



rozalia
project
for a clean ocean

Missions Atlantic & Pacific Coast

Rozalia Project's STEM Education Program



ROZALIA PROJECT

Rozalia Project is a 501(c)(3) non-profit whose mission is to protect the ocean through innovation, education, cleanup and research.

Since 2011, we removed 582,520 pieces of marine debris, worked with 19,000+ participants, built 25,000+ virtual crew members, partnered with 126 organizations, hired 50 employees, engaged 54 interns, and started or completed 5 leading edge research/cleanup projects... and counting!





211

American Promise





AMERICAN
PROMISE

AMERICAN

2013 program

- * STEM: healthy ocean, environment and sailing
- * Formal or informal education settings
- * Engaging and interactive

To the Life Rafts!

Emergency Life Rafts and Equipment/Mission Atlantic 5

Better to first explore a life raft inside a test/repair facility than in the water during an emergency. Teresa from Life Raft and Survival Equipment gave us a full orientation to the life raft we carry on American Promise as part of its yearly inspection. Beyond just having a life raft, knowing the equipment and what to do in an emergency is key to survival.

An emergency life raft has several simple and specific procedures that are needed to ensure its proper deployment. To deploy a life raft, you must first attach the painter (rope) onto a secure section of the vessel and toss the whole life raft box overboard. You must then pull the painter all the way until it releases the pin in the CO2 container, inflating the raft in under ten seconds. The painter line will be long, as much as 170 feet, so you must keep pulling until the end of the line to deploy the raft. Once the raft is inflated, you must pull yourself along the painter line and hoist yourself in, followed by the rest of the crew.



Mission Copepod

Small, but important, creatures/Mission Atlantic

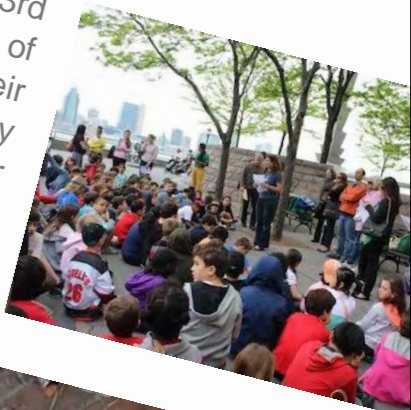
A copepod is a small marine crustacean, which means it is related to crabs. Copepods are zooplankton, which are small animals, capable of being able to travel long distances on their own. As part of the mission from the University of Exeter, UK, have been studying copepods that eat microplastic – 'microplastics' – which are formed as larger plastics break down into smaller pieces.

Copepods are the most abundant animal on the planet. There are an estimated 1,347,000,000,000,000,000,000 copepods in the world. If you could line them all up end-to-end, they would stretch to the moon and back nearly 200 billion times.

No Ifs, Ands, or Butts

The problem with cigarettes/Mission Atlantic 2

Mission Atlantic 2 kicked off with a lot of energy; the energy of 96 3rd graders from Mission Atlantic 2, an elementary school right in the middle of the Atlantic Cup program at North Cove Marina. They participated in four stations as part of their mission. They were part of the team running our station, where they collected debris and checked out the water quality. They also did art and writing about a clean ocean, and learned about the importance of science and learning about the environment.



Camouflaged Creatures at Catalina

Surprise finds with the ROV/Mission Pacific Coast 1

Remember how the ROV couldn't see through all the plankton at the time of our last mission report? Well Hector the Collector had no such trouble on our recent visit to Santa Catalina Island, CA! Even when he dived 40 feet beneath the hull of the schooner Tole Mour, we could still see his bright yellow float block far below.

What does such incredible visibility mean for the creatures that inhabit these waters? Well, it means that if they want to hide, one of their best options is to camouflage themselves. During the ROV, we were lucky to spot two such creatures; one was a scorpionfish. They hadn't moved, we never would have known.



A total of 1,508 pieces of trash in the debris were cigarettes; that is an average of 1.5 pieces per cigarette. The enthusiastic students cleaned up the debris and are good for the environment.



2013 Expedition Reports: Themes and Correlations

Here you will find all of Rozalia Project's Mission Reports listed by category. Some categories are accompanied by a list of Common Core or Next Generation Science Standards that the topic and reports are correlated with. This format is intended to help teachers who are looking for reports that align with a specific unit, topic, or standard.

List of Categories:

Challenge

Cleanup

Benthic (seafloor)

Data

Islands

Guest Scientists

History

Boat Life

Marine Debris CSI

Marine Creatures

Math

Microplastics

Neuston Net

Plankton

ROV

Science

Sea Chanteys

Technology

Transat Jacques Vabre (TJV)

Toxins

Weather

Videos

 = Next Generation Science Standards

 = Common Core Standards

Challenge (these Reports have activities where virtual crew send in their results!)

-Mission Report 1: All about the data

-Mission Report 12: Champlain Debris Study

-Mission Report 24: Rozalia Project Sea Chantey - Contest (video)

-Mission Pacific Coast 2: What Floats in our Cities?

Cleanup

Human Impacts: MS-ESS3-3. Human Sustainability: HS-ESS3-4.

-Mission Report 2: No Ifs, Ands or Butts

-Mission Report 7: Underwater Debris Heap

-Mission Report 13: After the storm



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MISSION
ATLANTIC



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MISSION
PACIFIC COAST

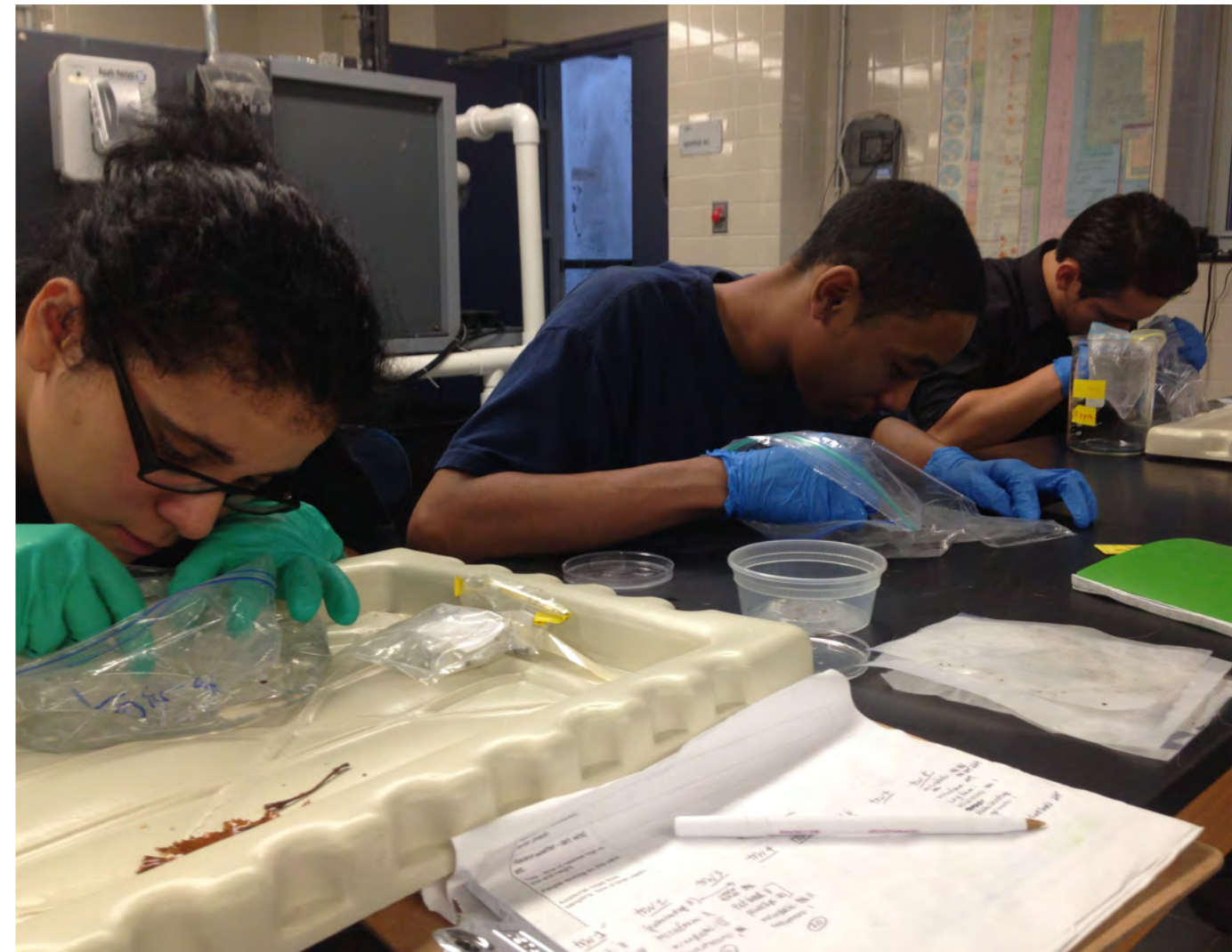
Best Reports: to play detective

Mission Reports 6 & 20: Marine Debris CSI



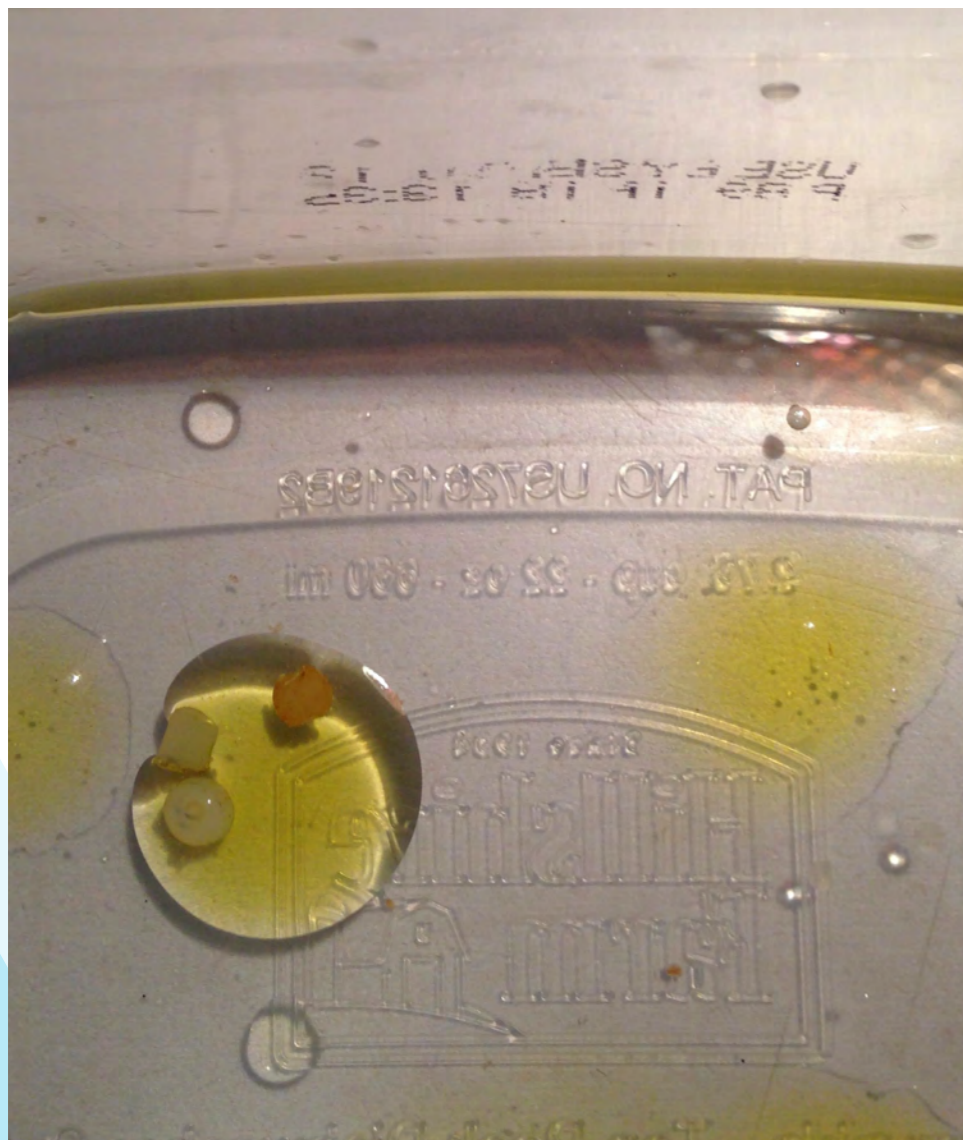
Best Report: for budding **scientists**

Mission Pacific Coast 2: What floats in our cities?



Best Report: for some new **big words**

Mission Atlantic 33: Oleophilic, hydrophobic and adsorption, defined



Best Report: for a **challenge** (and excuse to sing) **Mission Report 24: Sea Chantey and Contest**



2014: more shared experience: solutions, science, cleanup, saving the menhaden



Give your educators a break, we'll come to you!



Half Shell



Quinnipiack



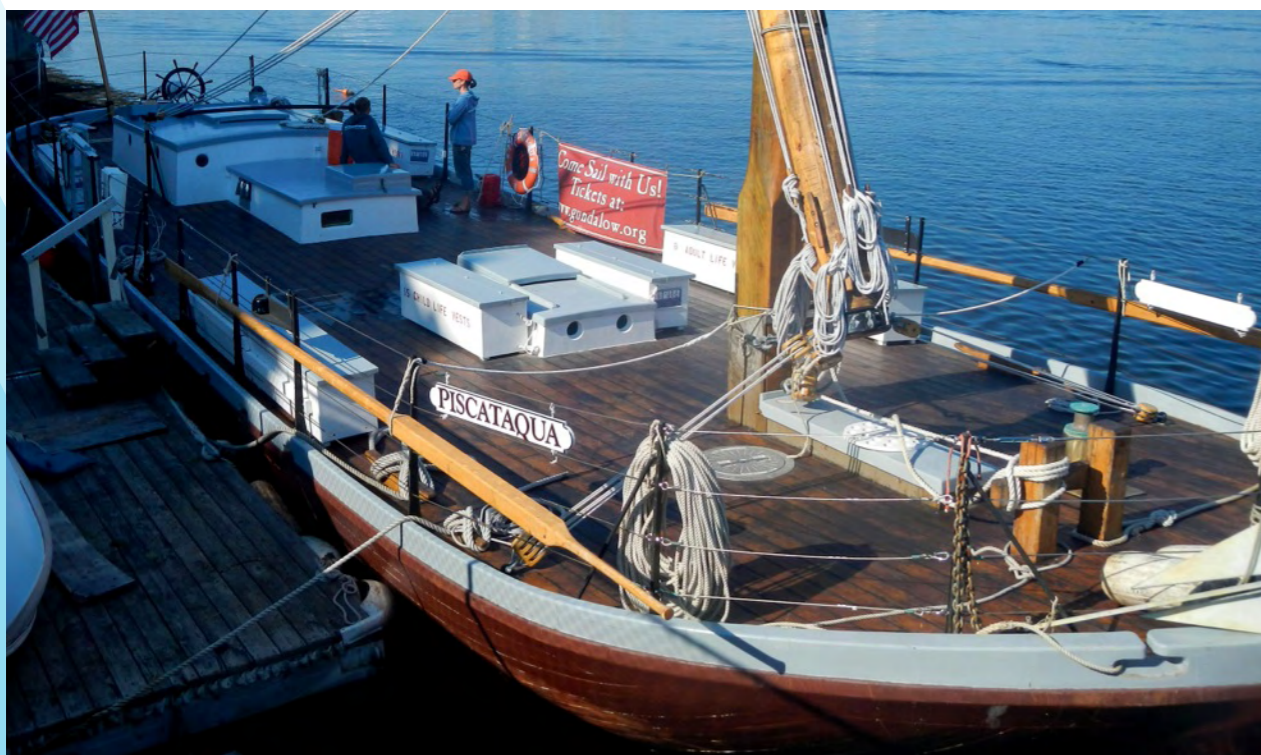
AJ Meerwald



Adventuress



Tole Mour



Piscataqua



ITs, Courageous Sailing Center, Boston



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