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Incorporating ALASKA FISHERMAN'S
JOURNAL

National Fisherman

DECEMBER 2008

INFORMED FISHERMEN • PROFITABLE FISHERIES • SUSTAINABLE FISH

Run of luck

Salmon call
the shots at
Ugashik, Alaska



Why 'forage first' is
second-rate thinking

Puppy love

A consensus is emerging that it's time for a directed fishery for dogfish

By Kirk Moore

On the deck of the dragger Darana R, a crew of research scientists is counting fish on the inner continental shelf, documenting what fishermen have been saying for years: The spiny dogfish are back.

"We actually saw more dogfish this fall than last fall," says Jim Gartland, a scientist from the Virginia Institute of Marine Science and a principal investigator for the Northeast Area Monitoring and Assessment Program, commonly referred to as NEAMAP.

"We think that's because the water has been colder than it was last year. The interesting thing we've been seeing is the sex ratio: 90 percent female."

After years of complaints about resurgent spiny dogfish, fishermen and managers in the Atlantic states are taking first, tentative moves to prepare for a reopening of the directed fishery. First, they need to reach some agreement about trends in the stock. That status could change in light of new research like the NEAMAP survey, and surprise findings from a preliminary satellite tagging study in the Gulf of Maine.

Of three dogfish released with \$5,000 tags in the pilot project, two were tracked heading from Maine southwest toward the Hudson Canyon off New Jersey, while a third may have gone south in the mid-ocean to nearly the latitude of Georgia, says tagger James Sulikowski, an associate professor at the University of New England in Biddeford, Maine.

The tagged fish also showed vertical movements through 150 feet of the water column in the course of a day, and at least one deep dive past 1,800 feet, Sulikowski told fishermen and managers gathered at a Sept. 30 dogfish conference in Philadelphia.

"This could play a role in terms of their catchability during the NMFS survey," Sulikowski says. He takes it a step further: Dogfish No. 1 was tracked for 90 percent of its time within the NMFS trawl survey areas, but never at the depth where the trawls are towed, while No. 2 was in those areas just 35 percent of the time and was only at catchable depth 24 percent of the time.

If this information suggests only 25 percent of dogfish are being sampled, Sulikowski adds, the spawning stock biomass may be twice as high as thought.

In the front row of the audience, scientist Paul Rago of the Northeast Fisheries Science Center is a little skeptical of this last point. If NMFS was missing that many dogfish, other signals would clue them to the error, he says.

But in his own presentation, Rago tells the group that 10 years after the 1990s directed fishery was sharply reined in, dogfish are approaching a rebuilt stock status, albeit still out of balance in terms of sex ratios and ages. "A 10,000-ton [annual] fishery in the long term is possible," he says.

In early 2009 Canadian and U.S. experts will meet to compare dogfish data, using Canada's latest five-year cooperative sur-

Crewman Seth Tripp of the Voracious offloads dogfish at Provincetown, Mass., in September 2007. The Voracious is one of a handful of smaller vessels that ply a coastal dogfish fishery in Massachusetts state waters.

STEVE KENNEDY

Surveys provide critical data

On the Darana R, dogfish are just one catch with data that could reset scientific and management thinking about fish stocks.

"We haven't made a tow between here and Block Island that didn't have butterfish," says Jim Ruhle, the Darana R's captain and longtime trawl adviser who helped design the net at the stern of his 90-footer.

Because of low numbers in their stock assessment, the little disc-shaped butterfish have become a limiting factor for catching the long-fin (loligo) squid they often swim with.

Ruhle, who is president of the Commercial Fishermen of America, regards a cascade of small- to medium-sized fish coming out of the bag end and remarks, "There's some of those non-existent butterfish."

In the notes of Jim Gartland of the Virginia Institute of Marine Science, scup is one of Northeast Area Monitoring and Assessment Program's most frequently caught species off New Jersey, but other survey indices and the lack of a stock assessment have restricted its catch for years.

The NEAMAP project began in 2006 to coordinate state and federal survey programs in inshore waters, and the sampling net on Darana R is almost identical to that on the new NMFS research vessel Bigelow.

vey with industry, and a joint assessment meeting will happen around mid-2009.

"There's a good chance things are going to move toward more liberalization

of landings," Rago says. But the slow growth and late reproductive maturity of dogfish — 6 to 11 years in males and 12 to 21 years for females — complicates any

Measuring about 100 feet open with the doors spread and 40 feet on the wings, it has an opening 18 feet high and "is extremely consistent," Ruhle says. "It does not vary significantly. We've had scientists on board and some of the best captains to watch this work, and not a single commercial fisherman disagrees with the performance of this gear. That's critical. Without their buy-in, this will never work."

The Virginia Institute of Marine Science supplied three topside work stations and equipment for the wet lab in the boat's fish hold. At \$3,700 per day plus fuel, the three- to four-week cruise is not cheap, but an alternative when government research vessel budgets are being cut.

"Basically our industry is hanging by a thread. If the dollar is going to determine what happens, what work gets done, whether it's on dogfish or any other species, it's critical to get it done somehow," Ruhle says. "The law says we have to use 'best available science' and Virginia Institute of Marine Science can generate the best available data as well as anyone."



KIRK MOORE

NEAMAP leader Jim Gartland (foreground) sorts fish as Jameson Gregg shovels the catch from a 20-minute test trawl.

lation," Rago says. The federal science center's work shows the size frequency of mature females — the bigger and therefore preferred target of past dogfish fisheries — narrowed to animals just around 3 feet long by 2006-2008. Meanwhile, the ratio of males to females in the population is around 4 to 1.

"The expectation is it should be around

— K.M.

time line and "make this more like big-game management," he adds.

"There was about a 10-year period with very low recruitment in this popu-

Fact finders

2 to 1,” Rago says. “What’s happened with the removal process is a lot of the older females have been taken out. It’s ‘Brokeback Mountain’ out there.”

It’s true that trawl surveys show that male and female dogfish congregate far apart when they are not courting. Along the Mid-Atlantic coast, it’s as if the flat-screen TVs and football are 70 to 90 miles offshore.

“We can’t tow for squid at the edge of the shelf because it’s infested with dogfish,” says Marty Buzas, a Cape May, N.J., fisherman. Scientists are finding evidence that dogfish are pregnant more often than not, too, giving birth to ready-to-roll predator pups.

“For young of the year, we’re getting both boys and girls — which makes sense,



Jim Ruhle, captain of the Darana R, operates the net reel during trawl surveys off Cape May, N.J., in October. The trawl is very much like the net used on NOAA’s research vessel Bigelow.

if the females are pupping in here,” Gartland says on the Darana R. “Mature dogs are almost all females.”

Close to the shelf break, “it appears there’s a dog fence out there,” holding males at the edge, says Jim Lovgren of the

Fishermen's Dock Cooperative in Point Pleasant Beach, N.J. Many are pups, Lovgren says.

"We've seen 5,000-pound tows of these things," he says, holding his hands inches apart. "Worst things in the world to put on your deck. You can't pick or shovel them. That's the safety zone for these animals. There's no predation out there.

"When less than 10 percent of your [survey] tows are in deep water, you're not getting an accurate stock assessment," Lovgren tells Rago. "Something's not right... Half the ecosystem is full of dogfish."

When the Garden State Seafood Association started talking up the idea of opening a state waters fishery for spiny dogfish, it had support from commercial fishermen looking for another option amid restrictions and season limits. But some of the biggest fans are on the recreational side.

"Disgusting," says Lenny Elich, a captain on the party boat Miss Barnegat Light, who with his mates contends with swarms of "spiny dogs" mobbing baits and spinning customers' lines into tangles.

Greg DiDomenico, executive director of the Garden State Seafood Association, says their idea for a 3,000-pound trip limit fishery targeting male dogfish is far short of a pest control program, and really just an attempt to help fishermen take some

advantage of a growing resource.

"For a 3,000-pound trip, that's \$600" at the dock, says Buzas, the Cape May captain who helped formulate the proposal. It's an opportune day trip in winter, or on a longer run out, that dogfish

catch would "help pay for grub and expenses," he says.

Mike Karch of Barnegat Light, N.J., still has photos from a 1996 catch of 15,000 pounds of dogfish weighing down his gillnetter at the dock. "When they shut it down, it was a pretty big hit for me," says Karch, who back then concentrated on dogfish he shipped to a New Bedford cutting house, and monkfish, the other once-underutilized and now much re-



KIRK MOORE

"A 10,000-ton [dogfish] fishery in the long term is possible."

— Paul Rago

NORTHEAST FISHERIES SCIENCE CENTER

duced fishery.

Like Elich, Karch correlates the 1990s dogfish fishery to good times for other fishermen: "Back when we were catching them, it seemed like black sea bass, summer flounder, all that stuff was making a really good comeback."

The pitch from fishermen for a part-time, males-targeting dogfish gillnet effort — with 5.5-inch mesh, licenses in state waters, a 3,000-pound trip limit and weekly electronic reporting from dealers — sounds like a good idea. If the Atlantic States Marine Fisheries Commission adopts state-specific quota shares, New Jersey netters could get 560,000 to 880,000 pounds a year.

Fact finders

The NEAMAP program

- The Northeast Area Monitoring and Assessment Program conducts spring and fall surveys, sampling 150 stations from Cape Cod, Mass., south to Cape Hatteras, N.C.
- Using a trawl nearly identical to that designed for the NMFS research vessel Henry B. Bigelow, the NEAMAP crew and captain Jim Ruhle on the dragger Darana R conduct 20-minute tows at around 3 knots at each station.
- Survey stations form a stratified random sample, and the survey is also stratified by depth to take samples in nearshore waters of 60 feet and deeper locations down to 120 feet.
- Catches are sorted by species and size class, and aggregate species weights and counts are recorded. Some fish of management interest are dissected for their stomachs, otoliths for aging, and spleens to check for disease exposure and genetic analysis.

On the Web: www.neamap.net

Source: Virginia Institute of Marine Science

But inshore, the New Jersey Division of Fish and Wildlife trawl surveys find that most of the dogfish in nets are females, says Pete Himchak, acting chief of the New Jersey Bureau of Marine Fisheries. That was the norm during the 1990s directed fishery, when more than 98 percent of the catch was bigger female sharks.

“So now we’re scratching our heads,” Himchak told the Philadelphia meeting. Fishermen think mesh and twine size could select more male dogfish. “We want a dogfish fishery. The recreational guys would be happy. We don’t want to cause any environmental damage to the

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KIRK MOORE

“For all practical purposes, [sex of dogfish caught] is irrelevant. Don't worry about it.”

— David Pierce

DEPUTY DIRECTOR, MASSACHUSETTS
DIVISION OF MARINE FISHERIES

spiny dogfish fishery.”

Dave Pierce, the deputy director of the Massachusetts Division of Marine Fisheries, told the New Jersey people they should go ahead and catch dogfish, male or female.

“For all practical purposes, it's irrelevant” considering growth trends in the dogfish stock, Pierce contends. “Don't worry about it.”

Pierce quotes a 1992 prediction from Steve Murawski, now the chief science adviser for NMFS, when he observed that “given the current high abundance of skates and dogfish, it may not be possible to increase (cod and haddock) and flounder abundance without ‘extracting’ some of the current standing stock” of sharks and skates.

Other scientists have documented dogfish predation on cod and other species in need of rebuilding, yet the dogfish management plan has no acknowledgement of this, Pierce says. Setting a new fishing target for dogfish, he says, is a “precautionary and common-sense approach, especially in the context of ecosystem-based fishery management.”

In the 1960s, Massachusetts managers talked of starting a “dogfish eradication” program when the population was a third of its present level. Now the species is managed under the Magnuson-Stevens Fishery Conservation and Management Act, with its mandate to restore all fish stocks to maximum sustainable levels.

It's one thing to challenge how NMFS determines dogfish biomass, staff analyst Jim Armstrong of the Mid-Atlantic Fishery Management Council tells the conference group. To change a management plan to drive down a species would be unprecedented, he says. **NF**

Kirk Moore is a reporter for the Asbury Park (N.J.) Press.