

$\underset{\text{for the year ended}}{\approx} \text{ANNUAL REPORT} \\ \frac{1}{31 \text{ december}} 2021$



ADVOCATES FOR THE TONGARIRO RIVER

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Carl Bergstrom

Gary Brown »	PRESIDENT
Warren Butterworth »	CO VICE-PRESIDENT
Tim Castle	
Virginia Church	
Sam Coxhead	
Mike Forret	
Richard Kemp »	CO VICE-PRESIDENT
Alasdair Keucke	
John Martin	
Julian Proctor	
John Toogood »	TREASURER
Eric Wilson »	SECRETARY

LIFE MEMBERS

Dr Mark Cosgrove Dr Stuart Crosbie Heather McDonald Bob McDonnell Sylvia Smith Eric Wilson

COVER



Spawning trout in the Waihukahuka Stream (flows through the National Trout Centre) seen from the Bridge crossing the stream between the carpark and the Trout Centre building. Registered Office: Advocates for the Tongariro River Incorporated 117 Taupahi Road Turangi 3334

Contact can be made through our website www.tongariroriver.org.nz

\approx NOTICE OF ANNUAL GENERAL MEETING

The nineteenth Annual General Meeting of the Advocates for the Tongariro River Inc. will be held at 139 Taupahi Road, Turangi, Saturday 21 May 2022 10.00am. All welcome.

\approx AGENDA

The business of the Annual General Meeting will be to:

- record those present and note apologies
- receive the minutes of the 18th Annual General Meeting
- receive the President's report
- approve the financial statements
- consider motions of which due notice has been provided. The full rules of the of the Advocates for the Tongariro River Inc. are printed in the 2004 Annual Report and are also available on the Advocates website <u>www.tongariroriver.org.nz</u>
- appoint an executive committee comprising a president, vice president, a secretary, a treasurer and 10 committee members
- consider any other matters.

≈ MINUTES

Minutes of the nineteenth Annual Meeting of the Advocates For The Tongariro River, Saturday 20th May 2021, 10.30am Parklands.

Present

Richard Kemp, (Acting Chairperson), Carl Bergstrom, Alasdair Keucke, John Martin, John Toogood, Eric Wilson, Mike Forret, Heather Macdonald, Virginia Church, Jenny Shieff.

Apologies

Gary Brown, Paul Brennan, Warren Butterworth, Alex Caldwell, Tim Castle, Sam Coxhead, Jaqui Crosbie, Stuart Crosbie, Renny Cunnack, Sue Martin, Julian Proctor, Sarah Shieff, Nettie Ramsay,

Apologies noted.

President's Report

The President's Report was published in the 2020 Annual Report. The Report was taken as read. Richard Kemp found the report covered the activity of the 2020 year well.

Matters arising:

- 1. That Stuart Crosbie be made a distinguished member of Advocates for the Tongariro River.
- Access. Maori Land Amendment and Maori Claims Act 1926 gave access to anglers with fishing license and rod over 20 meter strip alongside the river that was Maori Land after 1926. Access does not exist along Maori Land "Europeanised" prior to 1926 despite it still being owned by Maori. NB. Farm at end of Grace's Road, (Grace's Farm) does not have legal access. Permission of the owner is required.
- 3. View Shafts: A work in progress. Richard Kemp, Eric Wilson, Alasdair Keucke, John Toogood, to liaise with Dave Lumley to identify viewing areas.
- **4.** Julian Proctor is the new TFAC Chairperson.

5. Wilding Pines. Concern expressed on Mangamawhitwhiti farmland and on Rangipo Farmland being planted in Pines.

Moved John Toogood Seconded Carl Bergstrom, "That the President's Report is received".

Election of Officers

Stuart Crosbie resigned, Carl Bergstrom co-opted in 2020 and John Martin elected to the committee.

With the consent of the meeting the following members were elected:

Chairman: Gary Brown, *Co Vice Chairmen*: Warren Butterworth, Richard Kemp, *Secretary*: Eric Wilson, *Treasurer*: John Toogood, and *Committee members*: Carl Bergstrom, Tim Castle, Virginia Church, Sam Coxhead, Mike Forret, Alasdair Keucke, John Martin, Julian Proctor.

Distinguished Member:

Dr Stuart Crosbie be made a 'Distinguished Member of The Advocates For The Tongariro River' for his leadership and significant contributions on our behalf in the development of the Tongariro River Trail, the challenge to Mighty River Power on Lake level and for an Integrated Catchment Management Plan for the Tongariro River.

Moved Richard Kemp, Seconded Eric Wilson. Carried.

Financial Report

Moved Richard Kemp, *Seconded* Mike Forret "That the Finance Report be accepted". *Carried*.

John Toogood thanked for the clarity and accuracy of Finance for Committee and Annual Reports.

General Business

- 1. Once formed, tracks need to be maintained to keep them open.
- 2. Windows to view the river from Tongariro River Trail. Committee to discuss with Dave Lumley. Frustration at being close to the river, hear the river but not see the river.

- 3. Maintenance required in newly planted areas.
- 4. Erosion of river banks in area of Kohineheke Reserve.
- 5. Very low lake level a concern
- 6. Trout Farming look at overseas experiences.

Moved: Heather Macdonald, *Seconded* Jen Shieff "That the Committee be thanked for their work on behalf of members".

The meeting closed at 11.12am.

≈ PRESIDENT'S REPORT 2021

President Gary Brown reports Nga mihi nui kia koutou katoa Warm greetings to our advocate members

I am pleased to report on our committee's activities for the 2021 year.

During the year we had 6 meetings, January, March, May, July, September and November.

Despite the continuing Covid restrictions we managed to hold all our scheduled meetings. The Covid situation and a lockdown did however affect fishing activities to some extent, particularly later in the year.

Once again secretary Eric kept up communication with our committee and the various agencies we deal with, particularly the Waikato Regional Council and the Department of Conservation

During the year Mr Graham Whyman who was Chairman of the Taupo Fishery Advisory Committee resigned and our Advocates committee member Julian Procter in now the new Chairman. Our Advocates vice Chairman Richard Kemp remains a member of the TFAC committee and keeps us up to date with the various Taupo fishery issues.

Main issues

The main issues our committee dealt with during the 2021 year were:

- Concern regarding an illegal sign preventing river access located on the stop bank near the Tongariro Lodge- we discussed the situation with various parties including Waikato Regional Council and the sign is removed to the legal location halfway along the stop bank.
- 2. Concern with holdups in implementing the Waikato Regional Council (WRC) Tongariro River work plan, the main work being to maintain vegetation at a height that will not impede river flow in a time of flood. This includes willow growth on the beaches of the river and vegetation that may end up in the river creating aggradation of the river bed. The loss of two key staff members and their lack of replacement is a cause for concern.

- 3. The opening up of view shafts along the Tongariro River trail was asked for at our 2019 Annual meeting. The trail continues to be very popular with an increasing number of walkers, cyclists and anglers and we are negotiating with DOC to have some plant and tree growth removed to provide view shafts to the river from the track in selected areas.
- 4. Waihi Hill Lookouts. NZTA established roading for the 2 lookouts and now vegetation growth is reducing this wonderful view of Lake Taupo. We have contacted NZTA as advised by Taupo Mayor David Trewavas. NZTA have put a work order in place but the matter has not proceeded. It was a great lookout. Roading is in place but vegetation is blocking the view.



View from top of Waihi Hill

Lookout from below the Road sign

- 5. Our Advocates Database has needed upgrading, and thanks are due to committee member Mike Forret who has updated the database.
- 6. I mentioned in last year's report that the Taupo / Tongariro fishery had improved. The improvement in fish quality has continued during the 2021 year. Committee member Richard Kemp advises that at a recent meeting of TFAC it was noted that the overall quality of fish in the lake and rivers is good due largely to the proliferation of smelt in the lake-particularly the south-eastern lake areas. This was also confirmed by DOC Fishery manager Dave Conley who attended our September meeting. There were large quantities of good quality fish in the riverparticularly early in the year and I and my fishing companions enjoyed some very productive days in the lower reaches of the river.
- 7. During the year two documents were of interest to us. The first is Taupo Waters which dealt with ownership of Lake Taupo and changes that commercial users will build into their costs. The second is Te Kaupapa Kaitiaki. Both documents state a need to deal with wilding pines and other environmental matters. We are heartened by this.
- 8. Our Finances remain buoyant and we have available funds to contribute to some of the environmental issues we are negotiating with DOC, WRC and other parties should funding be required. I would like to place on record our thanks to several members who have provided donations and particularly to the Pharazyn Trust and Malcolm Whyte who have made substantial donations.

Appendices

F1 STATEMENT OF PURPOSE

This governance guideline was originally compiled by past Chairman Dr Stuart Crosby and remains as our mission statement.

F2 DEPARTMENT OF CONSERVATION CEO PENNY NELSON

We are pleased to note the appointment of new DOC CEO Penny Nelson who has an impressive background in biosecurity and environmental issues. We enjoy a good relationship with local DOC managers David Conley, David Lumley, and scientist Michel Dedual.

F3 EXOTIC INVADERS—PEST VEGETATION

This report by John McCrone outlines the many problems with unwanted pest vegetation including weeds, gorse, willows, wilding pines etc.

F4 WALKING ACCESS COMMISSION

This report relates to the work carried out by the Walking Access Commission to maintain walking access to country and wilderness areas around NZ.

F5 ALGAL BLOOM

Algal bloom (green slime) has recently occurred in Lake Taupo. Cawthron Institute scientist Dr Simon Stuart (who recently carried out the Lake Taupo food web study commissioned by our Advocates committee) has commenced a study sampling and monitoring these blooms in an effort to determine the likely cause of this phenomena. We trust that Simon and his team can throw some light on this developing world wide problem.

- **F6** The catchment is an attraction for more than anglers and we have chosen photos to show the activity the river has, its peaceful beauty, trout fishing, swimming,
- **F7** During the year a dog died of suspected 1080 poisoning from eating something on the riverbank which caused some concern. Carl's research provided an interesting solution for humans who are affected by 1080.

Membership

Lists current members of the advocates.

Advocates Committee

This is a Who's Who of our current committee.

Tongariro Works Plan

Sets out the work to be done during the current financial year.

Conclusion

Once again I would like to place on record the excellent work carried out by our committee during the 2021 year.

Eric and Lorraine Wilson have continued to host our meetings at their Turangi home which is much appreciated by all members of our committee.

I am sure I speak for all our members in trusting that the many frustrations we have all endured during the Covid pandemic will reduce significantly this year and that the smelt fattened trout will run up the river ready to attack our nymphs and woollybuggers.

for the

Gary Brown President

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\approx FINANCIAL STATEMENTS

For the 12-month period ended 31 December 2021

Income and Expenditure

		2021	2020
		\$	\$
Receipts			
Income	Subscriptions	2,230	
	Donations	2,550	
		4,780	
	Interest	126	
Projects/Grants	Pharazyn Trust	3,000	
		7,906	7,260
Outgoings			
Operating expenses	Admin/general expenses	50	
	Promotion	745	
	AGM, report, etc	782	
	Miscellaneous/subscriptions	-	
Projects	Projects		
		1,577	1,628
Excess outgoings/r	eceipts	6,329	5,632

Statement of financial position

As at 31 December 2021

		2021	2020
		\$	\$
Current assets			
Bank accounts	Current account	1,350	
	Online call account	45,503	
Total assets		46,853	40,524
Nett assets	Opening balance 1 January 2021	40,524	
	Excess expenditure/receipts	6,329	
Nett Funds before	commitments as noted below	46,853	40,524
Notes to Accour	nts		
Funds committed	for projects	16,341	
Net retained unas	signed funds	30,521	
		46,853	40,524

Subscriptions and donations

There was a nett financial increase over last year of \$775 to \$4,780 and a increase in numbers of 28 to 143 (including honorary members).

≈ NOTES TO THE FINANCIAL STATEMENTS

For the period ended 31 December 2021

Statement of accounting policies

- The Advocates For The Tongariro River Society Inc. is incorporated under the Incorporated Societies Act 1908.
- The financial Statements have been prepared in accordance with generally accepted accounting practice.
- The financial records are compiled on a cash in versus cash out basis. Funds/ grants for project work are recorded as 'Funds Committed'.
- The accounting principles record historical cost.
- Subscriptions are recorded on a cash received basis.
- There have been no overall changes in accounting policies. All policies have been applied on bases consistent with those used in the previous year.

Preparation of accounts

The accounts have been produced on information available to the Treasurer and have been reviewed by Rebecca Butler, Practicing Accountant, Nelson.

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Gary Brown President 20th January 2022

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John Toogood Treasurer 20th January 2022

\thickapprox APPENDIX 1 » STATEMENT OF OBJECTIVES

Mission To speak out for the Tongariro River and promote management strategies intended to preserve and enhance the values inherent in the river and its fishery **Guiding Principles** Reflect member concerns Be credible Be professional Be persistent 1. Member Focus Build a strong & informed member base 2. Stakeholder Focus Effectively engage with tangata whenua and key stakeholders 3. Issue Focus Build widespread public awareness and support for affirmative action on key issues 4. Accountability Focus Track progress by stakeholders against agreed commitments **Realise Vision** That the Tongariro River be restored and treasured as amongst the world's top 10 fishery experiences

≈ APPENDIX 2 » PENNY NELSON CEO DOC

Penny Nelson started the role of Director-General on 1 November 2021.

Before starting at DOC Penny was Deputy Director-General for Biosecurity NZ. Penny joined the Ministry for Primary Industries (MPI) in 2018 as Deputy Director-General Policy and Trade, where she led work shaping the future of the primary sector – enhancing the sector's sustainability and growth.

Penny has worked across a range of areas of government, including the environment, economic development, and social development. Prior to joining MPI, Penny was Deputy Secretary at Ministry for the Environment where she was responsible for climate change, the marine environment, environmental reporting, and the science system.

She has also worked within the private and science sectors including roles at DairyNZ, the Sustainable Business Council, and Landcare Research.

Penny holds a Masters of Science in Resource Management (Honours) from Lincoln University and a Bachelor of Arts (Honours) from the University of Otago.



\approx APPENDIX 3 » BUSY AS A BEE...



BUSY AS: Honey bees working the gorse hedge rows near Ellesmere.

Everyone knows New Zealand has a runaway wilding pine problem. But what about sycamores, cherries, rowans and palms, the next wave of weed trees? JOHN McCRONE reports.

When gorse was first introduced to Canterbury for stock fencing in the 1830s, one fond owner apparently sat up nights with his shotgun to prevent the precious seedlings being filched.

Massey University ecologist Dr Jill Rapson chuckles. Yes, hindsight is a wonderful thing.

Because New Zealand is now the weediest nation on Earth. Half our plants found in the wild are exotic invaders rather than native species, says Rapson. And worse, we are still on the bend of an accelerating curve. The onslaught of the weeds is only just getting going.

Rapson says it takes time for intruders – especially trees, which are a particular story for New Zealand – to get a hold. There is a lag of as much as a century between being planted in some garden to becoming a pest rampaging across the countryside.

Wilding pines are the problem everyone knows about. But now marching up behind is the following wave of sycamores, rowans, cherries and ash. A motley crew of ornamental escapees. In Canterbury's Porters Pass, white flowering hawthorn has reached critical mass. Around Nelson, dark pink Taiwan cherries have just been fingered as a new worry. Tourists love the colour of Tekapo's rowan stands, but they are getting out of hand too.

Turn your back for a few years and any spare gully or hillside will soon be taken over by something new which is not meant to be there.

Rapson, whose earned her PhD tracing the arrival of browntop grass back to stuffed mattresses dumped off a Scottish boat in Northland in 1854, says people think pest plants are a legacy issue.

Pines, gorse, lupins, broom. A smallish list of familiar names that ran away on us and now we are wise to them. However, ecologists can see the country's future problems just queued up.

"New Zealand has about 2000 native species and there are over 20,000 exotic plants sitting around in back gardens and parks, waiting to nip over the fence and naturalise in the wild."

Even if only a percentage have what it takes to thrive, says Rapson, you have to wonder what the New Zealand countryside is going to look like in another 50 or 100 years.

Lincoln University ecologist Dr Jon Sullivan agrees we are still slap in the middle of the changes. He says even with herbaceous weeds, there is more of a lag period than the public realises.

It takes decades to build a seed population, reach critical mass, but then the spread goes exponential. The plant is popping up everywhere.

"The things that are new to Canterbury's pest list, like purple loosestrife, the bad wetland weed, first showed up in the wild in the 1950s and we're only just starting to worry about them," says Sullivan.

When you look at gorse, thistles or pines, these are the farming associated pests that were introduced by the early settlers. "They were used for shelterbelts and fodder, or came in with the soil used as ballast on boats or whatever."

But Sullivan says the next wave is going to be characterised by the ornamental trees and plants that more recent generations of Kiwis have used to fill their gardens. Take palms for instance.

"Auckland has a real problem with those. We're already seeing some of the old time favourites like Bangalore palms and windmill fan palms getting going. Phoenix palms are starting to roar in the wild too.

"But gardens follow fashions and there have been so many new types of palms planted in the last few decades that eventually many other ones could be a worry. It's like a slow motion time bomb going off."

Sullivan says New Zealand is notorious as a country generally transformed by invasive species. It has the largest proportion of introduced mammals and second largest proportion of introduced birds anywhere in the world.

At least the lid has gone on the exotic fauna. But Sullivan says the plant invasion is different in that the future invaders are here, brought in by our enthusiasm for anything with an attractive form or flower, and are simply taking their time to break out across the New Zealand landscape.

"In the wider Auckland area, there's close to three times as many exotics as native plants growing in the wild now. And there's no reason to think the rest of the country won't be like that soon. We can't stop it, because so many species are out there, already going or gone," Sullivan says.

Some renegade Taiwan cherry saplings are this week's concern for ex- Nelson Landcare researcher. Dr Peter Williams. Even in his retirement, he is still chasing weed trees. And the spring flowering has suddenly made their extent obvious he says.

It is going to be a delicate business, Williams confesses. The source trees are mature specimens in just three backyards on Nelson's northern edge.

Blackbirds have been eating the fruit and pooping out the seeds across the local hillsides for a good few years. Now these slopes are throwing their own blossom festival.

"Taiwan cherries are a real problem in the North Island, but this is the first decent infestation we've seen in the South Island. With milder winters, they've taken off."

Can the home owners be persuaded to chop down loved trees on their own land? Will the town-folk think wilding cherries are in fact an attractive addition to the landscape, doing no great harm, and so resist any council eradication programme?

Williams says it is like the rowans that are bringing autumn colour to the Mackenzie Country.

"I have a wonderful picture of the rowans spreading up the hill beside Lake Tekapo. Beautiful blue lake against lovely red trees. The rowans are taking over from the broom and matagouri scrub. Now you're starting to get them showing on the tourist posters and calendars as a feature."

So gorse and pine are one thing. No-one much cared for these agricultural species in the first place. However, as our most favourite garden plants start to turn on us too, will Kiwis be galvanised to do what is necessary, Williams wonders?

First the analysis. What are the mechanics of this invasion? Why does New Zealand seem so particularly prone to weeds? Do its natives lack resistance? And how would it look if we let this "new New Zealand", this internationalised species mix, find its own equilibrium?

Massey's Rapson says early settlers, inspired by a Victorian view of Darwinian natural selection, indeed thought New Zealand wildlife to be weak and impoverished. Drab forests of beech and fern creating a dark blanket across the land. They thought it ripe for improvement by the importation of more vigorous and showy species.

But there is no evidence that New Zealand ecosystems have some basic vulnerability, she says. Look around the world and a passion for gardening novelty has produced thuggish invaders everywhere. Often names that will surprise.

"I've just been to Western Australia where they have a massive weed problem with freesias if you can believe it. And hydrangeas have gone completely feral on the Azores islands – I'm telling DoC we need to get rid of them on roadsides of the West Coast." Rapson says New Zealand has even managed to export a few notorious weeds of its own. Flax now clogs the cliff faces of Cornwall. Pohutukawa is forming impenetrable tangles in coastal South Africa.

Dr Dave Kelly, biology professor at Canterbury University, says when it comes to colonisation by non-natives, recent statistical research shows that the size of the land mass is a major factor. Smaller islands are more likely to be swamped by imports. Proportionately, places like Hawaii are in an even worse state than New Zealand.

Australia, with its similar settler history, has about the same number of exotics gone wild – about 2000 species. It is just that Australia is large enough for this to seem well diluted by the 20,000 natives it has of its own.

Kelly says the reason for New Zealand topping lists with half exotics is that foreign plants will flourish where they can get a foothold. And large tracts of New Zealand were first fired by the Maori, then systematically cleared by the Pakeha. "It's easy to take root where the landscape's been disturbed by human action, where it's suddenly open."

After that it does come down to vigour, says Kelly. Native bush is generally slow growing with small seeds which are adapted to having to spend years developing in dim light before breaking through the thick canopy overhead.

But Kelly says the introduced plants and trees giving all the trouble were brought here in the first place because they were quick growers with bountiful seed production. In picking species that would fast fill a space, we were selecting the natural weeds.

Then as settlers brought the right seed-spreading birds with them too, and possibly because rabbit and sheep found the native vegetation less equipped with chemical defences to discourage nibbling, the scene was set.

Kelly says throw in a nice average climate, a lack of home nation insects and viruses to keep the invaders in check, and the reason for New Zealand being the weediest nation, about to get much weedier yet, is no great puzzle.

Landcare's Williams says the widespread land clearance for pasture also explains why it is weed trees and woody shrubs in particular that are the notable feature of the New Zealand story.

Elsewhere, a weed is normally thought of as something small, green and leafy. But New Zealand was once a solid wall of forest up to the mountain tree-line and would naturally return to that state given half a chance.

"When I first joined the DSIR botany division, a wonderful old chap who studied tussock grass said to me: 'The problem Peter is wood. It all wants to be wood.' That wasn't so clear to us back then, but he turned out to be right."

Williams says this is evident with wilding pines. They would takeover the South Island high country from horizon to horizon if let go

We, of course, imported the very species that grow fast on barren land and do well in our climate. They produce plenteous wind-blown seed that can travel kilometres on a northwester. And Williams says we not only created the extensive logging plantations but for a good while followed a policy of using conifers to stabilise scree slopes.

"Some of the biggest invasions of pines were brought about because of catchment boards planting them in remote places for soil conservation reasons," says Williams.

It was only later that the scientists realised such erosion was natural, not a result of over- grazing. "Someone said hang on, the weathering on these scree rocks is an eighth of an inch deep. They've been sitting here like this for thousands of years."

But by then the damage had been done. Pockets of seed trees had been established in even the most inaccessible spots.

Politics did not help. There was a decade of confusion after responsibilities for pines were transferred from the old Forest Service to the Department of Conservation (DoC).

Tenure review added to this with large tracts of land switching from farming to conservation park without enough money set aside for upkeep. Now a romping tide of saplings is having to be held in check all over the back country.

It is Pinus radiata and Pinus contorta but also Douglas fir that threatens. Williams says Douglas fir is emerging as a risk as it is more shade tolerant so can creep in and replace even native bush where there is wind damage or a river bed to ramble up.

"I can take you to river basins in Marlborough where there are just acres of the stuff coming up like hairs on a dog's back."

So wilding conifers are the extreme problem. The easily identifiable enemy. But Williams says New Zealand now needs to be on the watch for the sycamores, hawthorns, rowans, palms – the whole swathe of trees that would quickly turn remote hills into exotic forest as well.

No single species will rival the pines, however the sheer variety of what could follow is the issue. "If humans and their grazing animals disappeared off the New Zealand landscape right now, within 100 years you would end up with this one bush that was a mosaic of species – exotic and native – just all jumbled together."

Pest species can be controlled. It is just a matter of time, cost and knowledge.

Williams says at least biosecurity legislation was brought in during the 1990s to stem the flow of further plant species. "Before that, you could bring in pretty much anything that had leaves."

Williams himself was part of the technical advisory group that drew up an accord with the Nursery and Garden Industry Association to limit the sale of the worst plant offenders.

He also worked on the DoC strategy on how to spend money wisely. A policy of tradeoffs. Williams says if it is early enough in the invasion curve, it makes sense to have a total control strategy for a species – aim at eradication. But once wild populations are widely dispersed, it becomes about targeting the high natural value areas of the countryside.

Williams says there is some good news on pines as recently a "devil's brew" of herbicides has been developed which just needs to be sprayed as a patch on the base of baby trees.

Before workers had to get in on foot and cut a nick for poisons to work. Now helicopters with a long spray boom can take out even the last of the cliff-face stragglers that shed their seeds across whole valleys.

Reports are that the Ministry for Primary Industries will shortly take advantage of the new control methods and announce a national- level wilding pine management programme, putting money into something that has got beyond what regional councils can deal with.

When it comes to plant pests, vines are another emerging concern.

Lincoln's Sullivan says vines represent a special threat to native bush as if something like the rampant clematis, old man's beard, gets a hold, it can smother 30-metrehigh trees.

There are many familiar garden species like banana passionfruit vine and Japanese honeysuckle on the loose. But for a while, the Bay of Plenty had a renegade kiwifruit epidemic too, says Sullivan, who was involve in the cleanup.

"In the early days, orchards weren't being good with their hygiene and just dumping reject fruit and cuttings into local gullies. Or it was being given to farmers to spread on the ground as stock feed."

Luckily, because the source of the contamination was agricultural, the authorities got on top of it quickly, says Sullivan.

"The numbers were looking frightening 10 years ago. It was just getting into that real, go forward, exponential increase phase like wilding pines. But it's been effectively stomped on."

When PSA came along in 2010, a wild kiwifruit population could have made the vine disease impossible to contain of course. So Sullivan says the experience shows exotic incursions can be dealt with, given the effort.

Sullivan says New Zealand has plenty of local volunteer weedbuster operations too. He is part of a weekend group, the Friends of Ernie Clark Reserve in Cashmere, where they knock back the sycamore seedlings to encourage the natives. There are individuals like DoC's Keith Briden who almost singlehandedly has been keeping South African boneseed, a pretty yellow daisy bush, from spreading out of Christchurch's beach suburbs and away over the hills past Taylors Mistake.

When people are aware of the dangers, it can make a lot of difference, says Sullivan.

But what of the long-term? Like Williams, Sullivan feels New Zealand is being reduced to managing a bad situation. There are too many weed species lined up and so much disrupted countryside where they can take hold.

Then there are the unforeseeables. Will the public secretly favour a more colourful New Zealand with palms, vines and cherries running riot? There are the famous examples of stubborn guerrilla gardening like the sewing of bright lupins all along the main highway through Central Otago's Lindis Pass.

Against that is the drive to encourage natives. The purists are pushing for strict controls on the new rural subdivisions popping up around the country – covenants to restrict their plantings to indigenous species.

Well, the real purists like Rapson are not even so sure about that. Personally, she says, she would rather gardeners even in country towns stick to exotics unless they are willing to eco- source natives that have a proper genetic match to the locality.

"In Manawatu, people want to plant rimu in their gardens because they think it's helping. But if those rimus are sourced from Northland or Southland, and they shed pollen into my local bush, then they are polluting that bush. So if you live anywhere near a native area, I say plant exotics, because when I find them straying, I know to weed them out."

This is when you realise how straightforward it has perhaps been with gorse and pines. The future debate over New Zealand's now compromised wilderness looks set to get complicated. All that is certain is we live in a weedy nation that still yearns to get a lot weedier.

14:41, Oct 04 2014 The Press.

≈ APPENDIX 4 » WALKING ACCESS COMMISSION

Our vision: Journeys across the land and to our special places | Te mauri o te hīkoi

We are working with communities to create and tend to tracks and trails, resolve disputes and care for our land and the people who live, work and play on it.

We are building a legacy of public access to the outdoors for everyone in New Zealand, from walkers to mountain bikers, anglers to horse riders, landholders to trail runners and beyond.

The New Zealand Walking Access Commission Ara Hīkoi Aotearoa provides leadership on outdoor access issues and administers a national strategy on outdoor access, including tracks and trails. It maps outdoor access, provides information to the public, oversees a code of responsible conduct, helps to resolve disputes and negotiates new access.

The Commission has a small team in Wellington and a network of regional field advisors. It is governed by an independent board.

For more information about the functions of the Commission please consult the Walking Access Act 2008.

≈ APPENDIX 5 » FILAMENTOUS BLUE GREEN ALGAE

Hannah Kronast, 7/07/2021

Why are NZ's pristine lakes turning green? Scientists baffled by 'deeply concerning' phenomenon.



© Video – Newshub; Image – Supplied Watch: Earlier this year, the Government said it would pump \$36m into cleaning up waterways.

New research by Kiwi scientists has revealed pristine lakes around the world – including Queenstown's Lake Wakatipu – are degrading at an "alarming" rate due to the growth of bright-green slimy algae.

The research was co-led by scientists at Nelson's Cawthron Institute and explored the potential causes of the algal blooms such as nutrient pollution, climate change and the loss of animals that eat the algae.

The findings were published in *BioScience Magazine* this week.

It found pristine lakes around the world are being carpeted by bright-green slimy algae growing on the lake bed, especially during the summer – a phenonemon that is "deeply concerning" to scientists.

Cawthron Institute scientist Dr Simon Stewart said typically, when a lake experiences degradation, the water becomes enriched in nutrients and filled with algae, but some of the lakes they studied which have algae mats growing on the lake bed have clear water that is free of nutrients.

"The fact these blooms are occurring in essentially pristine lakes is an indicator that freshwater ecosystems are rapidly changing and the blooms could be early-warning indicators of ecosystem change, but we have a puzzle to solve because traditional monitoring methods can't tell us much about the problem," he said.

Co-researcher Professor Marianne Moore from Wellesley College in Massachusetts said there are several lakes in New Zealand that are already experiencing the algae blooms, including Ōtūwharekai near Ashburton, Lake Wakatipu in Queenstown, and Lake Taupō.

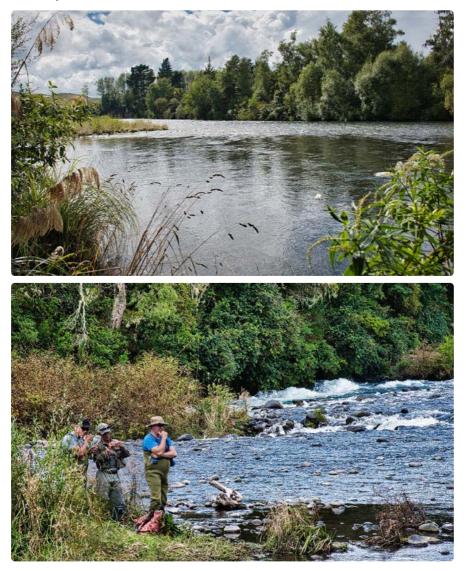
"Our team have been sampling and monitoring these blooms in a few lakes in New Zealand, including Taupō, to shed light on what is driving these blooms.

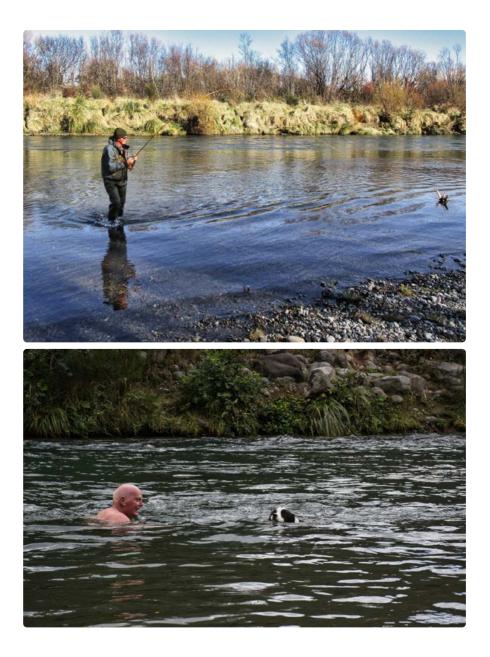
"But unlike the offshore waters in lakes where in some instances monitoring data goes back 100 years – and the theory is well-established, we're starting from a fresh slate so we're having to work smarter.

"This is why the global research partnership is so important – by sharing knowledge and resources with partners worldwide we can all make progress together."

\approx APPENDIX 6 » PHOTOS OF ACTIVITY

Photos by Alasdair Keucke





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\approx APPENDIX 7 » 1080 RESEARCH ON TROUT AND HUMANS

Hi All

I did some further digging into the risks that 1080 may pose to humans via trout, and my conclusion from the information I found is that the risk is extremely low. I have linked two documents:

- 1. A Cawthron Institute report (2014) HERE which experimentally tested the residue of 1080 in trout flesh after they were dosed with the poison.
- 2. An OSH document (HERE) which amongst other things provides toxicology data for humans.

The Cawthron report (executive summary) states that the peak level of residue in trout flesh occured after 24-48 hours at a maximum level just under 5mg/kg of flesh. The OSH document (pg.15) states that the minimum amount of poison required to kill a human is 2mg/kg of body weight (note the weights refer to pure poison, not pellet weight). Thus, even a 10kg toddler would need to consume 20mg of pure poison or 4kg of contaminated trout flesh to be fatal, and a 50kg adult / child would need to consume 100mg of poison or 20kg of trout flesh! The Cawthron report also noted that the dose of poison that they gave the trout was well above the level they considered possible in reality.

But the real gem in the OSH report is on pg 14. Unfortunately, there does not appear to be any antidote for the poison in humans except possibly alcohol. Yes, if you consume 1080 they actually recommend you have a stiff drink! So the clear action point from all of this is to take a flask of whiskey whenever you go fishing!

Cheers, Carl. *Thank you*.

\approx PROFILE OF ADVOCATES FOR THE TONGARIRO RIVER COMMITTEE FOR 2021

2021 Office Holders



Carl Bergstrom

Carl has been a regular visitor to Turangi and the surrounding area for over 35 years, and first learnt to fly fish on the Tongariro River. Now retired after a corporate career, he has more time for fishing, and is passionate about preserving this pristine and world renowned river so that future generations may enjoy it too.



Gary Brown – President, Committee member since 2011

Gary's family has an association that has lasted over a half century with the Lake Taupo fishery and he has had a life-long interest in hunting and fishing. Gary's prime focus as a committee member is therefore the state of the fishery and monitoring the effectiveness of the Department of Conservation's Taupo Sports Fishery Plan.

Gary lives in New Plymouth and is a retired architect by profession.



Warren Butterworth – Committee member since 2014 Vice President from 2015

Warren is a lawyer and part time farmer. He has fished the Tongariro and surrounding streams for more than 40 years and been a member of TALTAC for most of that time.

Warren resides in Auckland and is a board member of two substantial charitable trusts and of many private companies.



Tim Castle – Committee member 2016

Tim, a Wellington Barrister was elected to the committee in 2016. His home is in Wellington but he has a keen interest in the area and a holiday home for some years in Waitetoko.

Tim has studied Te Reo Maori and culture since the 1990's and has worked closely with iwi through his legal work.

He does not profess to being more than a keen learner angler.



Virginia Church – Committee member since 2011 Acting Secretary from October-December 2013

Virginia's 2001 Petition to Parliament on the plight of the Tongariro, was supported by 602 signatures. This, and the Submission based on that Petition that was presented in 2002 to the Parliamentary Select Committee for Local Government and the Environment, was the catalyst for formation of the Advocates as an incorporated society.

After living in Australia, Virginia and her family have returned to Turangi where they have very close hapu associations with local iwi.



Sam Coxhead – Committee member since 2014

Sam has been coming to Turangi for the last 20 odd years. He is a keen angler, who relishes any time he can spend on the river.

Sam and his large young family now have a home in Turangi. It has become more important for him to help with the responsibilities of looking after the river.

Sam wants to help ensure that the fishery, and river environment as a whole, is looked after so the future generations are able to enjoy all it has to offer.



Mike Forret – Co-opted member 2017

Mike Forret has been a keen angler for more than twenty years. He enjoys coming to the Tongariro and Turangi whenever he can and is very supportive of the Advocates aims.

Mike retired from the University of Waikato in 2016 where he worked in science and technology education for over twenty years. His main involvement with the Advocates has been provision, maintenance and support of the Advocates' website and membership database through his web services company iConcept Enterprises Ltd.



Richard Kemp – Committee member since 2002

A Wellingtonian, Richard has been coming to Turangi to fish all his life – as has his father before him and his son after him. He has a passion for the fishery and a particular interest in its sustainability.

Richard served as Vice-President from 2006-2010 and has been the Advocate's legal advisor throughout. He is the current Advocate's representative on the Taupo Fishery Advisory Committee.

As a lawyer, Richard's networks have been invaluable in helping to profile the Advocates and successfully source funds from philanthropic sources.



Alisdair Keucke – Committee member since 2018

Alisdair Keucke retired to Turangi from Auckland in 2015 after a career in manufacturing and electrical engineering. The third generation of an old Raetihi family he recalls holidaying as a child in one of the only two bachs in Kuratau in the 1950's. His father was a keen fly fisherman. Alisdair describes himself as a mere beginner.

Alisdair always had a keen interest in the environment and is primarily interested in the conservation of the Tongariro River and its environs. He had 10 years' experience co-chairing Auckland's Little Shoal Bay Action Committee, which resulted in North Shore City Council buying back reserve land sold to developers, to preserve it as a reserve and protected wetland.



John Martin

John is the strategic advisor to The Whiskey Project Group (Aust), Ltd, an independent director on the board of Statistics New Zealand, the Executive Director of the New Zealand Ocean Foundation, sits on various groups including the leadership assessment panel for Blake NZ and the editorial board of the RNZN Professional Journal.

He consults on governance and strategy to government agencies and coaches senior leaders.



Julian Proctor – Committee member since 2018

My father fished the Taupo area in the late 1940's after returning to NZ and started me fishing there in 1954 and built a house in Turangi in 1960. I have fished all of the rivers in the Taupo area and most of the stream mouths but my love has always been the Tongariro river.

I have been a member of TALTAC since I started fishing in Turangi and am now a committee member of the Advocates. I love all types of fishing and still do a lot of shooting. I retired in 2016 and now spend as much time as possible in Turangi.



John Toogood – Committee member since 2005, Treasurer

John first came to Turangi at the age of seven with his family in 1950 and still has the family bach that his father and grand-father built in the latter '50s.

He has had a life-long passion for the Turangi/Central Plateau area, the Tongariro in particular as a keen fisherman, and has a deep interest in the health of the environment. His particular concern is the spread of wilding pines and willow along the river, and has initiated a number of eradication programmes.

John and his wife, Susie, have a family business in Wellington.



Eric Wilson – Secretary since 2005

Eric was a community appointee to Waikato Regional Council's Lake Taupo Liaison Zone Committee until it ceased as a committee late 2019, and a key local liaison person within the Turangi community.

Eric has been a local Turangi resident for the past 47 years and is a former Principal of Tongariro High School.

Enjoys the outdoor environment of the wider Tongariro Catchment.

≈ LIST OF MEMBERS

Andrews

Bamford

Bamford

Bamford

Bartle

Batson

Beasley

Bergstrom

Bergstrom

Blackbeard

Bingham

Brace

Breen

Breen

Brennan

Ramsav

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Brown

Castle

Castle

Church

Church

Church

Cosgrove

Coxhead

Cunnack

Dickson

Duff

Duff

Fair

Elliott

Forret

Forret

Fransham

Fransham

Fransham

Chapman

Buckley

Butterworth

Butterworth

Butterworth

Avery

Avery

Charles J Bill Helen Dave Tim Will Murray Brian Anthony Carl lackie Peter Rob Robert Paul Ann Paul Nettie Garv Marie Rob Warren Nick lames Tim Sharon Barry Virginia lock Liam Alison Sam Rennv Steve Graeme Marion Helen Bill Dr Michael Dr Ioan Mike

Helen

Benjamin

Jessica Scott Sher Wavne Wendv David lan R Carter Robert Selwyn Marie Warwick Mike Gail Murrav Nsop Richard Honor Alisdair Helen Stephen Kim Peter Valerie Heather Jen lohn Sue lohn Elizabeth Ali David Alasdair Nick Lizzie Graeme Natasha Christine Leslev Iulian Adrian Renee lan

Fransham Gibbons Gibbons Godkin Godkin Grant Hamilton Haves Hazelwood Hodder Hodder Horton Hughes Hughes lamieson lamieson Kemp Kemp Keucke Keucke Kyle Kyle Lean Dandv Macdonald Shieff Martin Martin McCallum McCallum McHattie McHattie McNab Miles Hutton Nahkies Nahkies Pritt Hosking Proctor Rickards Rickards Rodger

Lola Rodger Mollv Rodger Greta Rodger Ionathan Ross Carol Ross Grace Ross Miles Ross Graeme Shanks loanna Shanks Marv Sherborne Murray Short Small Neil Rosemary Small Peter Smith Dan Stevenson Prue Stevenson Anna Bashford Sally lones Sam Stevenson lohn Summerhavs Anne Summerhays Terry Sutton Annabelle Sutton Marja ter Haar Trish Frank lohn Toogood Susie Toogood Georgina Toogood Treadwell Mical Richard Watson Malcolm Whyte Flizabeth Whyte Peter Williams Paul Williams Gwynne Williams Peter Wilson Godfrev Wilson Eric Wilson Lorraine Wilson Buster Young Trish Young

+ 8 un-named

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\approx COMMITTEE NOMINATION FORM	······×·
One form per nominee	- 3
//2022	(Tick position nominated)
	President
I nominate:	Vice-President
Signed by nominee:	Committee member
	Either
Nominator (signed):	□ Secretary
	Treasurer
Seconder (signed):	Or
	Secretary/Treasurer
President, Vice-President, Secretary/Treasurer and up to 11 committee men President, Vice-President, Secretary, Treasurer and up to 10 committee men	nbers + Immediate Past-President (15).
One form per nominee //2022	(Tick position nominated)
	President
l nominate:	Vice-President
Signed by nominee:	Committee member
signed by nonlinee:	Either
Nominator (signed):	□ Secretary
Nominator (Signed):	Treasurer
Cocondor (cignod)	Or
Seconder (signed):	Secretary/Treasurer
President, Vice-President, Secretary/Treasurer and up to 11 committee mem President, Vice-President, Secretary, Treasurer and up to 10 committee mem	
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One form per nominee	(Tick position nominated)
//2022	President
I nominato.	
I nominate:	Vice-President
Signed by nominee:	Committee member
	Either
Nominator (signed):	Secretary
-	Treasurer
Seconder (signed):	Or Secretary/Treasurer

President, Vice-President, Secretary/Treasurer and up to 11 committee members + Immediate Past-President (15) or President, Vice-President, Secretary, Treasurer and up to 10 committee members + Immediate Past-President (15).

# PROTECT NEW ZEALAND'S GREATEST RIVER & TROUT FISHERY THE MIGHTY TONGARIRO

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