



# Collaborations

A monthly update of cooperative research news

April 2002

## Inside:

In this month's issue of *Collaborations*, we have provided an overview of cooperative research projects that were funded by the Northeast Consortium in FY 2000.

Even as the commercial fishing industry is left reeling following the sweeping groundfish regulation changes that have been proposed by the National Marine Fisheries Service (NMFS), this month's newsletter will show that fishermen throughout the Gulf of Maine are continuing to work with scientists and government officials in order to address common concerns regarding the maintenance of a sustainable resource.

As always, we remain open to your comments and suggestions about *Collaborations*. You may also read this newsletter online simply by visiting our website at [www.namanet.org](http://www.namanet.org)

Thanks for reading, and if you know of someone who would like to receive our newsletter simply contact us at the Northwest Atlantic Marine Alliance; 200 Main Street; Suite A; Saco, Maine, 04072. (888) 320-4530 or by e-mail at [collaborations@namanet.org](mailto:collaborations@namanet.org)

Sincerely,  
— Randy Seaver,  
Collaborative Research Reporter  
Northwest Atlantic Marine Alliance

## Experimental cod ends produce startling results

Even as the fishing industry finds itself in an uproar over the latest ground fish recommendations put forward by the National Marine Fisheries Service (NMFS), scientists and fishermen have realized what they describe as "significant success" in a project designed to reduce cod bycatch and discard by using a composite mesh.

The project involves testing codends composed of both diamond and square mesh; 6-1/2-inch squares over 6-1/2 diamonds.

The codend is the final end of a trawl, where a vessel's catch collects. By using a different configuration of the net's mesh, small fish and non-targeted species are able to escape from the net. Thus, the vessel is mostly hauling targeted species.

Although previous work has indicated that composite codends can be used to limit sizes of flatfish and roundfish by separately adjusting the mesh sizes, those involved with the project say regulators need to pay more attention to the effectiveness of modified nets and other gear changes.

"The composite codends reduced

bycatch by approximately 72 percent and about 63 percent reduction of fish above minimum landing size," reported Dr. Chris Glass of the Manomet Center for Conservation Sciences. "The hex mesh reduces bycatch by approximately 80 percent of all fish caught and 73 percent of fish above minimum landing size! That ought to be really good news for the [New England Fisheries Management] Council and NMFS."

Previously, the Massachusetts Department of Marine Fisheries has collaborated with Manomet on a similar project, and Glass said the agency will continue to do so with the \$148,750 of funding provided by the Northeast Consortium in FY 2000.

The project has been completed, and Glass expects that his final report should be completed in early April. Once forwarded to the consortium, Glass expects to post the report on Manomet's website ([www.manomet.org](http://www.manomet.org)).

"We're in desperate need of these answers," says Proctor Wells, a fisherman based in Phippsburg, Maine. "We need this data badly because NMFS needs

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"Collaborations" is a monthly update on the 'goings on' of collaborative fisheries research. The Northwest Atlantic Marine Alliance (NAMA), with support from the Northeast Consortium, publishes this update as a service to individuals and groups committed to the future of collaborative research. Please visit us at [www.namanet.org](http://www.namanet.org) and [www.NortheastConsortium.org](http://www.NortheastConsortium.org) to learn more about our organizations.

# Atlas in development stage

**Note:** *This project received its initial funding in FY 2001, but information was not available when the March issue of Collaborations went to press.*

**W**hen beginning a journey, it's never a bad idea to have a map. The same is true when attempting to discover how individual communities relate to particular fisheries.

Thus was born a collaborative research project that will begin to assess how individual fleets move throughout the Gulf of Maine through the development of a comprehensive atlas.

The project, launched by Kevin St. Martin at Rutgers University, will rely upon fleet movement data that is already available through the National Marine Fisheries Service (NMFS) and it was funded by a two-year grant (\$168,953) from the Northeast Consortium.

According to the project's summary report, its goal is to engage fishing communities in the creation of an atlas that maps the connections between land-based communities and fishing territories in the Northeast using Geographic Information Systems (GIS).

The atlas will document the social and economic "landscape" of fisheries, necessary information as the management of fisheries becomes more area-based, St. Martin said. It should prove useful to both managers and fishing communities as a tool for assessing impact, responding to potential plans and avoiding conflict, he added. The atlas will also facilitate cooperation between fishermen and scientists by making clear who works in a particular area and by highlighting the value of their local environmental knowledge.

"We're trying to figure out who works where," St. Martin said. "Understandably, fishermen tend to be proprietary. We're not attempting to get that information . . . specifics about individual fishing habits. We simply want to show

links between communities and offshore knowledge, and we're hoping that it will create more discussion and community participation."

St. Martin said the project will be divided into three phases. As of press time, he says the project is now in the middle of the first stage. The available NMFS logbook information only dates back to 1994. Still, St. Martin is hoping to share that information with fishing communities during scheduled meetings.

The second phase of the project, he said, will involve generating commu-

**“***We have to start somewhere, so we have to use our own knowledge.***”**  
— **Kevin St. Martin**

nity discussion and attempting to discern what infor-

mation would be helpful to each community. The third phase of the project would identify people who want to be more actively involved in the development of the atlas, specifically commercial fishermen.

"We're at the point where we are in the process of developing interview protocols," St. Martin said. "By May we're hoping to make some contacts and a preliminary atlas available for discussion. We have to start somewhere, so we have to use our own knowledge."

**Project Title:** An Atlas-Based Audit of Fishing Territories, Local Knowledge, and Community Participation in Fisheries Science and Management  
**Funding:** \$168,953 for two years provided by the Northeast Consortium in FY 2000.  
**Status:** First phase of project should be completed by end of May.

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## Next month:

**We will review the collaborative research projects that were recently awarded NMFS funding and the status of NMFS projects that were funded in FY 2001**

## Outreach

**Are you working on a project that you would like to see highlighted in "Collaborations"? Did you miss an issue? Would you like to subscribe? Contact NAMA today, [collaborations@namanet.org](mailto:collaborations@namanet.org) (207)284-5374; 888-320-4530**

# GOM cod tagging program described as a major success

**A**re cod fish and other fish species moving from one closed area to another, or do the fish remain in one particular area? Questions like these are becoming more and more important as federal and state regulators wrestle with the commercial fishing industry over future resource management decisions.

Thus, participants in a comprehensive cod tagging project are hoping their efforts during the last year will provide reliable data regarding species

ing phoned in to the lab? What if, for instance, a fisherman opts not to report catching one of the tagged fish?

"It will be impossible to know for sure if that happens," Goethel said. "I'm not expecting it to be a big problem, but you never know. There are always people who will try to skate by without participating. I can tell you this, if we see one area with a total lack of data, we would certainly become suspicious about what is happening in that area."

**“ This project will hopefully give us better information in determining how accurate the moving closures are. ”**

**— Mike Morin, UNH graduate student**

movement in the Gulf of Maine.

"This is a project we began talking about before the Northeast Consortium even existed," Goethel said. "I think it's a very important project."

The project got underway in February of 2001. Using five fishing vessels, more than 15,000 cod fish were tagged in closed areas (Blocks 124, 125, 132 and 133) throughout the western portion of the Gulf of Maine.

During the next year, researchers are hoping to assimilate data that will be voluntarily collected by fishermen who net any of the tagged cod. A telephone number is imprinted upon each tag, and fishermen who catch the tagged fish are being asked to call in the tag number along with the location of where the fish was caught.

The project was funded by a \$214,640 grant from the Northeast Consortium in FY 2000, and Goethel described it as an overwhelming success.

"So far, things have gone better than what we expected," he said. "We should be done with the tagging [portion of the project] by the end of the month."

But will Goethel and researchers from the University of New Hampshire be able to rely upon the information be-

## Tracking the results

The scientific end of the project was coordinated by Dr. Hunt Howell of the University of New Hampshire. One of Howell's graduate students, Mike Morin, has been devoting much of his time to the project as part of his thesis.

"This project will hopefully give us better information in determining how accurate the moving closures are," Morin said.

The tags used in the project are made of a plastic material and are placed near the front dorsal fin. According to Morin, he has received approximately 800 calls about tagged cod so far.

"We've seen a lot of variability in the calls we have been receiving," Morin said. "For example, fish tagged in the 132/133 area seem to be moving east toward Jeffreys [Ledge] and north toward Portland [Maine]. In the Middlebank area, those fish tend to stay there or move south."

The furthest movement, Morin has observed thus far comes from a tagged cod that was reported by a fisherman near Nova Scotia.

"Originally, we thought that we would be able to tag 5,000 fish," Morin



**READY FOR TAGS --** Several cod fish are hauled in and ready to be tagged. (Photo courtesy of UNH)

**Project Title:** Determining groundfish species movement patterns in closed areas.

**Funding:** \$214,6400 provided by the Northeast Consortium in FY 2000.

**Status:** First phase of project should be completed by end of March. Data collection will continue through the next 12 months.

said. "We thought that would be a good number. Exceeding that goal had a lot to do with how many fish we caught."

According to Morin, more than 200 cod fish were caught during 30-minute tows last spring.

**Note:** For more information about this project, you visit its website at: <http://marine.unh.edu/codtagging>



# What do fish really want?

## Project examines new ways in which to increase fish selectivity

According to the fishermen who participated in a research project designed to test the effectiveness of catching commercial quantities of flatfish with longline gear, the project didn't bolster hopes that longlining could be successfully used in any Gulf of Maine fisheries other than cod.

But the project, funded by a \$111,262 grant from the Northeast Consortium in FY 2000, focused on three other areas of study, and it may continue into next year if it is approved for additional funding from the consortium. Although the first phase of the project is in the "near completion stage," in terms of its initial funding, according to Arnold Carr of the Massachusetts Division of Marine Fisheries, Carr's MaDMF colleague, Michael Pol, is optimistic that other aspects of the study (Improving the selectivity and utility of Demersal hook fishing) will continue.

The collaborative research project, centered in the waters southeast of Chatham, Mass., included four goals: examining feeding and hooking responses of cod, haddock and yellow-tail flounder; finding gear and artificial bait combinations that minimize bycatch; determining if flatfish can be caught with longline gear in commercial quantities; and publishing the findings for other New England fishermen.

"We want to do more work, center-

ing on the use of artificial bait, but we're also still interested in increasing selectivity," Pol said. "We're still in the early stages of the process. And although it's taking a lot longer than we expected, I've got a feeling that we've just scratched the surface."

Other participants in the project included members of the Cape Cod Commercial Hook Fishermen's Association (CCCHFA) and Dr. Susan Goldhor of the Center for Applied Regional Studies in Boston.

"We didn't have very good success," said Mark Leach, a CCCHFA member. "I participated in four of the sea trials, and I can definitely say it wasn't an effective way to get flounder."

In the wake of several proposed groundfish regulations now being recommended by the National Ma-

rine Fisheries Service, CCCHFA members said they were interested in the project as a means to diversify their effort. Goldhor said she was attracted to the project because longlining has less adverse effects on the benthic environment than trawling.

Tom Luce, another CCCHFA member, said cod fish is the "staple fishery" among his peers. The 37-year-old fisherman has been in the commercial fishing industry for more than 15 years, following in his father's footsteps.

"I went out for four trips on this project, but I've put it on hold for a while," Luce said. "I'm open to doing

it again in the summer, but I think it would probably work better if we went out in August or September."

One problem Luce noted was an overabundance of dogfish. "One day, we had dogfish on every hook," he said. "We used three different styles of hooks: small J hooks, small half circles and small circles."

Luce had an observer with him on his 31-foot boat (F/V Seawind), but says going after flounder isn't financially viable. "We rarely see them (flounder) over \$1 a pound," he said. "Ground fish prices keep going down. It's getting tougher and tougher out there."

For his part, Leach said the fish are out there, but they just did not go after the project's artificial bait combinations.

"When we used the underwater camera, we could see the fish swimming around, but they weren't biting," he said. "I think cod are cold-water sensitive. I think their metabolism might slow down and that's why they're not going after the bait. It's just a theory, but I'm not so sure that the fish are leaving the area. I think they're just not feeding as much."

While fishermen involved with the project don't hold out much hope for its effectiveness in crafting new management decisions, Goldhor said the "artificial bait" aspect of the project has long-term promise.

### *Attraction vs. Commitment*

Experimenting with bait combinations is much like observing the action in a singles bar, at least according to Goldhor.

While certain fish species may be *attracted* to one kind of bait, it's an entirely different matter when it comes to getting those same fish to *commit* by

**Project Title:** Improving the Selectivity and utility of Demersal Hook fishing

**Funding:** \$111, 263 provided by the Northeast Consortium in FY 2000.

**Status:** MaDMF hoping to receive additional funding for 2002 continuation; project met with limited success in first phase.

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# 'Let's be independent together'

Project achieves success without government or academic affiliation

In the classic children's movie *Rudolph the Red-Nosed Reindeer*, two of the cartoon's primary characters are ostracized by their respective peer groups. Thus, Hermie, the elf who wants to be a dentist, and Rudolph, upset with his physical attributes, embark upon a strange alliance with a common principle: "Let's be independent together," Hermie offers.

While that may not be a perfect analogy, it does set the stage for what Bill Lee (F/V Ocean Reporter) describes as the first-ever completely independent cooperative research project.

Lee, along with Dr. Allan Michael, a marine biologist, has been experimenting with a Nordmore-style grate to reduce the bycatch of cod while fishing for flounder. While the project is similar to other bycatch reduction experiments, Lee says his project is unique in that it is somewhat easier to coordinate research activities independently.

"You don't have to be wrapped up with someone and delayed by anyone else when you're working independently," he explains. "We were able to work at our own pace, and we didn't have to wait for anyone else. We worked when we needed to work."

Although the two men were able to work well together, Lee admits that having a university or government agency attached to a project at least helps to cut down on the large amount of paperwork required for publicly financed cooperative research.

But in other ways, working independently proved to be beneficial in terms of the project's scheduling and budget.

For instance, Lee learned how to weld while serving in the Navy Seabees. Thus, when his experimental grate needed to be modified, he simply took the device to his own workshop and began welding, making the necessary changes.

"Normally, when that kind of a situation comes up, you have to wait for someone else to make the modifications," Lee said. "The beauty of this project is that I can the work whenever I need to do it, on my own schedule."

## Caught on tape

A large portion of Lee's project includes underwater video taping of how the device is working with various species. Again, Lee has experience with underwater photography and performs editing of the tapes in his own Rockport studio.

While a typical Nordmore-style grate features vertical bars that are spaced approximately one inch apart, Lee's grate features horizontal bars that are spaced three inches apart. The modifications, he says, are based upon fish behavior. Flounders have a tendency to swim downward, while cod, much stronger swimmers, escape by swimming upward. He describes what he has witnessed on the videos as "a great success."

For example, Lee says during one tow 100 percent of the cod went out the cod escape hole with no mortality.

The project, centered in the Ipswich Bay area, has involved approximately 75 tows; the data has been collected using a combination of video taping and checking of the cod ends.

Lee expects the project to be completed in July, and he was able to receive an additional \$14,160 in funding from the Northeast Consortium.



**COD ON TAPE -- A cod fish travels through one of Bill Lee's experimental nets.**

*(Bill Lee photo)*

But how has Lee been able to conduct a one-year project, showing significant results with a total of only \$49,160 in funding?

"It's easy," he says. "I own the boat, I own the video equipment and I own the net. I basically have no overhead." As the project moves forward, Lee and Michael plan to alter their grate based upon what they have witnessed during the previous tows.

**(Please turn to page 6)**

**Project Title:** Development of a net to reduce bycatch of cod in the flounder fishery

**Funding:** \$49, 160 provided by the Northeast Consortium in FY 2000, including a \$14,160 extension.

**Status:** Scheduled for completion July 15, 2002

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# Selectivity

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taking the bait.

“About 10 years ago, I became interested in longlining because it’s a fishing method that does not destroy the habitat,” Goldhor said. “Few people, however, longline anymore. It’s messy and difficult, and small boats generally don’t have automatic baiting machines.”

Effective bait combinations are tricky, Goldhor explained.

“It’s hard to

know, especially in deep waters, what’s important to the fish,” she said. “We have to think about particular colors, shapes, or whether the bait should be shiny.”

When humans eat, Goldhor said, the first thing they notice is a particular food’s aroma. And even though the food might smell good, the taste could still be bitter or too spicy for a particular individual’s taste. “If it doesn’t taste right, it won’t work,” she said. “Fish will often play with their food.”

According to Goldhor, experimental baits can be an effective way to increase fish selectivity and reduce bycatch. “The bait may be the most important part of the gear,” she said.

Common baits, such as squid, clams and herring are the equivalents of Big Macs®, Whoppers® and other types of fast food, Goldhor explained. While most everyone enjoys fast food, it’s difficult to attract only one type of person by using a popular food product as bait.

Therefore, Goldhor cooks up variations on common themes, studying what works best for a particular species. Most of her “recipes” start out with waste product discard by fish processing plants. From there, Goldhor devel-

ops various matrix combinations, using the analogy of a gummy-bear.

“For me, this is something I have wanted to do for many years,” Goldhor said. A similar project she is working on in the Pacific Northwest has provided what she describes as some good,

baseline data.

“Longlining has the potential to be highly selective,” she said. “My goal is to not waste fish. I think this is an incredibly important

“It’s hard to know, especially in deep waters, what’s important to the fish. We have to think about particular colors, shapes, or whether the bait should be shiny.”

— Dr. Susan Goldhor

project, and I’m hoping that we can get it funded for another year.”

In this project, five trips were made with one commercial longline vessel to compare artificial bait against commonly used natural bait. Catch rates between hooks were compared by fish caught per 1000 hooks because the total number of fish caught was very low. The number of fish caught and the sample size were very low for both experiments, according to a recently released report from the Northeast Consortium.

## A silver lining

Although both Luce and Leach said they were disappointed with the project’s success, both men said participating in collaborative research projects makes sense.

Leach, who has participated in other hook-lining studies, said most aspects of the project went smoothly.

“I think we learned some things,” he said. “I think collaborative research has a place in the industry. It’s an opportunity to try things that you might otherwise only think about and be afraid to try because of financial risk.”

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# Working independently

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(Continued from page 5)

For instance, all of the escaping fish exited through a white, 6-1/2 inch portal on the port side of the grate and none of the fish exited via a gray, 6-1/2 inch portal on the starboard side.

“Was it the color, or the location?” Lee asked rhetorically. “I’m not sure. We’ll be switching the escape ports during our next set of tows.”

For his part, Allan says he noticed that monkfish were clogging the codends during the project’s initial tows.

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*The project’s overall objective is to show that trawling for flounder can continue without unnecessary negative effects on the recovery of cod populations.*

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There are behavioral differences between species that can be exploited to provide a method for separating fish and allowing escape, Allan said.

The project’s overall objective is to show that trawling for flounder can continue without unnecessary negative effects on the recovery of cod populations.

According to the project’s proposal, flounder scuttle along the sea floor when disturbed and are seldom found at any height off the bottom. Cod, on the other hand, swim just above the sea floor and will quickly rise above disturbances. They are also more likely to react to visual clues in searching for escape routes.

The modified grate, with horizontal slits of decreasing size, provides a method that will allow flounder to pass through into the cod end while directing cod up the grate toward an escape chute.

# Trawl survey to continue with NMFS funding

## Participants tout project's success, despite opposition from some Maine lobstermen

**D**espite the controversy it has generated, an ongoing Gulf of Maine trawl survey should continue collecting data and moving forward with its initial objectives, say those who are participating in the collaborative research project.

The survey, one of the most ambitious programs to be funded by the Northeast Consortium in FY 2000 (\$38,607), has received continued funding (\$332,454) through the NMFS/NEFMC NOAA grants award program.

"Regardless of the slugging in the trenches, this project is well worth our effort," said John Sowles, project manager for the Maine Department of Marine Resources (DMR).

The controversy is centered upon the objections raised by commercial lobstermen in Maine's Zone II area. The lobstermen say the trawl survey will severely limit their activities and effectiveness by disrupting fixed gear.

Sowles and other DMR officials say they are committed to modifying the survey in order to address the lobstermen's concerns, and point out that the ongoing survey can play a major role in providing a sustainable resource.

It remains to be seen if those modifications will help ease the tensions now brewing among Downeast lobstermen.

According to a story published in the March 2002 issue of *Commercial Fisheries News* (CFN), a standoff occurred between lobstermen and the 54' survey vessel Robert Michael in October 2001.

The article goes on to report "an even more hostile reception was given the survey crew the following day in the Jonesport area."

According to the CFN story, lobstermen said they were flatly op-

posed to the use of dragging as a survey method for lobsters. They refused to move gear when the survey vessel arrived, and argued that the impact of the trawl on both the lobsters themselves and their habitat was too high to justify it.

CFN reported that the Maine Marine Patrol "temporarily moved gear so the survey vessel could make some pre-selected transect passes as required by the survey protocol, but tensions [remained] high and several stations were not towed."

Despite those problems, Linda Mercer, DMR's director of resource management, said the project remains "near and dear" to her heart. "The survey is providing us with information on a wide range of species, and it should complement the ongoing efforts of what has been taking place in Massachusetts since 1978," she said.

All of the project's participants said the project is essential in order to provide effective, future management decisions.

"This survey is designed to tell us what the abundance levels actually are in the Gulf of Maine, and about how those levels change from year to year," Mercer said. "I would say that it is imperative for this project to continue for many more years."

Sowles said the project (combining spring and fall surveys, got underway in the fall of 2000. With three trawl surveys now completed, he anticipates that the next spring survey will get underway, as scheduled, in late April.

That survey, he said, will include five weeks of tows from the Massachusetts line to New Brunswick.

### Cooperation

**C**aptain Robert Tetrault agreed to participate in the survey, allowing his identical 54-foot vessels (F/V Tara Lynn and F/V Robert Michael) to be used by DMR scientists.

"We fully understood the chal-

lenges associated with this project," Tetrault said. "I know that the state needs this data, and by using our boats for the project I can keep my guys busy doing what they love to do."

Because he has extensive experience in the fishing industry, Tetrault says his business has been able to meet the sometimes rigorous needs and challenges of the project.

"We know what we're doing on our end of the project," he said. "You get what you pay for. We have lost zero days for mechanical problems and we've only had two aborted days, and those

**Project Title:** Gulf of Maine Inshore Trawl Survey

**Funding:** \$332,454 provided by NMFS NOAA grant award

**Status:** Three surveys completed using NEC funds; fourth survey scheduled to begin in late April

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# Experimental cod ends

(Continued from page 1)

to pay attention to what we're doing and about how we have proven that we can reduce bycatch."

Wells is one of three fishermen who teamed up with Glass in order to perform the project's sea trials, which involved a total of approximately 70 hauls. The trials were conducted in three areas during different times of the year. Russell Sherman of Gloucester, Mass., towed in the Stellwagen Bank

and diamond meshes," he said.

Although using a new type of cod end provided to be a bit of a learning curve for the fishermen, Glass described the project as a major success. "These were all guys who we had worked with in the past," he said. "We had already developed a good working relationship."

In fact, the project's only significant problem was found in getting the nec-

	Jan-01	Apr-01	Jun-01	Total hauls
6.5 sq	6	3	0	9
6 diam	7	4	8	19
6.5 sq/6.5 diam	7	3	6	16
6.5 sq/6 diam	7	5	6	18
6 hex	0	2	6	8
Total hauls	27	17	26	70

during April 2001; Frank Mirarchi of Scituate, Mass., conducted tows in January in the waters near Cape Cod; and Wells conducted tows approximately 10 miles southeast of Portland, Maine in June.

In this study, the selectivity parameters were obtained by covering each codend by a small mesh (1 7/8") codend. Some of the fish that enter the net will subsequently escape from it and be trapped by the small mesh codend. In order to calculate the selectivity curve and parameters of each codend, it is necessary to know the population that entered the net and the portion of it that was retained.

## *Motivation in the the face of increased regulation*

The project, Glass said, was the result of an intensive brainstorming session. "We all got together and figured there had to be some noble end to combining square

and diamond meshes," he said. Although using a new type of cod end provided to be a bit of a learning curve for the fishermen, Glass described the project as a major success. "These were all guys who we had worked with in the past," he said. "We had already developed a good working relationship."

Wells said using a new type of mesh took "a little getting used to," but he also said the project moved forward smoothly once he and the other fishermen got used to working with the nets.

The project's stunning results and its adherence to the stated goals and budget has left both the fishermen and scientists feeling good about their 18-month undertaking. But Wells says regulating authorities tend to extrapolate the basis of their regulations from outdated data or studies.

"The challenge now is to get NMFS to acknowledge what we were able to accomplish," Wells said. "I'm a big believer in increasing mesh size to be selective. There hasn't been a study like this done since we were using 5-inch mesh, maybe 10 years ago or so."

**Project Title:** A collaborative program to reduce bycatch and discard in Gulf of Maine otter trawl fisheries: Effect of composite mesh codends on trawl selectivity.

**Funding:** \$148,750 provided by the Northeast Consortium in FY 2000

**Status:** Completed; final report scheduled for publication in April

As for the project's future implications, Wells said much more money needs to be spent on gear modification projects in order to ensure that management decisions are based upon true and proven data.

And Glass is hoping that the project will serve as a "jumping-off" point for related and expanded research.

"Will this combination work in all places at all times? I'm not sure," Glass said. "We need to replicate these tests at other times of the year and in different areas."

Wells agreed, saying different results may be found when encountering spawning cod stocks because of their increased diameter. Asked if he would be willing to participate in another phase of the project, Wells didn't hesitate with his response.

"It's exciting for me to participate in a project like this," he said. "By participating, I know what it is about and that it works. This is the best part of collaborative research."

## Sea trials set to begin in summer

Sometimes, even the best of plans runs into a snag or two. Such is the case with a collaborative research project that intends to conduct commercial sea trials of flexible trawling devices, including soft trawl doors.

For starters, one of the fisherman who had signed up to participate in the project some two years has since decided to sell his vessel (Charles Saunders of Cundy's Harbor, Maine. The project's other fisherman, Capt. Robert Hannah, re-rigged his vessel for clamming and is now finishing up his groundfish trawls, according to Cliff Goudey of the MIT Sea Grant program.

Although the project has yet to begin sea trials, Goudey said he has learned a lot from the setbacks.

"We're hoping most of the field work can take place this summer," Goudey said. "Bob [Hannah] should have plenty of time now. We're still working out

the details of the boat time, so that we can have the least amount of disruption on his fishery; squid, butterfish and fluke . . ."

According to the project's summary report, the participants are hoping to capitalize upon results garnered from a Center for Fisheries Engineering Research (CFER) project that applied flexible hydrodynamic devices to control the shape and depth of trawls. These preliminary tests were done at the Marine Institute's flume tank in St. Johns, and revealed significant potential benefits for trawl fishermen, including:

- Reduced habitat impacts by relying less on heavy weight and rigid doors
- Trawl shape and depth that is independent of towing speed
- Wider mesh openings for improved selectivity
- Reduced cost and maintenance requirements for trawl gear, and

**Project Title:** Commercial sea trials of flexible trawling devices including soft trawl doors

**Funding:** \$200,000 provided by the Northeast Consortium in FY 2000

**Status:** Trials scheduled to begin Summer 2002

- Less risk on deck from heavy doors and sweeps.

According to Goudey, the project will include significant levels of project outreach in the form of reports, articles, edited video materials, and web-based availability of project results.

## Projects continue through 2001: An overview

**Note:** *The projects contained in this report were reviewed in the March 2002 issue of Collaborations. Although each of the projects was initially funded by the NEC in FY 2000, they also received further funding in FY 2001.*

### **\* Environmental Monitors on Lobster Traps (Phase I and II)**

*Project participants:*

Jim Manning [NMFS Northeast Science Center], Bonnie Spinazzola [Atlantic Offshore Lobstermen Assoc.], Pat White [Maine Lobstermen Assoc.], Bill Alder [Massachusetts Lobstermen Assoc.]

### **\* A New Role for the Commercial Fishing Fleet in Monitoring, Predicting, and Managing Sea Scallop Resources**

*Project participants:*

The Sea Scallop Recruitment Group Scott Gallagher, Richard Taylor, John Quinlan, Paul Rago, Ron Smolowitz, Cabell Davis, Alan Kuzirian, and Harlynn Halvorson

### **\* Groundfishing Vessel Survey of Herring Spawning Grounds**

*Project participants:*

Donald Perkins, Jr. [Gulf of Maine Aquarium], Cameron McClellan [McFish, Inc.] and Phillip O. Yund

[Gulf of Maine Aquarium]

### **\* Testing of Low-Profile Low Cod-Bycatch Gillnets (Phase I and II)**

*Project participants:*

Michael Pol [Massachusetts Dept. Marine Fisheries]; Arne Carr [Massachusetts Dept. Marine Fisheries]; and Bob Mackinnon [Massachusetts Gillnetters Association]

### **\* Groundfish Trawlnets designed to Reduce the Bycatch of Cod**

*Project participants:*

Luis Ribas [Provincetown, MA] Michael Pol [Massachusetts Dept Marine Fisheries]



# Trawl survey

(Continued from page 7)

were because of severe weather.”

Tetrault says that he treats the project just like typical fishing days, using a three-man crew. The project, however, has been anything but typical, in his opinion.

“I’m completely blown away by how my guys are responding to this thing,” he said. “I’m surprised by how well they have adapted to it. I think it’s because they know that they are doing something good – searching for the truth. We’re all tired of people just drawing assumptions about closed areas. My guys know what they do best, and I think they enjoy showing other people how well they can do what it is they love to do.”

If Tetrault sounds impressed by his crew’s performance, it’s nothing when compared to his observations about the project’s non-industry participants.

“Sally Sherman [DMR’s lead scientist] has been on every trip,” Tetrault said. “She’s a really hard worker, and she gets along great with the crew. This is not an easy business, we’re not talking about pleasure cruises or scenic tours here. Sally is always ready, she’s efficient and dedicated. She wants to use the best possible science.”

For her part, Sherman took Tetrault’s compliments in stride.

“I appreciate what Bob had to say, but I have to admit that it’s pretty easy to work with such a great bunch of people,” she said. “It can appear intimidating, at least on the surface. Remember, you’re talking about six people spending five weeks together on a boat in relatively small quarters. We’ve had really good communication.”

Sherman said working alongside commercial fishermen can be very rewarding. “In previous projects, we have worked on research vessels,” she said. “Working with fishermen, I’ve noticed that they are very interested in the project and how it’s being conducted versus viewing the project as just another charter.”

Don Perkins, president of the Gulf of Maine Aquarium, served as the project’s early coordinator, connecting scientists with fishermen. “I’m playing

less of a role these days, but I’m really pleased by how well the project has come together,” he said. And just like Tetrault and Sherman, Perkins heaped praise upon the other participants for the project’s successes. “Bob [Tetrault] is one of those guys I would describe as an industry leader when it comes to understanding the benefits of collaborative research,” Perkins said.

## Observations

According to Sherman, it is far too early to offer any conclusive reports, but she has already noticed some interesting developments between surveys.

For example, during the first survey, in the fall of 2000, Sherman said she was surprised by the amount of southern fish species, including black sea bass, scup and very small menhaden, which she didn’t see this year.

Despite its projected significance, the project has yet to receive any funding from the state of Maine. While NMFS has opted to fund the program for the next three years, Sherman has been frustrated by the Legislature’s lack of interest in the project.

“I’ll admit that it’s an expensive proposition,” she said. “But we’re getting a lot back for our money.”

Sowles said the project is also helping to break down communication barriers between fishermen and government agencies.

“People on both sides of the equation tend to have a lot of preconceived notions about the other side,” he said. “This isn’t rocket science. In my mind, what the fishermen can offer us, in terms of their own experience and first-hand observations, is every bit as reliable as scientific evidence. In many cases, scientists are now confirming what fishermen have been saying all along.”

According to an update Sowles provided in November on the DMR’s website ([www.state.me.us/dmr](http://www.state.me.us/dmr)) the

*“The value of the survey is simply too great to not try.”*

—John Sowles,  
Maine DMR

project has provided an opportunity to collect good information on groundfish and other stocks including lobster.

“Compared to last fall, we saw more cod, haddock, gray sole and both American and shortnosed sturgeon,” he reported. “We also encountered a large catch of spawning herring in Saco Bay. Silver hake (whiting) was abundant at all the deeper strata tows. Unlike last year, we did not see scup, black sea bass, or menhaden (pogy). Lobster abundance seemed low as compared to last year but this may have been a result of not being able to tow in some of the Downeast shallow areas where abundance was higher. The majority of lobsters measured were hard shell and sub-legal.

“Several unanticipated problems emerged. Apparently some fishermen were caught off guard by the earlier timing and different tow locations compared to last year. Although most fishermen knew that the survey would be earlier and stations would be different; it seems word did not get through to everyone. In addition, the new Emergency 911 addresses resulted in some mailings not being delivered. As a result of both these, Marine Patrol Officers had to clear more gear from tows than they did last year. Weather seemed to be more of a problem this year as well. We may need to reconsider sticking to such a tight schedule. We are now looking at how to adjust operations to account for bad weather.

Regarding the resistance to the survey we encountered Downeast, we are resolved to work through the problems as we approach next spring and fall when the survey will again take place. Since the beginning, we have been addressing issues and believe we are making steady progress. We hope we can work with the fishing community and involve them to resolve all the issues to their satisfaction. The value of the survey is simply too great to not try.”

# NAMA needs your help

**N**AMA is a non-profit corporation, and we rely upon people and organizations just like you for our continued funding.

Since 1995, our organization has continued to grow, and we have been able to make great strides in our efforts “to generate a new voice and institutional presence, open to all who are committed to our purpose and principles, that will work toward economic and ecological stability, personal responsibility and accountability, resource protection and distributed power and authority.”

But as harsh as it may sound, even the most noble of efforts and organizations requires sustainable funding in order to continue in their mission. We are asking you to consider becoming a NAMA

affiliate member or to make a tax-deductible contribution so that we may continue our work.

New England fishermen are taking initiatives, organizing themselves to use innovation, science, technology and local knowledge to ensure the tradition of New England fishing communities endure; many of these efforts are being coordinated by NAMA. Our alliance is a highly respected, fast growing group that needs some financial support to do what the federal government cannot: to restore and enhance the fisheries of the Gulf of Maine (the waters of Massachusetts, New Hampshire, and Maine) as well as Maritime Canada.

We can offer you recognition throughout the New England coast as being one who thought enough of the fishermen’s traditions, their livelihoods, their com-

munities, and of the marine resources to lend a generous and helpful hand. Please send the most generous check you can to the address below. All contributions are eligible as deductions to a non-profit organization on your income taxes.

Please call or e-mail us with any questions.

Sincerely,

*Craig Pendleton*

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## Research news

The Northeast Consortium’s schedule for the release of an RFP for project development funds is as follows.

The NEC will release the RFP June 1. Letter proposals will be due July 1 (email submissions will be encour-

aged).

Decisions will be made by July 10, with project start dates as early as July 15.

The NEC anticipates funding 10-12 awards at up to \$25,000 each.

**“If you’re not at the table. . .  
you’re on the menu.”**

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## Useful links:

[www.web.mit.edu/seagrant/](http://www.web.mit.edu/seagrant/)

[www.oceanreporter.com](http://www.oceanreporter.com)

[www.onlinemariner.com](http://www.onlinemariner.com)

[www.manomet.org](http://www.manomet.org)

[www.northeastconsortium.org](http://www.northeastconsortium.org)

[www.namanet.org](http://www.namanet.org)

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