The facility as a whole was incredible, everyone there was so friendly and the amount of things to learn and see there is almost too much, I am really looking forward to seeing how their new kingfish base is going to turn out and will definitely have to come see the finished result.

A very big thank you to the Marine Farming Association, Steve, Jamie Lee and Alana from the NIWA Bream Bay facility and my teachers Mr Garbes and Miss Wheeler for giving me this opportunity.

- Finn Stitchbury





Mussel Reef Restoration for Top of the South Island/ Te Tau Ihu

The mussel restoration project continues!

From 2019-2022 a collaborative research project was run with extensive support and collaboration from eight marine farming companies, the MFA, The Nature Conservancy, The University of Auckland, NIWA, and Te Tau Ihu Fisheries Forum, with funding support from the Ministry for Primary Industries.

We are extending the project for two more years with extensive support from the organizations listed above and many more including Manawhenua ki Mohua, Ngati Tama, MDC, and DOC. The wider community collective supporting the project has developed a project plan which will build on the previous project and aims to:

- Increase the effectiveness of mussel restoration by developing methods for harnessing natural recruitment into mussel beds in the Marlborough Sounds.
 i. Start of that work reported in this Newsletter below.
- 2. Assess the efficacy of recycling mussel shell from aquaculture to enhance biodiversity and stability of seafloor habitats with accumulated sediment from run off.
- 3. Extend the application of mussel restoration methods developed for enclosed waters of the Pelorus Sound/Te Hoiere so they are effective in open coastal waters of Golden Bay/Mohua and Delaware Bay/Wakapuaka.

We have begun looking at new sites to deploy mussels and shell material within all three locations and have found intertidal mussel reefs in Mohua and Wakapuaka! These remnant mussel reefs can provide insight into wild mussel recruitment that may be able to help the restoration efforts.

If you have any questions or



comments about this project, please feel free to reach out to Emilee Benjamin via email at Emilee.benjamin@auckland.ac.nz.

Untangling mussel recruitment

The Pelorus Sound/Te Hoiere Mussel Restoration Project has successfully trialled restoration efforts and has deployed over 50 tonnes of mussels. One of our key goals for this restoration project is self-sustaining populations, which means we need new mussels to recruit into the beds. We haven't seen any recruitment to our restored beds so far, so we wanted to try a new method to initiate recruitment. Specifically, we wanted to try deploying spat-filled seaweed, similar to what is used by the industry, to see if this could supply a source of new recruits.

Experimental design

We harvested wild seaweeds and hung them off a dock in Double Bay, Kenepuru Sound for two weeks. We've previously found this method to lead to large spat catches and had good luck with each seaweed sample catching hundreds of spat (both blue and green mussels). At the end of those two weeks, we brought 24 small trays out to Double Bay and filled them each with large rocks. Additionally, half of the trays each had 20 adult mussels (extras from a prior restoration effort) placed on top of the rocks. Finally, half of the trays (six with mussels, six without) each had a piece of the spat-filled seaweed strapped onto a rope suspended above them. All 24 trays were brought into the water in Double Bay and placed 2 m from one another in about 1 m of water depth on the low spring tide.

After one month we took half the trays to shore, emptied them, and took the rocks and adult mussels back to the lab to look for recruitment. After one more month we did the same thing with the other half of the trays to monitor continued survival of recruits.

Results and next steps

Juvenile mussels, blue and green, recruited into the rocks and adult mussels in the trays! However, we only saw significant recruitment levels to trays that we supplied with the spat-filled seaweed. This suggests that recruitment is possible in the area, but we may need to provide a source of recruitmentready spat. We did not see any significant decline in recruitment over the two months but did see the recruits continue to grow, suggesting.

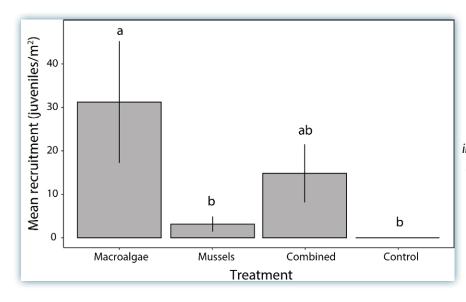
that mussels are able to survive after they recruit.

This was a small-scale experiment but has some promising results for our restoration efforts. Specifically, we are trialling a scaled-up version of this experiment by deploying spat-filled seaweed onto some of our restored reefs as well as adjacent rocky areas. If this method is successful, then it could help us understand more about recruitment dynamics in the restored mussel reefs and how to facilitate recruitment in the future.

If you have any questions or comments about this project, please feel free to reach out to Emilee Benjamin via email at Emilee.benjamin@auckland. ac.nz.



The four experimental treatment groups we trialled (clockwise from top left): Adult mussels and spat-filled seaweed, adult mussels without seaweed, no adult mussels and no seaweed, and spat-filled seaweed without adult mussels.



The results of the small-scale tray experiments for each of our four treatment groups. Mean recruitment includes both blue and green mussels. The letters show significantly different groups depending on the treatment.

MFA Newsletter Stories

If you have a story that you would like to see published in our newsletter, please forward it to office@marinefarming.co.nz for consideration.

Our newsletter comes out every two months.

New aquaculture volunteer Navigator joins the FirstMate crew

Meet Hailey, our new volunteer FirstMate Navigator. Hailey works in Havelock and is Sanford's ssel Repairs & Maintenance Planner.

Hailey heard about FirstMate through a meeting she went to in 2022 and was later asked to hand out flyers on FirstMate at the wharf helping raise awareness about our services to the vessel crews.

"Talking to the crews about how FirstMate could help them, made me think about how I could help. I work with 12 vessels, each with two crewed shifts a piece and I've seen the best and worst of the guys.

"My dad was a fisherman and worked on a mussel boat and I grew up knowing firsthand the financial challenges that come with this type of work. My husband also worked on mussel boats, I am very familiar with the aquaculture industry. I strongly care about the industry and the people working in it and want to help. People can confide in me, and I will do my very best to help get the support and resources to them".

Hailey has worked at Sanfords for two years and quickly learnt about the fast-changing nature of the industry.

"Very quickly things can feel out of control and stress and anxiety levels can rise. It could be mechanical breakdowns, weather events, spat (baby mussels) washing up on the beach in Kaitaia, COVID doing the rounds or cold weather impacts on harvesting. We're at the whim of mother nature".

"That's where I see FirstMate being such an important support to our fishers and farmers. Having a service where someone just needs to find





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the phone number and discreetly ask for help – is huge".

Hailey reflects that in her experience, the industry still has some stiama and an old-school attitude when it comes to talking about mental health and wellbeing.

"I'm on the wharf a lot and I think we can do better. We need to be nicer to each, our words have impacts, especially on the young guys. When it becomes the norm to be hard on each other, people don't realise that it's actually not normal and can't understand why they feel so down.

FirstMate is here for all our fishers and sea farmers and those that work in aquaculture. We're only a phone call away".

Lee Cowan **Communications Manager** 021930836



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CAL MARITIME TRAINING

A Combined age of 80

On August 25th 2023the Marlborough Shellfish Quality Programme (MSQP) held its 30th AGM, while the Marine Farming Association marked its 50th.

MSQP Chair Bruce Hearn said it had once again been a difficult year amid post-Covid inflation and two PST closures in the Marlborough Sounds. The Nydia Bay outbreak had demonstrated just how rapidly counts can increase.

Reassuringly, vibrio parahaemolyticus had remained quiescent since the 2022, but a likely hot summer ahead may see vibrio issues arise once more.

PSTs are here to stay, said MSQP Executive Officer Colin Johnston who joined the AGM from his base in Tasmania.

"With El Nino comes warmer water temperatures." He said the Tasman Sea was reporting the highest increases in sea temperatures anywhere over the last six years.

On the bright side, Bruce said MSQP was aware of research that may lead to onsite testing for PST before harvest as an additional non-regulatory measure giving assurance that regulatory levels are not exceeded.

He said MSQP was doing well and that was thanks to its staff and contractors.

"We have a world-class system – you all ought to be proud of it."

Bruce paid particular tribute to Kevin Primmer who he said had given outstanding service to the aquaculture industry over many years in Golden and Tasman bays. He said finding a replacement was no easy task but welcomed Dan Cairney of AMA Scientific Services (AMASS) to the role of vessel and sampling officer for the Tasman District.

The MFA AGM was a very efficient affair – with no voting or constitutional changes required in 2023.

MFA President Jono Large thanked the Board and MFA staff for another productive year, with his President's Report.

He remarked the post-pandemic world has left ''a hangover' of challenges including inflation. On a positive note, strong product demand continued over the past year, with recent sales figures approaching record highs for frozen half shell and various salmon formats. "This is very encouraging, and we look forward to those prices enduring and the gain for exporters flowing down to growers.'

He said the Marlborough Environment Plan's Variation 1/1A decision was incredibly positive, providing a guaranteed reconsenting pathway for ~95% of the existing industry. Mapping prepared by MFA and co-funded by AQNZ proved critical in giving the decision makers confidence to recommend Controlled Activity Status for reconsenting within an AMA, meaning applications can be processed on a non-notified basis. "This will significantly reduce the industry's expenditure on Environment Court hearings and arguments with the usual cast of anti-aquaculture groups."

Jono said despite the long list of wins, there were some disappointing aspects of the decision including a few farms that were initially given an AMA in the notified plan have now been left without a clear reconsenting pathway. There also seems to have been little thought given to the transition period between the operative plan and the new plan.

Variation 1A, which covered finfish only, has been withdrawn in full which he said was a good outcome, as many of the AMAs identified were unsuitable for salmon farming. There was also a lack of substantive consultation with iwi. A replacement process for identifying AMAs for finfish farming was now required.

Jono thanked all the MFA members who supported the MEP process through the MFA levy, attending meetings, making submissions, and giving evidence at hearings along with Core Group members and the Gascoigne Wicks team for their top-notch advice.

He acknowledged Amber McNamara for a fantastic job over the years for the MFA and said Nicola Russell as the new Office Manager has already proven herself to be an asset to MFA team. He thanked Alex Henry for her work and welcomed back Kiah Holdaway to provide admin support in addition to her seasonal spat counting duties.

Jono said the final report late last year for the multi-year King Shag project proved beyond all doubt that marine farms are not having a negative effect on King Shag foraging and if anything, provide a benefit.

MFA has secured SFFF funding to build on the Pelorus Mussel Restoration Project which will see further mussel shell and live mussel deployments occurring in Golden Bay, Delaware Bay, and Pelorus Sound.

"I'm sure you will agree the results of both projects have been outstanding for us as marine farmers and have really championed the sustainability credentials of the industry."

He said spat availability and retention remains a major challenge for the mussel industry and it will be a focus area for future MFA supported research projects. This includes seeking funds for a project aimed at identifying cost effective nursery feeds that could give spat a boost prior to deployment and another to investigate why some nursery sites perform better than others.

"We're also pleased to announce that the 2023 Contestable Fund has been awarded to Joe Wiid and Extrutec to support the development of a biodegradable crop/spat tie. This concept shows great promise for eliminating one aspect of the mussel industry's reliance on single use plastic."

He said this year's return of the Havelock Mussel and Seafood festival was a great success with 3500 attendees and over \$5000 raised for the Cyclone

Gabrielle Mayoral Fund as well as community grants.

The MFA Board has engaged Julie Brown to write a second industry book. It builds on Lines in the Water and focuses on the period from 2002 to present. Anyone not yet contacted who would like to feature in the publication is asked to advise the MFA office.

Jono said as the MFA Board entered its 50th AGM it was losing two highly experienced members – Aaron Pannell and Scott Gillanders. He thanked them for their service to the MFA and welcomed the two new Board members – MacLab's Mark Burnaby and Wayne Hollis from Aroma. - Brendon Burns





No straining involved for Teapot

Carl 'Teapot' Harris has worked in Rai Valley for TNL (now MOVe Freight) for 38 years and says he wouldn't have it any other way.



TNL/TIL marked Teapot's 30 years with the company with a special presentation from then CEO Jon Kyle.

Carting greenshell mussels still accounts for 80% of the depot's work and Teapot has rarely turned down a request to cart a load, no matter what time of day it's made.

He left the family farm at Bulford, just out of Rai in the mid-1970s and worked at the local dairy factory until it closed in 1980. After a period of sharemilking, he was asked by TNL's then manager at Rai Valley Norm Duggan if he'd join as a truck driver.

Teapot already had his licence though he needed to get his trailer certificate. His first five years were spent driving stock trucks.

By the early 1990s he was carting mussels. This included regular trips to Okiwi Bay.

The road over the Matapihi hill was still unsealed and sometimes the truck and trailer, laden with mussels, would get stuck.

"We'd just have to get another truck in, unload the trailer and tow me up,"



Teapot recalls.

"Sometimes you'd do 2 loads a day and sometimes between us we would do 100 tonnes a day."

His first truck was a six-wheeler Mercedes with 120hp that would take four hours to grind up the Rai Saddle and Whangamoas to Motueka and back.

"Now it's a piece of cake – we have trucks up to 540hp."

He enjoyed getting to know local mussel industry personalities like Rob Pooley, Chris Goodsiff, Ivan Godsiff, Greg Smith, Phil Hawke and Merv Whipp and lots of other great people.

"They are all good people – I've made a lot of friends around here."

Not that Teapot was limited to the top of the South. He'd often cart loads to the Pacifica factory in Christchurch. There were also long days away from home.

Grant Boyd, now Sanford's Floating and Farm Development Manager, recalls unloading Teapot's truck on many a late night especially at the Kaikoura Pacifica Factory.

"For big fulla, Teapot could still get up on top of the loads and move covers and bags around with ease.

"Teapot back in the day with Norm Duggan as well were totally customer focused. They'd say yes to any request then worry about the logistics of



Mussel rope and floats en route to a Golden Bay mussel farmer was the good guy. always happy to help, day or night. "

At its peak, the Rai Valley depot was running 19 trucks with 25 drivers – and mussels accounted for half the business. making it happen later! I'm sure there must have been plenty of moments when he wondered, How the hell am I going to make this work!

"The welcome and jug were always on at the Rai Valley office. Teapot



Teapot (right) with Ian Jones taking a load of fertilizer to the airstrip at Port Ligar

Today it's 80% but there are only 6 units and 6 drivers. Most of the mussels are now carted from Port Underwood to Havelock.

For the last 18 years Teapot has been managing the office rather than being behind the wheel.

"TNL asked me. It was a hard decision. I missed a lot of the people that I used to see on the road. I used to go away and not come back for two week stretches. We used to carry stores down to the fishing boats at Bluff and bring back (Stewart Island) mussels for processing up here."

His move to the office was around the time TNL was acquired by TIL Logistics (now MOVe) which he says has been 'bloody good' with better trucks and pay.

Teapot remains dedicated to looking after the mussel industry.

"The phone never leaves my side 24/7. I never turn down a job unless I am really stuck."

That's seen him turn out a driver late at night. He did this himself one night when Aroma's laden vessel was stuck at Okiwi Bay by rough weather with a load of mussels that needed to get out for processing.

Teapot only lives a couple of doors away from the depot and will return to the office when someone makes an out of hours request he can meet.

He's only ever lived in Rai Valley and says the climate suits him.

"Nah it's bloody good. Hot summers, cold winters – I'm used to it. I've got a good fireplace and there's plenty of firewood around here."

When he was driving trucks, he only drove in the South Island, loving the scenery and the roads he got to know so well.



Teapot with Dot, who has come through a long battle with facial cancer

He and his wife Dot have only travelled overseas once – to Australia when they were first married more than 40 years ago.

"We haven't travelled anywhere since - it doesn't really interest us."

After nearly 40 years of transporting mussels (and a few other things) he's glad he got that job offer to drive trucks.

"I wouldn't have chosen anything else. You meet that many good people."

And how, you might ask, did Teapot get his name?

"When I used to go away a lot and stay in motels I'd ring and say – 'Put a pot of tea and a meal in my room. I still drink a lot of tea and I did have a wee bit of a pot belly on me too."

Soon there was a teapot painted on the side of his truck and the name stuck. "Some people don't know me by my proper name. It's all I get called at home too."

There's even been mail, simply addressed to Mr and Mrs Teapot, Rai Valley. And like with the mussels on trucks, the mail gets delivered.

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Coromandel farmers first to face marine environment changes

Fanworm invasion, barnacles, heart-breaking snapper predation, labour shortages and an 'Old Testament' flood followed by a PSP outbreak are just some of the challenges which a panel of Coromandel marine farmers outlined at the MFA Conference in 2023.

Introducing the panel, MFA GM Ned Wells said that as marine farmers we know that change is occurring in the marine environment. While some of the challenges faced in the Coromandel are geography/proximity related, it is not unreasonable to expect that the Top of South will experience much the same in the coming years.

Mike Moy, Farming Manager for North Island Mussels Limited (NIML), said fanworm (Sabella) had become a massive issue. While they did not often attach to GSMs, their filter arms wrapped around ropes and took food mussels would normally ingest.

To combat fanworm and other fouling organisms improved rope cleaning techniques were being developed and trialled for both on and off water operations, at great expense to the industry.

The infestation's impacts included having to suspend the initiative to restore the native mussel beds in the Hauraki Gulf for a time, until safe systems to transport mussels (and not fanworm) were developed and agreed to by MPI. One of the more successful concepts was putting big freshwater tanks on harvest vessels and submerging the mussels, to drown any unwanted species including fanworm.

Mike also shared photos and a video showing snapper predation which he said was at heartbreaking levels.

"Spat especially take a hammering. They'll chew right through the stocking. We can lose 10,000 metres of seed in a night."

His company was now only seeding when snapper numbers were low through winter to spring.

Andrew Selby, Managing Director of Whitianga's OP Columbia processors says his company has lost more than 125 days this year through an "Old Testament' flood experience.



"Industry thinks the large amounts of fresh water in the Gulf provided conditions for the PSP to trigger. And it did spike quickly."

With no direct flight from Hamilton to Nelson and a need to get samples rapidly tested by Cawthron, he ended up driving to Auckland and flying them down. Andrew said the industry is now in discussions with Cawthron about having a presence in Auckland which would allow

for faster processing. Labour shortages had been an issue pre-Covid and securing 30 Filipino workers had been a godsend.

Rodney Roberts, GM SpatNZ, told the Conference that it was choosing stock that had the best characteristics through selective breeding. "Not all mussels are the same."

Traits were being found, tested and measured. Growth was one trait that was ideal for selective breeding as it was easy to measure and had a big genetic component.

SpatNZ had bred GSMs which give 'spectacular growth". Over three years of production data the yield for hatchery mussels was 2.5 times higher per metre of longline per year in the Marlborough Sounds than with Kaitaia seed.

Overall, fouling load is reduced through faster cycle times and it's possible that selective breeding could help with fouling resistance by capitalising on differences in shell structure, but it was no silver bullet, said Rodney.

Biotoxin accumulation could also potentially be reduced through selective breeding but it's unlikely to eliminate biotoxin risks completely. Unfortunately, fish predation could not be helped, unless snapper could be selectively bred to eat fanworm rather than GSM!

Dr Norman Ragg, who leads Cawthron's shellfish team, said there had been a lot of research on understanding and developing heat tolerance in GSMs.

He said Cawthron had being experimenting with adult mussels from heattolerant families that were then conditioned at higher temperatures – 17 to 24 Celsius. These produced offspring which had better survival rates at the higher temperature of 24 degrees, a temperature that would typically kill GSM embryos.

"It appears they actually prefer the hotter temperatures."

The heat tolerance trait was now being brought into selective breeding programmes. More detail on the Cawthron work will be provided in an upcoming Newsletter edition.



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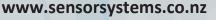
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