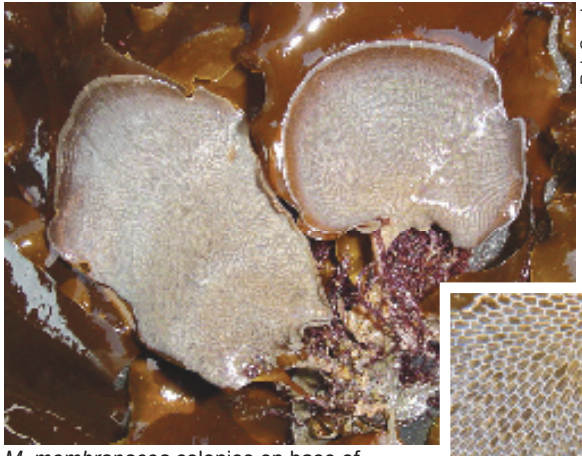
GUIDE TO MARINE INVADERS
IN RI COASTAL WATERS

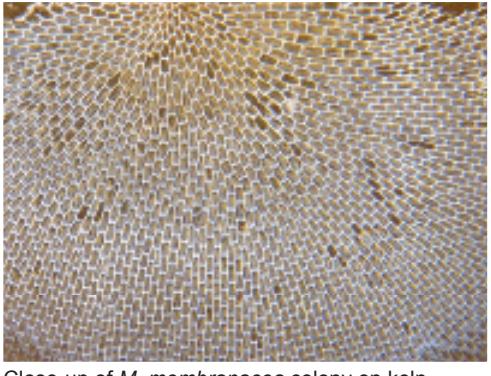
Membranipora membranacea
lacy crust bryozoan

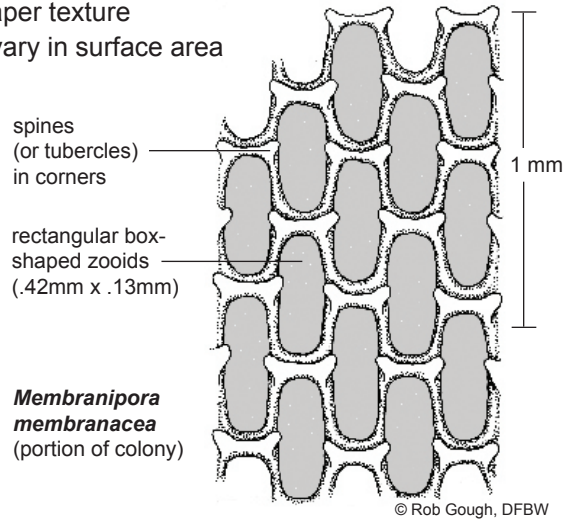

Rob Gough

M. membranacea colonies on base of kelp blades

PHYSICAL DESCRIPTION

- Bryozoan encrusts algae and other firm surfaces
- Colonies form a white or gray net or lace of tiny rectangular (or rhomboid) zooids, often beginning as a round colony spreading outward
- Each animal (zooid) has short spines (tubercles), giving the colony a sandpaper texture
- Thin, encrusting colonies vary in surface area


Close-up of *M. membranacea* colony on kelp



Membranipora membranacea
(portion of colony)

HABITAT PREFERENCE

- Found in shallow, subtidal waters on kelp and other algae
- Grows best in areas of fast flowing water or high tidal exchange

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INVASION STATUS & ECOLOGICAL CONCERNS

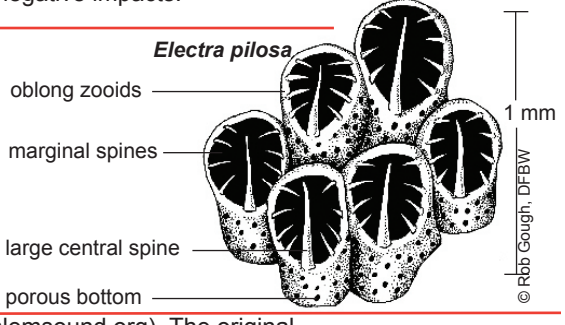
M. membranacea is a native of European waters as well as North America's Pacific coast from Alaska to Baja California. This species was first discovered at the Isles of Shoals in 1987, probably introduced via ballast water. Within a few years, the species had spread throughout the entire Gulf of Maine, first growing primarily on kelp, then on a variety of species.

While the full impact of this species is still being investigated, it appears to have a negative affect on the algal species that often serve as its host. As a *M. membranacea* colony grows, it forms a sheet across the surface of its host plant, reducing its ability to photosynthesize and making the algal body brittle, often causing it to break under the surrounding wave energy. As kelp beds become damaged or destroyed, they then may serve as ideal locations for the establishment of other invasives plants, including *Codium fragile* ssp. *tomentosoides*. The synergistic relationship between these two opportunistic species increases the potential for negative impacts.

Below: A specimen of *Fucus* sp. nearly completely covered by *M. membranacea*.

SIMILAR SPECIES

M. membranacea may at first glance be mistaken for *Electra pilosa*, another encrusting bryozoan. However, closer inspection using a hand lens, reveals that *E. pilosa* zooids are ovoid (vs. rectangular), surrounded by 4-12 spines (typically nine) including one larger central spine, and contain large pores throughout the bottom third (see right). Perhaps the most apparent difference is the often spiny appearance of *E. pilosa*, caused by the protruding central spine and the rounded zooids.



This card is adapted from an original series produced by Salem Sound Coastwatch (www.salemsound.org). The original series was funded by the MA EOEEA Office of Coastal Zone Management with funding from the U.S.F.W.S. For more information please visit www.mass.gov/czm/invasives/monitor/reporting.htm. The production of this adapted card was funded by the RI Coastal Resources Management Council with funding from the U.S. Fish & Wildlife Service. To report findings please email ***kcute@crmc.ri.gov or call (401) 783-7772 or (401) 783-3370.***

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