

Hands-On Learning: Eelgrass Restoration in Frenchman Bay, ME

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Project Affiliation:

Maine EPSCoR: Increasing Access and Success in the STEM Disciplines

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What is eelgrass?

Scientific name: *zostera marina*

Eelgrass is a flowering plant formerly occurring in widespread meadows in sub-tidal areas along the coast of Maine.

Why is eelgrass important?

Eelgrass helps fuel the food chain, feeding organisms like bacteria, worms, and a host of marine invertebrates. Eelgrass also curbs erosion by stabilizing bottom sediments and may improve water quality by filtering excess nutrients from runoff. It is also an important habitat for a variety of commercially valuable fin and shellfish species.

What is the current status of eelgrass in Maine?

Many coastal areas in Maine have experienced a significant decline in eelgrass in the past 7 years. Losses of eelgrass may be related to dragging for mussels as well as increases in water temperature and watershed pollution.

What is being done to restore eelgrass in Maine?

Beginning in 2007, community groups and individual volunteers have contributed to the restoration of eelgrass in a number of coastal areas. Initial efforts included the use of metal grids weighted with bricks and "seeded" with eelgrass. A newer method has included the construction of wooden grids and use of twine and sandbags to hold the grids seeded with eelgrass in place. Preliminary studies indicate that the wooden grids have a better result for eelgrass growth and have the added benefit of remaining where placed, due to being biodegradable.

Sources: <http://www.mdibl.org/eelgrass-restoration.php> (and) <http://www.mdibl.org/documents/2007EelgrassRestoration.pdf>

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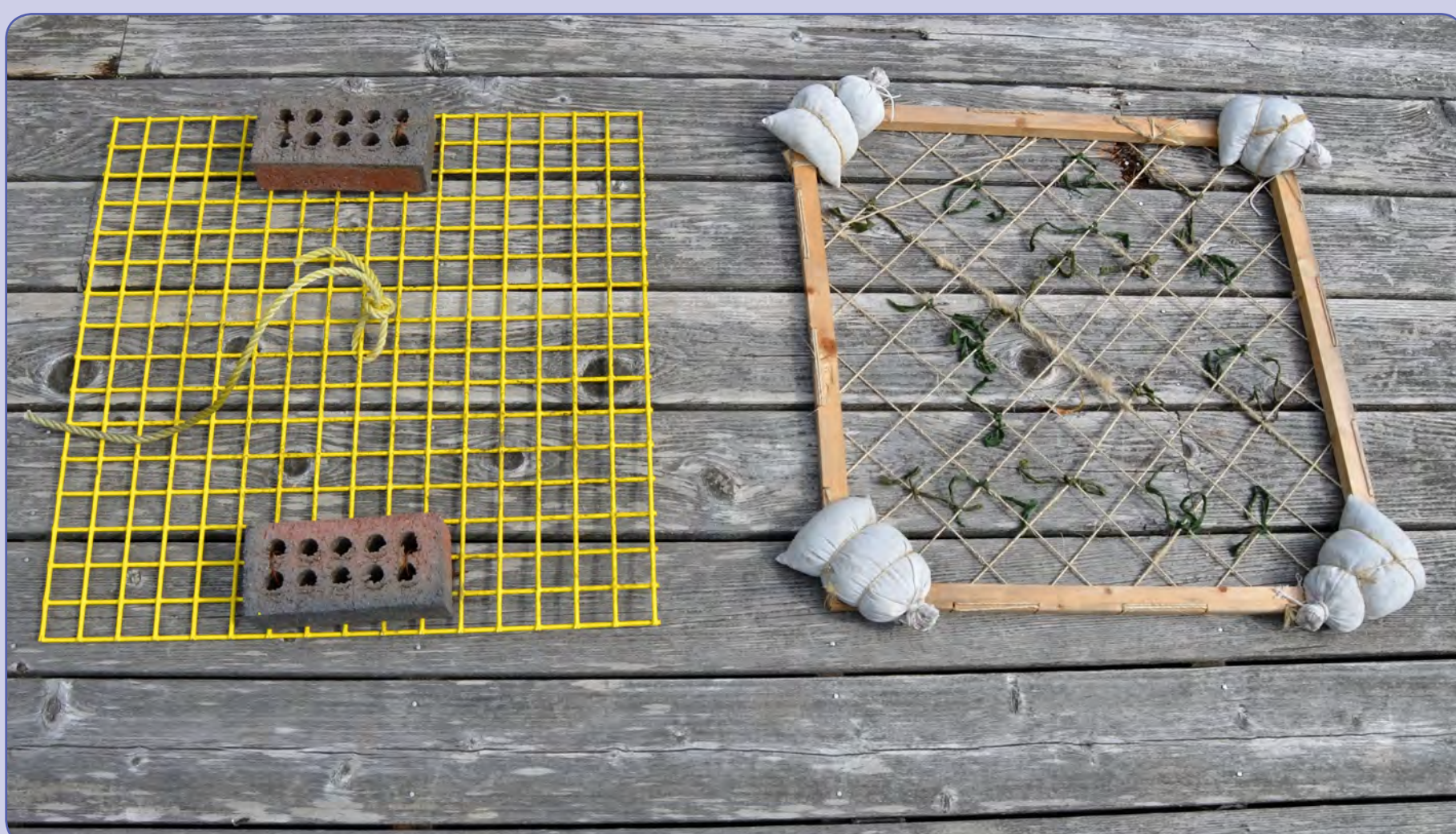
Mount Desert Island Biological Laboratory

Community-Based Eelgrass Restoration in Frenchman Bay, Maine

Pollution, over-fishing, environmentally destructive fishing methods, and climate change increasingly threaten our fragile oceans. Eelgrass beds provide critical nursery habitat for numerous marine species, including cod, flounder, herring, and lobster, but have been disappearing from the Atlantic seaboard at a rapid rate. Working collaboratively with local fishermen, schools, and other groups, MDIBL scientists are restoring a protected area in Frenchman Bay and studying transplantation methods, seed dispersal, and the ecology of eelgrass beds.

Jane E. Disney, Ph.D., Staff Scientist and Director
MDIBL Community Environmental Health Laboratory

Dr. Disney, is the recipient of numerous awards for her community based science efforts, including the Sea World Busch Gardens Environmental Excellence Award (1998), the Governor's Award for Environmental Excellence (2000), and the Gulf of Maine Council Visionary Award (2007).



Wire eelgrass grid (left) and biodegradable eelgrass grid (right)



Mount Desert Island Biological Laboratory Mission Statement:

We develop solutions to complex human and environmental health problems through research and education. Our innovative and collaborative approach encourages shared learning and is based on the recognition that all life is interconnected.

“Eelgrass decline along coastal Maine is today’s ‘canary in the coal mine.’”

Zachary Johnson, special assistant to eelgrass researcher, Dr. Jane Disney



“I enjoyed going to Bar Harbor and meeting Dr. Jane Disney at the MDI Biological Lab. I learned that Dr. Disney is very determined to find solutions to the eelgrass problem and it was exciting to be a part of that work. I learned a lot about eelgrass, both from online sources and from helping to build the wooden eelgrass grids. In my work through this internship, I felt like I was really contributing to an actual issue and others involved were interested to hear my ideas, too. I really enjoyed the internship opportunity and I can’t put a number on how much I have learned - too many things to count!”



Under the leadership of founding director, Lucille Zeph, Ed.D., the Center for Community Inclusion and Disability Studies (CCIDS) is Maine’s University Center for Excellence in Developmental Disabilities Education, Research, and Service (UCEDD). Established in 1992, CCIDS is part of a national network of congressionally authorized University Centers for Excellence in Developmental Disabilities sponsored by the Administration on Intellectual and Developmental Disabilities (AIDD) within the U.S. Department of Health and Human Services (Grant No. 90DD0005). Our statewide mission is met through interdisciplinary education, research, community services, and dissemination of state-of-the-art information.