

Stopping marine pests from destroying our waterways



Marine pests love a dirty boat bottom, and that fact alone brings major concern for fishers, Ministry of Fisheries (MFish), Biosecurity New Zealand (BNZ), a host of other agencies and almost anyone associated with our waterways.

By taking hold in the fouling fuzz on boat hulls, pests can establish themselves in new locations – generating the potential to seriously affect marine habitats, food chains, fish stocks, recreational activities and aquaculture.

In 1998, a report by the National Institute of Water and Atmospheric Research (NIWA) estimated that of the 148 known introduced marine species in New Zealand, 69 percent had arrived in hull fouling.

Bob Johnston, Senior Analyst at MFish, who has recently been seconded to Biosecurity NZ, says that marine pests are destructive to our fisheries in a range of ways.

“They can affect native species by competing for food and space, they can become a nuisance to recreational and commercial fishers through the clogging of dredges and fouling of other fishing gear and they can attach themselves to marine farm gear, such as mussel lines, and compete for food.

“We are keen to do all that we can to stop the spread of these pests.”

SO WHAT IS BEING DONE?

Since marine biosecurity was transferred from MFish to the Ministry of Agriculture and Forestry (MAF) in 2004, the two agencies have been working together on a range of strategic and operational issues in the marine environment.

The potential impact of marine pests on fisheries is one such

project and MFish and MAFBNZ will be working with fishers to ensure that concerns are addressed in any future fisheries planning.

The clear message to boaties is that the spread of all fouling marine pests can largely be controlled by ensuring boat hulls are clean, free of fouling and treated with anti-fouling coatings.

Ships too, can introduce non-indigenous marine species via ballast water. For this reason, all ships wishing to discharge ballast water in New Zealand waters need to demonstrate they have exchanged it for mid-ocean water en route here.

MAFBNZ is also working through the International Maritime Organisation (IMO) to develop international measures for minimising the transfer of invasive aquatic species through biofouling of ships.

The Pest Management Team within MAFBNZ is coordinating a national partnership to ‘Stop the Spread of Marine Pests’ (STOMP). Regional marine biosecurity partnerships have been formed for the top of the South Island (Nelson/Marlborough) and top of the North Island to coordinate marine biosecurity in these areas.

A Fiordland Marine Biosecurity Strategic Plan has been completed and a Fiordland Marine Biosecurity Operational Plan is currently being contracted out to implement the strategic plan. Work is also underway to develop a marine biosecurity partnership for the Chatham Islands.

WHAT ARE THE CURRENT MARINE PESTS TO LOOK OUT FOR?

Introduced marine species are one of the major threats to the world's oceans. There are potentially thousands of species that could cause harm to New Zealand's marine environment if they established here, but MAFBNZ has highlighted several high-impact species which all New Zealanders are encouraged to keep an eye out for. These include:

Northern Pacific seastar (*Asterias amurensis*) – a native to the coast of China, Korea, Russia and Japan. It was introduced to Tasmania and then Port Phillip Bay in Victoria, possibly in its larval stage in ballast water although adults have also been found in seachests (a ship's hull that houses pipes to take in seawater). Northern Pacific seastar is a voracious predator, preys on native shellfish, and has potential to impact on shellfish farming.



Mediterranean fanworm (*Sabella spallanzanii*) – a native of the Mediterranean and East Atlantic coasts from northwest France to Morocco. The species was possibly introduced in its planktonic form in ballast water or as vessel fouling. It is found in densities of approximately 1,000 per square metre on jetty piles and 300 per square metre on the bay floor of Port Phillip Bay and other parts of Australia. Mediterranean fanworm is regarded as a pest because of its ability to densely colonise hard surfaces and form dense beds which impact on commercial shellfish operations and its likely to out-compete native species.



Chinese mitten crab (*Eriocheir sinensis*) – With white-tipped hairy front claws and four spines, this crab is a highly invasive species that can cause major ecological and economic damage. Given the importance and unique biodiversity of our rivers and streams, establishment of the Chinese mitten crab would be particularly damaging, with the potential to affect fishing for trout, eels or whitebait. Also, mitten crabs have a very broad diet, which means they can potentially eat or out-compete native freshwater plants and animals.



ADVICE TO BOATIES

- Give your hull regular in-water attention, removing slime before it builds up to more serious growths – light in-water cleaning should only be undertaken at your usual mooring, berth or marina.
- The only way to ensure a thorough clean is to slip or haul out your boat – you should always haul out your vessel for cleaning if it is carrying any more than a slime layer – and remove all visible fouling, including mussels, barnacles, seaweed, etc.
- The best way to avoid fouling build-up is to have your hull coated with an appropriate anti-foul paint.
- Report suspicious species to MAFBNZ on 0800 80 99 66.

NEW COASTAL MARINE INFORMATION TO HELP DECISION-MAKERS

MAF Biosecurity's marine risk team has contracted research providers to compile and analyse data on the values provided by New Zealand's marine environment – addressing the whole suite of economic, environmental, social and cultural values. This major work programme has been running for several years and is now nearing completion. A complementary piece of work, to support biosecurity decisions, has investigated the risks posed by vessels bringing pests and diseases into New Zealand on their hulls.

Together these two projects – the values at stake, and the pathways exposing them to risk, will enable better decisions on marine resource use and marine biosecurity.

For more information on these projects, contact Bex Longford: bex.longford@maf.govt.nz