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Maine Lobstermen's Community Alliance
LOBSTER LARVAE GIVE HINTS ABOUT THE FUTURE
By Melissa Waterman

Jesica Waller, currently a Master’s degree student at the University of Maine, was working as a laboratory technician at Bigelow Laboratory in East Boothbay several years ago when she heard researchers at the lab talking about lobsters. Ocean acidification and a warming Gulf of Maine were in the news yet the effect these environmental changes would have on lobsters was unknown. So when Waller decided to attend graduate school at the University in 2014, she knew what she wanted to study. “I had heard my advisors [Rick Wahle and David Fields] talking about this in an abstract way and I said that I’d like to take that on,” Waller explained.

To do so meant raising lobster larvae in a laboratory setting, then subjecting the larvae to increased temperature and acidic water. “It’s hard to raise lobster larvae in the lab,” Waller said. “We have our own system here. So in 2014 we did a test run to see if it worked.”

It did. Waller was able to raise a large number of lobster larvae through all four molt stages [after which they will seek a place to settle on the sea floor] By 2015 she was ready to conduct her experiments.

LOBSTERMEN READY TO HELP ON THE WATER
By MLCA staff

Everyone knows that going to sea is dangerous. The number of ways in which one can become injured or killed are too numerous to count. Lobstermen are particularly aware of how quickly they, or anyone aboard a vessel, can get into serious trouble. And lobstermen also are often the first ones on the scene when an accident occurs at sea. This year Maine lobstermen have taken part in several -- sometimes tragic -- rescues.

Gerry Cushman, a lobsterman from Port Clyde, was hauling his traps aboard his boat Bug Catcha one morning this past January when he heard a distress call issued by the Coast Guard and also someone yelling “fire” on Channel 80, a channel monitored by fishermen in his area. The lobster boat Miss Lynne was on fire approximately four miles south of Port Clyde and a Coast Guard vessel was on its way from Rockland. Cushman realized that he was a little over two miles away from the burning boat. He hurried at top speed to the Miss Lynne, where he found the captain, John Hall, and his sternman, Karl Hoffman, standing at the burning boat’s bow. Cushman maneuvered his boat parallel to the Miss Lynne and the two men, outfitted in their survival suits, jumped aboard. The Coast Guard arrived soon after but could not save the vessel.

In June, two visitors from New Jersey and a local kayak guide encountered a violent squall while they were enjoying an afternoon paddle off Corea, Jennifer Popper, her husband Michael, and the guide, Gouldsboro’s code enforcement officer Ed Brackett, capsized when strong winds blew through the area. The water temperature was ap-
The month of November always seems to be such a surprise. The summer picks up speed and the next thing you know we are in the clear and cool days of September and October, the height of the Maine lobstering season. Then, bam! November, a month when the days are short and lobstermen start to bring in their traps. It’s a time of year when lobstermen begin to take stock of their landings for the year and look forward to the quiet that winter will bring.

Major changes are taking place in the Downeast Maine fishery, specifically in Zone C, which encompasses the waters from Sedgwick to Surry and includes the islands of North Haven, Vinalhaven, Criehaven and Matinicus. Zone C has long been known as the only open lobster zone in Maine, still allowing anyone with a commercial license to fish within its boundaries without a waiting period. But in recent years the increasing volume of lobsters landed in the zone has led to increased fishing pressure in the area. More lobstermen in a finite area means more snarls, lost gear and rising levels of frustration. In this issue of Landings, we look at the facts that led the Zone C council members to vote this year to close the zone to new entrants.

Lobster landings thus far hint at another strong season for Maine. An increasing proportion of the lobster landed will go to consumers in the fast-growing middle classes of Asian countries. Jeff Bennett, senior trade specialist at the Maine International Trade Center, provides an overview of just how fast those markets have expanded for Maine lobster and other seafood products.

Some of the lobsters landed later in the year are kept in lobster pounds for several months before being shipped to their final destinations. Lobsters must be fed and monitored closely while in pounds to ensure that they remain healthy and disease-free. One way of forestalling a disease outbreak is to provide the animals with a medicated feed, a practice that has been followed for decades. Seth Berry of Shucks Maine Lobster notes this month that one of his customers, a larger player in the market, is moving fast in his chosen career, with one season under his belt and a new 21-foot boat to look forward to. Landings features Charlie’s story as an example of a young Maine native setting forth in a traditional and time-honored profession.

Finally, the MLCA is currently recruiting its next group of young lobstermen to participate in the Maine Lobstermen Leadership Institute. The Institute will guide these young Maine fishermen through a series of workshops and real world educational opportunities to learn the ins and outs of lobster management, science, marketing and business planning. The program will begin in January and culminate with a lobsterman exchange program on Prince Edward Island in May. More information and the application are available in Landings.

We hope you enjoy the November issue and look forward to hearing from you with your ideas for future stories.
Booming Lobster Exports to China
Not an Overnight Success Story

By Jeff Bennett
Maine International Trade Center

Chinese New Year, which was on February 8 this year, launched a strong start for Maine's 2016 lobster exports to China. And that start has shown little signs of slowing down.

Through August, Maine's lobster exports to mainland China were up 56.9% ($16.9 million), and our lobster exports to Hong Kong were up 9.47% ($4.1 million) compared to the previous year.

Export numbers from the past five years reveal an impressive growth curve. In 2015, Maine exported nearly $20 million worth of lobster to China and another $5.8 million to Hong Kong. In 2010, Maine was exporting less than $1 million worth of lobster to each of these markets.

China's Economic Growth

After China initiated market reforms in 1978, its gross domestic product (GDP) growth has averaged nearly 10% a year - the fastest economic expansion in history. While China is still a developing country, this rapid economic expansion has lifted more than 800 million out of poverty.

There could be no better example of the rise of the Chinese market-based expansion than what happened this year during Singles Day — China's 24-hour shopping festival held annually on November 11 driven by China's on-line retail giant Alibaba — where sales topped $14 billion (USD) in a single day. For comparison, Cyber Monday in the U.S. topped $3 billion in 2015.

Food and Seafood Demand

China's increased wealth has led to an increase in consumption of imported food, agricultural and seafood products. Chinese imports of U.S. food and agricultural products increased from $13.1 billion in 2009 to $24.5 billion in 2014 — an increase of 87%.

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China's first "taste" of lobsters began with the Australian rock lobster. This luxury brand commanded a high price. It fed into China's growing consumer wealth and use of more and more exotic food options to symbolize status. With this increased demand, the opportunity was there to promote American lobster.

For over a decade, Maine's lobster industry, guided by its dealers and processors, has been leading the charge to educate China's consumers and develop relations with China's seafood distributors. Accumulating thousands of frequent flyer miles, business leaders have been active in China promoting Maine's brand through educational seminars and chef demonstrations and exhibiting at the world's largest seafood trade events in Boston, Brussels, Hong Kong, and Dalian and Qingdao, China.

State of Maine Trade Mission

Last fall's trade mission to Tokyo and Shanghai, led by the Maine International Trade Center (MITC) and Governor LePage, had a strong focus on seafood. Maine's lobster dealers and processors were a large part of the delegation. They held business matchmaking meetings with buyers and distributors and toured through August, Maine's lobster exports to mainland China were up 56.9% ($16.9 million), and our lobster exports to Hong Kong were up 9.47% ($4.1 million) compared to the previous year.

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Food and Seafood Demand

China's increased wealth has led to an increase in consumption of imported food, agricultural and seafood products. Chinese imports of U.S. food and agricultural products increased from $13.1 billion in 2009 to $24.5 billion in 2014 — an increase of 87%. China represents a fifth of the world's population and consumes more than one-third of the world's seafood, making it the single largest national consumer of seafood. Its total seafood consumption has more than tripled in the past twenty years, driven by a number of factors, not the least of which is increasing per capita consumption.

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To the Editor:

I’ve been a commercial salmon fisherman on Kodiak Island since 1969. My brothers make their living fishing Bering Sea crab and Bristol Bay salmon. Our family was commercial fishing in Alaska since before statehood. We also own and operate an engine-generator business in Seattle, Marine Engine Repair Co. We build work boat engines and generators for the commercial fishing and tug boat fleets on the West Coast. Our past, present, and future is tied to a healthy, sustainable ocean. I don’t scare easy and I’m scared.

I’ve witnessed the results of the steady rise in ocean temperature and acidity first hand. I’m troubled about the viability of the ocean my grandchildren and their children will inherit. This is not just our livelihood, it’s our way of life and it’s changing rapidly. I’m seeing warm water fish in places they’ve never been and cold water fish moving further north, salmon run timing is becoming less predictable and run strength less consistent, and shellfish are dying at infancy because the acidity of the water is too high for them to build a protective shell.

All we can do as individuals is take care of our own backyard, but if we all do that, change happens on a global scale.

We experienced a huge toxic algae outbreak last year, closing Dungeness crab and razor clam fisheries for much of their seasons. These threats are directly linked to carbon emissions, but we’re still lacking a carbon policy here in Washington.

I talk to a lot of fishermen on the West Coast, and what’s really scary to me is that there are so many in denial. We go about our daily lives and don’t think about how this plays out. What’s the end game? What’s the future look like with a hot, sour, and breathless ocean?

When it comes to carbon policy, the East Coast has adopted one of the best models in the world: nine states, from Maine to Maryland (minus New Jersey), participate in the Regional Greenhouse Gas Initiative, or RGGI, which puts a price on carbon.

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The money made from the RGGI carbon allowance auction is directly invested back into projects like outfitting businesses with more efficient equipment, free weatherization, and direct electric bill assistance. RGGI has achieved a 30% reduction in emissions since 2008 (more than double the national average) while growing the economy more than the rest of the country, and creating 23,000 jobs. On top of these impressive results, electricity prices fell by 3.4% in RGGI states, while going up 7.2% in non-RGGI states.

Among the 40 carbon markets currently in operation across the world, RGGI is one of the best, consistently achieving strong emissions reductions more quickly than the cap requires, while at the same time improving the economy. From what I’ve heard, many Maine fishermen may have saved on their electric bills and taken advantage of the free weatherization program without realizing where the funds came from.

RGGI is currently up for renewal, and right now program representatives are seeking stakeholder input on where the cap should be set from 2020: whether to set a 2.5% decline per year, or 5% per year. This decision is made by consensus among the nine states. Although RGGI has consistently achieved a 5% reduction since 2008, more conservative states are pushing for the 2.5% option.

I hope those of you who rely on fisheries for your livelihood understand the importance of RGGI and are speaking up to ensure maximum effectiveness of a program that is protecting our ocean (and saving you money at the same time). If the cap is set at a 5% decline each year through 2030, it will put Maine on track to meet the state’s aggressive climate requirements while creating jobs and keeping money in the local economy.

I can’t afford to fix the whole world, I can only do what I can do and that’s get involved in my own backyard. I’m educating myself on the facts and trying to pull my head out of the sand. My company is building engines with 95% less harmful emissions than the old tried-and-true diesels of the past. They are complex and costly. But we have to do this and more if we want a future on the ocean.

Many companies can’t afford new energy-efficient equipment. But with programs like RGGI, businesses that otherwise couldn’t have cut their carbon footprints can — saving money and reducing pollution simultaneously. Here in Washington State there’s a carbon tax on the ballot this year. Unfortunately, it gives the revenue away in tax breaks instead of reinvesting it like RGGI. Similar programs have been proven too weak to work so I’m holding out for the kind of strong policy that Maine currently enjoys.

All we can do as individuals is take care of our own backyard, but if we all do that, change happens on a global scale. Often the problem seems too overwhelming for an individual to make a difference. But we can help shape the future through our actions.

Those of us who depend on a healthy ocean have to do our part. The ocean absorbs about 25% of all carbon emissions, and over 90% of the excess heat. The Gulf of Maine is particularly at risk: scientists say it’s warming 99% faster than the world’s large bodies of saltwater. The fishing industry is of great importance to Maine, and your state’s policymakers should know where the industry stands on RGGI and climate action.

Wondering how to help? Get involved. Write letters and emails, call your representatives, let the Governor’s office know where you stand, get a seat at the table when decisions are made on where the money goes, and contact key representatives responsible for deciding RGGI’s future.

Robert Allen
Seattle, WA

For more information on how to make your voice heard about RGGI, call Nick Battista at the Island Institute at 594-9209.

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Guest Column: New England advance on carbon control
Fourteen-year-old Charlie Spinney of Kennebunk, a freshman at Kennebunk High School, started lobstering out of Kennebunkport this past May. Spinney’s paternal great-great-grandfather and his great-great-uncles were all lobstermen in Kittery Point many years ago and, although the fishing gene skipped a few generations, it has resurfaced yet again in young Charlie.

“My dad’s grandmother’s family, her dad and brothers were all fishermen. They owned lobster businesses and built boats down in Kittery Point. I never got the chance to meet any of them, except for my Nana. She died about four years ago, but she always told stories of the fishermen who would sell her the lobsters that she would market. That always stuck with me. My parents tell me that Nana and the rest of the Witham crew are channeling through me,” he said.

Spinney showed a keen interest in all kinds of fishing even as a toddler. “I’ve always loved fishing,” he said. “I started crabbing at Colony Beach in Kennebunkport when I was four. I always wanted to fish off the jetty there too and couldn’t wait until I was old enough to do it.”

In addition to his deep-rooted interest in fishing, Spinney also showed an entrepreneurial side from a very young age. “I’ve always loved to earn money,” he said matter-of-factly. “First it was lemonade stands, then lawn mowing and snow shoveling, which turned into more ideas and opportunities.” Spinney got interested in sand worms, read up on the creatures and then applied for a license a few years ago. “Now I sell my worms to different stores in the area and charter boats too. After that, I spoke with my parents about fishing for lobsters, which led to me scanning for boats,” he said. Last winter he bought a 16-foot skiff.

“Charlie is the oldest of three and has always been driven and has always wanted to run his own show,” explained Tara Spinney, Charlie’s mother. “His father Byron and I have always tried to support his endeavors and allow him to experience life. Charlie has a hand-won work ethic and a work ethic that is amazing.”

To get started in lobstering, Spinney researched the fishery and made some phone calls on his own. “I started calling people to find out what I had to do. I found out through the Department of Marine Resources that in order to get my license I needed sponsors and 1000 hours. Then I called people in the business who were able to help me,” he said. Kennebunkport lobstermen Lauren Brooks and Pete Hutchins helped Spinney learn the ropes, taking him out on their boats and sharing with him some of their knowledge. “They really helped out a lot,” Spinney explained.

While still in 8th grade, Spinney approached Dwight Raymond, owner of Performance Marine, to see if Raymond had any place on the Kennebunk River where he could tie up his skiff. “He and I talked back and forth until we came to an agreement and a work ethic that is amazing.”

Spinney sold all his lobsters this year to nearby Port Lobster Company. “Next year I’d like to try and distribute them to a few restaurants too,” he said.

By the end of his first summer, Spinney was able to buy a 21-foot center console T-top using his earnings and help from his parents and the boat’s former owner, Sherman Thompson from Cape Porpoise.

“He and my parents and I sat down together to figure out what I could afford to pay each month and came up with a number that would work for all of us. To help me pay for this I’ll be working on the weekends this winter on the Niewkerk family’s lobster boats. They have been really helpful too, and I have learned so much from them,” Spinney said.

Byron and Tara Spinney said Charlie has taken “every safety class we can think of for boat and marine safety.”

Last April, he took a Mariners safety course in Portland and learned how to survive in cold water, repair an engine on the fly, plug a leak and radio for help. His parents also insist that their son wear his life jacket at all times out on the ocean and they require the same of anyone on his boat with him.

While working weekends lobstering during the 2016-2017 school year, the ninth grader has plans to also play high school basketball, and join the Future Business Leaders of America club.

“After high school, depending on how lobstering works out for me, I will either continue fishing or go to a college or a trade school for business or boat building. What I do know for sure is that I will be involved in the Maine fishing industry,” he said.
NEW FEED REQUIREMENTS FOR LOBSTER POUND OWNERS

By Seth Berry

Due to a new federal rule to protect human health, medicated feed for lobsters will be harder to get as of January 1, 2017, except for those who plan ahead.

Lobster pound operators who use medicated feed to prevent shrinkage due to diseases like gaffelia (red tail disease) will only be able to use medicated feed when it is prescribed by an attending veterinarian. Fortunately, Maine has a number of veterinarians experienced in aquatic animal health.

Why the new rule?

In short, the new rule is intended to save lives and protect human health. Since penicillin was first used to treat infections, roughly 75 years ago, antibiotics have saved millions of lives and extended our lifespans. Today, however, antibiotic-resistant bacteria is becoming a serious threat.

Mainly due to the overuse of antibiotics, bacterial species have been given many opportunities to adapt and proliferate. As the use of antibiotics has exploded in agriculture, to promote growth or "just in case," even the newest generations of antimicrobials have become ineffective at an alarming rate. Each year in the U.S., say the Centers for Disease Control, over 2 million people are infected with antibiotic-resistant bacteria. Of these, at least 23,000 die each year.

What does the rule require?

To help keep antibiotics effective, the Food and Drug Administration (FDA) has prohibited virtually all over-the-counter sales of medicated lobster feed as of January, 2017. To medicate against red tail, Photobacterium indicum, or any other disease, lobster pound operators will first need to obtain a veterinary feed directive (VFD) from a veterinarian licensed in their state.

What do I do next?

To issue a VFD for animals like lobster, a veterinarian must have a "veterinarian-client-patient-relationship," or VCPR. For lobster pounds, this means working directly with the pound owner to make clinical judgments about lobster health.

The veterinarian must also have "sufficient knowledge" of the pound's lobsters. This can be obtained through testing provided at labs and through in-person visits to the pound.

Who can I call?

For a directory of veterinarians who may be able to meet your needs, you can visit the Maine Veterinary Medical Association Web site at www.mainavetmed.org and click on "Find a Veterinarian." Take time to answer this question: Is your pound ready to evolve?

Jeff Berry is Vice President for Business Development at Kennebec River Biosciences. For more information, he can be reached at (207) 844-5459 or at sberry@kennebecbio.com.
Maine Lobstermen’s Association

Advocating for a sustainable lobster resource and the fishermen and communities that depend on it since 1954.

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MALA Board Meeting on October 5 in Belfast. Rebecca Weil explained a new research project underway through NIOSH (National Institute of Occupational Safety and Health) to develop a user-friendly, cost-effective personal flotation device (PFD) for lobstermen. The research team will work with lobstermen on improving PFDs to be more workable, comfortable, and affordable. Research has shown that falls overboard are the most frequent cause of death in the northeast lobster fishery and could largely be prevented with the regular use of PFDs.

For these young men, anxiety about the future is balanced by a strong lobster season and good prices. MLA photo.

As I write this, we are in the home stretch of the election season. It seems the negative campaigning and rhetoric reached a new high (or low) this year. Fortunately, soon after you read this the results will be in. Regardless of how it all turned out, I am glad it’s over.

The tone of this year’s election season put a lot of people off. The stress of the unknown affects people differently — some get fired up while others feel disenfranchised. When things become this polarized, many people are gripped with fear about the future. This fear can make us lose sight of how blessed we are to live in a free, democratic country.

And if the election season wasn’t overwhelming enough, there’s been plenty going on within Maine’s lobster industry to strike fear into everyone’s heart. I know that my heart skipped a few beats when I learned about the Maine shellfish recall and closures this fall due to high domoic acid levels caused by a harmful algae bloom. That, and the California Dungeness crab fishery closure last year due to a domoic acid outbreak, tells me it’s time that the Maine lobster industry becomes educated on how susceptible the lobster industry is to this deadly bloom. While we are fortunate to have a strong bio-toxin monitoring program in place to detect these natural outbreaks and ensure that the public is not misled, dealing with a closure and product recall is something anyone wants to experience.

Another topic that certainly makes googlesbumps rise among lobstermen is the state of the North Atlantic right whale population. The Gulf of Maine’s changing environmental conditions are having significant impacts on these whales. Despite the many changes our industry has made to reduce the risk lobster gear poses to whales and the near doubling of the right whale population since 1997 when we became engaged in efforts to protect whales, scientists are now concerned that the whale population is trending downward. While there is no definitive research, it seems that the abundance and availability of food sources are shifting, where and when the whales are seen have become less predictable, and their health has been affected. This news, coupled with some recent high-profile entanglements, is certainly a cause for concern for our industry.

Bait also turned out to be a nerve-wracking issue for lobstermen this season. I doubt there’s a single lobsterman who hasn’t felt the pinch from this year’s tight supply and record-high bait prices. Thankfully, the lobster catch along the coast has been stable and prices remained good throughout the summer and early fall. Each lobsterman will have to reconcile how increased bait prices affected his or her bottom line this winter: were lobster landings and price strong enough to offset rising bait costs? And then there is the weather. With the fall fishing season firmly upon us, anxiety about weather increases day-by-day. The warm, calm sunny days of summer have shifted to a windy, stormy fall. Whether or not you go fishing is largely determined by the weather. Good fishing days are few and far between, and staying safe at sea and keeping track of gear become more worrisome.

None of this is new to lobstermen. Being a fisherman and running a small business will always be a source of anxiety. There are simply no guarantees when you are self-employed and your livelihood is dependent on Mother Nature. This life is not for everyone. You must be prepared to survive the ups and downs of the industry by being a skilled fisherman, having a clear business plan, and being prepared for your future. It is when you add all of those other issues to the fundamental challenge and danger of making your living at sea that it becomes so much harder.

It appears that this is the new normal for the lobster fishery. We have an amazing track record of being proactive. Due to the foresight of our forefathers, we are fortunate to have a strong, sustainable lobster population. Over the past few years we have developed strong national and international markets to support it. However, the future remains uncertain. As the Gulf of Maine continues to change, and the rest of the world’s oceans as well, the past provides less guidance for us today.

How do we deal with an uncertain future? Some will get angry, some will look for scapegoats, some will withdraw and disconnect from what they fear. Others will take on the challenge, becoming more educated about the issues facing lobstermen, more disciplined in business planning and more cautious about their activities today. As Winston Churchill said, "Fear is a reaction. Courage is a decision." As always, stay safe on the water.

Maine Lobstermen’s Association Update

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Weil asked the Directors to review a list of PFDs and select those they would be willing to try. She will use the feedback to select a variety of PFDs to field test with lobstermen. The field testing will consider how to meet lobstermen’s needs under changing conditions at different times of year, such as fishing inshore versus offshore. Lobstermen will share their thoughts on what they like or don’t like about the designs. Researchers will work with manufacturers to redesign PFDs based on the styles that lobstermen would likely wear when fishing.

Patrice McCarron updated the board on several items. The DMR held four public hearings on a proposal to require a second zone tag (double tagging) on lobster gear fished outside a lobsterman’s declared home zone. The purpose is to aid the Marine Patrol Bureau in enforcing the 49% /51% rule. The hearings were lightly attended.

Continued on page 8

STEAMING AHEAD

OCTOBER MLA DIRECTORS MEETING

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Continued on page 8
While there was little opposition to the proposal, logistical issues about lobstering and managing second zone tags were raised. Second zone tags will cost 10 cents and can be removed and refastened among traps. The rulemaking proposal must go before the DMR Advisory Council for review and approval.

The DMR solicited feedback from the lobster zone councils on establishing and setting criteria for a Zone Transfer list, which would be independent of the Apprentice waiting list. The creation of a Zone Transfer List was mandated by the Legislature as part of the new limited entry rules adopted last spring. DMR has brought forward two ideas for consideration, but is hoping to solicit additional concepts from the industry. DMR also solicited feedback during some of the zone council meetings on how best to realign the tag and license year, for instance, to change the license year to match the tag year.

The MLA Directors discussed several issues concerning bait. Herring landings picked up when Area 1A reopened on October 2 and more fish were landed from Area 3. MLA is monitoring discussions through the Atlantic States Marine Fisheries Commission regarding the menhaden menhaden quota. The fishery is not overfished and overfishing is not occurring so MLA is pushing to see an increase in that quota. Issues regarding state-by-state menhaden allocations and allocations for episodic menhaden events will be dealt with separately through the amendment process. Finally, there has been some confusion along the coast regarding the legality of some forms of hide bait. Specifically, a product marketed as pig hide and sold primarily in the Jonesport, Beals and Stonington areas was deemed to have too much fat. Only hairless hide baits are legal; if the product is mostly fat or contains other animal parts, it is not legal to use. Marine Patrol is working to educate the industry on this issue.

To date, it doesn’t appear that there will be many bills related to the lobster industry introduced in the next Legislative session. Cloture, the deadline to submit bill titles, is December 6 for government agencies and December 16 for legislators. However, during the full session of the Legislature many bills are submitted after deadline.

MLA is reaching out to lobstermen who fish in the coral zones around Schoodic Ridges and Mount Desert Rock to get a sense of the level of fishing effort in these areas and the potential economic losses if a closure is put in place. The New England Fishery Management Council is moving forward with discussions of its Coral Amendment which could close coral zones to commercial fishing. The MLA is pushing for an exemption of lobster gear in these areas.

It was a bad month for right whales and the commercial fishing industry. A spate of high profile entanglements made the news. During the year to date, there have been seven incidents with right whales, including two deaths. One of the deaths was entanglement-related and the other was not. The other five cases were entanglements. One whale was disentangled while four remain entangled. Much of the gear observed on the whales appears to be large diameter rope ½” or greater.

The National Weather Service (NWS) requested input on raising the level of conditions that trigger a Small Craft Advisory (SCA) during the cold season months. The Directors believe very strongly that the NWS should keep the status quo regarding SCA in all seasons. Small vessels are even more vulnerable during winter fishing and the proposed revised criteria could put the fleet at risk. Although there are many days during the winter when small craft advisories are in place, the MLA Directors believe those are necessary to warn vessels.
about at-sea conditions. Most fishermen use the small craft advisories in conjunction with real-time ocean buoy data to decide whether or not conditions are safe enough to go out.

MLA attended a Congressional press conference on the potential ban of lobster by the European Union; the MLA is exploring options with Maine Dealers Association and other stakeholders should this issue move forward. [NOTE: On October 14, the EU Committee on Invasive Alien Species announced that it had decided that it would not proceed with the listing of American lobster as an invasive species at the European Union level.]

The MLA Directors continued discussions on setting policy priorities for the upcoming year. The Maine Lobstermen’s Community Alliance received $4,276 for the MLCA Relief Fund from a fundraiser held by Cook’s Lobster. The MLCA Relief Fund made a donation to Jon Popham’s family in October. MLCA continues to raise funds through community nights at local restaurants and the sale of re-usable shopping bags.

The next MLA Board meeting will be at Darby’s at 5 p.m. on November 9.

**HERRING UPDATE**

**Atlantic Herring Landings**

<table>
<thead>
<tr>
<th>Area</th>
<th>Cumulative Catch YTD (10/21)</th>
<th>2015 Catch YTD</th>
<th>Total Annual Quota</th>
<th>2016 % of Quota</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area 1A</td>
<td>33.99</td>
<td>30,290</td>
<td>30,102</td>
<td>92%</td>
</tr>
<tr>
<td>1B</td>
<td>911</td>
<td>4,922</td>
<td>2,941</td>
<td>31%</td>
</tr>
<tr>
<td>2</td>
<td>9,803</td>
<td>32,100</td>
<td>32,100</td>
<td>31%</td>
</tr>
<tr>
<td>3</td>
<td>15,790</td>
<td>44,910</td>
<td>43,832</td>
<td>36%</td>
</tr>
</tbody>
</table>

| Total   | 54,413                       | 104,566        | 108,975           | 96%             |

*Quota June 1 thru Sept 30 = 21,910; Oct 1 thru Dec 31 = 8,192

**Area 1 Management**

The Area 1A Atlantic herring fishery was closed on October 18 because NOAA Fisheries estimated that at least 92% of the annual Area 1A quota had been landed. This restriction shall be in place until further notice.

Area 1A had previously been closed to fishing on September 13, when the fishery harvested 95% of the Trimmer 2 (June through September) allocation. The Area 1A fishery was reopened on October 2 to both seiner and trawl fishermen with four consecutive landing days to fish the final trimester quota.

**Herring Spawning closures**

ASMFMC implemented the 2016 spawning closures along the coast beginning in August and ending in October. In 2016, the Commission’s Atlantic Herring Section approved a one-year pilot of a new forecasting method that relies upon at least three samples, each containing at least 25 female herring in gonadal stages III-VI to be a spawning closure. During the closures, it is unlawful to fish for, take, possess, transfer, or land in any Maine port or facility, or to transfer at sea from any Maine registered vessel, any catch of herring harvested in the closed area.

Eastern Maine Spawning Area: Aug. 28 through Sept. 24

Western Maine Spawning Area: Sept. 18 through Oct. 15

Mass/NH Spawning Area: Oct. 2 through Oct. 29

**NOAA FISHERIES BEGINS RULEMAKING TO IMPLEMENT JONAH CRAB PLAN**

Jonah crab has long been considered a bycatch of the lobster fishery but, in recent years, there has been increasing fishing pressure and growing market demand for crab. The Atlantic States Marine Fisheries Commission approved an Interstate Fishery Management Plan for Jonah Crab in August 2015, and then modified Jonah crab management measures with Addendum I in May 2016. The Commission has requested that NOAA Fisheries issue complementary regulations for federal waters. State partners were required to implement regulations consistent with the Jonah Crab Plan by June, 2016.

In preparation for future rulemaking, NOAA Fisheries is seeking public comment on the Commission’s recommended management measures in federal waters. They are also seeking input on any additional alternatives that should be considered for managing the Jonah crab fishery in federal waters. The comment period is open through November 14. Comments are accepted through the online e-Rulemaking portal, or by mail to John K. Bullard, Regional Administrator, NMFS, Greater Atlantic Regional Fisheries Office, 55 Great Republic Drive, Gloucester, MA 01930. Please mark the outside of the envelope: “Comments on Jonah Crab Plan.”

**ASMF’s Recommended Jonah Crab Management Measures**

<table>
<thead>
<tr>
<th>Commercial Management Measure</th>
<th>Permits</th>
<th>Limits participation in the directed trap fishery to only those vessels and permit holders that already hold a lobster permit, or can prove prior participation in the crab fishery before June 2, 2015, control date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Size</td>
<td>4 5 inches (12.8 cm)</td>
<td></td>
</tr>
<tr>
<td>Landings Disposition</td>
<td>Whole crab fishery, with an exception for New Jersey, Maryland, Delaware, and Virginia harvesters who can demonstrate history in the claw-only fishery</td>
<td></td>
</tr>
<tr>
<td>Broodstock Protection</td>
<td>Prohibition on the retention of egg-bearing females</td>
<td></td>
</tr>
<tr>
<td>Incidental Catch Limit</td>
<td>1,000 crabs/trip for non-lobster trap and non-trap gear</td>
<td></td>
</tr>
<tr>
<td>Recreational Management Measure</td>
<td>Possession Limit 540 crab/person per day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Broodstock Protection Prohibition on the retention of egg-bearing females</td>
<td></td>
</tr>
</tbody>
</table>

**Reporting Requirements**

| Dealer Reporting | 100% dealer reporting |
| Harvester Reporting | 100% harvester reporting, but allows jurisdictions that currently require less than 100% of lobster harvesters to report are required to maintain its current reporting programs and extend them to Jonah crab

**CLERICAL CLARIFICATIONS ON ZONE LINES - DMR RULEMAKING**

DMR has proposed rule to make clerical corrections to the Lobster Zone line boundaries, amend confusing language for greater clarity, and add positions where Lobster Zone lines intersect with the Lobster Management Area 3 line. The proposal is online at [www.maine.gov/dmr/laws-regulations/documents/Ch.25%2999/proposedrule10%292016.pdf](http://www.maine.gov/dmr/laws-regulations/documents/Ch.25%2999/proposedrule10%292016.pdf). DMR is accepting written comments until November 18. No public hearing is scheduled. Questions or comments about this rulemaking should be directed to Sarah Cotoir, Maine DMR, 21 State House Station, Augusta, ME 04333; phone 207-624-6596 or email sarah.cotoir@maine.gov.

**Many thanks to these fine businesses, the MLA’s Keeper members!**

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- Bowdoin College Dining Services
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- Chapman & Chapman
- Chase Leavitt & Co.
- Coastal Documentation
- Conary Cove Lobster Co.
- Cousins Maine Lobster
- Cushing Diesel, LLC
- Damiscotta Bank & Trust Co.
- Eastern Tire & Auto Service
- Farrin’s Boatshop
- Finestink Scenic Cruises
- First National Bank
- Friendship Lobster Treats
- F W Thurston Co. Inc.
- Georgetown Fisher’s Co-op
- Gulf of Maine Lobster Foundation
- Guy Cotten, Inc.
- Harbor Bait Inc.
- H&H Propeller Shop
- Inland Seafood
- Instate Lobster Co.
- Island Fishing Gear & Auto Parts
- Island Fishermen’s Wives
- Island Seafood LLC
- John’s Bay Boat Co.
- Jonesport Shipyard
- Kips Seafood Co.
- Lake Pemaquid Inc.
- Lobster.com
- Lomnic’s Hydraulic Inc.
- Maine Financial Group
- Maine Lobstermen’s Community Alliance
- Maine Port Authority
- Maine Sea Grant
- Marine Hydraulic Engineering Co. Inc.
- McKeeoffshore
- Midcoast Marine Supply
- Mount Desert Oceanarium
- Muscongus Bay Lobster
- Nautilus Marine Fabrication Inc.
- New England Detroit
- New England Marine & Industrial Inc.
- Nicholas H. Walsh, PA
- Northeast Marine Survey Inc.
- Novatec Braids LTD
- Penobscot Bay & River Pilots Ass’n
- Penobscot East Resource Center
- Pete’s Marine Electronics
- Polyform US
- Port Clyde Fishermen’s Co-op
- Port Harbor Co.
- Re/Max Oceanside
- Riverdale Mills
- South Bristol Fishermen’s Cooperative
- Superior Bait and Salt
- Superior Marine Products Inc.
- Vinalhaven Fishermen’s Coop
- Weirs Motor Sales Inc.
- William Coffin & Sons
- Williams CPA Group
- Worumobok trust Co.
- Cousin’s Maine Lobster
- Damariscotta Bank & Trust
- Damariscotta Falls
- Damariscotta Mills
- Damariscotta Mills Lobster
- Damariscotta Mills Marine
- Damariscotta Mills Marine Supply
- Damariscotta Mills Marine Supply
MLA COMMENTS ON MENHADEN QUOTA

to Maine Voices, Portland Press Herald

Maine’s lobstermen recently caught a break with the reopening of the state’s menhaden fishery. A key source of local, fresh bait for Maine’s lobster fishery, menhaden has been an increasingly common presence in Maine waters. But the fishery’s reopening is only a temporary patch on a long-standing problem. Scientists have determined that the menhaden stock is in great shape. But the fishery suffered steep cuts in quota by Atlantic States Marine Fisheries Commission (ASMFC), the interstate body that manages menhaden, because the stock assessment conducted in 2012 had erroneously concluded that the stock was overfished.

The most recent menhaden assessment in 2015 found that the stock was not being overfished and had not been overfished since the 1960s. In short, the fishery is being managed sustainably. When read in conjunction with other metrics from the assessment, including all-time low levels of fishing mortality, it is clear that the menhaden stock is poised for long-term success. In 2015, the ASMFC, in recognition of the sustainability of current menhaden management, raised the coast-wide quota by ten percent. While this increase was a positive development for fisherman, the quota still remains well below what it was nearly five years ago. We have made dramatic gains in our understanding of the stock. Since the current science clearly supports the sustainability of the menhaden stock, the quota can clearly be safely increased.

In the year since the 2015 assessment, additional science continues to support a quota increase. The ASMFC also conducted an analysis earlier this year to determine the potential impact of a quota increase on the menhaden population. The assessment consisted of nearly 9,000 simulations, testing a variety of different potential harvest levels. At all levels tested, the scientists’ conclusion was that there was a zero percent chance of overfishing if the quota were to be raised.

Today, menhaden fishermen are back out on the water thanks to an “episodic exemption” from the ASMFC. This allows them to continue to fish above Maine’s stock assessment conducted in 2012 had erroneously concluded that the stock was overfished. In 2015, the ASMFC has the opportunity to reverse their flawed decision again brought to a vote. Mainers would be greatly served by a prompt ASMFC vote to increase the quota to a reasonable level.

Sincerely,

Patrice McCarron
Maine Lobstermen’s Association executive director
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---

**Typographical errors are unintentional and subject to correction.**
The Maine Lobster Marketing Collaborative celebrated another successful National Lobster Day, garnering excitement with media and on social channels. Compared to efforts in 2015, media mentions almost doubled and there were nearly 1000% more user engagements on social media. News about the holiday was shared through targeted media and social campaigns, garnering over 416 million impressions and reaching consumers, chefs and media through a variety of channels.

Media coverage highlights included 3 Associated Press stories, 3 national and 3 local broadcast placements, including mentions on MSNBC’s Morning Joe and segments on WCSH-TV Portland and WLBZ-TV Bangor. Consumers were also reached via social media through influencer posts and through the Maine Lobster Marketing Collaborative social channels, with the conversation around #NationalLobsterDay reaching almost 3 million users. In addition, several national restaurants participated in the celebration; including: Joe’s Crab Shack, Star Provisions, Crave Fish Bar, Red Lobster and Legal Seafood!

Maine Lobster Makes Headlines During National Lobster Day 2016


Thomas McLennan realized that as a member of the MLA, he could save money on a new boat from SW Boatworks.

“I don’t know why I didn’t do it sooner.”

And...the MLA does good things. I wanted to support it.”

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MAINE LOBSTER MAKES HEADLINES DURING NATIONAL LOBSTER DAY 2016

The Maine Lobster Marketing Collaborative celebrated another successful National Lobster Day, garnering excitement with media and on social channels. Compared to efforts in 2015, media mentions almost doubled and there were nearly 1000% more user engagements on social media. News about the holiday was shared through targeted media and social campaigns, garnering over 416 million impressions and reaching consumers, chefs and media through a variety of channels.

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The MLLI curriculum covers the scope of information necessary to ground new lobsterman leaders in the issues facing the industry. It provides a firm foundation to understand the context in which Maine's lobster fishery operates and how it differs from lobster fisheries in other areas. The MLCA is recruiting up to 20 young active commercial lobstermen who are interested in becoming more involved in the lobster industry from across Maine's seven lobster zones. Preference will be given to those under age 40, but others looking to step into leadership roles will be considered.

As the Maine lobster industry copes with a rapidly changing fishery, keeping the industry relevant and profitable for the next generation is essential. Current lobster industry leaders have served this industry for many years and are ready to pass the torch to the next generation.

New leaders must become engaged to ensure that the fishery remains strong. New leaders must continue to preserve the industry-driven conservation standards that are fundamental to the lobster fishery’s success, embrace the new technologies and social structure of the 21st century and define the industry’s goals and priorities moving forward.

The Maine Lobster Leadership Institute (MLLI) will foster new lobster industry leaders to identify priorities for the fishery and develop strategies to continue to engage lobstermen in securing a vibrant future for the fishery.

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You must commit to attend a two-day workshop retreat in late January, an exchange trip to Prince Edward Island in May, and a minimum of one meeting each month in February, March and April. The MLLI will cover the costs of meals (no alcohol), accommodations, and transportation for the two-day retreat and the exchange trip to Canada.

Interested lobstermen must hold a valid Maine commercial lobster license with no convictions. Participants must hold or obtain a current, valid U.S. passport or U.S. passport card. Those who have been convicted of criminal offense or any alcohol related offense will likely be denied entry into Canada.

### 2017 Draft Program Schedule

<table>
<thead>
<tr>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>Two-day workshop on lobster science, management, marketing and business planning&lt;br&gt;Onsite introduction to the Maine Legislature and Marine Resources Committee</td>
</tr>
<tr>
<td>February</td>
<td>Choose at least one:&lt;br&gt;- Attend industry meetings such as zone council, Lobster Advisory Council, or industry association boards</td>
</tr>
<tr>
<td>March</td>
<td>Choose at least one:&lt;br&gt;- A day in the life of a lobster (workshop)&lt;br&gt;- Maine Fishermen’s Forum&lt;br&gt;- Boston Seafood Show</td>
</tr>
<tr>
<td>April</td>
<td>Choose at least one:&lt;br&gt;- Maine aquaculture farms&lt;br&gt;- Maine Legislature (public hearings, work sessions, House, Senate)&lt;br&gt;- Workshops on lobster issues (whales, bait, etc)</td>
</tr>
<tr>
<td>May</td>
<td>Travel to Prince Edward Island, fish with lobstermen, meet with associations, tour fishermen-owned holding and processing facilities, and more!</td>
</tr>
<tr>
<td>June</td>
<td>Program Wrap-up&lt;br&gt;- Maine processing plants and holding infrastructure&lt;br&gt;- International Lobster Biology/Management conference&lt;br&gt;- Wrap-up meeting</td>
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### Apply Today!

**Maine Lobstermen Leadership Institute 2017 Program Application**

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<tr>
<th>Name</th>
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<td>Address</td>
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<td>Email</td>
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Why are you interested in the program?

Tell us more about yourself, your background and your interests.

Mail to Maine Lobstermen’s Community Alliance, PO Box 315, Kennebunk, ME 04043 or email to patrice@mainelobstermen.org

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**Deadline December 15, 2016**

**Questions?**
Patrice McCarron at 967-6221 or patrice@mainelobstermen.org
begin fishing. By 2001, all the zones except for Zones A and C and had adopted an exit/entry ratio. Zone A entered the limited entry program in 2004. Initially the ratio was based on lobster licenses; then it was changed to tags. Presently, a zone can base its exit ratio on either licenses or the historic high of tags held by a retiring lobsterman.

Zone C, which runs from Sedgwick to Surry and includes the islands of North Haven, Vinalhaven, Criehaven and Matinicus, had chosen to remain open to any Maine lobsterman who had completed his or her Apprenticeship requirements. That meant any commercial lobsterman could declare Zone C; a lobsterman from York could fish in Blue Hill Bay or a Rockland lobsterman could fish off Stonington. When lobster landings were light, as they were in the 1990s and early 2000s, pressure on the lobster stocks from lobstermen moving into the zone also remained light. But then lobster landings increased. The numbers tell the story. In 2000, Knox and Waldo county lobstermen landed 17,224,000 pounds of lobster; Hancock County landed 10,000,000. By 2010, Knox and Waldo County lobstermen landed 23,900,000 pounds; Hancock County lobstermen landed 31,300,000 pounds. By 2015, the difference was even greater; Knox and Waldo landed 34,700,000 and Hancock County landed 41,500,000 pounds.

A huge volume of lobster was coming out of Zone C waters. Stonington became the chief fishing port in the state by landings value; Vinalhaven moved up in rank as well.

More lobstermen in a finite area means more fishing pressure and more opportunities for setting on top of traps, creating snarls, and lost gear. As lobstermen within Zone C were quick to note, while a lobsterman in another zone could move to the area and then set his traps, they could not do the same in any of the state's six other zones.

The grumbling went on for some time until finally, in 2015, the Zone C council voted to send out a questionnaire to all licensed lobstermen in the zone to find out what they wanted to do. "This had come up at least three times before," said David Tarr, Zone C Council chairman. "The move to close was because there are a lot of people and a lot of boays out there. The number of licenses hasn't changed over the years, it's that a lot of licenses are being used more than they were six or eight years ago."

The questionnaire was mailed to 914 lobstermen in August that year; 347 responded (38%). It had one question: do you favor establishing limited entry within Zone C? Sixty-six percent of those that responded favored closing the zone; 34% were against. Lobstermen, not known for being reticent about any matters, responded (38%). It had one question: do you favor establishing limited entry within Zone C? Sixty-six percent of those that responded favored closing the zone; 34% were against. Lobstermen, not known for being reticent about anything, wrote comments on their questionnaires. "Too many traps in the water now," one person who favored closing the zone wrote. "The move to close Zone C is needed and long overdue," came the response from one in favor of closing Zone C to new entrants. "Definitely not! Hold my license for 40 years."

"Leave it as it is. Alone. Please. Thank you." "Not only no but Hell No." "Should have been closed ten years ago." came from some in favor of closing Zone C waters. Stonington became the chief fishing port in the state by landings value; Vinalhaven moved up in rank as well.

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With cold and flu season upon us, the last thing you need is to get caught without health insurance. An illness or injury can happen any day, but thankfully, you don’t have to worry about how to pay for your healthcare or medical bills. An illness or injury can happen any day, but thankfully, you don’t have to worry about how to pay for your healthcare or medical bills.

The ACA requires individuals to have health insurance or pay a tax penalty. The requirement can be met by having a plan with minimal essential coverage either through one’s employer or another group, or by purchasing an individual/family policy through Maine’s health insurance Marketplace.

For 2016, if an individual did not have health insurance, he or she will pay a tax penalty of 2.5% of the household income or $695 per adult and $347.50 per child under 18, whichever figure was greater, when the annual income tax return is filed. In 2017, the 2.5% of household income penalty will remain for those without coverage. However, if the dollar amount is greater, then a person would have to pay the 2016 dollar amounts plus a Cost of Living Adjustment (COLA).

Either way, you don’t want to be without health insurance next year. Get covered to avoid these penalties. There are a variety of plans available to fit your needs and budget. All the plans on Maine’s Marketplace cover doctor visits, hospital stays, prescriptions, preventive care and more.

The Marketplace offers plans from three health insurance carriers — Anthem Blue Cross and Blue Shield, Community Health Options, and Harvard Pilgrim — all of which provide coverage across the state. Maine residents can select from 33 plans for the 2017 coverage year. Consumers can browse plans within the Marketplace and compare levels of coverage. The health care plans are labelled with numbers for 1, 2, or 3 stars. A 3-star plan means that the plan has a high rating for comprehensive coverage and service, while a 1-star plan means that the plan has a low rating for comprehensive coverage and service.

Anthem offers quality care in 16 Maine counties with over 3,000 specialists and 1,000 primary-care physicians in its network, called ‘Pathway X.’ Anthem splits the state into two network branches, offering eleven different plans in each network:

- **Northern POS (point of service)**
  - Pathway X: Aroostook, Hancock, Penobscot, Piscataquis, Somerset, and Washington Counties.
- **Southern HMO (health maintenance organization)**

All of Anthem’s plans offer a range of programs, discounts, and tools to support health. The health and wellness resources offered are:
- 24/7 nurse telephone line, care support, the ‘myhealth advantage’ program, and a member discount program.
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  - 24/7 nurse telephone line, care support, the ‘myhealth advantage’ program, and a member discount program.
  - Anthem also offers online tools from their website and a mobile app. Both the website and mobile app feature tools for finding a doctor or hospital in your location, creating a virtual ID card, comparing doctor costs and quality, managing prescription benefits, and viewing claims.

Anthem also offers LiveHealth Online app which allows for members to have video visits with a doctor 24/7. Members need a smartphone, a tablet or a computer equipped with a webcam with Internet access. This feature allows for members to get medical advice, diagnoses, proper treatment and even prescriptions in about ten minutes or less. Members also can talk to a licensed therapist or psychologist from home.

Community Health Options is a consumer operated and oriented plan (CO-OP) formed under the ACA which has a broad network of providers across the state. This Maine-based and member-led company emphasizes prevention and primary care. For 2017, it will offer nine plans: one catastrophic plan, three Bronze plans, four Silver plans, and one Gold plan. All Maine hospitals are within Community Health Options’ network; the company now offers network providers in New Hampshire and Massachusetts as well.

Community Health Options provides its members with a Chronic Illness Support Program (CISP) which enables reduced out-of-pocket costs for covered services related to the routine management of five major chronic conditions: asthma, chronic obstructive pulmonary disease (COPD), diabetes, hypertension, and coronary artery disease (CAD). These services do not require any cost sharing when performed by a plan provider. Examples include office visits for the condition, medications related to the condition, lab tests, self-management classes, equipment, and supplies.

Community Health Options is the only insurance company in Maine’s Marketplace that provides benefits for pediatric dental services in some of their plans. It also offers a nurse telephone line which is available to members 24/7 for assistance in making important health care decisions. In addition, it has an online wellness portal with over 6,000 health topics plus tools and videos to enable informed choices about treatment options.

Harvard Pilgrim is a nonprofit health care company that was founded by doctors and has provided health insurance in Maine since 1994. It has a multi-state provider network which includes all the hospitals in Maine, New Hampshire, and Massachusetts. The regional network offers over 30,000 providers (doctors, hospitals, and ancillary providers). Harvard Pilgrim’s individual 2017 plans in Maine use an HMO (health maintenance organization) network. In southern and central Maine, it also offers plans that have a tiered network (Maine Choice Plans). Maine Choice HMO will be offered in Androscoggin, Cumberland, Franklin, Kennebec, Knox, Lincoln, Oxford, Sagadahoc, Waldo, and York Counties.

The Maine Choice Plans have discounts that range from 10% to 15% on the monthly premium and cost sharing for those who choose the insurer’s narrow network. This network is called the Preferred tier and has over 700 primary care providers, 3,000 specialists, and 12 hospitals. But members can also use the Standard tier which includes all doctors and hospitals in Harvard Pilgrim’s New England network (this option costs more than the Preferred tier).

Harvard Pilgrim also offers a Condition Management Program for members who are living with conditions such as asthma, chronic obstructive pulmonary disease (COPD), diabetes, heart disease, and kidney disease. Their offering includes programs for healthy eating, personal health coaches, member savings discount program, and a “right” rewards program, a know cost/quality comparison tool, and a $150 fitness reimbursement program. Additional benefits include world-wide emergency care covered at the “in-network” level, no referral requirements for acupuncture or chiropractic services, and a list of discounts for alternative medicine services.

Be sure to visit www.healthcare.gov to see what plans are available. Please contact the MLA’s Navigator to set up an appointment at 207-967-4555 or email alisha@mainelobstermen.org.
Using a series of seawater tanks, Waller tested the effect that warmer water and increased carbon dioxide (CO₂) would have on lobster larvae. Climatologists predict that by the end of this century, ocean temperatures will have risen by 3°C. (57°F). So Waller set up tanks with the current average temperature (16°C, or 61°F.) and tanks with the end-of-the-century temperature of 19°C. (66°F.). The lobster larvae were then raised through all four molt stages at the two different temperatures. Waller measured the lobsters’ length, weight, swimming speed and other factors.

It was time-consuming work. After all, as they pass through the first three molts of their lives, lobster larvae may be no more than 11 millimeters in length, less than the diameter of a dime. When they enter their fourth stage, when they begin to resemble a lobster, lobster larvae may be a whopping 14 millimeters in length. Keeping track of their size is a tricky endeavor.

“David Fields had developed a way to film the lobsters in 3-D,” Waller explained. Two video cameras were set up perpendicular to each other above each tank to track the lobsters’ movements. “I went through each ten-hour video to determine swimming speed,” Waller said. “It took a lot of time!” To measure larvae length, Waller would take a picture of ten larvae each day. Using image analysis software, she could determine the length of each larva. Weighing took place on an extremely high-resolution scale.

So if the Gulf of Maine continues to increase in temperature, can lobsters possibly adapt in time to survive in the new environment?

To study the effect that increasing acidity would have on lobster larvae, Waller used 24 tanks, each of which could be infused with a mix of carbon dioxide and air. “You can make any condition you want in the tank,” she said. Acidity, or pH level, is measured on a logarithmic scale. “We dropped the pH by 0.3 units, from 8.1 to 7.8,” Waller said. “We don’t know why but a preliminary hypothesis is that the larvae had an easier time building their shells in that environment. We don’t have data on this, however.”

When water temperature was raised to 66°F., regardless of the CO₂ concentration, lobster larvae had a hard time surviving. Those that did, however, progressed more rapidly through all four molt stages. “In the wild the fast development time might help them survive all four stages and get to the seafloor as juveniles more quickly,” Waller said.

But could a faster development time offset the low survival rate due to warmer water? “That’s a good question,” Waller said. “In southern New England we’ve seen that there’s a threshold temperature below which lobsters can survive, which is roughly 20°C.”

So if the Gulf of Maine continues to increase in temperature, can lobsters possibly adapt in time to survive in the new environment? That’s a good question. This study looked at ocean acidification and warming. The next step is to look at adaptation through multiple generations. Rick Wahle is planning a study using lobster larvae from southern New England, the Gulf of Maine and Nova Scotia to determine how larvae from the different locations react to warmer water and increased acidity.

For now, Waller is concentrating on defending her thesis this month and graduating in December. After that she plans to return to work at Bigelow Laboratory where her interest in science was sparked. “I just love figuring out what works and what is not going to work in a study,” she said.
Coastal waters are home to many microscopic single-cell algae called phytoplankton. These tiny organisms are partially responsible for the Gulf of Maine’s greenish-blue color and serve as a key source of food and oxygen at the base of the food web. While phytoplankton are an important part of the ecosystem, harmful algal blooms (HAB) occur when phytoplankton produce biotoxins that pose a public health risk if consumed.

Harmful algal blooms in Maine typically occur between April and October. Maine’s most common HAB is known as “red tide,” which is caused by a phytoplankton called _Pseudo-nitzschia_. As they filter the water to feed, they accumulate the toxin in their internal organs if affected. This toxin is passed up the food chain to invertebrates such as crabs, lobsters, and carnivorous snails when they feed on affected bivalves. These marine invertebrates are minimally affected by marine toxins, making toxicity very hard to detect visually. The presence of this toxic plankton in the environment is also hard to detect because it is rare if water color changes significantly. Thence, the historic nature of these blooms.

In Maine, researchers will be unraveling why this _Pseudo-nitzschia_ bloom produced such high levels of DA and how best to predict these events in the future. Questions remain regarding impacts of _Pseudo-nitzschia_-related toxicity for all marine organisms, not just bivalve shellfish. Answers to those questions will allow for better management and preparation for potential future DA events.

By Alison Sirois

**What happens when you or your boat can’t go haul?**

By Melissa Waterman

Phytoplankton need the right combination of conditions to bloom including sunlight, temperature, and salinity and are also dependent on nitrogen, phosphorus and other nutrients. In general, Maine experiences HABs that last between six and eight weeks each year. However, the addition of nutrients from land (via rainfall or tides) or from deep water upwelling in the ocean can prolong the bloom period.

While _Alexandrium_ blooms produce PSP toxins throughout the entire bloom period, _Pseudo-nitzschia_ blooms only produce DA toxins after nutrients are depleted in the water or the algae are environmentally stressed in some way. This makes predicting ASP toxin events and corresponding shellfish toxicity difficult. It also explains why in recent years Maine has documented many _Pseudo-nitzschia_ blooms with very low or no DA associated with them.

Once HABs begin to decline, shellfish get rid of these toxins by filtering toxin-free seawater. Some species of bivalve shellfish, however, such as Atlantic scallop and surf (hen) clams, will retain and store toxins for long periods of time after the bloom is over. Razor clams and other food sources that retain the DA toxin were thought to be the cause of the high DA levels that closed the Dungeness and rock crab fisheries in California for the majority of last year’s season. Little is known about how long species like crab and lobster might retain DA and PSP toxins in their internal organs if affected.

Historically, few illnesses have been documented due to seafood with DA toxins in North America. The first confirmed outbreak of ASP occurred on Prince Edward Island in 1987 and was related to mussels; three people died and over 100 became ill. In 1991, 10 to 21 cases of ASP illness were reported after consumption of razor clams in Washington. Last year’s DA event in the West Coast crab fishery and the current event in Maine have had no reported illness despite the historic nature of these blooms.

In Maine, researchers will be unraveling why this _Pseudo-nitzschia_ bloom produced such high levels of DA and how best to predict these events in the future. Questions remain regarding impacts of _Pseudo-nitzschia_-related toxicity for all marine organisms, not just bivalve shellfish. Answers to those questions will allow for better management and preparation for potential future DA events.

Alison Sirois worked for ten years in the Maine Department of Marine Resources’ Biotoxin and Phytoplankton Monitoring Programs.
LONG WORK HOURS AT SEA: WHAT’S UP?

by Ann Backus

Welcome to fall! Are you lobstermen working fewer hours as the daylight hours decrease? Probably not yet. But a shorter workday for those of you who are accustomed to working 12 or more hours a day is undoubtedly a good thing.

With a shorter workday, perhaps you will get more sleep, feel less stressed, eat more nutritious meals, and drink more water to keep hydrated. These behaviors may translate into feeling stronger, making better decisions, being able to concentrate longer or better on work tasks, or experiencing a more positive attitude.

With fewer work hours and more sleep you may also do your body some long-term health favors as well. Many studies in the occupational safety literature list hypertension, diabetes, heart disease, infections, muscular aches and pains, and depression as some of the health conditions associated with long work hours.

Research describes the relationship between work hours and injury in specific industries, such as trucking. The website www.truckaccidents.org notes that 30% of the 500,000 truck accidents per year are believed to be due to fatigue. The Department of Transportation regulations call for an 11-hour daily driving limit and a 14-hour limit to the work day (www.transportation.gov). In 2013 a new regulation reduced the allowable work week for truckers from 82 to 70 hours. This new regulation is expected to save lives and result in $280 million in savings from fewer large truck crashes and $470 million in savings from improved driver health.

The Federal Aviation Administration (FAA) struggles with regulations regarding duty hours and rest. The agency mandates rest periods. For example, flight crews must have 10 hours of rest prior to a flight duty period and although this can include the time of commuting to the airport, it must include an 8-hour period during which actual rest is possible. The FAA breaks fatigue into three types: transient fatigue, defined as short-term fatigue resulting from one or two nights of insufficient sleep; cumulative fatigue, defined as multiple nights of poor or insufficient sleep; and circadian fatigue which is fatigue due to being out of sync with one's normal sleep/rest cycle. While these three types of fatigue may not apply to lobstermen, fishing crew on multi-day trips might suffer from all three kinds of fatigue.

The FAA also includes time on task with regard to fatigue, in the sense that the longer one spends on a given task the more likely one is to become fatigued. This concept is directly applicable to the fishing industry. We could argue that a day of lobstering does not generally include a wide variety of tasks and therefore could increase fatigue.

A number of years ago, Dr. Allard Dembe, then at the University of Massachusetts Medical School, realized that while there was research on fatigue in specific industries such as trucking and airlines, there was no research that undertook to assess risks due to work schedule across a variety of industries. He hypothesized that “working overtime or an extended work schedule increases the risk that schedule has on the risk of injury or illness. Personal characteristics such as age, gender, and health status will influence risk and health impact as well. The organizational factors may have less relevance for the fishing community other than to the extent that regulations limit the hours during which fishing can be undertaken.

A study published in 2010 reported the results of research conducted by Paul Allen of Cardiff University’s Centre for Occupational Health Psychology and his colleagues in which they surveyed 81 British fishermen. Their findings revealed that

- 60% of these interviewed believed their personal safety had been at risk because of fatigue;
- 16% reported “having been involved in a fatigue-related accident”; and
- 44% said they had “worked to the point of exhaustion or collapse.”

In conclusion, in the fishing industry — the lobster fishery in this case — we are not exempt from the impacts of fatigue. The job is hazardous, the time on task is considerable, the work hours can be long. So to answer the question in this article's title: your risk of injury and illness is up. Get some sleep!

Can’t wait for the next issue of Landings?

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November 2016 | LANDINGS | Page 21
NOVA SCOTIA LOBSTER FISHING AREA (LFA) 35 began its season on October 14; lobstering there will end on December 31. The larger lobster fisheries are in LFA 34 and 33 off southwestern Nova Scotia and the south shore; they will begin on the last Monday in November and run until May 31.

PEI lobstermen hauled in as many lobsters this fall as they did last year — more, in some areas. The season, which began the first week of August, wrapped up Monday for 225 Island fishermen, who share the waters with nearly 500 from New Brunswick and a handful from Nova Scotia. Many lobstermen attribute the good season to exceptional weather. Fishermen in both the spring and fall seasons saw better prices than the previous year. The new PEI 12-member Lobster Marketing Board will begin to put a marketing plan in place within the next several months to spend the one-cent-per-pound levy collected from fishermen this season, expected to be in the range of $300,000.

DERELICT GEAR RETRIEVAL TO BEGIN AGAIN THIS WINTER

The Center for Coastal Studies will be working this winter to clean up lost, abandoned or derelict fishing gear from Cape Cod and Massachusetts Bays. The organization was awarded a $95,000 grant through NOAA’s Marine Debris Program to survey likely areas where fishing gear is expected and work with commercial fishermen to identify, remove, document, and properly dispose of lost gear from January through April.

“We try to isolate areas where gear will be likely to be found and recover it with grappling techniques,” said Laura Ludwig, the marine debris project coordinator with the Center for Coastal Studies. Previous efforts in 2013 and 2014 recovered more than 16 tons of gear including 660 lobster traps, half of which were returned to owners. The project runs through next November but recovery efforts will only take place during the winter.

FISHERMEN CONTINUE TO CONTEST TIDAL POWER PROJECT

The Bay of Fundy Inshore Fishermen’s Association appeared in October in Nova Scotia Supreme Court to ask for the court to stay the province’s approval to allow Cape Sharp Tidal Ventures to install two 16-metre-wide turbines at the bottom of the Minas Passage. Cape Sharp Tidal is a partnership between Halifax-based Emera and French-owned Open Hydro. The Nova Scotia government and Cape Sharp Tidal want the court to dismiss the application. The Fishermen’s Association claims that the tidal turbines would cause a decline in commercial fishing across the entire region. Their argument is that the current scale of the project is much greater than the proposal that was approved in 2009.

RIGHT WHALES RETURN TO THE BAY OF FUNDY

A marine biologist and leading researcher of North Atlantic right whales declared 2016 a banner year for North Atlantic right whales in the Bay of Fundy. Moira Brown, a senior scientist with the New England Aquarium and the Canadian Whale Institute, said that after five years of desert-like conditions, an unexpected richness and diversity of sea-life has returned to the bay. In 2015, she and her team documented eight right whales during their annual survey. In 2016, they found more than 70 individual right whales by mid-October. Since 1985 the team of marine biologists have studied the population of North Atlantic right whales that visit the Bay of Fundy in search of the blooms of plankton in the deep waters off Grand Manan. The plankton are swept into the bay by strong currents from the Gulf of Maine; the whales follow to feed and court.

EU DENIES SWEDISH BAN ON AMERICAN LOBSTER

In October, the European Union denied a Swedish proposal to ban live American lobster from the EU’s 28 member countries. After finding several dozen American lobsters living off its shores, Sweden claimed that the crustaceans threaten native European species, or bring new diseases to local fisheries. Members of the European Commission’s Invasive Alien Species Committee rejected that argument.
November 1
Health Insurance Open Enrollment begins at www.healthcare.gov. FMI: 967-4555.

November 1-3

November 9
MLA Board of Directors meeting, 5 p.m., Darby’s restaurant, Belfast.

ACA Health Insurance enrollment, 3-8 p.m., Rockland Free Clinic.

November 10
ASMFC Northern Shrimp Advisory Panel and Section Meetings, Portsmouth, NH.

ACA Health Insurance enrollment, 10 a.m.-2 p.m., Rockland Library; 5:30-7:30 p.m., Waldo County General Hospital, Belfast.

November 14
ACA Health Insurance enrollment, 4:30-6:30 p.m., Midcoast School of Technology, Rockland.

November 15-17
New England Fishery Management Council meeting, Newport R.I.

December 4
Kennebunk tree lighting ceremony, 5:30 p.m., Dock Square, Kennebunk.

December 6
Maine Lobster Marketing Collaborative meeting, Island Institute, Rockland.

December 7
MLA Board meeting, 5 p.m, Darby’s restaurant, Belfast.

December 7-8
New England Fishery Management Council, Herring Workshop, Portsmouth, NH.

Don’t forget to check out our expanded calendar at www.mainelobstermen.org. You can find more information, links, and photos. And let us know if you have upcoming events.

GIVING SAFETY A COMPETITIVE ADVANTAGE
By Rebecca Weil

Falls overboard are the leading cause of death in the northeast lobster fishery, according to the National Institute of Occupational Safety and Health (NIOSH) Center for Maritime Safety and Health Studies, and could largely be prevented with the regular use of personal flotation devices (PFDs).

In response to this problem, a safety project is being launched by the Northeast Center for Occupational Health and Safety; Agriculture, Forestry and Fishing (NEC), in conjunction with Fishing Partnership Support Services (FPSS) in Massachusetts.

Lobstermen from Maine and Massachusetts will be asked to try out existing, commercially available PFDs and to share what they like or don’t like about these designs. This information will be used to adjust existing designs whenever possible, then lobstermen will be given opportunities to try out these improved designs. A similar study was done with Alaskan fishermen, and one of the major takeaways from that study is that PFD design needs vary from fishery to fishery and from region to region. So the insights and experiences of lobstermen are very important.

It’s not only lobstermen and kayakers who may find themselves in difficult situations, as a letter to the editor of a Downeast newspaper this fall illustrated. Cally Dow and a friend were sailing along Eggemoggin Reach on a northeast wind when abruptly that wind strengthened. There were problems with the main sail so they were sailing with just the jib. The single sail was not enough to bring them back to their mooring. Flapping about and beset by the increasing wind, they noticed a lobster boat coming toward them. The captain, Billy Grant, asked if they needed help, to which they answered a decided yes. Grant’s sternman threw a line and towed the sailboat back to the harbor. As the line was freed, Dow expressed her gratitude. “Happy to do it,” Grant replied.

Our goal is to give lobstermen the opportunity to offer input on what does or does not work for them regarding PFDs. By giving lobstermen a primary role in the research process, we hope to develop safety solutions that address barriers to PFD use and to develop solutions that make safety cost-effective and easy. This research is not regulated; the research is designed to support lobstermen in staying alive while fishing.

Look for us as we come to the docks, or when we call you for input!

If you have questions regarding this project, please contact Julie Sorensen at julie.sorensen@bassett.org or at (607) 547-6023, ext.2210.
FALL FUNDRAISERS HELP
THE MAINE LOBSTERMEN’S COMMUNITY ALLIANCE

What could be better than good pizza and information about Maine’s lobstering industry? MLCA photo.

This fall the Maine Lobstermen’s Community Alliance was the recipient of several fundraising evenings at Otto Pizza of Yarmouth and the Flatbread Co. in Portland and Rockport. Customers enjoyed good food and information about Maine’s lobstermen and the state’s sustainable lobster fishery. All proceeds support the second Maine Lobster Leadership Institute taking place next spring. Many thanks to all who participated!

The staff at Otto Pizza in Yarmouth were happy to be part of the fundraising night in October. MLCA photo.

Brian welcomes customers to the MLCA fundraiser at Flatbread in Portland in September. MLCA photo.

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