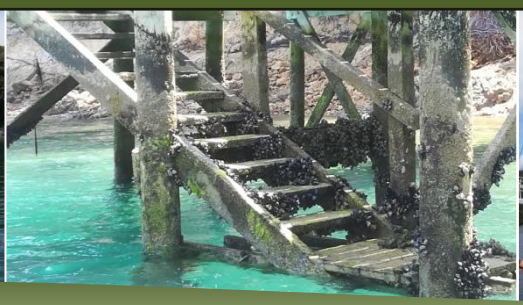
Partners Newsletter

Keeping you informed

Spring 2018



Summer survey – how you can help

Over 500 recreational vessels and 500 structures will be inspected for marine pests this summer, right across the TOS region. You can help by letting the team know of areas with concentrations of visiting boats from other regions.

Dr Barrie Forrest who heads the surveillance team said "This summer we are really interested in visiting boats, and areas where there are a lot of recreational vessels actively moving around. While we'll be having a look at inactive boats on moorings, it's the ones that are most mobile that pose the greatest risk. This year any boat out of Nelson, Tarakohe, Waikawa, Picton or Mana could be carrying the clubbed tunicate, and boats from north of Tauranga risk transporting the Mediterranean fanworm, as well as new pests, into the TOS. Last summer we surveyed 544 yachts and powerboats, and 546 coastal structures, and didn't find fanworm on any of them; so it appears that diver removal of fanworm funded by the Councils has prevented spread into the region, and we want to be sure that's still the case."

The fanworm can grow to 800mm long and form a closed canopy of "tentacles" over mussels potentially taking their food. How it might impact in our region is not yet clear, but around the Hauraki Gulf it is now in high densities and beyond control. Our main message for boaties is to be sure your boat is 'Clean below, before you Go'. "Without human help the fanworm will not easily spread and become a menace in the Top of the South" said Dr Forrest.

The news is not so good for the clubbed tunicate. Through the year we have had further reports of this pest appearing on marine farms in Golden Bay and the Marlborough Sounds. Last summer we found the tunicate on more than 5% of vessels, clearly indicating boats with dirty bottoms are a key mechanism for what is spreading it around.

Please call our Coordinator Peter Lawless on 021 894 363 if you see stuff we might be interested in for the survey. We start the survey mid-December and will be going through to February across the whole Top of the South. You will see the team out with DOC and the Harbour Masters over this period.

For more information see http://www.marinebiosecurity.co.nz/

Marlborough RPMP

Legally enforceable rules on marine pests came into force in the Top of the South Island for the first time on 1 October 2018 when Marlborough District Council's new Regional Pest Management Plan (RPMP) became operative.

The new RPMP has specific rules to prevent the establishment of the Mediterranean fanworm (*Sabella spallanzanii*) in Marlborough waters to try and prevent adverse effects on economic wellbeing, the environment and enjoyment of the natural environment.

The Council has used its ability to make a RPMP programme under the Biosecurity Act 1993 because of this pest's potential to become prolific in the marine environment and potentially threaten Marlborough's thriving aquaculture industry.

Recent studies have indicated there could be impacts from Mediterranean fanworm on the establishment of new generations of some marine species and on nutrient cycling of the benthic environment. The presence of dense colonies of this species could also change the underwater scenery of an area, potentially impacting on dive tourism activities. While the Mediterranean fanworm has not yet been recorded to have had significant impacts on fisheries in New Zealand, it could easily become a nuisance to recreational and commercial fishers by clogging equipment and other fishing gear when in high densities. The Mediterranean fanworm has been found within Picton Marina and on a small number of vessels that have entered Marlborough carrying fanworm amongst biofouling. All contaminated vessels have been cleaned and follow up divers have removed juveniles twice a year from the marina.

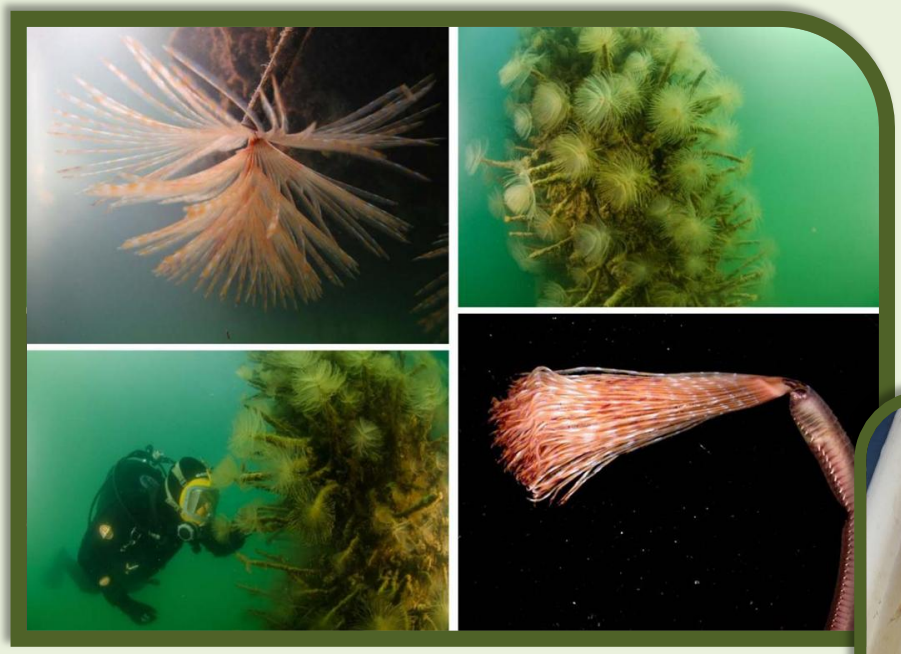
The RPMP programme provides for active management as well as legal rules that apply to anyone in charge of a craft entering Marlborough.

The key rule as part of the programme outlines that the owner or person in charge of a craft entering Marlborough must ensure that the fouling on the hull and niche areas of the craft does not exceed 'light fouling'. The prevalence of Mediterranean fanworm in other parts of New Zealand, including the key recreational vessel hubs of Auckland and Whangarei Harbour, means the arrival of craft into Marlborough that are carrying bio-fouling are the biggest risk to the achievement of the proposed Exclusion Programme.

Another key rule also outlines an obligation that the occupier of any place shall take all reasonable steps to destroy fanworm that is identified to be harbouring on that place, unless a management plan has been put in place and approved by Council.

This imposes a new duty on managers of structures and facilities to take steps to keep them free of fanworm. While in most instances the initial response will be led by the management agency under a management plan, this rule will also place a baseline requirement upon the occupier of that place to remain vigilant and continue to play an active role in preventing establishment.

For more information see: Go to RPMP Programme for Mediterranean fanworm on the Marlborough District Council website



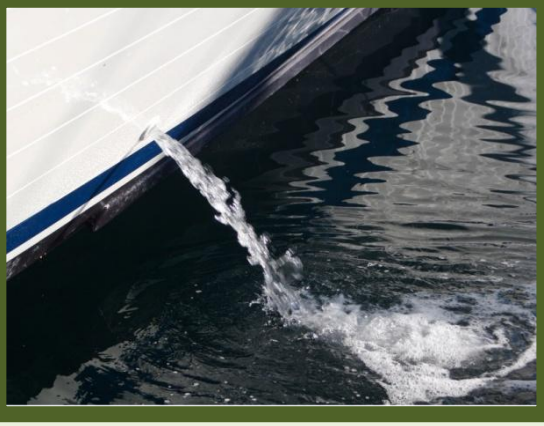
Top left: *Sabella* looking like a flower, with its filaments open. Credit: Serena Wilkens, NIWA.

Top right and bottom left: Diver Matt Smith (NIWA) in Auckland harbour. Credit: Crispin Middleton, NIWA.

Bottom right: The first specimen collected in New Zealand. Credit: Geoff Read, NIWA.

Dead *Sabella* in a dish. Credit: Geoff Read, NIWA.

Managing bilge water risks



A simple message from Cawthron's biosecurity team (Lauren Fletcher)

What is bilge water?

Bilge water can mean different things for different vessel types. In larger vessels, bilge water is often restricted to the oily water that accumulates in the engine room, particularly in older vessels where sea water enters through the stern gland. In smaller recreational craft, it is found in the bilge sump or simply sloshing freely across the deck. In addition to sea water, bilge water also commonly contains fresh water, contaminants such as oil or fuel, marine debris and often some bait! Bilge water is typically discharged from vessels via pumps (manual and automatic operation) and is not commonly treated prior to discharge.

Does bilge water pose a biosecurity risk?

Recent research by the Cawthron biosecurity team, in conjunction with NIWA, has shown that bilge water can contain a diverse range of microscopic life stages of marine invertebrates, including larvae of marine pests (e.g. the sea squirt *Ciona intestinalis*). We also found that some larvae taken on board within bilge water can survive for up to 3 days (perhaps longer for some species) and remain viable following discharge through the bilge system.

Our message to boaties

Bilge water has received a lot less scientific attention than hull biofouling and ballast water risks, but we believe there is enough evidence to suggest that bilge water could pose a biosecurity risk if it is transported over long distances. Recreational vessel owners can do their bit to help reduce the spread of pests in their region. For now, our advice to boaties is to use common sense: for example, if your vessel has been sitting in the marina, discharge the bilge before you depart for a journey, and frequently discharge bilge throughout the day so that any pests that end up in the bilge aren't transported with you. If you take on water in a port or marina environment where there are many pest species present, don't then discharge your bilge at a marine farm or in a marine reserve!

TOS Committee member profile

Richard Frizzell, Nelson City Council

Richard Frizzell is an Environmental Programme Adviser for Nelson City Council and oversees the Council's biosecurity responsibilities. He has been part of the TOSMBP Management Committee since September 2016.

Growing up in Blenheim Richard developed a passion for the sea during many hours boating in the Marlborough Sounds. His keen interest in nature conservation and environmental issues led him to completing a Diploma in Horticulture and a degree in Resource and Environmental Planning. He has been working for Nelson City Council for over 20 years in a variety of positions requiring technical, planning and community engagement expertise on diverse matters from air quality to heritage protection before taking on biosecurity. He works very closely with biosecurity teams of both Tasman District Council and Marlborough District Council, as well as contractors, including Nelmac which manages the Nelson marina.

Girl power bringing marine biosecurity into the digital age

A Nelson College for Girls project on marine biosecurity won the Dick Roberts Memorial Trust Award (Female) for the best investigation relating to life sciences, biology or geology at the 2018 Cawthron Scitec Expo.

The Y10 Digital Technologies class completed a unit on augmented reality and were then given the task of identifying ways that this technology could be used. They decided that this technology could be of huge benefit to help identify marine pests and to help keep them under control.

Peter Lawless, Top of the South Marine Biosecurity Coordinator, said "The girls were very keen to hear about the threat these marine pests are to our waters. They then used this knowledge, alongside their digital technology knowledge. The result was a prototype of an augmented reality mobile app. This allows people to identify marine pests and to get basic information about the pest and what to do if they encountered it. We will certainly look at developing this further for application in New Zealand. I commend the team for their enthusiasm and skill in creating something practical and valuable."

This project really showed how technology can be used to help spread the message about keeping our waters safe.

Back row from left: Neve Scott, Sophia Ryan, Grace Dowling, Laycee King, Georgia Roche, Megan Shields
Front row from left: Nelli Zaiko, Phoenix Binnie-Genet, Eleanor Bamfield, Amelia Mephan, Alice Bathgate