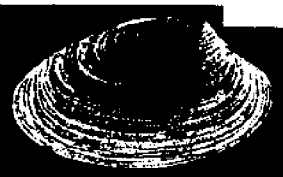
NJ Shellfish 1995 Culturists Roundup



1995 NJ Shellfish Culturists Roundup Meeting
February 21, 1996
Atlantic County Library
Jim Leeds Road
Galloway Township, NJ
Compiled by Gef Flimlin, Marine Agent
NJ Sea Grant Marine Advisory Service

The meeting started with the distribution of the 1994 NJ Shellfish Culturists Roundup publication and discussion of the problems in the Cape Cod region with a new disease killing cultured clams in Provincetown and Duxbury. Gef Flimlin mentioned that there was to be a larger discussion about the "QPX" (Quahog Parasite X) problem at the Milford Aquaculture meeting the following week in Connecticut. All growers were urged to attend the Milford meeting for more information.

Walter Canzonier, President of NJ Aquaculture Association and member of the Executive Board of Directors of the Northeastern Regional Aquaculture Center (NRAC), gave an update of NRAC activities. The search for a new Regional Director for the Center continued, but Dr. Bob Rheault of Moonstone Oysters from Rhode Island had been serving well as interim director (at time of this writing, the position has been permanently filled by Dr. Kim Harrison). Canzonier reported that Dr. John Kraeuter has been elected to the Technical Industrial Advisory Council (TIAC). Dr. Standish Allen of the Haskin Lab moved off, George Mathis Jr. had one year more on TIAC. He reported that there had been concern expressed by TIAC members that it took the USDA too long to release the funds for approved projects. Nine projects had been recommended for funding, and four were related to shellfish. There was also limited special funding committed to examine the QPX problem. Canzonier also mentioned a new Hazard Analysis Critical Control Point Program (HACCP) going into effect December 17, 1997 wwhich impact shellfish people in the state.

Dr. John Kraeuter from the Rutgers Haskin Shellfish Research Lab gave an update on the Aquaculture Demonstration Center. He said the Federal money had been transferred to Rutgers, there was a Rutgers Board of Governors commitment, the Delaware River and Bridge Authority has purchased the property and is negotiating the lease with Rutgers. There is a building in Cape May which Rutgers has leased from the city, and after renovation, it will be shared with the Cape May Seafood Association. Design contracts will soon be out and permits for construction should be granted within one year. He mentioned that there might be some research on the use of flyash mixed with sand from the utility companies as a pond liner.

The NJ Aquaculture Legislation is with Legislative Services being drawn up. There is good legislative support from Senator Singer and Assemblyman Azzolina who will introduce it in their respective houses. Other legislators have already expressed their support.

Kraeuter commented on shellfish research topics for the state. There has been a proposal directed by the Virginia legislature to continue introductions of the Japanese Oyster, *Crassostrea gigas*, into the Chesapeake, and work continues on MSX and Dermo at the Haskin Lab.

He provided and update on hard clam projects in NY, NJ and New England. The overwintering study of clam seed was proceeding, shellfish were planted and were due to be examined in April. The basic design of the work was to maintain hatchery seed at different levels of food supply, including supplementing of natural phytoplankton with cultured algae, to condition them and determine condition index, and to develop a system for estimating the potential for over-wintering survival. This work was done by industry members Rit and Ray Crema, Don Feldeisen, and George Mathis, Jr.

There was discussion about unexplained nursery mortalities in clam hatcheries in Brigantine and Atlantic City for two successive years around the Fourth of July. Industry suspects the spraying of the pesticide Abate, a larvacide for mosquitoes. The hatchery operators organized a meeting with the NJ DEP pesticide group to investigate the problem. John Kraeuter will also investigate the impacts of different levels of Abate on clam seed. The suggestion was made that, when mortalities are noted, hatchery operators must contact either the Haskin Lab or the Marine Advisory Service so that samples can be taken and fixed for examination later. It should be incumbent on the MAS to distribute some tissue fixative along with jars and some instructions for taking samples.

Kraeuter spoke of the shell plantings in Barnegat Bay which were done to assess the potential for increasing clam set with the use of bits of broken ocean clam shell. There is a need to resample, and determine if the experiment was successful. (At the time of writing, funds had just been secured from NJ Economic Development Authority to resample the experimental beds).

There is also interest in investigating the discoloration of hard clam meats/tissue in Little Egg Harbor Bay. There has been an initial meeting at Double Creek Fishery in Barnegat, where Dick Hook, the fish market owner, has been getting complaints and even the threat of a law suit about selling these clams whose meats are "black." Kraeuter, Flimlin, George Mathis, Dick Hook, Woody Winton, and Jim Joseph from the DEP Bureau of Shellfisheries worked on an experimental design to assess if the clams would purge the dark color out of the meats if moved to another area. Several met at the Nacote Creek lab to develop a color rating protocol for the clams using a Monsell Soil Color Chart. They will begin the industry supported study this summer.

Finally, Kraeuter mentioned that he is working on a book on the Biology of the Hard Clam.

Gef Flimlin said that funds for the fisheries and aquaculture position in the NJ Department of Agriculture have been eliminated from the next budget, and he suggested that comments concerning Linda O'Dierno's position should be forwarded to Al Galetta, the President of the State Board of Agriculture to solicit funding for this position.

1995 Seasonal Clam Culture Events

Weather

Comments suggested that the winter was fairly mild. There were two weeks of ice in the end of January and the beginning of February, but there was very little screen damage. Water temperature in Dry Bay and Jenny's Creek was around 40 degrees F. The end of February was the coldest period, and Bob Fenton attributed the lack of damage to the slow thaw of the ice.

Rit Crema noticed clams growing around March 20, which was the earliest ever in his recollection, but a fizzle in May. Bob Fenton, who also farms vegetables as well as clams, thus quite sensitive to rainfall amounts, noted 1 1/2" of rain in early June, and then no sign of rain until Mid-August. Spawning of field populations were noticed from late May to early June.

The summer was very hot with water temperatures reaching almost 100 degrees in Dry Bay. There were almost 40 days straight where the air temperature was over 90. Crema said the clams kept growing and there was very little indication of growth inhibition regardless of water temperatures.

The fall also had drought conditions, but the air temps were moderate and it stayed warm long into the fall. Two inches of rain fell on September 17, first in a month, northeast winds hampered planting. Water clarity increased after the third week of September. Three inches of rain occurred on October 4 & 5. Steve Mastro mentioned that the water temperatures stayed up well into November, even until the second or third week. Mathis reports water temps increasing around October 6 from 66 to 81 in Jenny's Creek. Canzonier said Delaware Bay temps dropped in December.

Rick Beckley mentioned ice in Dry Bay before Christmas. Mathis notes the ice beginning around December 15 with 4" in Jenny's Creek by 12/17. Four days later the creek was clear but a second ice situation occurred on December 26 which wiped out many stakes in Dry Bay but did no screen damage. Water temperature was 34 degrees.

Overwintering 1994/1995

Rit Crema saw early growth in the spring, which he felt was very promising for successful overwintering. In fact, all sizes were growing. Bob Fenton saw growth in his growout bags first, but experienced a mortality of about 50% in Absecon Bay, with more losses of smaller seed. It was mentioned that Billy Scull had planted 50 to 100 thousand small seed under 1/6" screen in the fall, and his results were quite acceptable. Jerry Zodl reported about 50% survival in their raceways at Biosphere in Tuckerton. No one admitted overwintering their small clams in southern states, although some are practicing this strategy. Mathis reports clam seed growing in Jenny's Creek on March 18, the earliest he's ever seen there.

Hatchery Production

Jerry Zodl did his first spawn in April; Rick Beckley waited until May; Crema spawned early and that went well, a late spawn was also good. Everything in between was problematic. Biosphere said things were going well until mid-May, when there was a phytoplankton bloom which coincided with the stoppage of all growth. It turned out to be a brown tide, similar to that which had been experienced on Long Island over the past few years. This persisted in Tuckerton until early July. No mortality was associated with it. Biosphere's water had been filtered to 5 micrometers, yet there were hair like masses floating on the water. That company uses a charcoal filter which usually changes the tannic water of Tuckerton Creek a tropical blue in appearance, but the darker color remained in this case. Zodl had the water analyzed by Bob Nuzzi of the Suffolk County (NY) Department of Health, and he found concentrations of 1 million cells per milliliter. Zodl counted 2 million cells in some samples he took. It was identified as *Aureococcus* using monoclonal antibody assay. Crema reported similar conditions in his Atlantic City facility.

Nursery

Rick Beckley reported unexplained mortalities at his hatchery in Brigantine in the raceways and upwellers. Crema also reported mortalities of seed in raceways that had just been taken out of the upwellers at his facility in Atlantic City. He said, however, that the mortalities did not affect all the raceways. Beckley reported these mortalities around July 4th. The County Mosquito Commission indicated that they had sprayed June 28, the same schedule they had one year before. There had also been mortalities around this time in 1994. He said the seed had been growing well, but began to die around June 29 or 30. He noticed a die off of the hydroid *Tubularia* at the same time. The hatchery operators contacted the Mosquito Commission to solicit an investigation.

Fenton reported that things grew well after the brown tide episode ended in the first week of July. Zodl saw no August slow down even with water temps pushing 89 degrees.

Field Growout

Rit Crema said clams in Dry Bay stopped growing in May, just when the "brown tide" was affecting the hatcheries. Mastro commented that in Absecon Bay growth of shellfish was opposite to Dry Bay. There seemed to be general agreement that Absecon Bay and Dry Bay were out of phase with each other. Fenton commented that both nursery bags and bottom plants in the two bays had varying growth cycles. This might be caused by varying food availability or size in the two bays at different times.

Clams grew well everywhere until the second week of November when Mastro reported the water temperature dropped.

Beckley and Fenton reported that biofouling with tape mud (*Ampelisca*) was most predominant in the middle of the summer in Dry Bay. It was worse than during other parts of the year, but never got very thick and didn't present much of a problem. Mastro saw a lot of tape mud in Absecon Bay, which grew rapidly in late summer then slowed down, but it remained through into the fall and winter, and was still on the grounds in early February 1996.

Mathis made significant notes about fouling organisms and predators. As early as January 4, he noticed *Ampelisca* (tape mud amphipod) growing in Dry Bay. On March 10, he reports cladophora beginning in Jenny's Creek and many rock crabs.

Cancer irroratus, showing up there too. This is a very unusual predator in the creek. He noticed mud snails and paired amphipods in mid-March, tape mud patches in Dry Bay by May 12, and *Ulva* growing there also. Much screen cleaning of macro algae in Jenny's Creek in May. There was severe *Agardiella* growth in June in Tuckerton lease with little problem in Dry Bay. Although, by August he reports almost no biofouling of tunicates or bryzoans, but larger than normal quantities of bay anemones in header tanks and field nursery.

Macro-algae did not present much of a problem although there was some cabbage (*Ulva*) in Absecon Bay and Red Beard (*Agardiella*) there and in Great Bay, but it was not too bad. Mastro reported seeing red beard algae on 1/2" screen but not on 1/4". Others felt some biofouling with algae was beneficial since they felt it swept the screen keeping other more deleterious species from colonizing the area.

Markets

The market was strong throughout the year but supply was somewhat down, possibly related to poor survival in the winter of 1993-1994. Major holiday prices were good to excellent. The price to the digger was up $.02. There were no comments by the producers on poor shelf life of NJ product.

Regulatory or Legislative Changes

The Sunday Clamming Bill was once again re-introduced but was not put to the floor for a vote. It will not go away. The most unfortunate part is that the commercial industry is against the bill because of the paucity of hard clams in the wild beds, but has the support of the recreational sector and the state, even without any biological data to support increased harvest.

Leasing was opened up again and Jenkins Sound opened to harvesting. There were again a lot of leases vacated by the leasees in Little Egg Harbor Bay indicating the poor condition of the clamming in that area.

Walt Canzonier brought up the issue of the industry paying a fee to cover the state program costs. Landing fees were not popular but an increase in licensing fees might be palatable. This was asked in response to the legislation which would charge $2 per bushel landing fees for clams in the depuration or relay program in Northern Monmouth County.

Other Items

Gef Flimlin mentioned that the Clam Farm Shellfish Software Management Program was undergoing revisions at Atlantic Veterinary College at the University of Prince Edward Island and should be ready for this year.

Attendees:

Ralph Bailey
Rick Beckley
Mike Brodton
Walt Canzonier
Rit Crema
Bob Fenton
Gef Flimlin
John Kraeuter
Steve Mastro
Al Mruz
Al Ogden
Craig Tomalo

Other data supplied by George Mathis
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Sea Grant
New Jersey Sea Grant

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