The Sea Grant American Lobster Initiative
Notes from Network Meeting
February 10, 2022

Welcome and overview of the ALI (10:00 – 10:15 am)
- The Sea Grant American Lobster Initiative (ALI) began in 2019 and is funded by NOAA's National Sea Grant College Program.
- The overarching goal of the ALI is to increase the American lobster industry's resilience to the biological, economic, and social impacts of ecosystem change in the Gulf of Maine, Georges Bank, and southern New England.
- The ALI consists of two components – the <u>American Lobster Research Program</u> and the <u>Northeast Regional Lobster Extension Program</u>.
    - The research program is addressing critical knowledge gaps about American lobster and its iconic fishery in a dynamic and changing environment, and the extension program is designed to support the region by enhancing and complementing the research program.
    - Together, these two components are working together to develop and share new knowledge and understanding with industry stakeholders and resource managers from Maine to New York.
- Since 2019, the Research Program has supported 22 projects that span three research cohorts.
- The National Sea Grant Office oversees the research program, soliciting projects through a competitive process that involves review by subject matter experts.
    - Alison Krepp (Alison.Krepp@noaa.gov), with support from Elizabeth Diamond (Elizabeth.Diamond@noaa.gov), is the lead for this effort for the NSGO.
    - Alison is the go-to person for questions on progress reports, budget adjustments, no-cost extensions…etc.
- Research priorities of the program has shifted throughout the three cohorts, but have included foci such as:
    - Biological or ecological topics (like understanding life history parameters, spatial distribution and migration patterns, ecosystem shifts, and species interactions)
    - Socio-economic lessons to be learned from SNE and applied to GBK/GoM
    - Socio-ecological investigations to inform future management decisions (like research exploring bait alternatives to herring and their implications for the lobster fishery).
- The research program includes scientists, students, and collaborators from over 40 organizations, including individuals from academic institutions and universities, research institutions, state and federal management agencies, industry members and associations, nonprofits, and Sea Grant staff from across the Northeastern US, Virginia, Maryland, and Canada.
- Regional Lobster Extension Program includes individuals from the 7 Northeast Sea Grant Programs – Maine, New Hampshire, MIT, Woods Hole, Rhode Island, Connecticut, and New York. Maine is coordinating the program, and all programs are leading state-specific projects while contributing to building capacity for lobster research, outreach, and engagement across the region.
- Broadly, the extension program aims to:
    - Increase understanding of biological, economic, and social impacts of ecosystem change in the region
    - Identify attributes of a resilient lobster industry
    - Identify research, technical assistance, and outreach needs
    - Increase opportunities for cross-sector collaboration
- This effort is also administered by the NSGO, and we're in regular communication with Alison and Beth.

- The extension program is also informed by the Regional Steering Committee, which consists of industry and management representatives from across the Northeast.
  - The RSC provides input and advice on the direction of the extension program, but also provides input on research needs across the Northeast.
  - In this way, we have a direct connection between the RSC and the NSGO through the extension effort.
- There is a lot more information to share, but you can find project summaries, contact information, lists of upcoming events, and news stories on the ALI webpage, which is hosted by Maine Sea Grant at the University of Maine.
- Goals for today are to foster conversations across the network between people working on similar or complementary research projects; and to explore ways research teams might leverage the extension program assistance to share their results with non-academic audiences.

Introductions to the Northeast Regional Extension Program (10:15 – 10:30 am)
New Hampshire Sea Grant
- Gabby Bradt (gabriela.bradt@unh.edu) and Alexa Brickett (alexa.brickett@unh.edu) – expertise in collecting data on what the fishery looks like in New Hampshire
- NH Local Seafood Finder StoryMap to capture resiliency of fishery
- Working in collaboration with RI to capture how direct sales (as a result of COVID) have impacted the fishery.
  - Does it have positive or negative impacts?
  - What were the benefits from pursuing this kind of marketing strategy?
- Alexa works with other communicators in the region to have consistent messaging and outreach for the program.
  - Using digital communications skills, website, etc.
  - Engaging with graduate students and post docs to write blog posts/research updates
  - Archive all products and media coverage so we have a full understanding of where our messages are going

MIT Sea Grant
- Rob Vincent (rvincent@mit.edu), Carolina Bastidas (bastidas@mit.edu), Lindsey Williams (now at NH SG; lindsey.williams@unh.edu)
- Collaborating on oral histories and industry surveys with Woods Hole, Connecticut, and New York Sea Grant Programs
  - Provided 18 interview to collect stories from lobstermen operating in Long Island Sound: 7 lobstermen, 2 other industry members, 5 researchers, and 4 managers.
  - Lobster Lore StoryMap
- Human dimensions of American lobster analysis
- Stakeholder engagement and technology development
- Worked with students to develop web-based report on how climate change affects lobster

Woods Hole Sea Grant
- Jennie Rheuban (jrheuban@whoi.edu) – WH SG Research Coordinator with expertise in coastal biogeochemistry and climate change
- Collaborated with MIT Sea Grant and Maine Sea Grant on a StoryMap, "A fishery in a sea of change"
  - Explores how climate change is expected to impact the lobster population and highlights how ALI fits into that research landscape.
  - Hoping the StoryMap can serve as a platform to highlight all ALI research
  - Working with a student to update the content this summer

Rhode Island Sea Grant
- Dawn Kotowicz (dkotowicz@uri.edu) and Azure Cygler (ACygler@uri.edu)
- Local Seafood Finder in Rhode Island – shows where consumers can access local sea food in response to COVID shutdown
  - Graduate student, Abbey Greene, contributed a research update/blog post on her participation in this work
- Coordinating with NH SG on survey of lobster industry to understand dockside sales challenges and benefits related to moving to a direct-to-consumer market shifts
- Providing student support for various projects

Connecticut Sea Grant
- Nancy Balcom (Nancy.Balcom@uconn.edu) and Anoushka Concepcion (Anoushka.Concepcion@uconn.edu)
- Lobster industry in Long Island Sound far diminished from what it was in the 1990s
- Contributing to the Oral Traditions project with NH and MIT Sea Grant
- Collaborating with NY SG to synthesize lobster research since 1999

New York Sea Grant
- Antoinette Clemetson (aoc5@cornell.edu)
- Joined Sea Grant during lobster mass mortality event in 1999
- Joint Programming with CT SG to coordinate:
  - ALI oral history
  - Desk study synthesizing American lobster research over the past two decades
  - Maintain bistate Long Island Sound (LIS) American Research Initiative webpage

Maine Sea Grant
- Amalia Harrington (amalia.harrington@maine.edu), Beth Bisson (beth.bisson@maine.edu), Chris Bartlett (cbartlett@maine.edu), Hannah Robbins (hannah.robbins@maine.edu), and Jenny Spekhardt (petersj@maine.edu)
- Coordinating regional extension program
- Outreach/engagement
  - Collaborative Chats webinar series
  - Science communications opportunities for students, scientists, and technicians
  - Interactive StoryMap with Woods Hole and MIT Sea Grant
  - Developing resource for industry-relevant issues
- Convened a special session in RARGOM to highlight research
- Contributing to industry association meetings, Maine Fishermen's Forum and special sessions with DMR

Questions for extension teams (10:30 -10:40 am)
- The Extension Team spoke to a number of ongoing/existing outreach efforts and products. Are things like the StoryMap something these research projects can fit into, or should we be thinking about other ideas as well?
  - Jennie (WHOI SG): Regarding the ALI StoryMap created by Maine, MIT, and Woods Hole – synthesizes lobster research – past and some ALI research. It puts ALI into context of current American lobster research landscape. We are hoping it will be a living platform and will help share your research through multimedia – videos, soundbites, images, and slide shows. We're joping to add more content there and would love to talk

about how to best add your research results to that – the door is always open, so feel free to reach out.

- o Alison (NSGO): There is also a lots of buzz at NOAA as a product that makes the research available to other non-scientific audiences.
- o Amalia (ME SG): We're always looking at other ways to share your work with other people. Hoping to expand into hard copy products in the future, too.

- I am curious if the oral histories are accessible? Will they be archived maybe at NOAA Voices form the Fisheries?
  - o Yes, they will be uploaded to the Voices sometime soon.
  - o NOAA is also engaging in discussions about expanding and enhancing avenues for archiving oral histories and other social data....it's a journey but it's on the radar.

Breakout groups (10:40 – 11:30 am)

Report back (11:30 – 11:50 am)
Group 1: Larval studies/early life history – Group A
The group focused on how Sea Grant can help groups involved in the ALI make connections. Sea Grant can help provide 1:1+ matchmaking services based on research topics/interests. They can also help make industry connections, especially through industry associations and at in-person trade shows and meetings (i.e., Sea Grant can share updates through a table and invite researchers to share through materials and/or in-person attendance). The group mentioned the need to involve industry early and often in the proposal process. Meetings like this are already a Sea Grant strength. The group also touched on how to involve Extension associates in development of outreach portions of research proposals IN ADDITION to industry.

Group 2: Larval studies/early life history – Group B
The conversation focused on modeling and collecting larvae, and the group would like to get together to talk about the topic more. They found synergies across projects, as well as outreach needs. The group touched on the fact that not being able to be in person during the pandemic has affected the ability to network with one another, but they valued this opportunity. They also valued the idea of continuing conversations. The group shared thoughts on the utility of the StoryMap platform and ideas on how to build out the ALI product. The group discussed some blog posts that have been done and their value. They discussed ways to engage with industry and other stakeholders more, and ways to translate basic science to outreach groups.

Group 3: Ecosystem shifts
The group learned about each other's current and past efforts, particularly as in relation to warming, acidification, and ecosystem shifts. They discussed larval an juvenile lobsters, as well as finfish predators. The group talked about reaching out to industry and presenting at industry forums, and folks were interested in new ways to engage industry and other stakeholders. The group discussed the use of social media, and had a strong focus on K-12 education on some projects. They are thinking about more ways to translate results to industry. Some of the barriers to collaboration include closure of venues for communication with partners (e.g., Maine Fishermen's Forum), and working within state systems (e.g., red tape involved when working in state agencies).

Group 4: Lessons learned from southern New England
The group looked at commonalities and overlap and discussed lobster populations in relation to carrying capacity and how that impacts stock assessments. What happens next for the population in the rest of the region? We need to look at forecasting and think about stock assessments. The group suggested a greater connection with social scientists and economists will be necessary. They discussed the utility of regional listservs to share progress and updates in small bits, and they are looking for a way to engage with

stakeholders. The group expressed a need for more coordination with engagement while also avoiding stakeholder fatigue. One idea was to combine efforts rather than duplicating them. The group also shared a goal of more collaboration with economic sectors to communicate results. They also touched on ways to make outreach/engagement more fun and exciting while being informational. One barrier to collaboration is the fact that the researchers are competing for funds, which hinders developing a collaborative atmosphere.

Group 5: Species interactions
The group discussed concern over new and emerging species and potential impacts over lobster populations. They also discussed some issue in obtaining available data – how best can we coordinate and share the data so that it can be used in models for fisheries management decisions? There is a need for Sea Grant to help bring people together who are working in different areas across different states in order to understand the breadth of research going on with this topic. There is also a need to help build trust among researchers, industry, and managers. We need to think about doing this through boots on the ground and trust building is needed. There is also potential to bridge trust gaps by gearing outreach products like StoryMaps toward industry and fishing groups.

Group 6: Socioeconomic impacts of change
The group discussed areas around risk and risk perception. There is difficulty with industry fatigue when it comes to conducting interviews, and there is a need to determine how to avoid tapping the same people for interviews. The group also mentioned that industry members may have a lot going on in their lives that has nothing to do with research projects (e.g., OSW, whales), which makes it hard for them to engage in other areas. The group mentioned it would be helpful to have extension help get industry or resource manager feedback for new ways to do or communicate the stock assessment, or guidance on developing infographics and/or public facing documents. There needs to be greater thought and input on how to get stakeholder eyes on the important materials. This is related to how the information is being translated – is it getting the message across? Some boundaries to collaboration include cross boarder issues with working with Canada. How can we work more regionally and think about lobster as a resource beyond US boarders? Is there a way to share data management plans so there is a way to keep track of what's being produced?

Group 7: Modeling and/or forecasting
The group discussed how stock assessment gaps might intersect with new and emerging industries offshore, and how it is unclear how they might impact the ability to get data for stock assessments. There was interest in finding any resources showing where local and state-wide surveys are occurring. There is a need to come up with a better way for conducting lobster individual surveys to avoid fatigue by individuals. At some point there needs to be better collaboration across scientists and research groups doing the surveys. The group talked about ways to engage with fishing industry members. In-person communications are preferred over email and paper communications. There are existing platforms to use that reach a large number of industry members, like the Massachusetts Lobstermen's Association newspaper. Traditional communication methods may need to be rethought, especially since modeling is a complicated topic to share with both scientists and a lay audience. Sea Grant is full of communications expertise. It would be good to find a way to summarize all of the research projects on the ALI and to share the research projects more broadly. It is hard to communicate anything at the moment due to COVID. Things are happening at a fast pace and it is hard to keep up with communications as projects progress.

Groups 8: Alternative baits
It would be beneficial to create a working group that meets a couple of times a year to discuss issues around alternative baits in the lobster industry. The group discussed drivers that are not allowing alternative baits to surface as something that industry might want. For example, lobstermen might try

alternative baits, but what would make them accept it as an alternative to current baits? There needs to be an economic assessment to see if alternative baits are comparable to traditional baits used in traps. There is also a need in gathering those data, and synthesizing what work has been done already. Are there studies where the alternatives have worked? What are the regulatory processes and what are the impediments to scaling up some of these baits? The group noted it is important to engage industry early in this work, and when trying to figure out what could be beneficial for industry in terms of research needs/questions. Industry seems interested in collaborating at the product development stage, but not as eager if the product has already been developed. The group suggested involving industry in the development of proposals. There was also a note in the chat that policy analysis questions regarding baits may be a good thing to explore with RISG Law Center as a law fellow legal research project.

Concluding remarks/next steps (11:50 – 12:00 pm)
Amalia shared a quick poll to gauge interest in setting up smaller working groups based on research themes. She will follow-up with those who are interested as well as those unable to attend. The slide deck with links and contact information will be shared, and we encourage everyone to reach out to discuss potential collaborations and/or outreach and engagement needs. You can see everyone's contact information on the "Contacts" page of the ALI webpage.