Sea squirt (Didemnum vexillum)

*Didemnum vexillum* (sea squirt) is an exotic aquatic pest which is easily spread, attaching onto infrastructure such as wharves, pilings and boat ramps, as well as ropes and boats.

This exotic sea squirt is on the Consultative Committee on Introduced Marine Pest Emergencies Trigger List as it is a marine pest of national concern. It is known to overgrow on and smother marine animals such as mussel and oyster populations.

**Natural distribution & biology**

**Description:** *D. vexillum* is a spongy textured sea squirt and is a distinctive orange/yellow colour. The species has a leathery feel but is not slimy.

**Habitat:** *D. vexillum* typically grows on hard surfaces in sub-tidal waters and seems to have a preference for artificial structures such as wharfs, pilings and boat hulls. It can tolerate a wide range of temperatures (as low as -2°C and greater than 24°C), but typically reproduces in temperatures above 13°C.

**Reproduction and dispersal:** *D. vexillum* is a hermaphrodite, which means it is capable of self-fertilisation. Internally fertilised eggs are brooded and developed into larvae (called tadpoles) before they are released. Generally the larvae remain planktonic from 10 minutes to 2 hours before settling on hard structures. This sea squirt is also capable of asexual reproduction, whereby small pieces can break off and re-attach forming new colonies.

**Investigation**

Industry & Investment NSW is investigating a suspected outbreak of this exotic aquatic pest on the NSW Far South Coast in Twofold Bay. It has not been known to occur in NSW before. If confirmed, this species has the potential to impact marine infrastructure and mussel and oyster stocks.

The origin of this species is unknown, however outbreaks have been recorded in New Zealand and the United States, and it is thought that shipping activities have been responsible for these incursions.

**Further reading**

- Didemnum Vexillum FAQs
- New Zealand Didemnum vexillum occurrences and images (woodshole.er.usgs.gov)
- Didemnum vexillum Identification Guide (www.nzmic.co.nz)
- Didemnum information page (Biosecurity New Zealand)

**How can you help?**

There are several steps you can take to help prevent sea squirts from spreading further in our waterways. For example:

If you have visited an area known to be infested with a marine pest, inspect anchors, ropes and chains before leaving the area and dispose of any unusual plants or animals in a bin.

Wash your boat and gear down in wash down bays (where provided) or an area away from water bodies and stormwater drains. Do not conduct any hull-scraping in the water.

When diving or fishing in marine waters, keep a lookout for new species.

If you find what you believe is a