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DMF NEWS

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Marine Fisheries

A Commonwealth of Massachusetts Agency

NOAA to Create Saltwater Angler Registry in 2010

States have more time to implement programs

NOAA Fisheries released its final rule in December 2008 explaining how and when it will create a national registry of marine recreational fishermen. A requirement to establish a registry was included in Congress' 2006 reauthorization of the Magnuson-Stevens Act (MSA) to help the nation better protect our shared marine resources. The final rule requires anglers and spearfishers who fish recreationally in federal ocean waters to be included in the national saltwater angler registry by January 1, 2010. NOAA Fisheries will exempt anglers from the federal registry if they are licensed in states that have a system to provide complete information on their saltwater anglers to the national registry.

NOAA Fisheries had originally proposed that registration be required beginning January 1, 2009, but based on public input decided to give states another year to put in place their own data collection systems. NOAA Fisheries has stated it wants to work closely with the states and anglers to better capture the contributions and effects of sportfishing and they expect that this additional year will allow a number of states to put in place systems to register their anglers annually and provide this information to NOAA Fisheries.

The improved quality of recreational fishing data achieved through a saltwater angler registry will help demonstrate the economic value of saltwater recreational fishing, and will provide a more complete picture of how recreational fishing is affecting

fish stocks. This kind of information is essential to achieving the National goal to end overfishing as required under the MSA.

If anglers are not registered by a state that has been exempted and want to fish in federal waters, they will be required to register with NOAA Fisheries. They must also register if they fish in tidal waters for migratory fish such as striped bass and salmon that spawn in rivers and spend their adult lives in estuaries and oceans. Anglers who fish only on licensed party, charter, or guide boats would not be required to register with NOAA Fisheries since these vessels are surveyed separately from angler surveys.

Public input received by the Commonwealth largely shows support for the state to administer its own registry *in lieu* of a federal registry supposing minimal fees are charged and direct license revenue to enhance Massachusetts saltwater recreational fishing.

Questions about the Commonwealth's role in future licensing could be directed to Paul Diodati (617-626-1530) and more information about the federal final rule can be found at <http://www.st.nmfs.noaa.gov/mrip/aboutus/organization/anglerteam.html>.

By Paul Diodati, Director

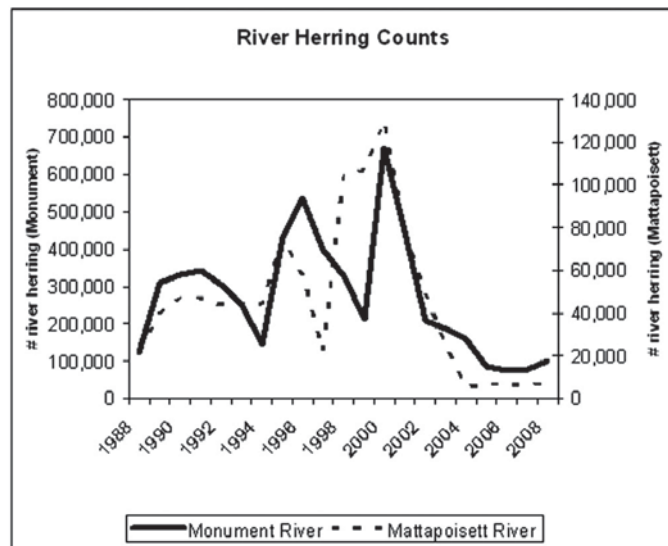
River Herring Moratorium Continued for Three More Years to Maximize Spawning Numbers

On October 2, 2008 the Massachusetts Marine Fisheries Advisory Commission approved the continuation of a **moratorium on the harvest, possession and sale of river herring** in the Commonwealth for another three years through 2011. The decision extends the original 3-year moratorium that has been in effect since January 2006.

Other states including Connecticut, Rhode Island and North Carolina also have closed their fisheries for river herring. The National Marine Fisheries Service (NMFS) has listed both species of river herring (alewife, *Alosa pseudoharengus* and blueback herring, *A. aestivalis*) as species of concern due to an overall decline coast-wide.

The moratorium has been extended due to a lack of recovery of river herring runs in the Commonwealth and surrounding regions. All available information indicate that the number of spawning river herring entering the runs in spring of 2008 remained well below average, and mortality remained high.

But there is some good news - the moratorium appears to have helped stabilize the runs, although at lower levels, and many of our runs showed a slight 2008 increase in the number of spawning fish (see graph). This suggests recovery is underway. Three more years of moratorium will allow the maximum number of spawners to complete an entire life cycle, thus increasing the probability of stock recovery.



Herring numbers increased slightly in 2008 after a precipitous decline beginning in 2001.

During the initial closure period, research has focused on establishing better ways to monitor runs, determining population mortality rates, and examining possible causes of population declines. *Marine Fisheries* staff spent considerable time examining by-catch of river herring in sea herring pelagic fisheries (mid-water trawling, mid-water pair trawling, small-mesh trawling, and purse seining) and its impacts on river herring populations - see accompanying article. A study entitled "Estimates of River Herring By-catch in the Directed Atlantic Herring Fishery" co-authored by Matthew Cieri (Maine Department of Marine Resources) and Gary Nelson and Michael Armstrong (*Marine Fisheries*)

released on September 23rd, provides estimates of river herring by-catch in the directed sea herring fisheries from 2005 through 2007.

By-catch estimates were derived from sea sampling data from the NMFS Observer Program and the Maine Department of Marine Resources Portside Sampling Project which sampled Atlantic herring and mackerel catches at processing plants and bait dealerships from Maine to New Jersey. The study identified areas and times of year where river herring by-catch occurs.

About 70% of all sea herring trips contained no river herring by-catch and only a very small number had significant quantities. Total weight of river herring by-catch in the sea herring pelagic fishery ranged from 285,000 to 1.7-million pounds per year. While significant, this amount of mortality is not sufficient to cause the coastwide decline of river herring stocks, and so there must be other, currently unidentified factors contributing to mortality.

Currently, the Atlantic States Marine Fisheries Commission is developing Amendment 2 to its Interstate Fishery Management Plan for Shad and River Herring to address stock declines and control fishing mortality. *Marine Fisheries* is making significant contributions to the formulation of this assessment.

We also continue to lead river herring restoration efforts in the Commonwealth by continuing to monitor the health of river herring populations thus building upon the existing time-series for certain runs and creating new ones. Other restoration efforts include increasing river herring access to historical spawning habitat through dam removal and fishway construction as well as transplanting spawning adults into rivers to augment current population levels and re-introduce river herring to rivers where runs have been extirpated.

By Phillips Brady, Senior Fisheries Biologist & John Sheppard, Fisheries Biologist, & Dr. Michael Armstrong, Recreational Fisheries Program Chief

By-Catch Monitoring in the Sea Herring and Atlantic Mackerel Fisheries

Each year mid-water trawlers land about 90-million pounds of sea herring and 50-million pounds of Atlantic mackerel in the ports of Gloucester, New Bedford and Fall River - about 50% of all sea herring and greater than 80% of all Atlantic mackerel landed on the east coast. Atlantic sea herring aggregate in large schools offshore and are not to be confused with river herring that enter rivers and streams during spring. They are an important forage species for many fish, marine mammal and seabirds; they are also a highly valued commercial fishery for both domestic and foreign fishing fleets. Nationally, the herring fishery supplies bait for commercial lobster, blue crab, and tuna fisheries, and recreational fisheries, and provides product such as a canned fish (i.e., sardines). Overseas, frozen and salted herring are a valued commodity.

With pelagic fishing off our coast and on Georges Bank comes concern about bycatch and discards of species other than herring. Regulated through complementary management processes between the Atlantic States Marine Fisheries Commission (ASMFC) and the New England Fisheries Management Council (NEFMC), bycatch concerns and increasing fishing effort on the inshore component (Gulf of Maine) of the Atlantic herring stock, among other

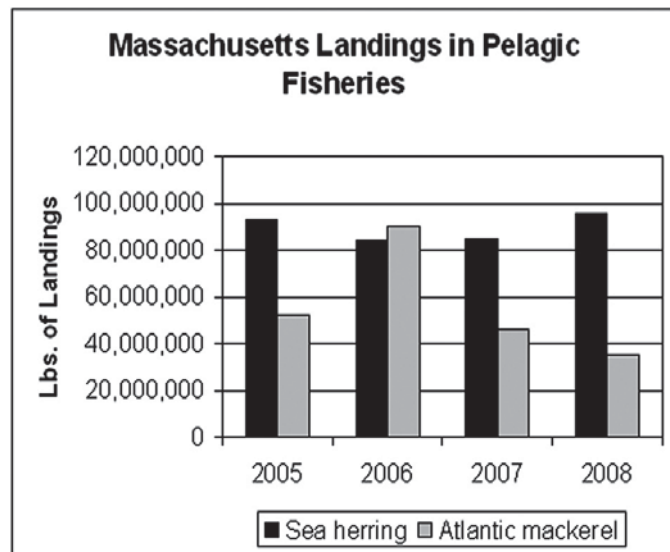
concerns, have prompted development of new management plan amendments. *Marine Fisheries* has supported these regional management actions but has taken the added step of implementing its own project to closely monitor these high volume pelagic fisheries.

The major goal of the project is to quantify the by-catch of non-target species, with particular interest in river herring, American shad, and haddock. Staff will sample fishermen's landings at the dock to acquire information on the biological characteristics of the catch and other information of importance to stock assessment and management. This will be accomplished by sampling catches as they are pumped shoreside from the mid-water trawlers. All landings are relayed through processing plants where fish are sorted, packed and frozen or loaded into trucks for distribution into the bait market, the export market, and shipment to canneries in Maine. These bait dealers and plants will be the sample sites as they offer a good opportunity for samplers to access catch and effectively quantify the entire vessel's landings.

Sampling will be concentrated in Gloucester, New Bedford, and Fall River but as time allows, sampling will also take place in ports from adjacent states. In general, the sampling involves taking periodic subsamples of the catch during the entire pump-out period, which can last as long as 12 hours. Rates of by-catch, length frequencies of various species, and other biological data are then expanded to the total catch from that particular boat. The boat information is then expanded to the entire fleet based on areas fished, gear type and time of year with the end result being an accurate estimate of by-catch in the pelagic fleet.

Marine Fisheries will work closely with the Maine Department of Marine Resources (MEDMR) to apply sampling methodologies that have been used by MEDMR to sample pelagic fisheries in previous years, and to further refine these techniques based on the needs of sampling in Massachusetts ports to generate the most accurate data. We hope our sampling and analysis will contribute towards a better catch sampling program that is now being developed by the New England Fishery Management Council as the focus of its next management plan amendment.

By Dr. Michael Armstrong



A majority of the overall sea herring and Atlantic mackerel catches are landed in the Commonwealth annually.

Framework 42 - Economic Relief for Crew Members

Coastal communities along the Eastern seaboard have long depended economically on the fishing industry. Massachusetts commercial fisheries were worth \$4.4 billion (3rd highest value in the nation) and provided 83,000 jobs in 2006, NOAA Fisheries reported in the most recent "Fisheries Economics of the U.S.". Over the past two decades, however, stressed stocks, lower profitability and increased regulatory oversight have led to an overall consolidation of the fishing fleets; resulting in fewer active vessels and the movement of vessels into the few remaining major 'fishing ports'. Through it all, the Northeast groundfish fishery remains rooted in Massachusetts, with over 50% of the \$100 million (ex-vessel) industry landing their catch here.

Framework 42 (FW 42) regulations adopted to curb fishing effort in the Northeast groundfish fishery disproportionately impacted Massachusetts groundfish fishermen versus other Northeast states. Early in 2008 Congress appropriated \$13,395,000 to *Marine Fisheries* to alleviate FW 42 economic impacts on the Massachusetts groundfish fishery. *Marine Fisheries* worked with a state Drafting Group and an Industry Subcommittee in addition to holding three public meetings to develop a program to provide relief to a broad segment of fishery participants.

In order to distribute these funds in a multi-phase approach, *Marine Fisheries* applied for and received a grant entitled, "Massachusetts Groundfish Relief for Impacts of Framework 42". During Phase 1, eligible vessels were identified for compensation (see DMF News, 1st and 2nd Quarter 2008) and vessel owners were requested to provide information on crew members who worked on their vessel during the eligibility period. This information was used to compile a list of individuals who would potentially qualify for participation in Phase 2 of the program, 'Economic Relief for Crew Members'.

Phase 2 of the grant includes \$750,000 in funds for direct assistance for crew members, and over \$630,000 to assist fishermen and their families with health insurance offered through the Fishing Partnership Health Plan (FPHP). To assist in providing information to as many crew members as possible, *Marine Fisheries* worked with two partners: Shore Support, Inc. of New Bedford and the Gloucester Fishermen's Wives Association of Gloucester. The Commonwealth's partners also helped by disbursing relief funds to crew members in their respective regions. Outside of the Gloucester and New Bedford areas, eligible crewmen received relief funds directly from the Commonwealth.

As of December 15, 2008, funds had been distributed to 520 crew members qualified to receive relief payments in the amount of \$1,445. As expected, the two major fishing ports of New Bedford and Gloucester accounted for the largest numbers of qualified applicants, with percentages of 24% and 21%, respectively.

Assistance to groundfish fishermen and their families for health insurance through the FPHP will be provided by the Massachusetts Fishermen's Partnership (MFP), Inc. The MFP will assist eligible applicants in completing forms, filing paperwork, and assisting with premium payments. This program will operate for one or two years until funds are exhausted. For further information contact the MFP's Executive Director, Angela SanFilippo, at 978.282.4847.

By Kevin Creighton, Acting Chief Financial Officer

Exploring Manufactured Bait Use to Minimize Cod Bycatch in Nearshore Haddock Fishery

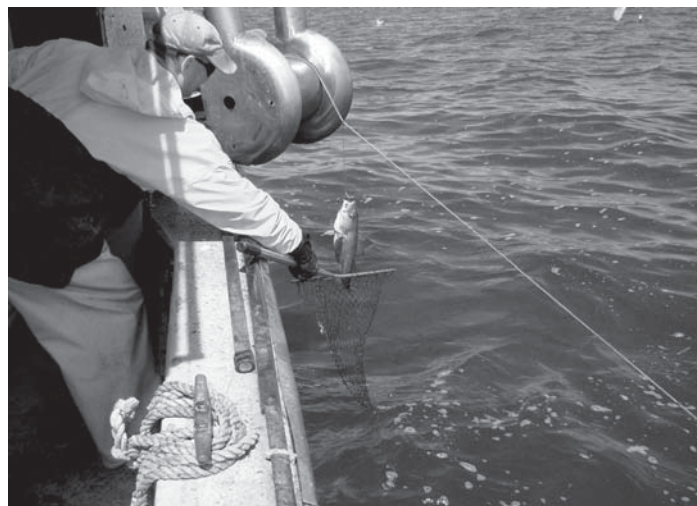
In spring 2007 South Shore fishermen Robert MacKinnon and Jeffrey Carver were helping *MarineFisheries* researchers in the Cod Conservation Zone (CCZ) when they noticed something surprising: a lot of haddock in experimental gillnets. Opportunity knocked, and they answered by developing a cooperative research proposal with DMF to hook for haddock in the CCZ, with manufactured bait marketed as haddock-selective while avoiding cod (Norbait 700E).

Made primarily of mackerel, Norbait has been used by the Cape Cod Commercial Hook Fishermen's Association (CCCHFA) to create a sector for longlining haddock in and around Closed Area I on Georges Bank. Testing by CCCHFA and others in the region appeared to confirm the bait's effectiveness. Our research questioned how effective Norbait might be in the Gulf of Maine where the cod to haddock ratio is higher than on Georges Bank.

After reviewing the fishermen's proposal, *MarineFisheries* designed an experiment to compare catches of cod and haddock between standard bottom longline gear baited with clams, herring, and Norbait. During April-May 2007 *MarineFisheries* biologists and MacKinnon fished a total of 35,000 11/0 circle hooks aboard Carver's vessel. In assessing the relative catch of haddock to cod, only legal-sized haddock were considered while all sizes of cod were counted. We assumed legal-sized haddock represented possible landed catch, while all cod would be discarded without regard to size.

Norbait caught less cod, but also less haddock suggesting it might be difficult to make a day's pay after all expenses when using only Norbait. Results showed Norbait reduced the relative catch of cod to haddock by about one-half compared to herring and clams:

<u>Norbait</u>	<u>Herring</u>	<u>Clams</u>
2.6 legal sized haddock/cod	equal #s haddock/cod	1.25 haddock/cod



Jeff Carver nets a cod harvested using Norbait 700E on a longline hook, as it is hauled out of the water.

The effectiveness of Norbait in terms of the ratio of cod to haddock, however, likely was based on the ratio of cod to haddock in the Gulf of Maine. There simply might not be enough haddock in the CCZ under current resource and management conditions to make a Norbait hook fishery for haddock effective right now. This might explain why CCCHFA saw much higher haddock to cod ratios given the status of Georges Bank haddock and cod and consequent management restrictions (or allowances) in place for each stock.

In 2009 we have new considerations. The status of Gulf of Maine haddock has greatly improved and may support future use of Norbait as a management tool in the Gulf of Maine.

There is more to learn about the utility of Norbait under varying resource and management conditions. At the behest of Messrs. Carver and MacKinnon, *MarineFisheries* is applying 2007 results to develop another experimental project using just Norbait 700E for bait. If approved by *MarineFisheries* for state waters, only a few fishermen will be involved because areas and times fished will have to be closely monitored. No cod will be retained.

Regardless of the outcome of the proposed 2009 study, the 2007 project was an excellent example of fishermen, scientists, and managers combining their expertise to investigate whether a state waters' fishery for haddock can be permitted while protecting Atlantic cod.

More research details can be found by referencing the published study (Pol, M., Correia, S., MacKinnon, R., & Carver, J. 2008. Longlining haddock with manufactured bait to reduce catch of Atlantic cod in a conservation zone. *Fisheries Research* 94(2):199-205) or contacting Michael Pol (mike.pol@state.ma.us or 508.990.2860 x116).



Jeff Carver (r), Bob MacKinnon (standing, second from right) and the crew of the F/V Sandra Jean prepare to leave the dock to go to their mooring

Spiny Dogfish Rebuilt!

Commercial quota increased

Spiny dogfish are back and in numbers reminiscent of what was observed in the late 1980s before any directed dogfish fishery. At current levels, dogfish is considered a “scourge” by commercial and recreational fishermen along the Atlantic coast. Too high of an abundance of dogfish could cause delay in the recovery of some heavily managed fisheries.

The large-scale directed fishery conducted on dogfish in federal waters during the 1990s prompted an aggressive federal fishery management plan with a very high rebuilding target and a resultant complete closure of the fishery in federal waters. States agreed to support the closure, with one exception – Massachusetts. Our hesitancy to support what we believed was an ill-advised closure led to conflicts with the federal government and the Atlantic States Marine Fisheries Commission (ASMFC) that eventually adopted the federal position.

We argued from the very beginning that a small-scale directed fishery (e.g., 2,000-pound limit) in state waters was justified and would be a signal to the New England and Mid-Atlantic Fishery Management Councils and the National Marine Fisheries Service (NMFS) that we were unwilling to set-aside predictions from federal scientists in the early 1990s that large biomass of dogfish (and skates) could impede state and federal efforts to rebuild cod and other groundfish to their targets. With rebuilding groundfish as a central concern, we were unwilling to support a stockpiling of large amounts of dogfish in nearshore waters especially in cod nursery areas such as Cape Cod and Massachusetts Bay. In recent years dogfish have been almost year-round residents in our waters thereby intensifying our concerns about dogfish predation and their ecosystem effects.

This year-round residency might be a result of dogfish having been rebuilt to its target biomass for large mature females. A new and refined, recommended target for large mature females (≥ 80 cm) is 167,800 metric tons. Abundance in 2008 climbed to 194,600 mt (Figure 1). Consequently, dogfish are not overfished, and just as important, overfishing is not occurring.

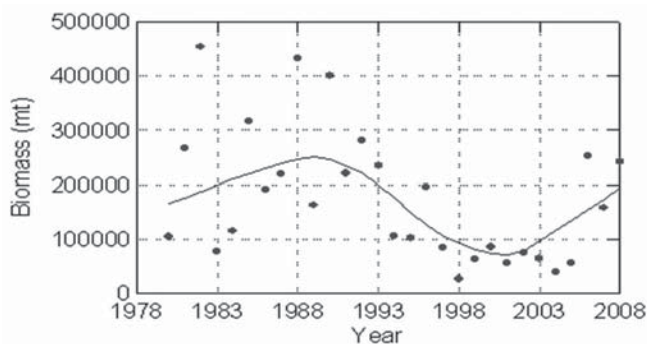


Figure 1. Biomass of mature females (≥ 80 cm) (3 yr), NEFSC spring bottom trawl surveys, 1980-2008

This outcome convinced the councils to increase the quota from 4- to 12-million pounds for the 2009 fishing year beginning on May 1st. ASMFC increased from 8- to 12-million pounds. All management bodies agreed to a maximum possession limit of 3,000-pounds. We now await NMFS' determination as to whether federal officials will agree with the council quota increase and a return to some directed

fishing, although still small-scale. The current federal limit is 600-pounds and is considered to be a bycatch allowance. Regardless of the federal decision states will restrain themselves to 12-million pounds and up to a 3,000-pound limit.

Despite this extremely good news, words of caution have been emphasized. Managers are warned that the skewed ratio of mature males to mature females is cause for concern although the ratio is no longer above 5:1 (Figure 2). Too many mature males as compared to females have scientists and managers skeptical of rebuilding success. We have a

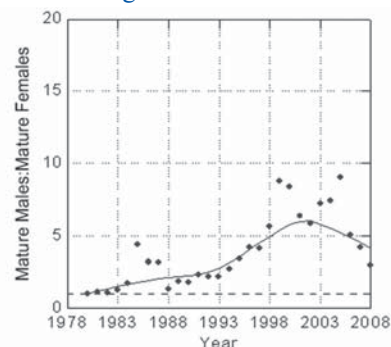


Figure 2. Mature male:female ratio (3 yr), NEFSC spring bottom trawl surveys, 1980-2008

different perspective that minimizes our concern about a “skewed” sex ratio.

The ratio of 5:1 and greater occurred when large mature females were overfished and their numbers dropped dramatically. Simple arithmetic reveals that when mature female abundance increases, the ratio drops below 5:1. Why be concerned about the current ratio of about 3:1 when that ratio and lower existed when there was no directed fishery and mature female biomass was very high? With just a few exceptions, mature male biomass has remained very constant since 1980.

Another caution pertains to a warning that over the last 10 years recruitment appears to have been poor; therefore, the recruitment deficit will have to be “paid back.” Perhaps, although recent years’ recruitment (number of “pups”) has been very promising and provides evidence that the mature female biomass has rebuilt dramatically. Nevertheless, all projections of mature female stock size indicate they will not be overfished again provided fishing mortality is kept low and reasonable. We expect the councils and ASMFC will abide by that requirement, unless, eventually, it is revealed that by keeping dogfish at its very high target biomass, ecosystem impacts – notable predator-prey interactions – are unacceptable. Federal law would have to be revised allowing councils to set lower targets in the interest of favoring desirable ecosystem dynamics and fish stocks of greater value to the nation.

This winter we will meet with fishermen and processors to determine how Massachusetts should best manage its “share” of the 12 million quota; a north-south split reserves 58% of the total quota for states from Maine through Connecticut. Working with the Commonwealth’s Marine Fisheries Advisory Commission, our challenge will be to maximize economic benefits to the industry while balancing small-scale fishing in state waters against fishermen’s need to land their dogfish bycatch caught while fishing for other species such as cod and flounders. It’s a welcome challenge after so many years of discouraging news about dogfish and our having to contend with critics of our state management approach putting us at odds with our partners in state and federal fisheries management.

By Dr. David Pierce, Deputy Director

"Massachusetts Lobster Fishing - The Right Way"

DMF and Partners Launch Lobster Promotion Program

In July 2008, a new lobster promotion campaign was introduced to educate consumers about what Massachusetts lobstermen are doing to protect endangered whales. *Marine Fisheries* has partnered with the Massachusetts Lobstermen's Association, the Whale and Dolphin Conservation Society, and The Ocean Conservancy on a campaign called "Massachusetts Lobster Fishing – The Right Way." This marketing campaign uses labeled lobster bands and informational materials to promote lobsters caught by Massachusetts lobstermen using gear that reduces the risk of whale entanglements. Buying local lobsters helps support Massachusetts lobstermen who are putting a significant financial investment into whale protection at a time of rising bait and fuel costs.

A key component of the program is signature green lobster bands, which feature the word "Massachusetts" and a whale's tail to identify lobster caught using our unique gear modifications. Massachusetts is the first and only state to require sinking groundline year-round in all state waters. The use of sinking groundline removes those arcs of line from the water column and reduces the risk of entanglement for large whales, including the North Atlantic right whale. In addition, Massachusetts lobstermen have other rules to protect whales, including break-away links on all buoylines and seasonal gear restrictions in Cape Cod Bay Critical Habitat. The program partners have distributed colorful brochures to fish markets, restaurants, seafood dealers, and whale watch boats describing the program.

The lobster promotion campaign even caught the eye of world-renowned chef (and Fall River native) Emeril Lagasse. His show, *Emeril Green*, on the Discovery Channel's Planet Green television network features sustainable, local, and organic foods. Massachusetts was highlighted in an episode because of the more sustainable approach to lobster fishing used in the state. Massachusetts lobsterman, Dave Casoni, was featured in the episode alongside the renowned chef to explore lobster recipes and explain how Massachusetts lobster is caught in ways that are safer for endangered whales.

The episode aired November 4. "Being a part of this show was a great experience. It is important for people to know that there is a more sustainable choice when it comes to buying



Green bands identify lobster caught by Massachusetts fishermen complying with gear specifications required to reduce risk of whale entanglements

lobster, and this will help get out the word," said Casoni. "Along with our partners, we will continue to tell the story about Massachusetts lobster and how buying local is the best choice for whales and for our local economy."

In 2009, the Massachusetts Lobster program will continue to highlight the efforts of Massachusetts lobstermen using media and outreach to consumers. For more information please contact Erin Burke at 508-990-2860 x134.

DMF uses acoustic tracking equipment to examine local striped bass migrations

Striped bass is an anadromous fish that is distributed along the Atlantic coast from Florida to Canada's St. Lawrence estuary and historically in the Gulf of Mexico. The Atlantic migratory coastal stocks, which mostly originate in the Chesapeake Bay, Delaware River, Hudson River and Roanoke River/Albemarle Sound, undergo seasonal coastal migrations ranging from North Carolina to Nova Scotia, while stocks to the north remain within their natal rivers of estuaries. The coastal and near coastal waters off of Massachusetts are one of the primary summering grounds for the Atlantic migratory coastal stock where they feed off the nutrient-rich forage base that is inherent to these cool waters. Tagging studies have shown that although some smaller striped bass arrive in Massachusetts waters in early May, the main body of fish arrives in Massachusetts by the first week of June.

Latitudinal movements of striped bass with season have been well documented through tagging studies. Longitudinal movements, inshore-offshore, are not as well known as past tagging studies were not designed to provide data to answer this question explicitly. This lack of information could have an impact on management as managers must rely on undocumented information to assess the effectiveness of regulations.

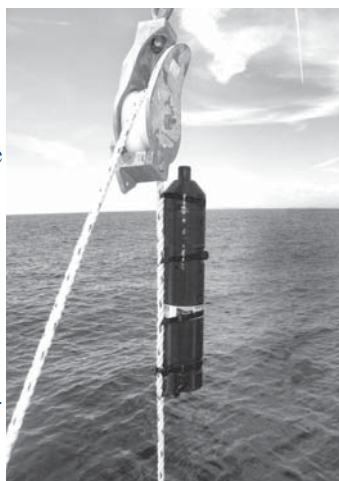
In May of 2008, *Marine Fisheries* initiated a study to document the inshore-offshore movements of striped bass along the Massachusetts coast. The study will be conducted for two years with the goal of improving our understanding of current fishing mortality and the impact of the prohibition of recreational fishing in federal waters (EEZ) that has been in place since 1990.

The study is being conducted on Stellwagen Bank, which is located on the Gulf of Maine at the eastern edge of Massachusetts Bay, and inshore areas along Massachusetts and Cape Cod Bay. The movements of striped bass are being monitored using Vemco's underwater acoustic telemetry tracking equipment. The tracking equipment consists of



Kelly Ricaurte (Ocean Conservancy), Dave Casoni, Chef Emeril Lagasse, and Deputy Director Dan McKiernan.

V16H and V13H transmitters (tags) and VR2W receivers. The tags are approximately the same size of an AA battery and the receiver is cylinder-shaped and is 3" in diameter and 14" long. Once activated and placed in water, these tags send sound signals to the receivers and relay information such as: a unique ID, depth, and temperature. The receivers then store the data with a time stamp which can be retrieved and downloaded by the researcher. Downloads are wirelessly ("Bluetooth") logged to the researcher's computer. To monitor fish movements, typically, a line (array) of receivers is strategically placed in the study area. Similar to a car passing through a toll booth using a Fast Lane pass, as the tagged fish swims through the array a record with associated data is stored in the receiver.



Individual Vemco receivers were grouped in the ocean to create listening arrays.

In May, *MarineFisheries* deployed 3 arrays which included a total of 44 receivers. The main array was located off the tip of Cape Cod and ran in an east - west direction paralleling the state boundary. The objective of the array is to record fish that transit between state and federal waters. The second array, located off the eastern side of Truro MA, was set perpendicular to the shore and was designed to act as a "gate" to monitor fish that migrate out of the study area (typically during the fall migration south). The third array was in the northern entrance of the Cape Cod Canal in Sandwich/Bourne, and similar to the Truro gate, was designed to monitor fish that migrate to the south through the Canal.

An additional array was deployed in Salem Sound, which is located in the western most portion of Massachusetts Bay. This array is part of a second (separate) study intended to examine small scale movements to track depth and temperature preferences of striped bass in Salem Sound. Dr. Gary

Nelson (*MarineFisheries*) demonstrated in 2007 that many striped bass in Beverly-Salem Harbor remain in that estuary for the entire summer and have distinct temperature/depth preferences (see related article). Vemco's tags and receivers will provide finer scale measurements of habitat use.

In June, *MarineFisheries* surgically implanted 50 tags in striped bass - half caught on the southwest corner of Stellwagen Bank and half from Salem Sound. Fish were caught by artificial lures or bait with circle hooks using conventional angling techniques. Circle hooks helped minimize damage and/or mortality and all tagged fish were released in excellent condition. The average size of fish tagged on Stellwagen Bank was 36" and weighed 18.4-lbs.; in Salem Sound average size was 31" and weight was 12-lbs. The largest fish tagged was caught on Stellwagen Bank and was 42" in length and weighed 27.5-lbs. The minimum size fish tagged was 26" and was caught in Salem Sound.



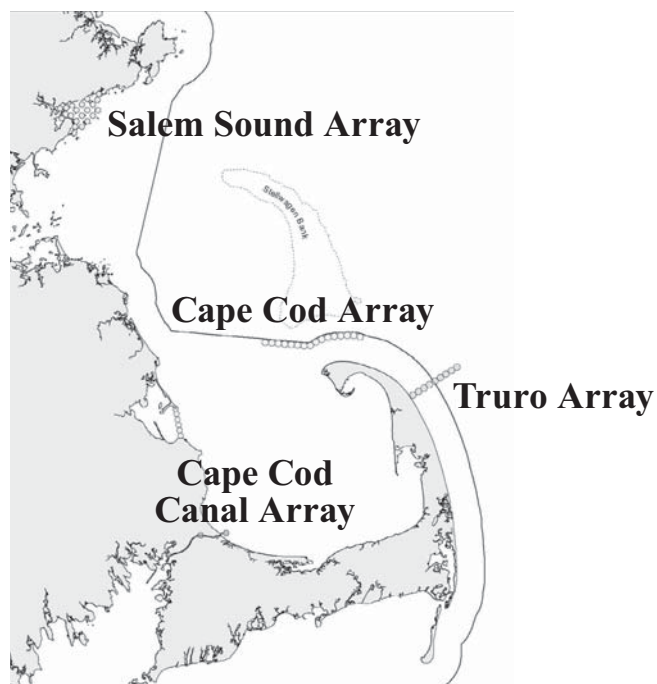
Striped bass were tagged by implanting transmitters through a ventral incision.

In November, 2008, the receivers were hauled in for the season and data were downloaded. Volumes of information are now being edited and analysis will begin this winter. Although complete results are not yet available, we have been able to confirm an inshore - offshore movement of fish from Stellwagen Bank into state waters. Ancillary information was unexpectedly provided by Delaware researchers in November. Using Vemco receivers that were capable of receiving signals from *MarineFisheries*' tags, 60% of the striped bass tagged on Stellwagen Bank by *MarineFisheries* were recorded off of the mouth of the Delaware River.

This introduction of acoustic technology has given *MarineFisheries* the ability to track local movements of striped bass in discrete areas. Later this year we plan to expand our array of receivers to include all of Massachusetts Bay which will help determine the migration rates between inshore and offshore waters in the Massachusetts portion of the Gulf of Maine. In addition, it is anticipated that the use of this technology will be expanded to monitor movement of other species including winter flounder, tautog, lobster, and sand tiger sharks.

Since there is potential for loss of receivers, typically due to storms, interaction with commercial fishing activities, vandalism, or boat strike, if you should find a black device labeled "VR2W Acoustic Monitoring Receiver" please call the 1-800 number on the receiver, or contact Bill Hoffman at: Bill.Hoffman@state.ma.us or 978.282.0308 ext 106. Likewise, if you caught a striped bass with a red disk tag beneath its dorsal fin this summer, or catch one next season, please contact Bill. Rewards are available for returned tags and receivers.

By Bill Hoffman, Fisheries Biologist



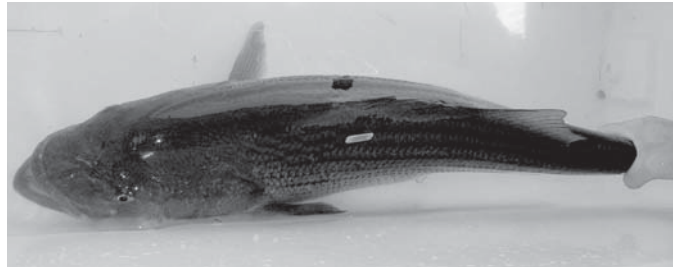
Temperature Preferences of Striped Bass

In June through August of 2006, *Marine Fisheries* biologists studied the temperature preferences of striped bass during their summer residence in Massachusetts. The thermal preference of striped bass has been described for landlocked populations in southern reservoirs, but it is unknown if such preferences exist for striped bass in the continuously changing marine environment. Knowledge of the temperature preferences of striped bass in the ocean provides an understanding of where striped bass forage for their prey species often shared with humans.

Led by Dr. Gary Nelson, the study was conducted in Salem Sound. To determine if striped bass exhibit a preference, biologists tagged and released striped bass with temperature-recording data storage tags (waterproof microchips) that recorded the water temperatures experienced by the fish every 2 hours for up to 170 days. Temperatures throughout the water column were measured by similar loggers situated at various depths at twelve fixed stations in Salem Sound.

Marine Fisheries' researchers next task was to develop a statistical model that predicts water depth from water temperature. This was accomplished using depth-temperature data collected from the twelve stations - the model was validated by comparing model predictions to depth-temperature profiles collected independently of the fixed stations. Researchers were then able to identify depths and temperatures avoided by striped bass by comparing the water depth-temperature relationships to the temperatures experienced by striped bass.

In total, 24 of the 151 striped bass tagged in June 2006 were recaptured by recreational and commercial anglers in the intervening year. Release sizes of recaptured fish ranged from 21" to 33" total length and fish were at-large from 1 to 351 days (median = 23 days). Most tagged fish (22) were recaptured during June-August 2006 generally ≤ 5 nm from the release location.



A data recording microchip can be seen near the striped bass' dorsal fin.

Preliminary results reveal that striped bass experienced a wide range of temperatures while at-large during June-August 2006. The temperatures experienced by striped bass ranged from a low of 7.0°C (44°F) to a high of 28.5°C (83°F), but most observations (95%) were between 10°C (50°F) and 25.5°C (78°F). Average temperatures while at-large ranged from 15.0°C (59°F) to 22.2°C (72°F). In comparison, the coldest temperature measured at the twelve stations was 6°C (43°F) at 36.5 meters (120 feet) and the warmest temperature measured was 25°C (77°F) at 0.6 meters (2 feet).

Comparisons of water depth-temperatures versus striped bass temperatures showed that most striped bass stay in temperatures above 9-10°C (48-50°F), generally found in depths < 10 m (30 feet), even though colder temperatures are available. Since they do not appear to go below ten meters due to cold water, striped bass probably forage on benthic prey only when nearshore. Therefore, any impact on economically-important prey like the American lobster may be concentrated to specific shallow-water areas.

A full report on the results of this study will be available by summer of 2009.

By Dr. Gary Nelson, Senior Fisheries Biologist

The Massachusetts In-Lieu Fee Mitigation Program

Marine Fisheries staff review and comment on potential impacts of hundreds of coastal alteration projects each year with three guiding principles – avoidance, minimization, and mitigation. Mitigation may be required of proponents when projects unavoidably and adversely will impact an area's capacity to provide ecological services (e.g., shelter, forage, and spawning habitat).

The scale of mitigation required for a coastal alteration project varies with the nature and severity of the impact(s). Because smaller mitigation projects are often unlikely to properly "compensate" for loss of marine habitat and resources, *Marine Fisheries* entered into an agreement with the Army Corps of Engineers (ACOE) to administer a "Massachusetts In-Lieu Fee (ILF) Mitigation Program".

ILF mitigation will provide general (financial) compensation for permitted impacts to marine resources and habitat, particularly those to Essential Fish Habitat (EFH) and shellfish habitat in Massachusetts. Project applicants who choose to participate in the program have the in-lieu fee



Silt suspended in the water column by dredge activities such as the barge shown here in Salem Harbor during the Hubline project (top) can "choke" filter feeders like mussels (bottom left) and inhibit spawning success of species like winter flounder (bottom right).

become a part of their permit condition after approval by the ACoE. In-lieu fees will be deposited into the *Marine Fisheries* Conservation Trust Account and may be aggregated for larger and more extensive mitigation projects.

One of the big challenges of the new ILF Program was the development of an initial cost per square foot value to be used to calculate in-lieu fee payments that represented all of the species and habitat types of concern. Although there are many examples of salt marsh and eelgrass restoration efforts and cost per square foot, other projects, such as shellfish seeding or fish passage restoration, do not provide a per-foot reporting of project efforts or costs. A Steering Committee, chaired by *Marine Fisheries* (other agency members include the ACoE, NMFS, EPA, MA Office of Coastal Zone Management and state Department of Environmental Protection) settled on a base per square foot value of \$10. Once a project is eligible for the ILF Program, the in-lieu fee will be calculated using this base value and an appropriate compensatory mitigation ratio. The use of these ratios will maximize the effectiveness of compensatory mitigation for a given project.

	Mitigation ratio
Open Water	1:1
Salt marsh	2:1 to 4:1
SAV	3:1 to 5:1
Streams	2:1
Intertidal	2:1

To allow for equitable distribution of restoration/enhancement projects along the coast, all in-lieu fees will be tracked by the general location where projects are taking place. The regions are **North** (New Hampshire border to Cohasset), **Central** (Scituate to Orleans including Cape Cod Bay and the eastern extent of Cape Cod), **South** (Chatham to the Rhode Island border and the Islands including Nantucket Sound, Vineyard Sound, and Buzzards Bay), and the **Connecticut River**. Given the wide range of habitat and resource types covered under the ILF Program, there will be many options from which to choose. As well as evaluating traditional project types such as salt marsh and eelgrass restoration, the Steering Committee is also exploring opportunities for more broad-based efforts to improve water quality. Examples of candidate projects include:

- Eelgrass planting
- Fish habitat enhancement
- Fish Passage – ladders, dam removal, and water level management
- Derelict fishing gear removal
- Modification of mooring hardware
- Salt marsh restoration
- Sediment remediation
- Shellfish seeding/propagation
- Water quality improvements

In December of 2008, the ACOE approved the first ILF payment (\$7,500) for a wharf reconstruction project in the Weymouth Fore River that will result in the loss of 750 square feet of open water habitat. Receipt of this first ILF payment will start the clock for the Steering Committee to propose one or more mitigation projects by 2011.

For more information about the Commonwealth's ILF Program, contact Vin Malkoski at (508) 910-6318 or vincent.malkoski@state.ma.us.

Blue Crab Conservation Concerns Result In New Daily Limit (50 Count) And Research On Massachusetts Population Structure

In October of 2008 the Marine Fisheries Advisory Commission approved a 50-blue crab possession limit for recreational and commercial harvesters alike. Traditionally, blue crabs have been harvested by non-commercial users using dipnets (often in conjunction with a baited line) to catch crabs for personal consumption.

Last year the Town of Edgartown petitioned *Marine Fisheries* for a commercial limit after a commercial fisherman began harvesting significantly higher numbers of blue crabs for use as bait in whelk (conch) pots. Historically, blue crab abundance in Massachusetts has not been high enough to promote and sustain a commercial fishery and associated market. Consequently, *Marine Fisheries* decided to limit commercial harvest to prevent declines in local blue crab populations while preserving a traditional non-commercial fishery.

The blue crab (*Callinectes sapidus*) is distributed from Massachusetts southward along the western Atlantic coast and into the Gulf of Mexico. It occurs here primarily in south coastal estuaries and embayments including Cape Cod and the islands. It is prized by recreational fishermen for its sweet, succulent meat. Much of what is known about blue crab biology and ecology has been generated by research in mid-Atlantic, south-Atlantic, and Gulf of Mexico states where blue crab abundance historically has been higher and has supported significant commercial fisheries.

Although information about Massachusetts blue crab populations is quite limited, *Marine Fisheries* crustacean experts all agree that the Commonwealth does not have a blue crab resource that can sustain a significant commercial fishery due to habitat limitations. These limitations are characteristic of our locations, being on the northern extreme of the reproductive range. Some areas where we need to improve our understanding include what level of local blue crab catch is sustainable, how catch impacts abundance within each pond, or the larval source of crabs taken within specific embayments. These unknowns have prompted *Marine Fisheries* to learn more about our blue crab resource and to determine if any of the populations within the Commonwealth are discrete. Given the consensus from *Marine Fisheries* crustacean experts that a sustainable commercial fishery is unachievable, *Marine Fisheries* anticipates a lower daily catch limit or increase in the minimum size may be needed in the future.



A male blue crab (top) embraces a female during reproduction.

Marine Fisheries and the University of Maryland's Biotechnology Institute are investigating genetic diversity in Massachusetts blue crabs. The Institute has conducted extensive investigations into the genetics of blue crabs within and beyond the Chesapeake Bay system. Previous studies revealed extensive genetic variation in blue crab populations; however, no genetic differences were found along most of the eastern seaboard, except at the previous extremes investigated, namely, New Jersey and Gulf of Mexico crabs.

During summer 2008, over 250 crabs from five Massachusetts estuaries were shipped to the Institute for analysis. Preliminary results indicate Massachusetts blue crabs are only half as genetically diverse as those from Chesapeake Bay. Work is on-going in regard to the inter-relationships among our Massachusetts estuarine populations, the degree of larval intermixing, and how they compare genetically to those from other states.

Results from this cooperative effort will enhance our understanding of the population dynamics of this species.
By Bruce Estrella, Senior Fisheries Biologist

Blue Crab Licensing & Fishery Information

The popular recreational blue crab fishery in the Commonwealth's (southern) waters is largely undocumented. Under state law, M.G.L. section 37 no permit is required of any person to take up to 50 edible crabs for use of one's family by methods other than potting. Consequently, no permit is necessary to participate in dip-netting crabs. Estimates of participation or catch by this sector are unavailable. The most common harvest technique is dip netting. Night-time dip-netting is allowed.

Twenty Years Later, Dennis Shellfish Beds Re-opened -

Town's concerted efforts to improve water quality result in 144-acres of Conditionally Approved habitat

On December 8, 2008, *Marine Fisheries* was able to reclassify Swan Pond River and a portion of Swan Pond in Dennis, from Prohibited to Conditionally Approved based on a sanitary survey conducted by *Marine Fisheries'* Shellfish Program. Approximately 144-acres were re-opened to shellfishing under local town control after being closed for more than a decade. The Conditionally Approved classification allows the harvest of shellfish from December 1 through April 30 during periods that water quality meets National Shellfish Sanitation Program (NSSP) standards.

Improvements in water quality are the result of a concerted effort by local officials to find and eliminate or mitigate for sources of pollution. Nearly all of Swan Pond River is bordered by a 50 to 100-foot salt marsh fringe. Development bordering the marsh consists primarily of dense residential areas with small lots from 1/4 to 1-acre in size. Commercial properties border the river at three bridge crossings. All homes around the shoreline of Swan Pond and the river rely on individual waste disposal systems that at the time of the closure twenty years ago consisted mostly of cesspools. The Dennis Board of Health strictly enforces regulations governing sewage disposal requiring upgrades to comply with Title V of the State Sanitary Code when business and residential properties are transferred, repaired or remodeled. A significant number of cesspools have been replaced since 1990.

Besides domestic waste, other significant sources of pollution are storm water from road runoff and bacterial contamination from the high numbers of waterfowl and wildlife in the watershed. In 1986, Dennis enacted a local by-law that prohibited feeding waterfowl. This was followed with signage at public access points and educational brochures explaining the problems associated with feeding ducks and geese. The general consensus is that these efforts have reduced successfully the "gathering" of waterfowl and this has helped to reduce fecal contamination.



Flats along the Swan Pond River in Dennis, MA.

During the closure period the Dennis Department of Public Works has identified and improved most if not all of the town owned road drainage systems that discharged into Swan Pond and Swan Pond River. Catch basins and infiltration systems were installed or upgraded to retain the first flush during rain events. These improvements have helped to reduce bacterial contamination during rain events by preventing direct discharge into the pond or river.

The re-opening of shellfish beds is the direct result of water quality improvements brought about by the co-operative efforts of boards and department in the Town of Dennis that never lost sight of the ultimate goal. At the time of the closure Swan Pond and Swan Pond River contained significant soft-shelled clam and American oyster resources and a limited number of quahogs. Hopefully as water quality continues to improve and with good stewardship, the shellfish resources that are still important can be restored and maintained.

By J. Michael Hickey, Shellfish Program Chief

Nantucket Shellfishermen Prosper after *Marine Fisheries* Enacts Rule to Accomodate Some "nub" Harvest

Nantucket bay scallopers faced an extraordinary resource condition this past fall prompting *Marine Fisheries* to re-evaluate the legal standards for separating immature ("seed") scallops from harvestable adults.

Bay scallop fisheries have been managed using the century-old wisdom and scientific findings of Dr. David Belding, considered the pre-eminent marine biologist of the early 20th century. The strategy (captured in state law) prohibits the harvest of "seed" scallops, those under one year old whose shells do not have the tell-tale raised annual growth line. This line is distinguishable by sight and especially by touch by running one's fingernail along the curve of the shell from the origin to the margin.

The growth line usually lies mid-shell (1.2" to 1.6" from the hinge) with last year's growth reflected below the line and this year's growth above the line to the shell margin. From Belding's long-standing published work it has been the policy of *Marine Fisheries* and towns that the raised growth line must be at least 10 mm (3/8") from the hinge, else it is considered seed.

An extraordinary late spawn of bay scallops in fall of 2007 in Nantucket resulted in an abundance of scallops in 2008 that were in their second year but whose raised growth line was very close to the shell hinge, less than 10 mm. Locally known as "nub" scallops, nubs are difficult to distinguish from large seed so are prohibited from harvest. Shellfish biologists have found many of these "nubs" spawn as normal 1-year old scallops (in their second summer) but the smaller individuals may not have spawned - and would spawn in their third summer if they survive the winter.

Last November, Nantucket fishermen faced a dilemma where over 85% of one year old scallops were "nubs." Consequently the state and town's policy requiring all legal scallops to have a raised growth line at least 10 mm from the hinge became a significant restraint on the harvest.

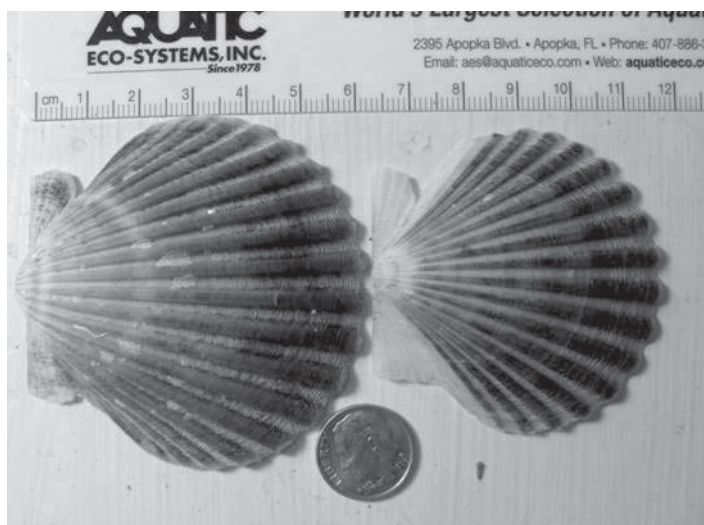
Nantucket shellfish officials worked diligently to estimate standing stock and reproductive status of the scallop

population. They petitioned *Marine Fisheries* for relief by creating a more refined rule that would honor the century-old standard to protect seed scallops, but allow some nub scallops, those with a raised growth line less than 10 mm from the hinge to be harvested if the scallop measured at least 2.5" shell height. Based on data collected by Nantucket's shellfish biologists, this strategy would allow about 43% of the nubs to be harvested, presumably most of those that have spawned, yet continue to protect 57% of the smaller nubs.

The benefits to the industry have been well-documented by Nantucket. The scallop harvest was increased three-fold and came at a particularly crucial time given the current economic conditions. Nantucket biologists and town officials deserve credit for their efforts to characterize the populations. The documentation accompanying the request for a rule change was impressive, revealing and convincing.

Marine Fisheries will continue to work with town officials in Nantucket and other communities that have the few remaining bay scallop fisheries to study the practicality of this new rule. We must determine if this standard that was based on an intense data collection exercise in a single area and year can hold up to the natural annual and regional variability in growth and spawning success that is a hallmark of the bay scallop fisheries.

By Dan McKiernan, Deputy Director



This year Nantucket scallopers were faced with the difficulty of differentiating between small "nubs" and large seed scallops. From left to right: scallop nub, seed, seed, nub. Photos courtesy of Town of Nantucket.

2008 Quota Monitoring Summary

2008 was a challenging year for Massachusetts commercial quota fisheries management. Several fisheries saw a significant reduction in their quotas from the previous year, which generally results in shorter seasons and increased difficulty in predicting accurate closure dates. Anticipating these challenges, *Marine Fisheries* amended regulations for 2008 in an attempt to slow the pace of landings and lengthen the seasons.

A later opening date and reduced possession limit in the fluke fishery allowed for an almost 3-month long Period I (25% of the annual quota), whereas in prior years the Period I limit had been reached in only 8-10 days (Figure 1). Additional no-fishing days in the scup and black sea bass fisheries helped prolong those seasons somewhat, but with 63% (scup) and 35% (sea bass) quota reductions in 2008, they still closed several weeks (sea bass) to several months (scup) earlier than usual (Figures 2 & 3).

There were also some fairly substantial quota overages in 2008. Predicting closure dates entails calculating an average daily landings rate and using that to forecast when 100% of the quota will be filled. When there isn't enough time to get a reliable estimate of the daily landings rate, the chance of ending up somewhere above or below 100% can be quite high. This occurred in the scup and black sea bass fisheries this year: When the "second season" opened up on August 1st, there wasn't enough time or quota remaining to accurately forecast a closure date and the fishery overshot the target. A similar situation also occurred in the tautog fishery, however that was further exacerbated by a 100% increase in the landings rate during the last week (Figure 4). Some of these overages may be reduced by transfers of quota from other states, but the remainder will be deducted from next year's quota.

Other species, including spiny dogfish, Atlantic herring, illex and loligo squid are also managed by annual quotas, but since those quotas are shared by several Atlantic coast states, their monitoring is coordinated at the federal level by the National Marine Fisheries Service.

By Micah Dean, Fisheries Analyst

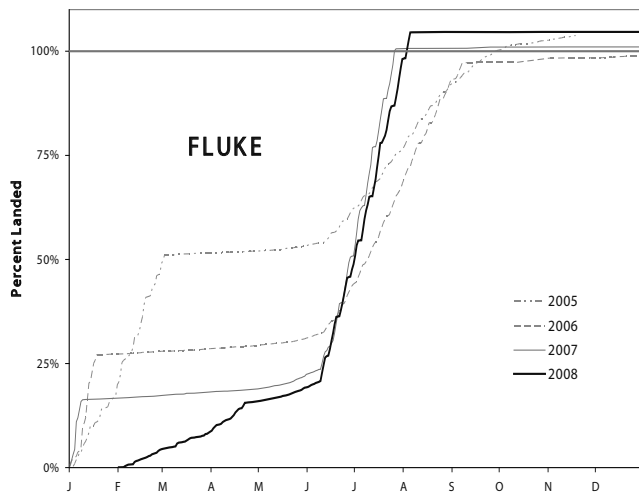


Figure 1. A later opening date and a reduced possession limit increased the length of the Period I fluke fishery by several months in 2008.

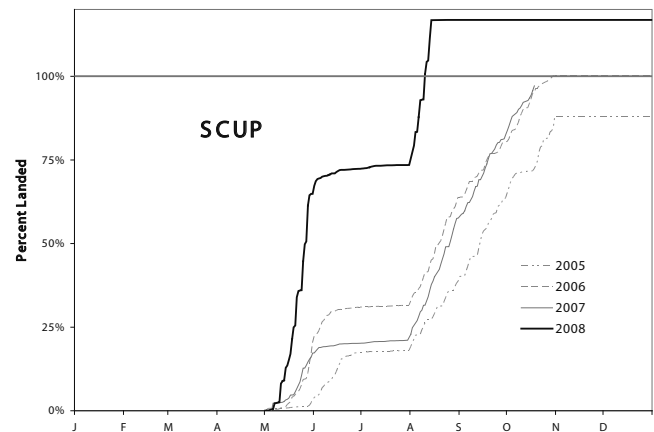


Figure 3. A 63% reduction in quota led to a scup fishery that was over 2 months shorter than the previous year.

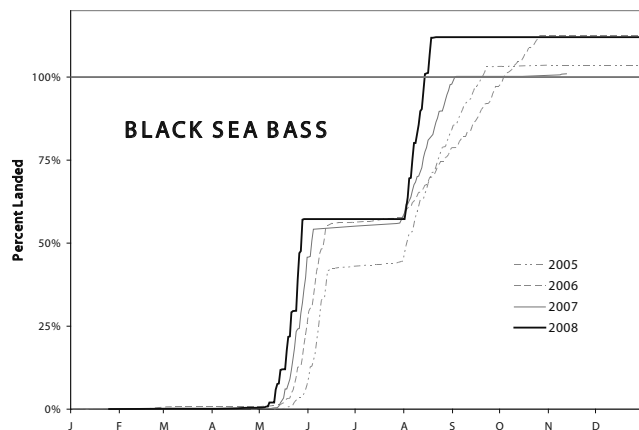


Figure 2. A reduced quota, split seasons and a high daily landings rate (up to 25,000 lbs/day) makes it difficult to forecast closure dates in the black sea bass fishery.

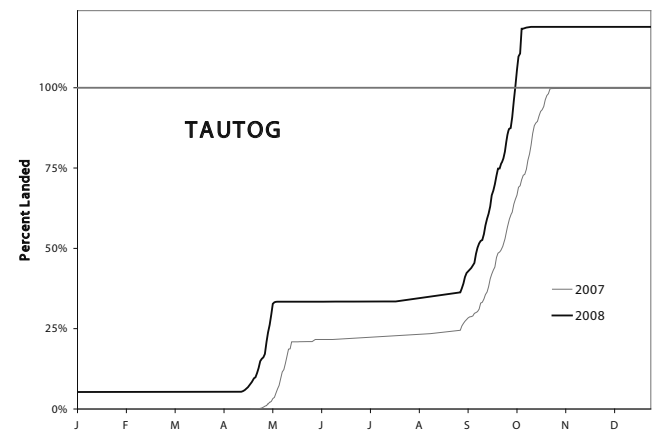


Figure 4. A quota reduction and a 100% increase in the last week of landings led to an 18% overage in the commercial tautog fishery.

**Status of Massachusetts 2008
Quota Managed Fisheries as of Jan 9, 2009**

Fishery	2008 MA Quota	2008 Landings	Percent Landed
Black Sea Bass	263,649	295,319	112.0%
Bluefish	516,619	511,064	98.9%
Fluke	615,218	643,767	104.6%
Scup (May-Oct)	377,742	443,945	117.5%
Striped Bass	1,107,828	1,157,814	104.5%
Tautog	64,753	77,016	118.9%

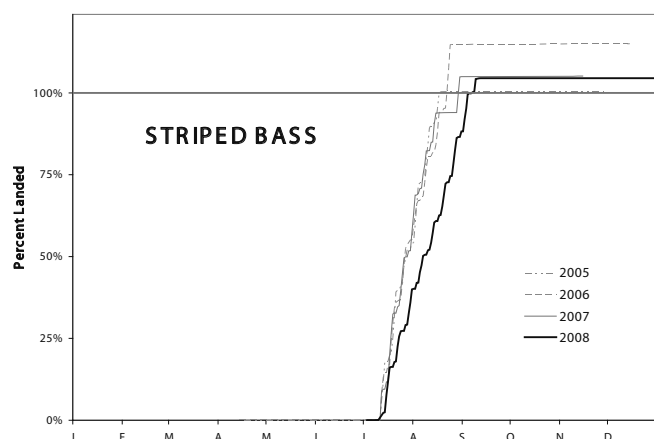


Figure 5. The commercial striped bass fishery was over 2 weeks longer in 2008 due to a slower than usual landings rate.

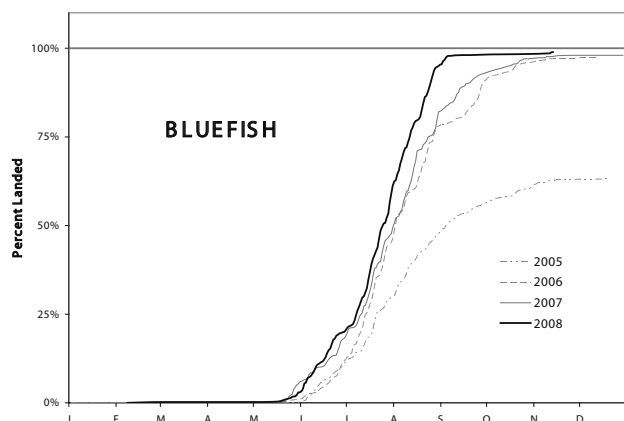


Figure 6. 2008 marks the first year the Commonwealth closed the commercial bluefish fishery because 100% of the quota was forecasted to be harvested.



Regulations Update

During the period August through December 2008, the following regulatory changes were enacted by DMF after public hearings and Marine Fishery Advisory Commission (MFC) approval. Emergency regulations that have subsequently expired are not included:

1. Atlantic sea herring

Marine Fisheries eliminated outdated regulatory language specifying no-fishing days in the Management Area 1A sea herring fishery. Fishery limits, as approved by the Atlantic States Marine Fisheries Commission, are now established by declaration of the Director. This process enables better real-time management of the sea herring fishery.

2. Cod Conservation Zone (CCZ)

The MFC approved *Marine Fisheries* recommendation to continue for an additional three years prohibitions on cod fishing in the CCZ during December & January (322 CMR 8.15), thereby lifting prior restrictions in place during the month of February.

During the closure period no person shall harvest cod from waters under the jurisdiction of the Commonwealth north of latitude 42° 20' and south of 42° 30'. It is unlawful for any person to fish, set, or abandon any gear capable of harvesting cod in this CCZ during the restricted season. This prohibition applies to all gillnets, otter trawls, mid-water trawls, seines, and all hook-and-line gears including longlines, rod-and-reel, and handlines, however exempted gears include lobster traps, and drags used for scallops and urchins.

3. River Herring Moratorium

The MFC also approved continuing the current moratorium on directed harvest of river herring for another three years, through 2011. The allowed tolerance for bait fisheries (5% by count of any batch) was unchanged.

Marine Fisheries is committed to addressing the larger issue of river herring bycatch in other fisheries, working through the Atlantic States Marine Fisheries Commission and with the New England Fishery Management Council.

4. Blue Crab Possession Limit

MFC approved a new 50-blue crab possession limit for recreational and commercial harvesters. The Commonwealth's southern embayments are the northern end of the blue crab's reproductive range and there is no known commercial fishery due to low and fluctuating abundance and lack of local markets. The traditional harvest has been almost exclusively by non-commercial users using dipnets to catch crabs for personal consumption. This limit seeks to ensure sustainability of the blue crab resource and fisheries and minimize future commercial harvest.

5. Bay Scallop Emergency

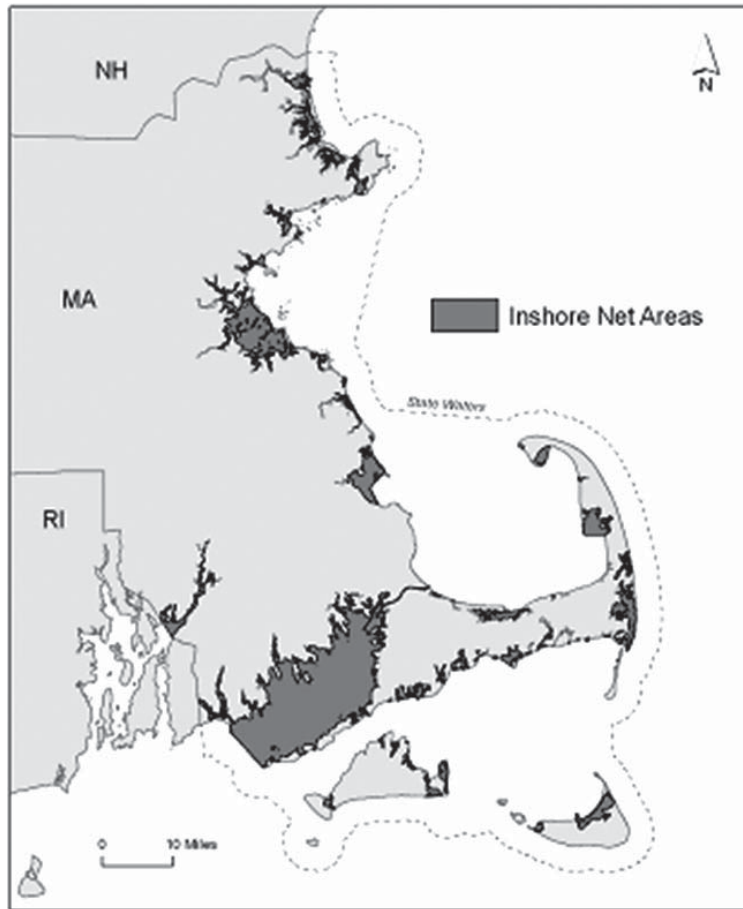
Marine Fisheries established by emergency action a minimum size of 2 ½" shell height for bay scallops that have a well-defined growth ring measuring less than 10 mm from the shell hinge.

By Melanie Griffin, Fisheries Management Specialist

Notice of Public Hearings January 26 & 27, 2009

Under the provisions of M.G.L. Ch 30A and pursuant to the authority found in M.G.L. Ch. 130 ss. 2, 17A, 38, 80 & 100A Division of Marine Fisheries (DMF) and the Marine Fisheries Advisory Commission (MFC) have scheduled public hearings to accept comments on:

1. **DMF proposals to amend regulations governing pelagic fisheries for species such as menhaden, sea herring and mackerel conducted in waters under the jurisdiction of the Commonwealth using various gear types, including purse seines, surface gillnets, and cast nets. Proposals include a) purse seine permit and vessel size requirements; b) surface gillnet permit requirements and gear specifications; and c) cast net permitting requirements. Note: Certain proposals apply to the Inshore Net Regulated Areas as defined in 322 CMR 4.02.**
 - a. Purse seine permit and vessel size proposals (322 CMR 7.00 & 8.00), include:
 - i. Clarification that a Coastal Access Permit (CAP) for mobile gear is required to use purse seines, but that moratorium on new CAPs does not apply to those being issued specifically for the use of purse seines;
 - ii. Clarification that the 72-foot maximum vessel length limit for CAP holders does apply to purse seine vessels but propose to exempt certain permit holders who have fished purse seines with vessels longer than 72-feet in waters under the jurisdiction of the Commonwealth since 1995; and
 - iii. Continued limitation on purse seining in the Inshore Net Regulated Areas as regulated through permit conditions.
 - iv. Accept comments on a prohibition on purse seining in the Inshore Net Regulated Areas on certain days of the week such as weekends.
 - b. Surface gillnet permit & gear specifications proposals (322 CMR 4.14, 6.07, 7.00 & 12.00), include:
 - i. Require a commercial surface gillnet permit and annual catch reporting to fish this gear in any approved waters under jurisdiction of the Commonwealth. This amends the current requirement to obtain an Inshore Net Restricted Area Permit to fish these areas with a surface gillnet. Use of surface gillnets smaller than 200 square feet would be exempt from the permit requirement.
 - ii. Require any person using a surface gillnet for purposes of obtaining bait for sale to person who is not a licensed dealer to obtain both a commercial fishermen's permit and a bait dealer's permit.
 - iii. Clarify that vessels using or possessing only surface gillnets shall not be precluded from possessing striped bass under a long-standing regulation that prohibits striped bass possession for vessels "rigged for netting."
 - iv. New section (322 CMR 4.14) that establishes restrictions on the use of surface gillnets including:
 1. a tending requirement for all fishermen fishing surface gillnets to remain within 100 feet of the net at all times;
 2. gear marking requirements where for each 50 linear feet of gillnet, at least one headrope float must be marked with the DMF 6-digit permit number, and a buoy marking scheme that displays the letters "SNN" and the 6-digit number;
 3. Maximum net length of 200 feet fishing at any one time. Comments will be accepted regarding the adoption of a larger maximum net length. Additional nets may not be used but may be stowed aboard the vessel;
 4. A maximum mesh opening of 3 ¾" and a minimum mesh opening of 2 ½";
 5. Seasonal river herring protection closure that prohibits the use of surface gillnets in the Inshore Net Restricted Areas prior to June 1 in any year;
 6. Year-round prohibition of surface gillnets in Buzzards Bay;
 7. Prohibition on setting a surface gillnet within a designated navigation channel;
 - c. Cast net permitting & use proposals (322 CMR 4.15), include:
 - i. Allow any person to use a cast net for purposes of catching bait species for personal use without a permit;
 - ii. Require any person using a cast net for purposes of obtaining bait for sale to a bait dealer to obtain a commercial fishing permit;
 - iii. Require any person using a cast net for purposes of obtaining bait for sale to someone who is not a dealer to obtain both a commercial fishermen's permit and a bait dealer's permit.



2. **DMF proposal to allow for-hire fishing operations to dispose of striped bass frames (racks) at-sea after filleting fish (322 CMR 6.07).**
3. **DMF proposals to complement federal rules affecting fixed gear and trap/pot use as mandated by updates to the Atlantic Large Whale Take Reduction Plan and Harbor Porpoise Take Reduction Plan, including:**
 - a. elimination of a November prohibition on use of sink gillnets in an area north of Cape Cod (322 CMR 4.08);
 - b. color-specific buoy line marking requirements for all fixed and pot/trap gear (322 CMR 4.13);
 - c. amending the definition of storing or abandoning fixed gear to require hauling gear at least every 30 days (322 CMR 4.13 & 12.02);
 - d. prohibiting gillnets during March in certain waters under the jurisdiction of the Commonwealth south of Cape Cod (322 CMR 12.04);
 - e. requiring weak links with a breaking strength of up to 600-lbs. on all trap/pot gear fished year-round in waters under the jurisdiction of the Commonwealth, except for the current 500-lb weak link requirement in the Right Whale Critical Habitat from January thru May 15 (322 CMR 12.05); and
 - f. requiring acoustic pingers on sink gillnets fished during September 15TH thru May in Upper Massachusetts Bay and Ipswich Bay from Marblehead to the New Hampshire Border and during December 1 thru February and April 1 thru May in the Massachusetts Bay & Cape Cod South Areas (322 CMR 12.12).
4. **DMF proposal to require commercial lobstermen authorized to fish traps in the Outer Cape Cod Lobster Conservation Management Area to fish only traps rigged with current trap tags after March 15 (322 CMR 6.31).**
5. **DMF proposal to adopt a November 6, 2008 control date for the spiny dogfish fishery (322 CMR 7.04).**
No restrictions are currently proposed for use with this control date.

**Public hearings have been scheduled for
Monday, January 26, 2009 (6PM) at the
Annisquam River Marine Fisheries Station (30 Emerson Ave., Gloucester) &
Tuesday, January 27, 2009 (6PM) at Radisson – Plymouth Harbor (180 Water St.).**

Comments received by e-mail (marine.fish@state.ma.us), fax (617.626.1509), or mail (251 Causeway St., Suite 400; Boston, MA 02114) will be accepted until 3PM on Friday, January 30, 2009.

Contact DMF for regulations and further details or visit our website at www.mass.gov/marinefisheries.

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- MA Lobster Promotion Campaign
- New Regulations
- January 26th & 27th Hearings

Surfers • Surfers • Surfers

This Newsletter and Other
Information is available
at our Web Site!

<http://www.mass.gov/marinefisheries>

DMF NEWS

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Melanie Griffin

GRAPHICS: **David Gabriel**

Marine Fisheries receives state and federal funds to conduct research, management and development of the Commonwealth's marine fishery resources. Information in this publication is available in alternative formats.

Deval L. Patrick, Governor
Timothy P. Murray, Lt. Governor
Ian A. Bowles, Secretary, EOEEA
Mary B. Griffin, Commissioner, DFG
Paul J. Diodati, Director, *Marine Fisheries*

Comments and suggestions for the newsletter are welcome. Please contact the Editors at (617) 626-1520, or write to:

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