the Lobster Bulletin

Summer 2010

"News, research updates, and information on lobsters and the lobster industry."

Published by the Lobster Institute

"Protecting and conserving the lobster resource, and enhancing lobstering as an industry…and a way of life."

Mooring That Creates Lobster Habitat Now Available - Portion of Sales to Support Mission of the Lobster Institute

The first Habitat Mooring System (*HMS 4000*) deployed from Seal Harbor on Wednesday, July 28, 2010. It is being used to secure the Town of Mount Desert's "No Wake" buoy in Seal Harbor. Harbormaster Shawn Murphy accepted the donation of the first *HMS 4000* from its designer, Stewart Hardison, of The Wind Reef Group, LLC.

HMS 4000

Based in Orono, Maine, The Wind Reef Group has designed a proprietary mooring system that creates habitat for lobsters and other marine life. Enhanced habitat can benefit lobster stocks. Research has shown that 15% of Maine's lobsters have no home shelter and are constantly ranging in search of protected habitat, exposing them to predators and disrupting vital life cycle behavior. (Bricknell, 2009) By providing recessed cavities and tunnels, The Wind Reef Group's moorings create ideal shelters for these lobsters.

"Never before has there been a mooring specifically designed to create habitat for lobsters and other sea life," says Lobster Institute Executive Director Dr. Robert Bayer. "Traditional granite or concrete moorings can disturb habitat where they land. The *HMS 4000* makes up for this lost footprint with engineered habitat that can provide a protected nursery for juvenile lobsters, or lobsters of almost any size." The *HMS 4000* is made of poured concrete, especially engineered for the marine environment. It can be manufactured at a variety of weights. The unit shown measures 50" x 50" at the base, 40" x 40" at the top, and

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Input Sought for Lobster Institute Strategic Plan

Periodically, the Lobster Institute reaches out to the various communities it serves to assess its mission and priorities in order to update the strategic plan that guides its programs and outreach. The Institute is currently in the process of strategic planning to steer its decision-making for research priorities and program development for the next 3-5 years.

Guidance from those directly involved in the fishery is crucial to the success of this process. We need your input in order to ensure goals for our research, outreach and educational programming that will best serve the fishermen, the industry, and the lobstering community. Please take a moment to complete the brief survey on Page 2 or go to www.lobsterinstitute.org and print a copy. The survey includes no identifying information, thus your responses will be anonymous.

Please note: We are asking for your guidance for future priorities for the Lobster Institute as an organization – not necessarily for the lobster industry as a whole. Once completed, please mail to:

Lobster Institute, 210 Rogers Hall,
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A member of the University of Maine System

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THE LOBSTER INSTITUTE'S 2010 NEEDS ASSESSMENT SURVEY

Please rate the importance of the following priorities for the Lobster Institute by placing your assessment of each element in the space before each question with a 5 represent extremely important - scaled to 0 for no opinion.

General Priorities
(5=extremely important, 4=very important, 3=important, 2= not very important, 1=not at all important, 0=no opinion)

_____1. Involving fishermen in its research projects?

_____2. Collaborative work with other lobster researchers?

_____3. Having representation from all aspects of the fishery on its advisory board?

_____4. Developing state of the art educational activities for those in the lobster industry?

_____5. Developing educational activities for K-12 students?

_____6. Developing educational activities for the general public?

_____7. Facilitating communication across segments of the lobster industry, research community, and government agencies, to increase understanding of each one's challenges and objectives

_____8. Communication to ensure that research information reaches the industry, the public and policy makers

_____9. Serving as an independent source of research based information for the industry and policy makers

Please note your top two general priorities:

Research Priorities – How do you rate the importance of focusing research on the following issues:
(5=extremely important, 4=very important, 3=important, 2= not very important, 1=not at all important, 0=no opinion)

____10. Lobster health issues?

____11. Effects of environmental toxins on lobsters?

____12. Understanding lobster ecology?

____13 Understanding lobster biology?

____14. Understanding lobster behavior?

____15. Understanding lobster population dynamics?

____16. Developing value-added products as part of lobster processing?

____17. Developing strategies for sustaining the herring population?

____18. Developing affordable and effective alternative lobster bait?

____19. Right whale entanglement issues?

____20. Assessing economic factors influencing the lobster industry

____21. Assessing the impact of the lobster industry on the regional economy

____22. Other – should have been included but wasn't (please specify):

Please note your <u>top two</u> research priorities:

I am a: [ ] Lobsterman [ ] Dealer/Distributor
[ ] Processor [ ] Scientist [ ] Fishery Manager
[ ] Member of Coastal Community
[ ] Other (note here) _____

I'm from: [ ] Canada (which province: _____)
[ ] U.S. (which state: _____) [ ] Other_____

Age: _____ **# of years fishing**: _____ **# traps:** _____

As a Non-profit, the Lobster Institute relies on industry and private support to continue its work for and with the lobster fishery. Please consider donating as a Fried of the Lobster Institute today. Call 207-581-2751 or visit www.lobsterinstitute.org

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Research Report

Readers may contact the Lobster Institute for more detailed information on any of these projects.

- **Bait: how much is enough? –** (excerpts from a report by University of Maine student, Emma Landherr , on the catch rate in lobster traps baited with differing amounts of bait.) One of the main problems facing the lobster fishery is an imminent shortage in supply of bait. The Atlantic herring (*Clupea harengus)* is the primary bait source for commercial lobstering. Points of interest:
  - ❖ In 2008 Maine fishermen landed 66 million pounds of herring
  - ❖ 70% of the landings were sold to lobstermen
  - ❖ In one trip a crew can go through 1-2 barrels of Atlantic herring
  - ❖ Since the 1970s the amount of bait being used has increased four times
  - ❖ Perley Frazier said "we used to pack bait bags to the size of a softball, now they're the size of a basketball."

  The purpose of the study was to determine the effectiveness of the current amount of bait used by lobstermen versus using half the amount. One hundred traps were set at latitude 44.14972 and longitude -68.4605, by volunteer lobsterman Jason Joyce, near Swans Island off the coast of Maine on December 5, 2009, in 28 fathoms of water (168 feet). Fifty traps used 8 inch bait bags and 50 used 12 inch bait bags, with all bags having the same size mesh holes (8 inch baits bag held an average of 962 grams and 12 inch bags held and average of 1732 grams). The bait used was salted herring cuttings. Traps were hauled after 9 days.

  Results

  The traps with the 8 inch bait bags:
  - Caught 118 lobsters in total
  - Average of 2.26 lobsters per trap
  - 33 lobsters or 27.9% were legal size

  The traps with the 12 inch bait bags:
  - Caught 157 lobsters in total
  - Average of 3.14 lobsters per trap
  - 47 lobsters or 29.9% were legal size

  Conclusion

  From this limited size study there is not enough research to support the theory that more bait=more lobsters. Further research needs to be performed in order to determine the level of significance using two different amounts of bait on the trap efficiency of lobsters. When the traps were hauled there was no bait left in any of the bait bags. The traps with 8 inch bait bags may have caught fewer lobsters because they ran out of bait faster than traps with 12 inch bags. Considerations for further studies include:
  - ❖ More traps
  - ❖ Shorter soaking time
  - ❖ Fish during peak lobster season
  - ❖ Explore alternative baits
  - ❖ Test in different fathoms
  - ❖ Look at what else eats the bait

  UMaine Marine Sciences student Maddelyn Harden is continuing this study in Prince Edward Island with volunteer fisherman Kenny Drake.

- **Lobster assessment models compared --** Earlier this year, Maine Sea Grant identified recipients of 2010-2012 research funding awards from the National Oceanic and Atmospheric Administration National Sea Grant Office. Yong Chen of the University of Maine and Carl Wilson of the Maine Department of Marine Resources received $127,890 to work on "A comparative study of monitoring programs for coherence in quantifying the dynamics of American lobster fisheries in Maine." Chen and Wilson will compare and evaluate the nine different lobster assessment methods currently in place, with a goal of improving monitoring program design for greater efficiency and reduced costs.

- **Paper on modeling lobster growth without age markers wins award** -- Charlene Bergeron, a graduate student at the University of Maine's Darling Marine Center, received the Best Student Paper at this year's International Conference on Recent Advances in Lobster Biology and Management, held in Chennai, India for her presentation titled *Modeling growth without age-markers in a variable environment: integrating size-frequency and tag-based methods in the American lobster*. Using existing growth data on lobsters of various sizes and data-bases on juvenile lobster size structure, Bergeron has developed growth models of lobsters in 3 oceanographically distinct regions: southern New England, Midcoast, and Bay of Fundy. This paper represents findings of Bergeron's ongoing thesis work. For more information contact charlene.bergeron@maine.edu.

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Habitat Mooring System

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is 2 feet high. It weighs 4,025 pounds. The embedded hitch is 1.25" diameter steel rod. Various models are available in a variety of weights, and serve as suitable moorings for everything from lobster boats, to yachts, to marine buoys and aquaculture pen moorings.

Engineers and marine scientists at the University of Maine assisted Wind Reef Group founder Stewart Hardison in the design of the Habitat Mooring System.

The mooring is manufactured at American Concrete in Veazie, Maine. Hamilton Marine is the exclusive distributor in Maine and throughout the Northeast.

As a way to give back to the lobster industry, The Wind Reef Group will donate a portion of the proceeds from sales of the Habitat Mooring System to the Lobster Institute to further their research and outreach work for and with the lobster industry. According to Hardison, "The Lobster Institute's history of collaboration with the lobster industry is well-known. They have been very helpful with the design and launch of the HMS 4000. I couldn't think of a better partner or more worthy beneficiary of the success of the *HMS 4000*."

To order an *HMS 4000* contact Hamilton Marine at (207) 548-6302. ⌘

Click, Crack, Eat

Click, Crack, Eat – that's the tag line for a new iPhone application created by Ben Greeley and Robert Hernandez of Waterville, Maine. The iLobster offers step-by-step instructions on how to get the meat out of a lobster. The application will also help you find nearby restaurants that serve lobsters, places that will ship lobsters, and more. You can download iLobster for $1.99 at the iTunes App Store. For more information, visit www.ilobsterapp.com. ⌘

New Maximum Size and V-Notch Measures Take Effect in the U.S. Outer Cape Management Area and Offshore Area 3

The Northeast Regional Office of the National Oceanic and Atmospheric Administration reports that, beginning July 1 of this year, new brood stock lobster management measures took effect in the Outer Cape Cod Lobster Management Area and in Offshore Lobster Management Area 3 as follows:

- Maximum carapace length (maximum size) requirements for all lobsters harvested in the Outer Cape Area and Area 3 will be 6 ¾ inches.
- A revision of the Lobster V-notch definition for the Outer Cape brings it into conformance with the definition already in practice in Areas 2, 3, 4, 5 and 6. A standard v-notch is "any notch or indentation at least as deep as 1/8 inch, with or without setal hairs."

Copies of the final rule and supporting documents are available on the Northeast Regional Office Web site at www.nero.noaa.gov, or questions can be referred to the Sustainable Fisheries Division at (978) 281-9144. ⌘

THANKS FOR HELPING US GO GREEN!

After a notice in the last edition, over 100 people opted to receive the *Lobster Bulletin* via email!

If you would prefer to receive your copy of the *Lobster Bulletin* via email, please let us know. Email Deb Seekins at deb.seekins@maine.edu

This will not only cut down on paper, it will save the Lobster Institute the cost of printing and mailing. It's a win, win!