Description of Research: The Gulf of Maine Research Institute (GMRI), the University of Maine (UMaine), and the University of Southern Maine (USM) are seeking paid interns for the summer of 2010 at the GMRI research facility in Portland, Maine. Research will occur in the following areas (see opposite page for potential projects):

- Fish & Community Ecology
- Fishing Gear Technology
- Ecosystem Modeling & Climate Change
- Bioeconomic Modeling
- Science Translation

The fish ecology/fishing gear technology studies will involve a balanced mix of field (i.e., tagging fish, conducting video surveys of fish utilization of habitat, fishing gear sampling, tethering prey, data collection, hydroacoustic sampling, underwater video surveys, etc.) and lab (project design, gear preparation and maintenance, data entry and analysis, otolith age estimation, otolith shape and microstructure analyses, morphometrics, scoring video surveys, acoustic or catch data processing, etc.) work. The ecosystem modeling studies will involve analyzing historical biological and climate data and developing new models of the Gulf of Maine ecosystem. The bioeconomic fishery modeling will develop extensions of existing simulations models of major Gulf of Maine fisheries. Science translation will involve documenting the work of GMRI’s science team to share with non-scientific audiences.

Qualifications: Successful candidates in the fish ecology and fishing gear technology areas will have a strong background in biology and will preferably be completing a Bachelor’s degree in ecology or a related discipline. Successful candidates in the ecosystem modeling and climate change area will have training in math and computer programming and preferably a background in oceanography. Successful candidates in bioeconomic modeling will have training in math and computer programming and preferably a background in economics or ecology – experience with MATLAB is desirable. Successful candidates in science translation will have strong writing skills and familiarity with photography, video, and web-based communications tools. Successful candidates will also work well in a team setting both in the laboratory and in the field; field collections may include multi-day trips to sea aboard industry vessels or driving to field sites. Other assets include an eye for detail, a steady hand, and a general eagerness to learn about the Gulf of Maine ecosystem.

Applications: Applicants should submit:

1) A letter of interest that includes their preferred research project(s),
2) A resume, and
3) Names of three references to: researchintern@gmri.org.

Applications will be accepted until 5 pm on Friday, February 12, 2010.

For more information about the internship program, please contact:
Kathi Higgins
Gulf of Maine Research Institute
350 Commercial St
Portland, ME 04101 Email: researchintern@gmri.org.

For additional information about the host institutions, please visit: GMRI at www.gmri.org, USM at http://research.usm.maine.edu/AquaticSystemsGroup/. GMRI, USM, and UMaine are equal opportunity employers.
Potential Research Projects

Fish & Community Ecology

- Trophic dynamics and benthic-pelagic coupling: groundfish, benthic invertebrate, and Atlantic herring interactions in the Gulf of Maine.
- Source-sink dynamics in monkfish populations using mark-recapture experiments.
- Evaluating potential impacts of offshore wind platforms on fish distribution using hydroacoustics.
- Stock structure identification of river herring populations in the Gulf of Maine.
- Zooplankton dynamics in the Gulf of Maine.
- Baseline food web structure of Penobscot Bay and Penobscot River before dam removal.
- Biological monitoring of a mid-coast Maine salt marsh restoration.
- Fish and aquatic community structure of the Kennebec River and Estuary, Maine.

Fishing Gear Technology

- The effect of specialized rigging modification on the selectivity of monkfish gillnets using underwater video cameras and at-sea sampling.
- Testing the efficacy of hook design on catches of redfish in the Gulf of Maine.
- Evaluating spatial and temporal variation in shrimp catches and bycatch using the Nordmore grate in the northern shrimp fishery.
- Developing and testing protocols to reduce fuel consumption, greenhouse gas emissions, and bycatch in the groundfish fishery in the Gulf of Maine.

Ecosystem Modeling & Climate Change

- The impact of climate variability and change on the Gulf of Maine ecosystem.
- Developing models of the Gulf of Maine ecosystem.

Bioeconomic Modeling

- Developing bioeconomic models of Gulf of Maine fisheries.

Science Translation

- Identifying and developing relevant science stories that may be of interest to members of the marine community, middle school students, and the general public.
- Documenting and sharing progress on a range of science projects through writing, photography, and video.
- Translating complex science research into approachable content for non-science audiences to a variety of print and electronic media including brief reports, brochures, one-pagers, web content, blogs, videos, and PowerPoint presentations.
- Supporting the creative use of social networking tools to further GMRI’s outreach and communications goals.