



**TINDALE
MARINE RESEARCH
CHARITABLE TRUST**

SUMMER REPORT

#8

February 2020

Tindale Marine research Charitable trust quarterly report. Includes Trust member News, activities, engagements and achievements over the summer of 2020

Scott Tindale
Founding Director



TINDALE MARINE RESEARCH CHARITABLE TRUST

Charities Registration No. CC55555

IRD no. 126-648-057

#8 Summer Report 2020

Welcome back everyone I hope you have been enjoying these reports and have had an opportunity to get out amongst it yourselves. Here is a roundup of the 2020 summer season. Firstly I would like to thank all the supporters that have volunteered their time and experiences to build on a shared vision of sustainability through education, ethical angling and citizen science. A very special thanks to Kaye Oliver for her huge help in putting together grant applications & processing tagging kit registrations and orders at fishing competitions. Our first year of the inshore fish tagging project has been a huge success with some awesome recaptures and releases adding to our knowledge of the marine life we all enjoy. Remember this is your project too, run by fishers for fishers with a long term benefit to the environment and sustainability of the sportfish we target.

Citizen science is a well-recognised as a way of gathering valuable data, recording observations, and providing marine specimens important for research studies. Trust members have been busy this summer collating and assisting in many of these projects. This year has seen how effective social media is in sharing observations. I have been tagged in numerous manta ray, whale shark and great white shark sightings. Thank you all for this the info and footage has contributed to furthering studies on these species.



Sadly there have been 7 reported deaths and 2 live releases of great white sharks this summer. Most were caught on recreational longlines, one in a Recreational set net and one unknown. Catch sites included 90 mile beach, Murawai beach and south of the Manukau harbour on the west coast. Bay of Island, Orewa beach and Waihi on the east coast. All were juveniles averaging around 2m.

This 2.7m juvenile great white shark was caught in a recreational set net off Orewa beach and was collected by Trust members and taken to the marine pathology lab at Massey university in Albany. A necropsy carried out by Department of

Conservation shark scientist, Clinton Duffy with the assistance of Trust, University staff and local Iwi representatives involved measuring, weighing and collecting DNA samples. A sample of backbone was taken for aging and the gut contents included snapper remains.

It is important to remember Great white sharks are a protected species. Under the law it is illegal for the public to take any part of, harm or target great white sharks. Two of the sharks recovered since October have had the fins or jaw removed. Accidental catches happen and are not illegal. You must however release it immediately and report as soon as possible to Department of conservation staff. If the shark dies contact DOC staff immediately and they will arrange for its collection if possible so it can then contribute to further studies on this species. Phone 0800 DOC HOT (0800 362 468) or email: sharks@doc.govt.nz

Necropsies explained.

Necropsy means the examination of a body after death (Necro refers to death, and -opsy to medical examination). Whereas autopsy is reserved for human beings (auto refers to self), a necropsy usually applies to a non-human animal.

In the case of fishes, where the cause of death is often known (i.e. fishing), the purpose of a necropsy is generally to collect biological data on the species (e.g. weight, length, size and weight of reproductive organs, numbers of embryos or eggs, diet, parasite burden), or blood and tissue samples for aging, genetics (species identification, population structure), and/or determination of contaminant levels or reproductive stage. All things that are difficult or impossible to obtain from live fish in their natural environment.

In some cases a necropsy may be performed to determine the cause of death. This can require microscopic examination of thin slices of tissues taken from various organs for evidence of disease, or culturing bacterial samples taken from wounds or infected organs. Non-natural mortality from human interactions such as fishing, pollution and rubbish is also important to document in order to manage or mitigate them.



Clinton Duffy & Scott Tindale examine a Great White Shark at Auckland War Memorial Museum

Department of Conservation staff, Trust members, Waikato University & Massey University lecturers and Students examine a Bronze whaler shark found washed up on an Auckland beach.

Stomach contents of this shark included remains of a grey mullet, snapper and fishing tackle.



Research In and around the field

A big part of the Tindale Marine Research Charitable Trust is helping other organisations and individuals in their research projects. One such project is a research project on Tope, sometimes called School shark or Grey boy in the south. Massey university post graduate student Alex Burton is aiming to tag and release 500 fish in the Kaipara harbour ranging in size from juveniles to fully mature sharks and will be asking the fishing public to report recaptures around the New Zealand coast.

Via Email:

Greetings, Mr Tindale

My name is Alex Burton, I am a postgraduate student at Massey University studying school (tope) sharks in the Kaipara Harbour.

Part of my research is to track movements of tagged sharks through the use of spaghetti tags (see an attached image of a tag).

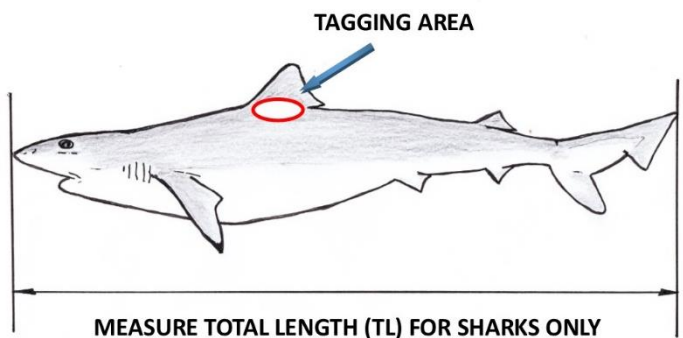
In order for us to track these movements, we are relying on reported recaptures of these tagged individuals.

This species has had individuals that have previously been tracked moving from the east coast to the west coast and from the top of the North Island to the bottom of the South Island.

If any of your members captures a school shark or any other fish with a tag, can we please ask that live individuals are released and that the tag number, total length (please see attached image), capture location, and capture location depth of all captured, tagged sharks or fish are reported to <https://tindaleresearch.org.nz/fish-tag-recovery-form/> or 0274760687.

Best Fishes,

Alex Burton



Tope sharks are easily identified by the transparent tip of the nose and absence of dorsal spines. The tags are green and have individual serial numbers and contact details printed on each tag.

Weather depending, we are about to get under way with year two of the **Giant Manta Ray** satellite tagging project off the North Island east coast. The special permits and animal ethic approval have included the tagging of **Basking sharks** and **whale sharks**. The tag sponsors have been keen to support this option should the opportunity arise to place one of their tags on one of majestic giants. Sightings of giant manta rays are fairly common off our coasts every year over the summer months but Whale Sharks are rare visitors this far south. In my years of big game fishing off the NE coasts I have seen 15 on seasons that have corresponded with the warmer ocean currents making it this far south. Basking sharks were regular visitors to lower NZ but their absence over the last decade has raised concerns on what has happened. Satellite tagging of these big fish is the only way to observe what and where these fish go when they leave our shores.



We would appreciate any help in reporting sightings of any of these big fish species.

Shark Specimens wanted

We recently received an email from the University of Auckland for a study by a PhD student studying under Craig Radford who would like any fresh shark specimens that are found washed up on a beach or landed in a Recreational fishing competition within a reasonable driving distance of Leigh. They are happy to collect either just the head or they can take the entire animal, whichever is more convenient. If the animal can be stored on ice that would be perfect.

Craig has a Marsden grant to study the nervous systems of sharks and he is after fresh chilled heads from a variety of large shark species (bronze whalers, blue, Mako, white, medium sized - large hammerheads, threshers, seven and six gills, ...) so they can be carefully fixed (preserved) and then MRI scanned. So please bear him in mind if you happen to get a report of a nice fresh shark on a beach or wrapped up in a net somewhere. Also please let him know of any fishing competitions coming up where large sharks may be landed. He has good contacts for obtaining specimens of the smaller species (i.e. school sharks, rig, juvenile hammers, carpet sharks, spiny dogs) but if anything unusual turns up please let him know (unless Tom at Auckland Museum wants it in one piece that is).

Craig can be contacted directly on 021 666 245, Derek (PhD student) on 027 425 3789, Or here at the Trust



Mako shark, Hauraki Gulf. Photo by Scott Tindale

Museum collections and IGFA world records



Masked Foxfish *Bodianus flavifrons*



Plain Perch *Lepidoperca inornata*



Cucumberfish *Paraulopus nigripinnis*



Golden snapper *centroberyx affinis* 3.68kg

We often am asked by recreational anglers to identify fish they have caught. There is a comprehensive ID guide on our website but some species are rare and sought after for further scientific studies. This small sample above is an example that we have arranged this week to be added to the Auckland Museum fish collections. Each fish is formally ID'ed and frozen until it can be put through the preservation process. Recorded with the fish is the Date & location caught, depth of water, anglers name and the scientific names of the species once identified. Once the preservation process is completed each specimen is catalogued and put with the main collection for future studies.

This Golden snapper caught by Baz Harvey weighed 3.68kg making it a potential IGFA world record and at 530mm VL is 95mm longer than the maximum size recorded so was a great candidate for preservation.

If you should happen upon a fish that you are unsure of what species it is and can't find a match on line send me a photo, carefully wrap in plastic wrap ensuring no damage to the fragile fins and freeze for collection. You never know you might have discovered a new to science species.

Partnerships

With such a huge reach across the country on marine matters it is understandable to help out or form alignments with like-minded groups with common goals. Our inshore tagging program has influenced many fishing competitions to become a bit more sustainable and limiting our impact on our sport fishery. Roll out measure mats have now become an essential part of these events offering anglers the choice of releasing trophy fish while keeping only what they can eat. Event organisers have advised it has sped up the final day processing and allows anglers more time to relax and enjoy the day out. Sponsors are clearly interested aligning with the sustainability branding reopening doors for organisers. A reminder that we have included measure mats at cost on trademe or through the website.

YOUNG OCEAN EXPLORERS

At the start of summer the Trust was invited by Steve & Riley Hathaway, of Young Ocean Explorers to feature in one of their 8 Hope stories involving the Hauraki Gulf. The Hope stories highlight people who are making a difference. The Hope stories are part of a larger program, called the '21 Day Challenge – Restoring the Hauraki Gulf Marine Park'. The Challenge starts on February 8th 2021 and are targeting at least 60,000 children participating simultaneously through their schools.

“We want to share stories with a generation of kids that are environmental natives. They understand the world is in turmoil and they want to make a difference... our aim is to use stories like yours to take the mystery out of what it means to ‘be the difference’. This generation of kids are a powerful force, they just need some tools in their belts, so they can action some of their ideas to make the world a better place.

An afternoon was spent on the water with film producers and camera crew whilst Scott and Riley talked about the Tindale Marine Research Charitable Trust inshore tagging program. Riley was able to get some first-hand experience in catching, measuring, tagging and carefully releasing a number of popular inshore fish species while demonstrating the process and benefits for viewers and young citizen scientist wanting to participate in building a more sustainable fishery.

Check out more of Young Ocean Explorers amazing work at: www.youngoceanexplorers.com



Lights Camera Action.....Photos by Steve Hathaway

Our sea life needs our help

To the New Zealand public.....

I am writing to you in the hope of partnering with like-minded people and organisations that can help us to clean up our waterways. While attending the IGFA Angling World Record awards evening in Florida USA I came across this simple but effective solution for collecting unwanted or discarded fishing line. These PVC collection stations were attached to popular fishing wharfs or jetties to avoid dumping of unwanted monofilament into the waterways. The line is then collected by community volunteers who ship it to Pure Fishing to be cut up, melted into pellets and used again in the manufacture of new plastic items. Pure Fishing had recycled over 100 million miles of discarded fishing up until the time I was last there in 2014.



I saw this concept again in Australia where they were a common addition to local fishing jetties.

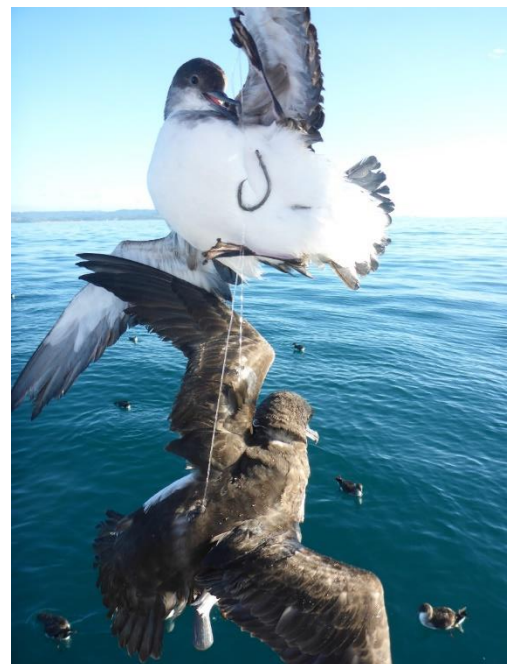
As a recreational fisherman and a healthy marine life advocate I have witnessed first-hand the increase in fishing related rubbish on our shores and the threat it has on our ecosystem. So for the past 3 years we have been showcasing this concept at the Auckland and Tauranga boat shows to gauge the public reaction. All of it was very positive. We would visit a local beach prior to each event and easily collected discarded fishing line for the displays. It was great to see Parents explaining to their children their shared concerns & the reasons behind the displays, Fellow fishers listening to constructive advice and sharing their own observations and staff from city Council & community organisations wanting to get behind the idea.



Discarded fishing tackle was collected from our local beaches for these displays. Fishing gear makes up a majority of the rubbish we see on our beaches and is not only an issue for our wildlife that get entangled or ingest it, monofilament fishing line takes over 600 years to break down.



Shag caught in discarded fishing tackle (facebook)



5 shearwaters wrapped in fishing line
Hauraki Gulf



Discarded monofilament fishing line entangled around wharf piles Shelly Beach Auckland



A young dolphin drowned from being tangled in discarded fishing line (photo DOC New Zealand)

To address this problem we are proposing with your help is to expand the trial to other land based fishing “hot spots” around the country and are looking for materials, sponsors and volunteers to make it happen. These areas would contain the large populations of recreational anglers with fishing platforms within the community town boundaries. Mainstream funding is only an option if we can find a local operator that can recycle the collected material for reuse. I am not aware of any yet that can help. Therefore if nylon monofilament is not able to be recycled here in NZ, then in the meantime at least landfill is a better option than littering our beaches and harming our marine life. We have to start somewhere and soon before it's too late.

In the feedback we have had to date volunteers have come forward to help assemble and fit on site, maintain and empty the collection stations when they get full and educate the public on their use. In our trials around Auckland it was encouraging to see them working with used tackle being deposited in these tubes.

We are actively looking for support in other communities around the country that have similar areas of concern that could use and initiative like this and or could assist in the instillation, maintaining, emptying and or disposal of the collected. If this sounds like you we would love to hear from you. Together we can make a difference.

Upcoming events



Yes it's getting close. A 4 day event at the Auckland showgrounds 14-17 May 2020. We will be at stand 101, hall 1 (the fishing hall) with tagging kits and accessories on hand with a few giveaways showcasing Marine Research and Citizen Science. Come and have a chat to the team we hope to see you all there.

Social media, networking and that annoying internet

I would like to thank all of you that have shared your posts, photos, experiences and advice on the trusts Facebook and community pages. We will shortly make a few changes to make it easier to link posts and suggest tagging **@tindaleresearch** in the future. I have better luck tagging fish so I appreciated the help from Alex in sorting this out. The website is next...

The last report spring issue #7 we had a bit of a hiccup with windows updating during sending the email out. This caused many of you the get it 6 times. Apologies for that I only hit send once but hyperspace did its own thing. We may look at posting these reports on the website in future if we have issues again.

Those of you that have received tagging kits over summer would have noticed extra tags and spare brochures. The tags are courtesy of our kind donations and we ask that you share the brochures with your local tackle stores, fishing clubs and fishing colleagues to ensure everyone is aware what to do if they catch tagged fish. Remember this is your project too and we all have a vested interest in its success.



TINDALE MARINE RESEARCH CHARITABLE TRUST

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End of year tax refunds

For many of you out there the end of March is the end of the Tax year. This is important information for those that have or intend making a donation to this trust.

The Tindale Marine research Charitable Trust is a New Zealand registered charity with full donee status. This means that for individuals and corporates (companies), for any donations made to the Trust, you are entitled to a full tax credit as described below.

Individual's donations.

Individuals can claim a 33.33% tax credit for all donations over \$5.00 they make to an approved donee. A tax credit reduces the amount of tax you have to pay. The total tax credits an individual can claim is capped at one third of their total taxable income. Remember to keep your valid donation receipts so you or your accountant can complete an IR526 Tax credit claim form and forward to IRD.

Corporate giving.

Companies can claim tax deductions for all donations made to an approved donee providing their claim does not exceed their total annual income. A tax deduction is a reduction in the amount of taxable income. Companies can claim this deduction using the IR4 form.

You can only claim donation tax credits within a period of four years following the year in which the gift was made.



For more information go to www.ird.govt.nz

Recognition Awards

On the 25th February the Minister of Fisheries Hon Stuart Nash announced the finalists in the 2020 Seafood Sustainability Awards. Tindale marine research founding directors **Sue and Scott Tindale** have been named in the **Kaitiakitanga award** finalists and will be heading to parliament for a special Awards dinner. Sue & Scott are the only recreational fishing sector representatives to make it through to the finals.....



Date: 25 Feb 2020

Leaders in seafood sustainability have been recognised in the Seafood Sustainability Awards, which announced its finalists today.

"Everyone has a part to play in ensuring the sustainability of New Zealand's kaimoana. These awards are a chance to recognise the innovation, commitment and excellence of a group of people from across the community who are leading the way," says deputy director-general of Fisheries New Zealand, Dan Bolger.

"They have been selected by an independent judging panel including representatives from commercial, recreational, and customary fisheries sectors as well as aquaculture and environmental NGOs [non-government organisations].

"The finalists are shining examples of those throughout tangata whenua, industry, and communities who contribute to the long-term sustainability of New Zealand's seafood sector and ensure that our oceans are resilient, healthy and bountiful for future generations," says Mr Bolger.

Judging panel chair and WWF-New Zealand chief executive, Livia Esterhazy, says the finalists represent an exciting and diverse range of individuals, teams, businesses, research organisations, iwi, schools and communities who contribute to the long-term health and sustainable use of our Moana.

"Every single life in Aotearoa is connected to our ocean. In fact, we all depend on a healthy ocean for our survival. So, a sustainable seafood sector is essential.

"The quality of the entrants has made it a challenge for the judging panel to select the finalists. We are inspired by the calibre of people who are putting in the hard mahi to ensure we can protect, restore, and sustain our ocean.

"We congratulate all of the finalists announced today, and commend every entrant for their dedication to the sustainability of New Zealand's seafood sector," says Ms Esterhazy.

Minister of Fisheries Stuart Nash launched the inaugural Seafood Sustainability Awards to recognise those who actively work towards the innovation and sustainability across the seafood sector. All award winners will be announced at the awards' dinner in Wellington on 18 March 2020.

Over 50 entries were received across 6 categories. These spanned a diverse range of individuals, groups, and projects within the seafood sectors. The entrants all shared a passion for innovation and commitment to the long-term health and sustainable use of our Moana.

Kaitiakitanga Award

This award recognises those who:

- demonstrate guardianship of the environment through spatial management, minimisation or mitigation of environmental impacts, or protection of vulnerable species (such as marine mammals, seabirds, inanga, tuna, or kōura), or
- Make a significant contribution to the knowledge about sustainability that is held by our fishing and aquaculture communities or New Zealanders in general, through science and research, or education and engagement.

Kaitiakitanga Award Finalist

- CRA8 Rock Lobster Industry Association Inc
- Aaron McCloy – Papa Taiao Earthcare
- Richard Wells – Resource Wise
- Scott and Sue Tindale

Scott and Sue Tindale

“Scott and Sue Tindale are an inseparable team that have spent a lifetime working together, encouraging the public to take notice of their impact on the environment. Leading by example, they have developed methods to reduce fish and seabird mortality and raised public awareness of the harmful effects discarded fishing lines have on wildlife. In 2019 they developed the Tindale Marine Research Charitable Trust to collate their years of volunteer work and establish a citizen science inshore fish tagging program.”

On March the 18th at an awards evening to be held in the grand hall in parliament winners of each section will be announced including two special overall awards, Supreme Sustainability Award and Minister of Fisheries Award.



Supreme Sustainability Award

Sustainability is the key objective of the awards programme and is applicable across the first 3 categories, so all entrants in these categories will be considered for this supreme award.

Minister of Fisheries' Award

 This award recognises:

- an individual or group who are making consistent and regular contributions to New Zealand's seafood sector
- a champion of seafood sustainability or a developer of innovative methods or tools
- an exceptional commitment to responsible growth and best practice, or
- An outstanding contribution to New Zealand's reputation for high quality and sustainable marine products.

The Awards night results will be included in the next report...

Finally to the fishing report

One of my responsibilities as a New Zealand International Gamefish Association (IGFA) representative is to assist anglers in the processing of world record claims. Since I introduced length records to the New Zealand record system 9 years ago I have encouraged this as a sustainable alternative to weighing dead fish. This has been a slow job with little promotion from the fishing organisations but through getting out there and doing it talking to individuals and encouraging others to do the same we have seen a steady change in culture of fishing events from the ground up. More and more non club related fishing competitions are adopting the 'Measure' instead of weighing concept. Fishing clubs are however slowly following suit with some adding a length category driven from their memberships wants.

The end of year NZACA records report just released showed 11 out of the 22 New Zealand angling records this past season coming from our Trust tagging members, 8 of these for tagged and released live fish. There are a few extra record claims still pending so **Congratulations** to those anglers well done.



Tindale Marine Research Charitable Trust Inshore Fish Tagging Program Report

As expected there has been an increase in effort over this summer helped by settled weather with 450 additional fish tagged and released since the spring report. To date 34 species of fish have been tagged and released. Snapper being the most popular followed by kahawai, kingfish, gurnard and trevally to cover the main inshore species. Over 8000 tags have been distributed so far with 2080 tag deployed and recorded into the data base from around the country and 53 tagged fish recaptures.

Which brings me to housekeeping....There are still several of you that have deployed tags but have not sent in your catch details. Please ensure that you get onto this soon as possible. I have spoken to one member who has lost his entire record which is a shame as we had one of those fish recaptured and are unable to process. Another tag was recovered found washed up on Waihi beach again we have no record of this tag being deployed. With over 300 taggers there is a lot of data to process so we would like to streamline things a bit and not have to track down or chase people up. Can you also advise if you change address or contact details? I like to ensure the tagger is the first to be informed of a recaptures.

Notable recaptures and releases

T0612

Christmas eve we received a call from Ian Newton who had recaptured a tagged snapper on the Kaipara harbour. It measured 42cm Fork Length and had a tag number of T0612. Looking up the details of this fish found it was tagged and released by Sue Tindale over a year earlier on the 29th November 2018. It measured 38cm Fork Length on release 630m from the recapture point. This fish measured an increase in growth of 4cm over 390 days.

Interestingly from years of fishing this harbour we know the snapper vacate this area over winter and we have had some of the longest distances recorded by snapper released from this location and recaptured later in the year. It is possible that this fish has returned as part of its annual migration but to confirm more tagging and recaptures seasonally will be required first.



T5309

4th of January saw Jonathan Speedy fishing from his boat in the far north where he recaptured a tagged Snapper estimated at 18lb and measuring 75cm. The tag was removed before a quick photo and re-releasing the fish again.

The snapper was tagged and released 42 days earlier by Benjamin Hall land based fishing Spirits Bay with Michael Jenkins just under a kilometre from where it was later re-caught.



Ben with his tagged fish ready for release



Jonathan about to re-release this 75cm Snapper

T1555

On the 15th of January Rotorua based fly-fishing guide Julian Dandy was guiding Bridget Wies who caught this tagged kingfish wading the shallows around Tauranga harbour. They estimated the length at 1m removed the tag and re-released it again.

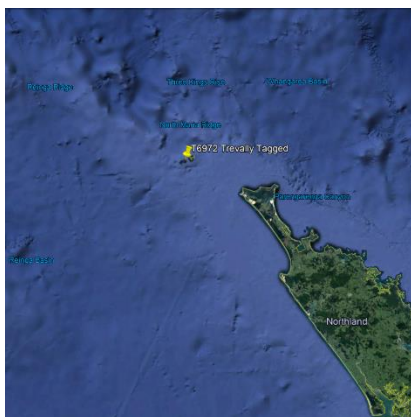
Ben Riddiford originally tagged this fish 25 days earlier 2.27km away where he measured it at 98cm. Julian commented he was surprised to see the tag and commended the initiative of an inshore tagging program promoting catch and release



T6972

Gerald Gates took his tagging kit on a charter to the 3 Kings islands early December last year where he tagged several fish including a 70cm Trevally he caught in 30m of water.

31 days later on the 23 of January spear fisherman Matt Lind shot this trevally on a spearfishing trip to the Princess group at the 3 Kings. Matt measured the fish at 71cm and weighed it at 7.645kg



T2186

Zane Sainty was fishing with his father in the entrance to the Kaipara harbour on the 7th of February 2020 when he caught a tagged Kahawai what his mother described as “Huge” in our phone conversation. Cath said it fed the whole family. Keen to know more about the tag I was able to reply that the fish was originally tagged 21.3km up the south arm of the harbour 275 days earlier by Scott Tindale fishing in the shallows and measured 56cm on release. When asked about the estimated age Clinton Duffy was able to provide further information..... So it



turns out that estimating the age of a large kahawai is not that straight forward. Pasted below are a couple of age-length keys for kahawai from this report - <http://docs.niwa.co.nz/library/public/FAR2006-57.pdf>. As you can see there is a lot of variation in age at a given length and 57 cm fish have been aged between 9-18 years old and 62 cm fish between 9-11 years. Eggleston (1975) aged kahawai from all around New Zealand (but only 10 in each age class) and got age estimates for kahawai between 55-60 cm lengths of 17-22 years. Maximum reported age is 26 years (<http://docs.niwa.co.nz/library/public/FAR2016-26.pdf>). So it seems a 57 or 62 cm FL kahawai could be anywhere between 9-26 years old.

T0582

On the 25th of May 2029 Scott Tindale tagged and released several species of fish in the Mairatahi Creek in the Kaipara harbour including a 51cm snapper from 2.5m of water.

259 days later on the 8th of February Shaun Wood fishing from his boat “Funsor” recaptured this fish less than 2.3km away from the original release point in 3.5m of water over the Omokoiti Flats. Shaun reported it was in prime condition weighing 2.6kg and measuring 52cm. Its stomach contents contained mantis shrimp remains, an invasive species now established in the Kaipara. This fish is possibly another seasonal returnee.



T1406

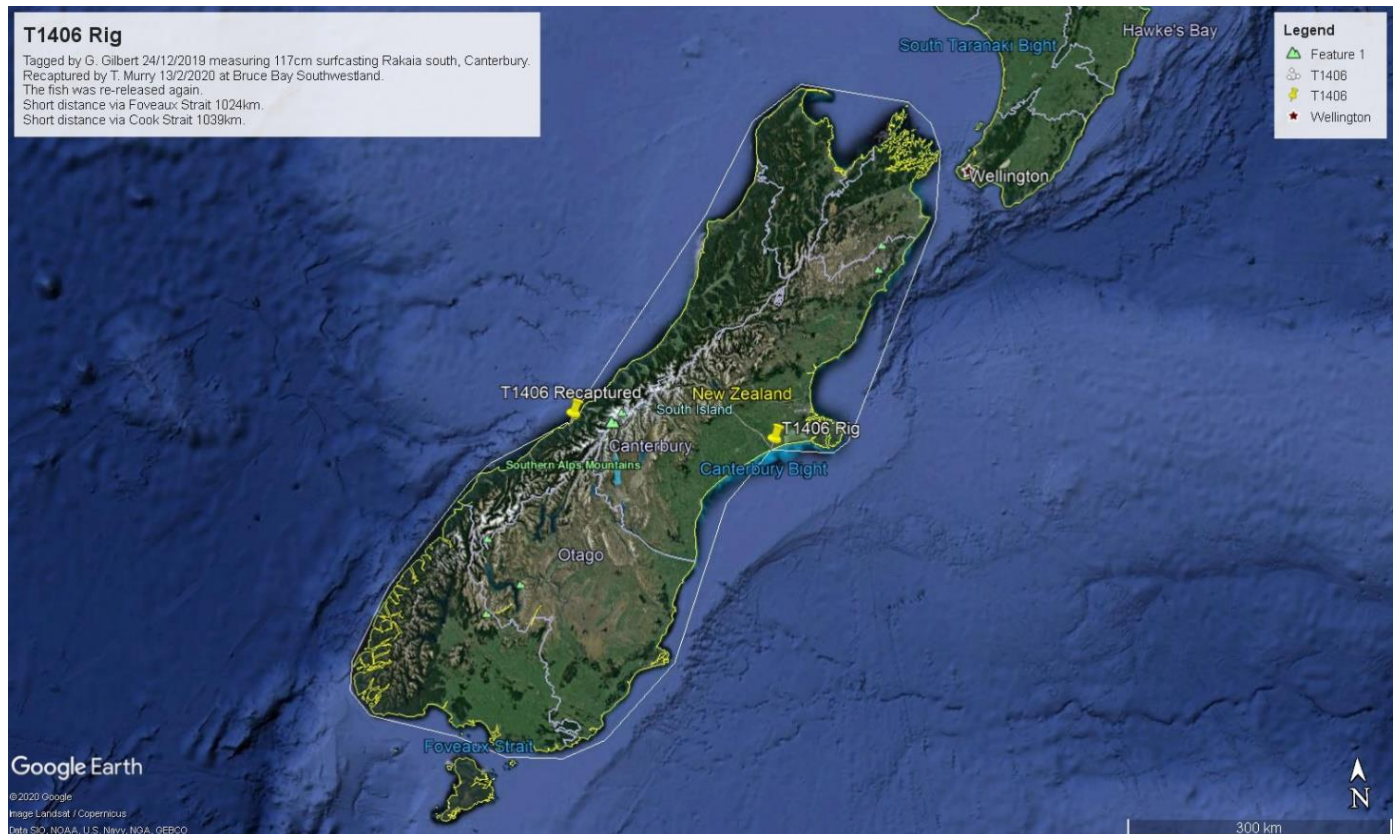
It is always exciting to get a recapture confirming you have done your best to handle, record and release a live fish without any detrimental harm to the subjects. A tag is never wasted if it can tell stories of successes. With the passing of our first year mile stone this program is starting to show some amazing results. From short to long term recaptures, from short to epic journeysThanks go out to all involved.

On the 24th of December 2019 Greg Gilbert was surfcasting off the south Rakaia in Canterbury when he tagged and released a 117cm female Rig, spotted smoothhound (*Mustelus lenticulatus*).

51 days later Tim Murry recaptured this Rig on his longline set in 10m of water off Bruce Bay South Westland. Tim an avid game fisherman formerly from Ruakaka had recently moved to Bruce bay so knew what to do with a tagged fish recapture. After recording the tag details he was able to unhook and re-release the tagged fish alive. Tim had no measure so estimated the fish at approximately 1.5m



This journey from the east coast of New Zealand to the west coast of New Zealand took only 51 days and covered a short line distance of around 1030km either via the northward route vis Cook Strait or via the south route through the Foveaux Strait. Clinton was able to send additional information from a 1988 published paper by Dr Malcolm Francis showing similar movements of 2 tagged Rig. The study reported 52% of females tagged moved greater than 200km with the greatest movement recorded for one fish of 1159km from Snares to Golden Bay.



That is all for this report. Contact me if you have anything you would like added. Catch you next time.

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