



Partners Newsletter

Keeping you informed



Summer 2019

Which anti-fouling paint to use?

Correct use of antifouling paint is critical to preventing spread of harmful marine organisms. Marcus Gardener of Carboline paints addressed the TOS Committee and this article summarises his information on the types of paint. In the next newsletter we will cover preparation and painting for best results.

Primary biofouling begins as soon as the surface of a vessel is submerged in seawater with the formation of a slimy surface film consisting of bacteria and microscopic algae. Secondary biofouling happens as the vessel remains submerged in seawater. The process occurs as organisms settle on top of the primary biofouling layer. Tertiary biofouling generally consists of larger organisms, such as sponges, sea squirts, mussels, oysters and seaweeds. Levels of biofouling increase the longer a vessel or structure remains submerged in seawater.

Different sorts of antifouling have different uses:

Ablative antifouls are very slightly soluble in water, so microscopic fragments of it are constantly falling away exposing fresh biocide. The build-up of layers of antifoul is reduced and tends to be cheaper than hard antifouls. This is the most commonly used antifoul and is suitable for cruising yachts and displacement motorboats. Its drawback is that it cannot be scrubbed. It typically lasts 24 months and is better suited to boats which spend more time moored than at sea.

Hard types of antifoul use biocides that dissolve very slowly in water, so they gradually dissolve as the season progresses. The biocide particles are suspended in the paint resin which dries to a hard finish. They can enable periodic scrubbing during the season to keep the bottom in perfect condition. It is ideal for racing yachts that are kept afloat and for fast powerboats or planning launches. It cannot be easily applied over soft ablative antifouls. Not as effective unless the boat is used regularly.

Foul release coatings are not actually an antifoul as these contain NO biocides. They are a type of coating which rely on low surface tension, low surface roughness and high flexibility. They provide no biofoul protection while stationary, are expensive to apply to vessels, require vessel to be used regularly and for long periods, and once this paint has become fouled beyond a primary level, may no longer work. They are typically used on ocean going vessels primarily those at sea more than 90% of the time. They are also used on faster speed, -regular use vessels such as pilot boats. They are not suitable for recreational vessels.

Rudders, Kortz nozzles and propellers often need specialist foul release systems (commonly silicone based).

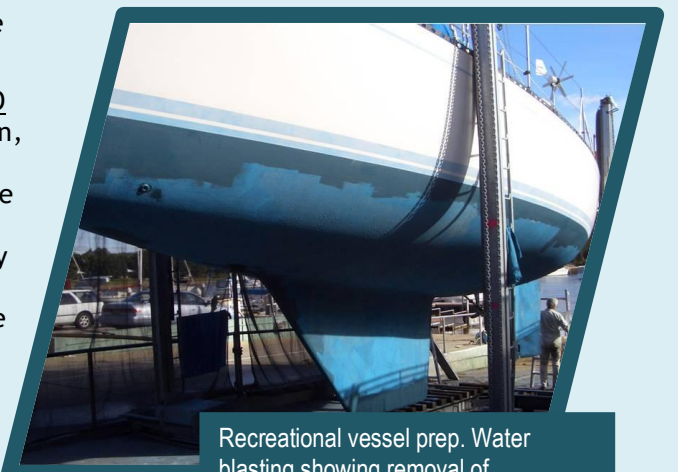
For more information contact: marcus@carboline.co.nz



Sea chests, water intakes and outlets, bow thrusters – all areas which need careful attention to preparation and antifouling.



Not how an antifoul system should perform – wrong antifoul and bad application



Recreational vessel prep. Water blasting showing removal of hydrolysed layers.

Summer Survey 2018/19

The summer survey of vessels and structures across the region is almost complete, with just the moored boats in Nelson Haven left to check. So far we've checked for marine pests and hull biofouling levels on over 500 recreational boats from right across the TOS region, focusing on the Abel Tasman coastline and the Marlborough Sounds. We've also checked nearly 500 associated structures like swing moorings, and some adjacent areas of seabed. Around 20% of the boats we checked came from outside the top of the south region, many from Wellington.



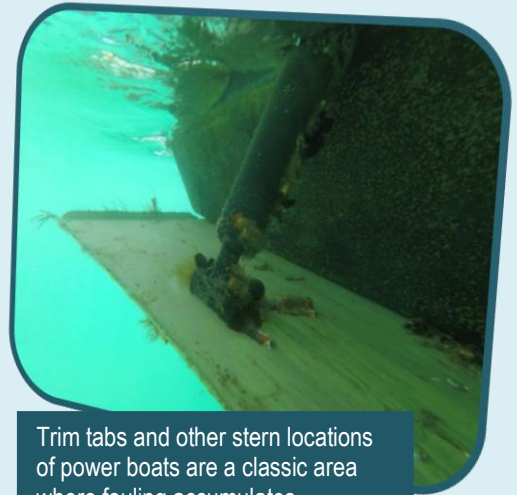
Fortunately, we found no new marine pests in our survey. Also, we didn't find the Mediterranean fanworm on any boats or structures, suggesting that council-funded diver removal of fanworm in Picton, Nelson and Tarkohe marinas has prevented spread into the region. This is good news for sectors such as the mussel industry, which may be adversely affected if the fanworm becomes established and widespread. Alas the news is not so good for the clubbed tunicate. This pest was found on a few boats across the region, and populations appear to be gaining an increasing stronghold on moorings and other structures in three sub-regions of Pelorus Sound - Kenepuru Sound, Nydia Bay and Duncan Bay.

Despite the absence of significant new pest finds or regional range extensions, there are still many boaties who are leaving port without any prior hull antifouling or cleaning. These vessels have the potential to transport hull fouling marine species (many of which are of overseas origin) far beyond the limited spread they could achieve by their own natural dispersal mechanisms. In some cases, the absence of effective management results from lack of awareness of the risk, or lack of willingness to do anything about it. However, we're also aware that the infrastructure to enable hull cleaning isn't sufficient to meet peak demand pre-summer, at least in Nelson and Tasman. This is an issue that's currently being addressed by the councils in those regions.

By the time the next newsletter comes around we'll have completed the survey and data analysis, so will have some more facts and figures to report. In the meantime, we'd like to say a big thanks for the vessel support we had from the Harbour Masters and their skippers in Tasman, Nelson and Marlborough, as well as the Department of Conservation in Picton.



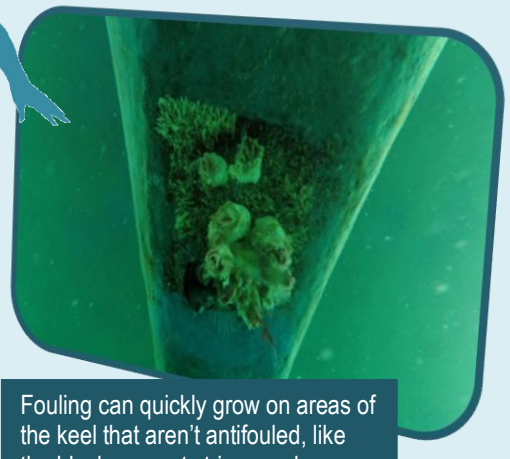
Styela is becoming increasingly abundant on mooring ropes in some areas.



Trim tabs and other stern locations of power boats are a classic area where fouling accumulates.



Grating and pipe intakes/outlets are common areas where fouling is found.



Fouling can quickly grow on areas of the keel that aren't antifouled, like the block support strip seen here.



Recording marine pests

Marine farming operations are at the front line in managing marine biosecurity risks, and marine farms are the perfect surveillance system for potentially harmful fouling organisms. Operational staff who are regularly looking at farm structures and growing lines are in the perfect position to notice and report on new risks and to help track the spread of existing pests that threaten the industry.

To help with current surveillance efforts, we are looking for industry support to record and report on the presence or absence of two pests, the Mediterranean fanworm *Sabella spallanzanii* and sea squirt *Styela clava*. Recording absences is equally as important as recording new finds, as it helps us understand whether present management efforts are worthwhile.

For those willing to help with this, there are a couple of recording and reporting options you could consider. One is to add presence/absence fields for the two target pests to existing production databases, and send us the presence/ absence data at regular periods (e.g. quarterly, annually). Another option is that we can provide a simple recording app for your smart phone or tablet that would enable operators to upload the data to a cloud database at the push of a button.

If anyone is interested and willing to help, please get in touch with Barrie Forrest from the TOS marine biosecurity team: bforrest@marinebio.co.nz.



Sabella spallanzanii



Styela clava (Photo: Anthony Fisher)

Links to other regions

Recent events elsewhere in New Zealand have highlighted the marine biosecurity pathways that link the Top of the South with the rest of the country.

We are getting reports on efforts to control fanworm at Opuā which is where 90% of visiting recreational vessels arrive in New Zealand before heading here.

Fanworm were found in Opuā marina in July 2018. The Northland Marine Biosecurity Team advised us that the first step of the eradication response was taken between 5-27 July when intensive diving found and removed 104 fanworm (over 90% in the marina). Surveys included hulls, moorings, seafloor and structures. The second step of the eradication response consisted of another intensive dive survey at 36 sites with removal of any fanworm found.

Poor visibility (average of 30cm during December) has meant divers could not successfully conduct surveys. In January, divers dived at 10 sites, but visibility was still very poor, and surveys could not be completed at most sites. During all the attempted surveys, no fanworm was found. At the first opportunity, dive surveys and removal of any fanworm found will resume.

Southland Regional Council advised suspect fanworm tubes were found on a vessel that did not have a current clean vessel pass. This vessel had been in the Top of the South before heading to Fiordland. The couple who took their boat there without checking the hull properly will face a hefty inspection and clean-up bill. It was heartening to hear that the samples identified were not similar to the composition of the invasive fanworm *Sabella spallanzanii*, but any suspected *Sabella spallanzanii* is a worrying find due to the invasive nature of this species.

Fiordland Marine Guardians chair Dr Rebecca McLeod said they regard marine pests as one of the biggest threats to Fiordland and fully support Environment Southland cracking down on boaties who are not living up to expectations and treating this special place with the respect it deserves.

To find out more about Clean Vessel Passes see: <https://www.es.govt.nz/environment/pest-animals-and-plants/Pages/Fiordland-Marine-Pathway-Plan.aspx>



Opuā Marina, Bay of Islands

Hector's dolphin app

Out and about this summer we have been encouraging people to take up and use the Hector's dolphin sightings app that has been extended to include other marine mammal species. The information below has been provided by Gemma McGrath who developed the app.



Hector's dolphins are the smallest dolphin species in the world. They are not found anywhere else except Aotearoa. They live in coastal shallow waters, and there used to be a lot more of them around, especially around the top of the South Island and Taranaki. These dolphins used to be seen much more widely, including Kapiti and Palliser Bay (by Wellington) and much of the East Coast! The main cause for their decline has been getting caught in coastal set nets in large numbers since the 1970s. It's mostly the juvenile dolphins that get caught.

These dolphins love surfing and can be quite interactive. You might be lucky enough to see some when you are working or recreating in the Top of the South. If you do, you could put your sighting to some good conservation use and put it in the app. The Hector's Dolphin Sightings App is a free citizen science tool that records whale and dolphin sightings around Aotearoa. The more sightings information there is, the more evidence to remove threats from the dolphins' habitat.

The app has been set up to be very easy to use. It automatically records date, time and GPS when you experience a dolphin sighting. You can add behaviours, comments, descriptions and see all the dolphin data whenever you like. You can get notifications if you like too, and you only have to enter your details once. It's available free from Google Play and Apple stores and is in partnership with Whale and Dolphin Conservation and the Department of Conservation.

You may have already seen some Hector's dolphins recently or remember seeing them a few years back, maybe even longer ago?

If you have seen dolphins in the past, I'd love to hear from you. You can easily put historical sightings on the app, the trick is to scroll to the location before you push the report button first when entering sightings from a while ago, otherwise the sightings might show up in your living room.

If apps aren't your thing, then feel free to email sightings in to aotearoa.dolphin@gmail.com or text/call on 027 694 3533. You can leave a message here too: 03 973 6740.

