

## DIDYMO REPORT

### THE DIDYMOSPHENIA GERMINATA STORY, SO FAR.

Mark Cosgrove reports on a meeting with Biosecurity New Zealand, Tokaanu, 11 October 2005.

**The invading alga, *Didymosphenia germinata*, poses grave threats to New Zealand's rivers and possibly its lakes. This alga is native to northern European countries.**

The alga is also found in North America; it is thought to have been there for some 20 years. New Zealand is the only place in the southern hemisphere and the only place outside of northern Europe and America where this invasive alga is found.



It is thought that the alga has been in New Zealand for about three years, and it was identified in Mararoa and Lower Waiau Rivers in Southland in October 2004. Advocates for the Tongariro River were notified of the 2004 outbreak last November: a MAF/Biosecurity New Zealand notice was mailed out. The alga is to be treated as a serious pest of freshwaters, especially rivers with shingle beds.

The most vulnerable rivers in New Zealand are those which are cool with clear running water – the South Island high country rivers and streams on the eastern side of the main divide, from the Nelson Lakes south, and the rivers of Southland. The mountain streams of the central North Island are equally likely to be vulnerable.

Scientists and others are searching international databases for information on this alga. At present, there are no known methods of eradication or for control in a river. Nor is it known how it spreads, although the hunch is that humans are the principal spreading agents. Controlling human activities would then seem to be the main thrust of any remedial action.

The alga is likely to have wide impacts on the economy (guided angling, tourism, industrial users such as hydro generators and irrigators), on the environment (as for the economy plus the challenge to the 'clean, green' mantra), and on intrinsic cultural and social values.



The invasion is taken seriously by the Government: Biosecurity New Zealand will report to the Prime Minister and the Cabinet before April 2006 on:

- the biology and ecology of this alga
- the alga's distribution in New Zealand
- the potential effects of the alga
- the likely impacts and significance for New Zealand
- control options.

### CONTROL AND ERADICATION

Biosecurity New Zealand is undertaking a public awareness campaign based upon all river users cleaning their gear thoroughly. The alga is to be contained to its present distribution, which is now the first two rivers mentioned, as well the Hawea, Upper Waiau and Oreti Rivers of the deep south, and the Buller River near the Nelson Lakes National Park. So at least six rivers are contaminated.

There are no plans to quarantine any rivers, nor is there much awareness of impacts for industrial users such as irrigators and hydro generators.

The control processes will depend on river users adopting scrupulous gear-cleaning practices. All river-use gear needs to be treated in one of these ways:

- Clumps of weeds are to be removed from boats, skis, fishing nets etc.
- Dogs need to be dried thoroughly before moving from one river to another.
- Equipment needs to be soaked and scrubbed in hot, soapy water at 60° Celsius for one minute.
- A 2% bleach solution can be used as well, and/or a 5% saline solution, or detergent.

In any case, wait 48 hours until all gear is completely dry.

### ACTION RESPONSIBLE RIVER USERS MUST TAKE

The recommendation is that 'all rivers are to be regarded as being contaminated and a gear-cleaning regime brought in to operation'. It may be necessary to dedicate certain gear to certain rivers; for example, use one's neoprene waders in the Tongariro River only, or have a set of gear for each location.

So the message is:

**AVOID** spreading the alga

**DEDICATE** equipment to specific rivers and lakes

**DECONTAMINATE** by thorough cleaning.

### ON-GOING MONITORING

NIWA is doing the work in the rivers, and the central North Island is being closely watched. There are grave implications for this region; if, say, the alga was found in the Whakapapa River, would that mean the whole western diversion would need to be shut down? Already the hydro companies have serious weed removal problems; adding this invader will add to those concerns.

### NOTIFYING AUTHORITIES OF POSSIBLE SIGHTINGS

Phone 0800 80 99 66 to report any strange weed growths. Rather than collecting samples, rely on the technical people to do that.

### TREAT ALL WATERWAYS AS IF THEY ARE CONTAMINATED AND PUT IN PLACE A SUITABLE DECONTAMINATING PROGRAMME.

Mark Cosgrove on behalf of The Advocates for the Tongariro River Inc.  
Email: mark@cosgrove.net.nz

### FROM THE PRESIDENT...

Recent biosecurity testing has given the Tongariro a reprieve. It was a relief to learn that the Tongariro and other North Island rivers are, for now at least, not contaminated by Didymo, as far as the testing has been able to determine. "We are giving no guarantees," Biosecurity (BSNZ) staff say.

We've been lucky. Now we've got to be informed, and careful. As an Advocates group we need to see that the right information gets out there. We want people to know:

- the facts about Didymo, including the fact that not only anglers and other river users but also dogs, trampers and kayaks can act as contamination agents
- what the risks of contamination could mean for the fishery – and for the region
- what to do in order not to contaminate the river.

Our region has the conditions needed for Didymo to thrive, according to BSNZ.

I have been involved with others on the committee in pushing for practical strategies to try to contain Didymo and keep it out of the central North Island waterways. We have talked with DoC, urging them to take leadership initiative. We have talked with the Professional Fishing Guides Association, with Fish and Game NZ, and have attended a BSNZ information meeting on Didymo. (Refer Mark Cosgrove's report.) I have written on behalf of the Advocates to the Taupo Fishing Advisory Committee asking them to make a resolution to implement practical preventative measures in the region.

Unfortunately these endeavours seem to have had very limited effect, so we have decided to take our own action to fill the immediate information gap. To this end, we have produced an information pamphlet, as enclosed, and a set of posters.

Thanks to the design expertise and goodwill of Bob MacDonnell and Sylvia Smith, and the generosity of Color Reprographics Ltd and Service Printers Ltd, both of Wellington, we have a quality design, carrying the latest biosecurity information. We have had 4,000 pamphlets printed, at a run cost of approximately 2,400, but there has been no cost to the Advocates. We have put pamphlets onto the counters of sportshops in Turangi and Taupo and distributed them to fishing lodges in the area as well as putting posters up in river access carparks.

Any contribution towards the cost of future print runs of Didymo information pamphlets should be sent to our Treasurer, Eric Wilson, PO Box 335, Turangi. Please keep an eye on the Biosecurity New Zealand website for updated information on Didymo. I urge anglers to be diligent, especially when moving between rivers.

Heather Macdonald  
PRESIDENT

### ALERT

HELP STOP THE SPREAD OF DIDYMO TO THE TONGARIRO AND TAUPO LAKES & RIVERS



**WHY BE CONCERNED?**  
Didymo is an invasive freshwater algae that attaches itself to the streambed and smothers rocks, thereby reducing insect abundance which is important for the health of trout, other fresh water species and the habitat of the river.

**HOW IS IT SPREAD?**  
It is believed human activity is the most likely means of transmission via kayaks, boats, angling equipment, fishing waders and tramping gear.



Didymo has already infected the Waiau, Mararoa, Buller, Hawea, Clutha, Von and Oreti rivers.  
SEE OVERLEAF FOR HOW YOU CAN HELP PREVENT DIDYMO SPREADING



# LAND USE, WATER QUALITY AND THE LAKE TAUPO PROTECTION PROJECT

A talk by Paul White

The seminar on the Sunday afternoon of Labour Weekend has become an annual Advocates event and provides an opportunity to tap into aspects of new science to do with rivers and lakes.

This year, our speaker was Paul White, a scientist with the New Zealand Institute of Geological and Nuclear Sciences.

Paul is a researcher who has been active in New Zealand groundwater since 1981. His research topics include rainfall recharge to groundwater, river/groundwater interaction, groundwater and lakes, and groundwater economics. Paul is a Trustee of Lakes and Waterways, President of the New Zealand Hydrological Society and Councillor of the Royal Society of New Zealand.

Paul talked about the impact of nitrogen and other nutrients on the quality of lake water.



Paul's historical data showed that, generally, waste water treatment is improving over time, but waste water volumes are increasing over time, so nutrient discharges are increasing over time.

Paul said that Taupo District Council's future expenditure on waste water treatment would involve a cost of approximately 24 million over the next 15 years, an upgraded Turangi plant to be commissioned soon, and upgrades to other plants. In view of this expenditure and improvement, there is every reason to expect that nutrient discharge from treatment plants to receiving waters will decline in the future.

It is encouraging that Paul and others have volunteered to monitor the nutrient discharge from treatment stations, in consultation with TDC.

Lake Taupo Sources of Nitrogen	Tonnes N/year
Rainfall on lake.....	230
Wetlands.....	4
Bare ground and tussock.....	62
Indigenous forest and scrub.....	247
Tongariro Power Diversion.....	80
Planted forest.....	132
Sheep/beef pasture.....	377
Dairy pasture.....	58
Urban sewage.....	17
Urban runoff.....	16
Total.....	1220

In response to the observation that the table shows more than half of the 1200 tonnes of nitrogen p.a. to be from natural sources, Paul said that the contribution of humans seems, however, to be having a significant impact on altering the water quality.

When Paul was asked if the proposed Lake Taupo Protection Project could work, he gave the example of the successful Lake

Hayes protection. He said, "The outlook is good. I'm confident that Lake Taupo can be protected." Using the Lake Hayes example, he said that the signs look good, as presumed reductions in nutrient discharge are having a positive effect on Lake Hayes water quality.

But, Paul says, the effort required to protect Lake Taupo is significant. "A whole range of potential solutions should be effected. The challenges and costs are significant. Social division is quite likely because land use change is required. And the timescales for restoration are decades."

For Paul White's talk in detail, please visit the Advocates' website, [www.tongariroriver.co.nz](http://www.tongariroriver.co.nz)

## FAREWELL AND THANKS

Gill Osborne, who has been a foundation member of the Advocates, its first secretary, and an active committee member, is moving from Turangi to become a resident of Waiheke Island.



Gill and a small group of local residents known as TRAG were instrumental in lobbying for flood protection work at the end of Kura Street in 1998. The Advocates grew from this TRAG initiative and in response to a request by Virginia Church for help in drafting a parliamentary submission on the problems in the lower river. We wish Gill all the best.

## HAVE A SAY!

The Advocates' website, [www.tongariroriver.co.nz](http://www.tongariroriver.co.nz), now has a discussion forum function. We encourage you to use this to express your views on river issues.



## SUBSCRIPTIONS

The financial year for the Advocates is from 1 January to 31 December, and so it is now time to renew subscriptions for 2006. Enclosed there is a membership form which I ask you to complete and return so that we can update our membership records. We really appreciate early payment of subs as we then have a base with which to work.

We have also enclosed some additional forms in the hope that you will sign up new members.

During 2005, we sent membership forms with each newsletter hoping you would use the forms to increase the membership base. However, some members thought the forms were intended for their own membership renewal. We have advised those members who have made a double payment.

We thank you for your ongoing support of the Advocates.

Eric Wilson,  
Treasurer, PO Box 335, Turangi.

# PLANTING FOR THE FUTURE

As part of a project managed by the Advocates, with Jen Shieff as the Project Manager, the Advocates have accepted DoC's landscape designer's planting plan for the stretch of riverbank between Poto St and Cherry Tree reserve. The help of Advocates and residents of Turangi will be sought as the plan takes shape.

The two main stages of the project are the clearing of broom and other undesirable plants and then, in early May, the planting of approximately 240 plants which will provide cover for fish and strengthen the riverbank.

The project is seen as a pilot for community participation



Advocate member Jen Shieff and DoC Manager Dave Lumley discuss DoC's planting plan.

in planting several sections of the riverbank. "The pooled resources of DoC and the Advocates will make the project successful, and participating will be very enjoyable and worthwhile," says Jen.

The Advocates have undertaken to raise funds for the purchase of the trees and plants recommended by DoC. The Advocates and DoC staff will focus their efforts on a few days' clearing and planting activity, mainly in the autumn.

Those interested in taking part in any aspect of the project should contact Jen, tel 07 3866 501, for a copy of the project plan.

## PLAN NOW FOR EASTER 2006

Plan to be at the Tongariro Bridge Fishing Lodge at 4.30 on Easter Sunday for our AGM, to be followed by a presentation, discussion and drinks. Details to be advised.

## STOP PRESS:

Arthur Smallman, Chairman of the Turangitukua Environment Committee, advised the Advocates as we go to press that Turangitukua have agreed to start work immediately on the channel restoration of the Lower Tongariro River.

This is very good news and the Advocates are keen to offer whatever support will be helpful in this process. We hope to have details of the action plan in time for the publication of our Annual Report.