



Experiencing Marine Reserves www.emr.org.nz

Lesson Title: Experiencing Marine Reserves – Marine biodiversity threats

Age group – Yr 6-8

Setting: School

Learning Outcomes:

- Learn about marine biodiversity threats – in particular marine pests
- Understand the threats of Mediterranean Fanworm to marine ecosystems
- Acknowledge the community's role in identifying pest species and reporting to management agencies
- Taking action to prevent spread of Mediterranean Fanworm to other areas

Duration: 1 hour

Activity	Teacher Instructions / Student activity	Resources
Marine Pests	<p>Steps:</p> <p><i>Discussion</i></p> <ul style="list-style-type: none"> ▪ Ask students to define terms 'native' 'endemic' and introduced ▪ Ask students if they are aware of marine pests? ▪ Ask students to compile a list of the 6 marine nasties identified by The Ministry of Primary industries? ▪ How would we know marine pests are present? ▪ How difficult do you think they would be to eradicate or control? ▪ How do marine pests spread into other areas? <p><i>Action</i></p> <ul style="list-style-type: none"> ▪ Create a 'Un- wanted poster' for the marine invader Mediterranean fanworm ▪ What does it look like? ▪ What are the distinguishing features apart from native fan worm species? ▪ What locations has it been established in around NZ so far? ▪ Where has it been seen in Northland? ▪ What should people do if they find it? ▪ What is an exclusion marine pest? ▪ What are the regulations with regards to exclusion marine pests at the Northland Regional Council? <p><i>Discussion</i></p> <ul style="list-style-type: none"> ▪ What sort of people or activities would likely come across Mediterranean Fanworm? ▪ What impact could this have on our marine environment and human activities? ▪ How can we prevent the spread from Auckland (Waitamata Harbour) to Northland and other parts of New Zealand? <p><i>Action</i></p>	<ul style="list-style-type: none"> * Boaties guide * Un-Wanted poster template * Northland Regional Council Regulations * Teachers background info (below) * EMR's unwanted example poster



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	<ul style="list-style-type: none">▪ Make your un-wanted poster and distribute to someone in the community that may have a role in the identification or spread of the fanworm or other marine pest nasties identified by MPI▪ What other ways could you take action?	
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Background information: EMR & Mediterranean fanworm

The Experiencing Marine Reserves (EMR) is a non-profit action based marine education programme, offering quality experiential learning opportunities to schools and communities. We have recently partnered with the Northland Regional Council (NRC) to build awareness about marine pests, in particular the Mediterranean Fanworm.

Mediterranean fanworm (*Sabella spallanzanii*) is a marine bristle worm with a single spiral fan (radiole) with a greatly reduced semicircular fan. Fanworm can rapidly forms large dense colonies on submerged hard surfaces. The filter feeding fanworm is native to the Mediterranean and a highly invasive marine pest here in New Zealand.

Marine Pests can:

- Damage your boat (increase drag and fuel costs, clog pipes, motors or propellers, causing engine overheating)
- Threaten human health
- Impact on fishing
- Destroy marine environments
- Impact on integrity of natural communities, including rare and endangered species
- Impact economic, ecological, social and cultural aspects of coastal marine environments

EMR is very concerned about the establishment threat of Mediterranean fanworm in the Whangarei Harbour, it has been found at Port Nikau and Marsden Cove Marina. It was found on the hull of a moored vessel in Marsden Cove and was discovered growing on the concrete walls, piles, pontoons and sea floor in the marina. NRC is confident they have removed the majority of fan-worm from this area now and plan to continue to monitor the area.

Vessels moored in these areas however should clean their hulls before travelling elsewhere, this invasive species can form dense groups and compete with native species for food and space, imagine if it found its way to the Whangarei Harbour or Poor Knights marine reserve.

This invasive marine pest has the potential to become widespread throughout the Whangarei Harbour and other areas of Northland and New Zealand if further care isn't taken to stop its spread.

Mediterranean fanworm is found in very low numbers after an elimination attempt in Lyttleton Harbour, but it is well established in the Waitamata Harbour, consequently our awareness campaign has stretched to the Auckland area to encourage moored boat operators to check, clean & antifoul their hulls before travelling North. According to the NRC Pest Management Strategy, it is illegal to knowingly transport exclusion marine pests such as Mediterranean fanworm.

EMR has just returned from the Hutchwilco Boat Show in Auckland where we talked to over 500 boating enthusiasts about marine pests and marine conservation



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We are appealing to ALL boaties/yachties to ensure they have cleaned and antifouled hulls to help prevent the spread of marine pests, we also call on the public to report Mediterranean fanworm if found outside its known locations. Fan worm is often found growing along the very base of the keel and those difficult to get at places like prop housings so it pays to get an experienced diver to check or alternatively slip and antifoul your hull.

We know Northland Regional Council staff will respond to any reported sightings of fan worm and the public can call the Council's hotline number 0800 504 639 if they have information

Information about marine pests is available from these websites

www.nrc.govt.nz/nasties www.biosecurity.govt.nz www.emr.org.nz

Hull Cleaning Video <http://www.biosecurity.govt.nz/video/clean-boats-living-seas>

UNWANTED



Image by Crispin Middleton, NIWA

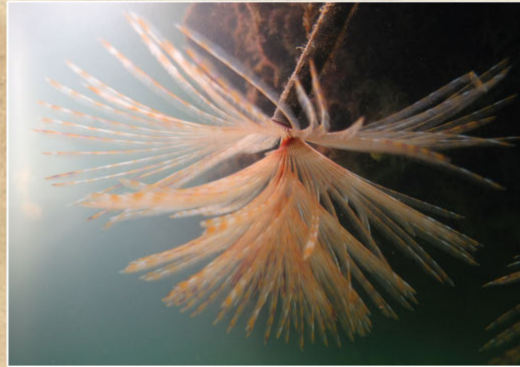


Image by Serena Wilkens, NIWA

Mediterranean Fanworm (*Sabella Spallanzanii*)

Appearance: Brown tube worm with a brightly coloured orange, white and purple striped single spiral fan. The Fanworm very cleverly disguises itself as a muddy tube by retracting its fan when alarmed.

Warning: Could compete with native species for food & space. It is illegal to knowingly transport this exclusion marine pest to Northland.

Now Established: Waitemata Harbour & Lyttleton Harbour.

Previous Sightings: Marsden Cove Marina, Port Nikau (Whangarei)

Possible Sighting: Whangarei Harbour Marine Reserve (Reotahi)

The Mediterranean Fanworm will anchor to any hard substrate, including piers, your hull, especially if it has been moored at Waitemata Harbour in Auckland or other known locations of this pest.

If you have seen this marine pest be alarmed! Take photo if possible, record the place, how many you saw, along with the date, contact Biosecurity officers at Northland Regional Council on **0800 002 004** or the MPI Biosecurity Hotline 0800 80 99 66.

Mediterranean Fanworm is an internationally recognised pest species. Take action against marine pests! **Check-Clean-Dry-Antifoul & Report Sightings.**

Experiencing Marine Reserves www.emr.org.nz is working in partnership with Northland Regional Council to keep this pest from being established in Northland.