Grateloupia turuturu:

Preventing the spread of this invasive seaweed in Maine

Grateloupia turuturu is native to Japan, but it has spread to other areas, including New England. Although marine, it can live in a range of temperatures and salinities. After slow spread north and south of its accidental introduction to Rhode Island in 1994, *Grateloupia* has expanded its range and recently was documented in the upper Damariscotta River Estuary in Maine.

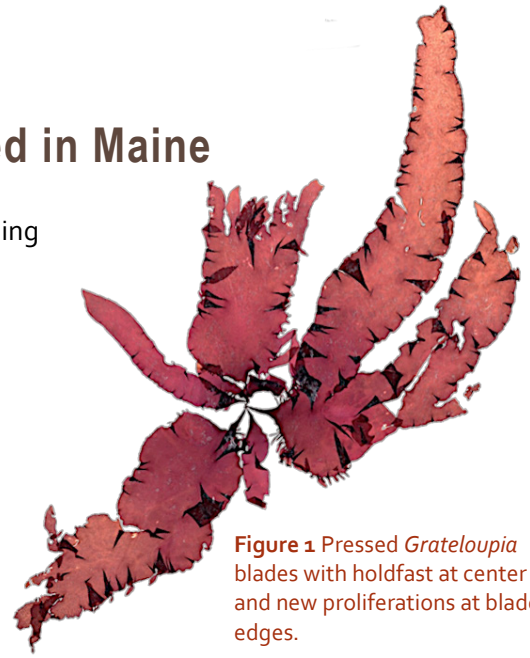

Figure 1 Pressed *Grateloupia* blades with holdfast at center and new proliferations at blade edges.

Why is *Grateloupia* harmful?

Grateloupia competes with native marine algae such as Irish Moss (*Chondrus crispus*) and affects the distribution of other native species (Mathieson et al. 2008; Janiak & Whitlach 2011; Kraemer et al. 2017).

How does it reproduce and spread?

- Each *Grateloupia* blade produces thousands of spores that can grow into new blades. Spores settle on nearly any artificial or natural surface in the lower intertidal to shallow subtidal zone.
- If colonized buoys, ropes, rafts, boats or shells are moved to a new location, *Grateloupia* can easily spread.

Identification

Where? *Grateloupia* grows in the low intertidal and shallow subtidal where it attaches to rocks, shells, and pilings as well as floating structures such as ropes, floats, and rafts.

Look for these characteristics

- Long, lobed blades are deep red to reddish brown and grow from a single holdfast.
- Blades commonly feel soft and slippery to the touch. Depending on age and habitat, blades may have different shapes and textures, including proliferations near the base of blades and small bumps when reproductive.
- *Grateloupia* may be misidentified as the commercially important, native red algal species "Dulse" (*Palmaria palmata*). Dulse has a firmer, more leathery texture, and lobes that form from a single blade.

Figure 2 *Grateloupia* blades growing on rope in the Damariscotta Estuary. Photo: Maine Sea Grant

What you can do if you find *Grateloupia*:

Remove and Report—Blades should be completely removed from the water at the base and discarded in terrestrial garbage. Note the date and location (coordinates, local landmarks, etc.) where you found the *Grateloupia*. If possible, take photos of the sample. This information and any further questions about *Grateloupia* in Maine should be directed to Maine Sea Grant. Please request private property owners' permission before accessing or removing *Grateloupia* growing on docks and other marine equipment.

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References

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