

The Algae That Won't Leave Our Beaches

The public and the MDC are victims of the nuisance conditions generated by the algae because it inhibits use of the beaches to their full advantage.

The Metropolitan District Commission has been managing the algae, known as *Pilayella littoralis*, on our beaches for more than 20 years and has contributed over \$300,000 in research and studies. The MDC, assisted by academic institutions completed the first phase of research which resulted in the documentation of the biology of the organism in Nahant Bay. The recent abundance of *Pilayella* in Broad Sound resulted in the establishment of the Algae Task Force by MDC Commissioner M. Ilyas Bhatti. More research must be done to establish ways to efficiently control the algae that has plagued our beaches and is spreading.

How can I help?

You can contact the MDC Office of Community Affairs at (617) 727-5033 for more information.

Failure to adequately fund necessary studies to develop better equipment and understand the role of nutrients in these shallow embayments *now* will only be more expensive in the future.

You must become involved in order to be part of the solution. Contact these local organizations and help make a difference.

SAVE OUR SHORES

350 Revere Beach Boulevard Unit 6-7N
Revere, Massachusetts 02151
(617) 289-6693
Attn: Larry Potaro

SAFER WATERS IN MASSACHUSETTS (SWIM)
c/o Northeastern University Marine Science Center
East Point Nahant, Massachusetts 01908
(617) 581-0075
Attn: Polly Bradley

...fulfilling a dream

In 1892, Charles Eliot proposed the creation of a Metropolitan Parks System. Eliot was a member of the Frederick Law Olmsted Landscape Architectural Firm, and the first landscape architect to work on development of the parks system. Eliot believed that particularly in a crowded urban area, people needed easy access to and contact with nature and open space in order to relax, unwind and escape the pressure of city life. To that end, Eliot developed a plan that would provide the growing city and its suburbs with scenery, parks and reservations to be held in perpetuity for the public's use and enjoyment.

Eliot's idea was to set aside beachfront along the bay, land along the Charles, Mystic and Neponset Rivers and high ground throughout the Metropolitan area, and to turn this property into regional parks. He envisioned the creation of a series of parkways and roads built and maintained with aesthetics in mind, to make travel between the parks easy and attractive. By 1893 Eliot's design had begun to take shape as the state created the Metropolitan Parks Commission and placed with it 9,177 acres of reservations, 13 miles of ocean frontage, 56 miles of riverbank and seven parkways. Since then, the system has grown. The Commission acquired and preserved thousands of additional acres of parkland that fit into Olmsted and Eliot's original design. It also built new parks, skating rinks, swimming pools, athletic fields, band shells and other recreational outlets. Even today, more property is being preserved; more historical sites are being restored; more ways to make the regional parks system safe and accessible and attractive are being devised.

We can only maintain this great park system with public support and cooperation. Please do your part by respecting each property and complying with all rules and regulations. Thank you.

Metropolitan District Commission
20 Somerset Street, Boston, MA 02108

William F. Weld, Governor
Susan F. Tierney, Secretary, EOEA

Commonwealth of Massachusetts
Metropolitan District Commission

Nahant Bay and Broad Sound Algae Task Force

Q & A



Free-living Nahant Bay *Pilayella littoralis*.

What is this stuff?

The brown material that washes up on the beach and floats in the water off the beaches is a rapidly growing, free-floating form of marine plant/algae, named Pilayella littoralis.

Is it sewage?

No. The agal mass is not sewage, nor is it found in polluted areas of the coast.

Where did it come from?

The species has been in Nahant Bay since at least 1902, its ultimate origin is not known. This type of brown seaweed is unique to our area, and no one, including scientists, is entirely sure why it occurs in such large quantities and why it is only found in Nahant Bay and Broad Sound.

How does it grow?

It grows vegetatively. The characteristics (temperature, light, depth, and nutrients) of Nahant Bay/Broad Sound are ideal for abundant growth. Under ideal growing conditions it can double its biomass in 6-10 days.

How does it get on the beach?

It is transported toward the shore and ultimately on the beach by prevailing winds, currents, tides and waves.

What is the stench?

As the plant material decays on the beach and in the sand, it smells bad. The odor is a sulfide compound and is a gaseous by-product from decomposing algae. There are no documented detrimental health effects from the beach generated odors.

Can it be killed?

No. The application of herbicides in a marine environment is not environmentally wise or supported.

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What's being done about it?

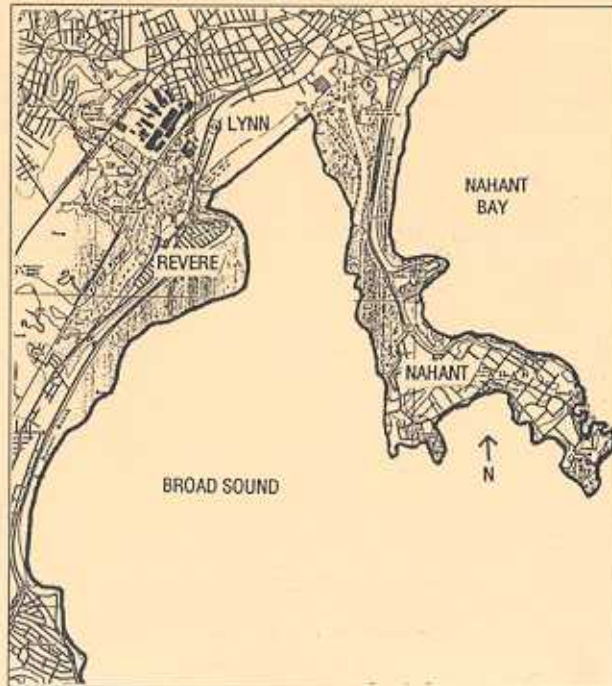
Is it unhealthy?

PILAYELLA IS NOT TOXIC OR DANGEROUS to man or any other form of life. Pilayella itself does not indicate poor water quality.

Does the algae serve a purpose?

Drift algae provide habitat for smaller marine animals and have a large appetite for nitrogen compounds.

Areas where Pilayella can be found year-round



How is the MDC presently managing the algae on the beach?

The MDC is presently using either a tractor which has a york rake with a rubber blade or a front end loader to remove cast alga from the beach. This method allows for a greater area to be cleaned. Removal is focused along high tide lines. Presently the alga sand scrapings are returned to the water's edge in order to save the sand (by weight the scrapings contain 98% sand). Some material is used for planting beach grass.

When does the MDC begin removal?

During the warmer months when heavy accumulations begin to cause nuisance conditions and as necessary given available resources and cost constraints.

Does the MDC foresee any better management strategies in the future?

The optimum solution is preventing the algae from accumulating on the beaches. Future needs are for better equipment to collect the algae without the sand either on shore or off shore. Investigations must be conducted to determine any beneficial re-use of the algae or environmentally sound alternative disposal methods. Alternative management methods require additional State, Municipal and Federal agencies to join efforts and financially support research and management of the algae problem. ■