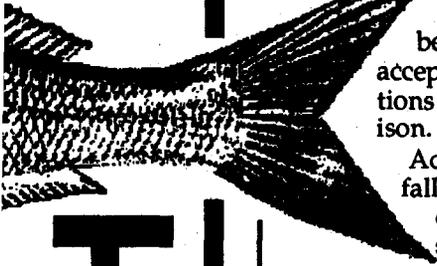


TALES



FISH

IS THE NEW JERSEY MARINE ENVIRONMENT GETTING A BUM RAP?

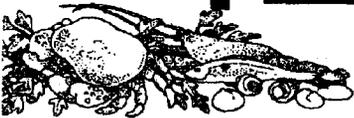
How many people are aware that water quality in New Jersey has actually been improving over the past ten years? New sewage treatment plants have gone on line, regulations limiting dumping have been adopted and an overall environmental consciousness has developed. Currently, New Jersey has one of the most rigorous water testing programs in the nation. New Jersey has more water sampling stations and stricter water quality standards than any other state on the East Coast. Our rules for testing coastal waters are more stringent than those required by the Environmental Protection Agency.

Yes, beaches are sometimes closed in New Jersey and there are areas closed to shellfish harvest. In other states that don't suffer from beach closures, how much testing is actually being done? What are the standards for acceptable water quality? These are the questions that you must ask to make a fair comparison.

According to a draft study conducted in the fall of 1989 by the New Jersey Department of Health, 8 of the 23 states and territories surveyed had no structured statewide water quality monitoring programs; 13 had no structured surveillance programs; and 11 do not have established criteria for determining bathing beach closures due to unsatisfactory microbiological water quality.

New Jersey is equally stringent in its standards for molluscan shellfish. The New Jersey Department of Environmental Protection has established water quality standards for the safe harvesting of shellfish and regularly monitors harvest areas to ensure that water quality is within safe limits. Again New Jersey has more shellfish sampling stations than any other state on the East Coast and we are the only state to classify ocean water for the harvest of shellfish.

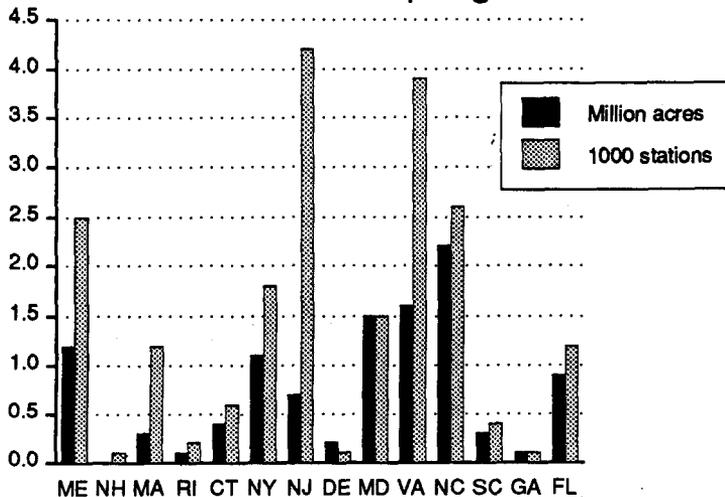
Continued on page 2



The New Jersey Department of Health regularly collects shellfish samples from harvest areas, certified shellfish dealers and retailers for bacteriological examination. Also inspectors routinely check the shipping containers of shellfish to be sure that wholesalers are providing proper identification tags which show the source of the shellfish.

To insure each American the right to safe and enjoyable beach experiences, Senator Frank Lautenberg (D) and Senator Bill Bradley(D) have introduced federal legislation to require uniform testing standards for water quality. Congressman Bill Hughes (D) is sponsoring companion legislation in the House. This would provide a more even set of standards across the board and more accurate comparisons could be made among the various states. New Jersey has been a leader in this area and there is every expectation that the state will benefit by a more uniform standard of comparison.

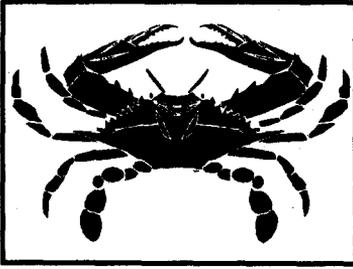
Shellfish Sampling Stations



1. What Saint used the scallop shell as his emblem during his crusades?



THE BEAUTIFUL SWIMMER



Native to New Jersey waters, blue crabs have long been considered one of the most delectable marine creatures on the eastern seaboard. Blue crabs are enjoyed in both the hard and soft shell stages. "Shedders" or "peelers" are really blue crabs that have recently shed their hard shells as part of the growth process. Soft shell crabs are a shore tradition and considered a delicacy by seafood lovers.

Blue crabs spend the winter hibernating in deep waters and move into our warm, shallow waters in the spring and summer. They prefer muddy, soft bottoms where they can dig burrows and hide when they're shedding. Seasoned crabbers should know the difference between females (sooks) and males (jimmies). Females have a broad apron pattern on the bottom side of their shells and bright red claw tip. Males have a rocket or lighthouse pattern on the bottom of their shells. Recreationally and commercially, the blue crab is one of the shore's most popular summer catches.

Not only is crab meat very rich and sweet-tasting, it is low in calories and provides excellent high-quality, protein, vitamins and minerals. Most of the meat from the blue crab comes from the body. In season, blue crabs are plentiful and you can purchase them live in the shell, steamed in the shell, or as fresh, frozen or pasteurized meat. Be sure to keep crab meat chilled until you use it!

CRUSTACEAN REVELATION

- ★ The number of times a female crab mates during its life: 1.
- ★ The average number of hours a male crab spends wooing and cradling his mate beneath him as he swims in search of a secluded patch of underwater grass: 36
- ★ The number of consecutive hours that crabs actually have sex: 9
- ★ The average number of eggs produced by an impregnated female crab: 2 million
- ★ The number of eggs that will grow into an actual adult crab: 2

2. Which traditional outdoor seafood cookery requires that kerosene be thrown on the fire to allow the fat to boil off the pot?





CONCERNS ABOUT LOCALLY HARVESTED FISH AND SEAFOOD PRODUCTS

New Jersey has a rich maritime history. Fishermen from Belford to Cape May have harvested the bountiful resources of the area for over three hundred years. These fishermen harvest a variety of species from offshore and inshore waters. Some vessels may travel up to several hundred miles out to sea to catch deepwater fish such as tuna, swordfish, cod and tilefish. Some New Jersey vessels actually process their catch at sea to provide the consumer with high quality products. Other vessels follow migratory fish up and down the coast. A variety of seafoods such as sea trout, flounders, squid, whiting, porgies, butterfish, sea bass, crabs and lobsters are landed by these boats at area ports.

Although pollution related incidents have caused some people to become concerned about enjoying their favorite seafoods, there is no evidence to indicate that these concerns are justified. A number of different agencies including the Departments of Environmental Protection and Health regularly monitor the safety of seafood products.

In an attempt to simplify and interpret the current safety advisories, a great deal of confusion has been developed. The advisories that are currently in effect were announced several years ago. No new advisories have been issued. In the case of PCB's, production of these chemicals was curtailed in the 1970's when it was recognized that they are not biodegradable and therefore are persistent in the environment. In 1984 the action level on these chemicals (that is the level at which a potential health risk might exist) was reduced from 5 parts per million to 2 parts per million. Subsequently, advisories were issued by the New Jersey Department of Environmental Protection. Those advisories are reproduced below. It should be noted that the advisories are primarily for the northern portion of the State and that in the case of bluefish, they are limited to larger fish since the longer the fish lives in the suspect environment, the greater the possible concentration of contaminants.

1) STATEWIDE ADVISORY AND /OR PROHIBITION

Striped bass--all sales prohibited

American eels--advised limited consumption (especially in the Northeast region).

2) NEWARK BAY COMPLEX

Prohibited--Sale or consumption of all fish from the Tidal Passaic River; sale or consumption of striped bass and blue crabs; and sale of American eels from the entire complex.



3) HUDSON RIVER (NJ WATERS)

Advised--very limited consumption of striped bass and limited consumption of white perch, white catfish and large bluefish (over 6 pounds).

4) LOWER NEW YORK BAY

Not in New Jersey State waters but fishermen should adhere to the New York State advisory guidelines which are similar to New Jersey's.

5) NORTHERN COASTAL (Barnegat Light North)

Advised--limited consumption of striped bass and large bluefish (over 6 pounds).

6) CAMDEN AREA

Prohibited--sale and consumption of all fish harvested locally.

Limited consumption means any person should not consume more than one meal per week of such fish and persons of high risk such as pregnant women, nursing mothers, women of child-bearing years and young children should not eat any fish from designated regions. Very limited consumption is the same as above except to further restrict consumption to no more than one meal per month.

To put the advisories in perspective, one fish meal per week can be translated into 1/2 pound per week. The average American consumes approximately six pounds of frozen and fresh finfish each year. If you consider that seafood consumption in the Greater New York area is about twice the national average, that is approximately 12 pounds per year. That is still less than half of the amount suggested by the action level, and that would assume that all fish consumed are those covered by the limited advisory i.e. striped bass, white catfish, white perch and large (over 6 pounds) bluefish. It is also interesting to note that the levels of PCB's reported by the Environmental Protection Agency study did not exceed the 2 ppm action level by a wide range and that these higher numbers were seen during the fall months. Advisories are developed to provide a margin of safety for the consumer.

One of the factors that minimizes potential risks for people who consume seafoods from our area is that they are likely to eat a variety of fish from many locations. Variety has always been the key to good dietary habits. In addition, scientific evidence seems to indicate, and most health related organizations have recognized the positive role that seafoods can play in the American diet. Seafoods are high in protein, low in fat, saturated fat, cholesterol, sodium and calories. The unique type of fat, omega-3 fatty acids, found primarily in marine products may also play a role in reducing an individual's risk of heart disease.

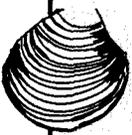
If a consumer wishes to reduce the possible risk of contaminants in fatty fish, there are a variety of preparation techniques that can be used. Since many of



these contaminants tend to accumulate in the fatty tissue; the belly flaps, dark meat along the lateral line, and skin should be removed. Try to select smaller fish, those under six pounds. Use cooking techniques such as grilling, broiling and baking on a rack so that the fats tend to drip away from the fish. Coatings that hold in fats and oils should be avoided.

Each consumer must weigh the benefits of seafood consumption against the potential risk; and determine what is correct for their own lifestyle but each consumer should be presented with all of the facts available. As with any type of food no matter how healthful and nutritious, most dietary experts agree that excessive consumption is to be avoided.

Seafoods offer tremendous opportunity for variety since there are over six hundred species of finfish and shellfish commercially available in the United States. These products come from a variety of different areas. For example, some people might feel more comfortable with fatty fish from offshore waters such as tuna and mackerel. For folks who like milder taste, there are a variety of local species such as tilefish, flounder, fluke, whiting and porgies. Other options may include farm-raised products such as salmon, trout, tilapia, mussels and other shellfish. For the adventurous consumer, there are choices from all over the world. For example you might want to try orange roughy from New Zealand, salmon from Scandinavia, halibut from the North Atlantic or tropical species like mahi-mahi and groupers. There are also traditional shellfish favorites such as lobsters, shrimp, scallops, oysters and clams. No matter what your nutritional needs or safety concerns, there is a seafood that's right for you.



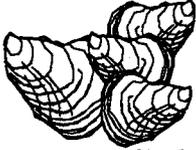
GET READY AND START SHUCKING NOW FOR ...THE GREAT NEW JERSEY SHUCK-OFF!

Are you the fastest shucker in town? If the answer is yes, then plan to enter the Great New Jersey Shuck-Off, a clam shucking competition sponsored by the New Jersey Department of Agriculture's Fish and Seafood Development Program. The event will take place on September 16, at 3 pm on the Village Green at Smithville located on Rt. 9 and East Moss Mill Road. The contest is part of the Third Annual Clam Festival and Recipe Contest to be held in Smithville September 15 and 16. Included in the festival are entertainment, carnival rides, educational exhibits, demonstrations, contests and clam delicacies.

The contest is open to both men and women and contestants will be judged on speed and presentation. There will be prizes for the top three winners of both the men's and women's division. If you would like to test your skills as a clam shucker simply mail your address and telephone number along with a \$10 entry fee returnable at the completion of the competition to: New Jersey Department of Agriculture, Fish and Seafood Development Program, CN 330, Room 204, Trenton, NJ 08625.



IS THAT FAMOUS GOURMET FAVORITE, THE PORT NORRIS OYSTER EXTINCT?



Although decreases in funding have caused the Maurice River Oyster Culture Foundation (MROCF) to reduce its effort for the coming year, the group is adamant in its effort to bring back a major oyster industry to Delaware Bay. The MROCF is a consortium of industry, government and science working in tandem for the revitalization of the Delaware Bay oyster industry using MSX resistant oysters developed by the Rutgers Bivalve Shellfish Laboratory.

MSX is a disease that has decimated oyster populations in the Mid-Atlantic Region. Although the disease is fatal to oysters, it has no human health implications.

One of the major problems plaguing this effort is the failure of existing hatcheries to produce sufficient eyed larvae on a regular basis for setting on the seed beds. This emphasizes the need for a New Jersey based hatchery that is capable of producing large quantities of seeds on a predictable basis to replenish our beds.

The success of MSX resistant stocks in trials in other states has generated a growing interest in the use of these stocks and FATEC is currently investigating the possibility of licensing the MSX resistant stocks.

ATTENTION AQUACULTURE ENTHUSIASTS!!!

FATEC has produced a series of brochures on pond construction and cage culture. For copies, call Stew Tweed, New Jersey Sea Grant at (609) 465-5115.

FATEC Activities

- Hosted International Aquaculture Workshop.
- Set up test plots for using recycled shells for hard clam cultch.
- Work is progressing on a pond culture demonstration project.
- A special research project is investigating the use of ice nucleators to cut energy costs in the production of frozen seafood.

GLUE FROM CLAM SHELLS?

FATEC, Magaronics Inc., and Rutgers are examining the possibility of using extracts from ocean clam shells to produce industrial adhesives.

FISH FESTIVALS HOOK CONSUMERS IN BELMAR AND ATLANTIC CITY!



Fish Tales Interviews Captain Charlie McLaughlin

Charlie McLaughlin is the President of the Atlantic County Party and Charter Boat Association and currently operates his charter boat, Salty Dog III out of Angler's Roost Marina in Margate, NJ.

How did you get started in the charter boat business?

I started fishing when I was ten years old in Florida where I worked as a mate aboard a fishing boat and I've been fishing ever since. When I was eighteen I got my captain's license and ran boats for private individuals and casinos in Atlantic City. I started out doing my own fishing with a few smaller boats and worked my way up to the Salty Dog III, which is a 35 foot Alura.

During what part of the year do you charter your boat?

We fish all year long. We go out after cod fish in the winter, mackerel in April, bluefish from May to October, tuna from the end of June to October, mako from the middle of June to July and wreck-fish in the spring and fall.

As President of the Atlantic County Party & Charterboat Association tell us what your organization does?

I formed the association about two years ago and we currently have 45 boats and 110 members. The primary focus of the association is to advertise our services. We want people to know Atlantic County has a lot to offer in the way of sports and charter boat fishing, scuba diving expeditions and sailboat excursions. We have also become involved in the Atlantic County Artificial Reef Fund in which we work closely with The Department of Environmental Protection. The association raises money for this cause. It costs approximately \$5,000 to \$7,000 to have a donated ship prepped and cleaned (removal of all oil, gas, etc.) to meet DEP and Coast Guard approval for sinking and this is where we fit in. We have been involved in the sinking of three ships and have helped to extend the reef into shallower, more productive waters. We now have a 250 foot freighter and tugboat from New York currently on line for sinking. Recently the association held a "Take a Kid Fishing Tournament" at Gardners Basin thanks to one of our members who is a school teacher. We took Atlantic City junior high school students who excelled in math and science for a day of wreck fishing. We wanted to reward kids for the positive things they do because all too often we hear about the negatives. Next year we're planning to do the same thing with handicapped kids. We were also one of the sponsors of the Jersey Fresh Seafood Festival which helped to raise money for the kidney dialysis unit at the Atlantic City Medical Center, as well as the Artificial Reef Fund.

3. Which crab is fished for its claws which are twisted off and the crab is returned to the water to generate new ones?

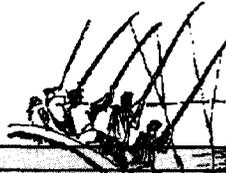


What types of educational programs do you feel would be most beneficial for recreational fishermen?

Workshop or video on "tag and release" would be helpful because most people don't even know what it is. We try to tell people aboard our boats to keep only the fish that they are going to eat and to save the rest for the next guy or another day of fishing. Fish all day, catch all the fish you want, but don't take what you're not going to use. For example, when I take a group out to catch tuna, I try to convince them to take two fish per man because of their size.

Do you have any final comments you would like to tell our readers?

I would just like to say that fishing is great this year, better than last year and the water is the cleanest its been in years. When someone is reeling in a fish you can tell what it is 20 feet down, the water is so clean. Also due to the plastics law that's in effect, you don't see this type of pollution in our waters like you used to. Its important to keep our waters clean and protect our marine resources for future generations to come.



FISHING FOR INDUSTRY COMMENTS

This column of Fish Tales will provide space for those who like to express their viewpoints on industry and marine related issues. We welcome any statements, comments, suggestions or criticisms you may have concerning the fish and seafood industry. This is your chance to speak out and be heard! We look forward to hearing from you.

Please submit your comments to: New Jersey Department of Agriculture, Fish and Seafood Development Program, CN 330, Trenton, NJ 08625.

CONGRATULATIONS TO CARL FORTIN OF HOPE, NEW JERSEY WHO WAS THE WINNER OF A FULL SCHOLARSHIP TO JOHNSON AND WALES COLLEGE AS A RESULT OF ENTERING A RECIPE CONTEST FOR HIGH SCHOOL STUDENTS. FORTIN'S RECIPE, GRILLED SALMON WITH TOMATO AND BELL PEPPER RELISH, TOOK TOP HONORS AMONG 31 OTHER ENTRANTS. FORTIN WORKED AT THE RYLAND INN IN WHITEHORSE, NEW JERSEY UNDER THE TUTELAGE OF CHEF CRAIG LASKEY, THE 1990 NEW JERSEY SEAFOOD CHALLENGE WINNER.



AQUACULTURE V

A one day seminar on expanding shellfish and finfish production will be held on Saturday, October 13, 1990 at Ocean County College.

Aquaculture V will present two concurrent sessions on oyster and clam culture and fish culturing. These sessions are intended to stimulate the aquaculture industry to meet the demand for seafood in a period of declining fish stocks.

Aquaculture V is being organized by the New Jersey Aquaculture Association, the Sea Grant Extension Service and Cook College Office of Continuing Professional Education at the request of the New Jersey Marine Sciences Consortium and the Sea Grant Program.

Oyster and clam culturing will provide information on tidal upwellers, public aquaculture in Connecticut and New York and shellfish growout on Cape Cod. Shellfish growers will also learn about New Jersey regulations affecting aquaculture, oyster culture in New Jersey and Rutgers' disease-resistant oyster.

Fish culturing will discuss various types of aquaculture systems, pond management and the use of water testing equipment. Finfish growers will also learn about fish genetics, the cage culture and marketing of hybrid striped bass, and the aquaculture of small scale tilapia, including re-use systems and a hydroponics demonstration.

The sessions are designed to assist aquaculture operators, watermen, interested in raising their catch, farmers looking for increased income from ponds, state and federal agencies assisting the state's aquaculture industry and others interested in starting aquaculture production.

For registration information, please contact the Office of Continuing Professional Education at Cook College, P.O. Box 231, New Brunswick, NJ 08903-0231. For further information, call (201) 932-9271.

4. Which English Queen passed a law to encourage fish consumption?





UPCOMING EVENTS

August 26

The 8th Annual Barnegat Bay Crab Race, Seaside Heights.

Contact: Toms River Chamber of Commerce at (201) 349-0220

September 15-16

The Third Annual Clam Carnival and Clam Shucking Competition

The Village Green at Smithville

Contact: Linda May at (609) 748-1222

September 15-16

The Point Pleasant Seafood Festival, Point Pleasant.

Contact: The Great Point Pleasant Area Chamber of Commerce at
(201) 899-2424

September 15

Chowder Cook-Off, Beach Haven

Contact: The Southern Ocean County Chamber of Commerce
(609) 494-7211

September 16

Septemberfest-music, food & flea market, Beach Haven

Contact: The Southern Ocean County Chamber of Commerce
(609) 494-7211

September 27-30

Liberty State Park Boat Show-on Land & in Water

Fishing tournaments - mini model controlled boat racing - Thurs night
cruise aboard The Spirit of New Jersey - other exciting activities.

Sponsored by the Marine Trade Association - Admission to show \$5.

For more information contact: JoAnna Krahn at (201) 269-1412

October 6-7

Commercial Township Seafood Festival,

Mauricetown Fire Hall, Mauricetown

October 13

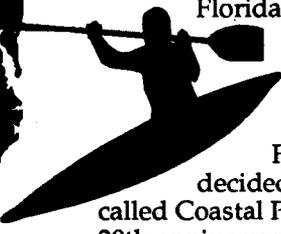
Aquaculture V, Ocean County College, Toms River

A conference featuring concurrent sessions on finfish and shellfish culture.
Registration begins at 8:30 AM. For more information contact: Rene Conlon,
Dept. of Continuing Education, Rutgers University at (201)932-9271



NJMSC HELPS LAUNCH COASTAL PATROL 1990

Kim Kosko



In the summer of 1970, twenty-five year old Joel Fogel launched his kayak in New York Harbor and paddled solo for two-and-half months, until he reached Miami, Florida. Inspired by the first Earth Day celebration, undaunted by the odds and elements, Joel made the journey to observe and record environmental conditions along the coast. Twenty years later, Joel Fogel, a marine zoologist and journalist, decided to repeat the 1,500 mile kayak voyage, called Coastal Patrol 1990, to commemorate Earth Day's 20th anniversary and scientifically observe environmental changes along the coast. This time, Fogel had the company of a core team of kayaks, canoes and other vessels. The concept of Coastal Patrol 1990 as an environmental awareness program was initially endorsed by state officials, agencies and environmental organizations, including The New Jersey Marine Sciences Consortium, New Jersey Sea Grant, The New Jersey Department of Environmental Protection, The New Jersey Department of Agriculture's Fish and Seafood Development Program and the American Littoral Society.

One of the most notable additions to Coastal Patrol 1990, was the scientific team organized to test water quality along the Eastern Seaboard. Members of the scientific team include Robert Ray Smith, a former research assistant for Maryland Sea Grant and Victor Maene, a microbiologist with the Atlantic County Utilities Authority (ACUA). One of the project's main sponsors, the ACUA has set up a system to process water sample gathered and delivered by health and environmental agencies between New Jersey and Florida. Recently, there has been a great deal of state and federal focus on the issue of the need for a uniform system of testing water quality. According to scientist Victor Maene, "Coastal Patrol 1990 signals one of the first cooperative efforts among state environmental and health agencies."

A number of New Jersey state agencies, marine-related businesses and environmental organizations cooperated to transport the Coastal Patrol 1990 crew to its take-off site in New York Harbor on July 15th and helped arrange an at-sea press conference and seafood buffet for participants on the first night of their expedition.

Fogel and the core team of Coastal Patrol 1990 kayakers will spend the next two months travelling along the bays, lagoons, harbors and salt marshes that string together, forming the Intercoastal Waterways on the East Coast. If all goes well, the group is expected to arrive in Miami by the end of September.





NEW JERSEY FACTS AND FIGURES

DID YOU KNOW...

There are approximately 1,820 commercial fishing vessels and 2,864 commercial fishermen in the state.

There are six major commercial fishing ports located along our 126 mile coastline. They include Belford (51 boats), Point Pleasant (42 boats), Barnegat Light (62 boats), Atlantic City (92 boats), Cape May (152 boats) and Port Norris (21 boats).

According to the latest National Marine Fishery Service statistics, New Jersey enjoyed the greatest gain in value of marine products harvested, \$6.7 million, in the Mid-Atlantic region.

According to preliminary landing figures, New Jersey ports rank high in the Mid-Atlantic region: 1) Cape May, 2) Atlantic City, 3) Ocean City, Maryland, 4) Point Pleasant, 5) Hampton Roads, Virginia, 6) Montauk, Long Island.

The port of Atlantic City enjoyed the greatest growth in both volume and value, up 6.2 million pounds and \$2.9 million.

The primary fisheries in Atlantic City are ocean quahogs and surf clams which are processed into chowders, sauces, dips and breaded strips.

It has been estimated that two out of every three clams consumed worldwide was harvested in New Jersey.

Our longline fleet out of Barnegat Light harvests tuna and swordfish in the Caribbean and coast of South America.

The quality of many of our New Jersey harvested products make them high demand items in both foreign and domestic markets.



FISHING FOR THE FACTS

Stew Tweed

No one pays much attention to fishery statistics until they begin to differ with long assumed and anecdotal public perceptions. New Jersey weakfish landings are a case in point.

The press has carried numerous articles by and about groups suggesting that the "other fellow" is to blame for declines in their fishing. Seldom is statistical evidence given to support these biases.

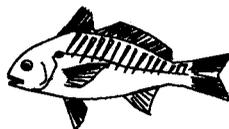
Fishery managers at the state and federal levels have a responsibility to collect and evaluate fishery statistics before they propose regulations that may jeopardize the resources and/or the social-economic structure of the state.

A recent draft of the DEP's "Management Plan for Weakfish" includes total state weakfish landing data from 1981-1987. This data indicates that while gill net catches have remained below 1 million pounds, recreational catches have fluctuated from a low of million in 1982 to over 7 million in 1987. Gill net harvests over these 7 years accounted for 8.3% of the state total. Recreational catches were 62% of this total. This clearly reflects the increase in recreational fishing that occurred in the 1980's.

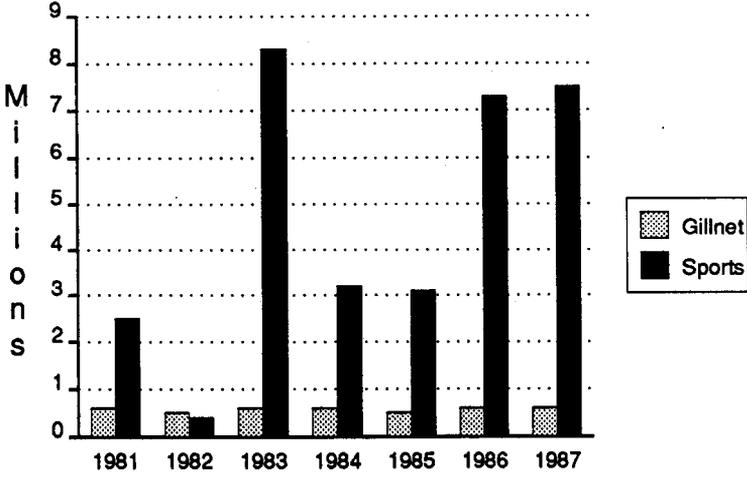
Fishery managers must also consider the larger impacts of climatic changes and human activities (ie. habitat destruction, pollutants, industrial uses, etc.) on species abundance. Armed with fishery statistics and an understanding of the cyclic nature of species, managers can propose programs that will effectively limit over harvesting by all user groups and reduce socio-economic impacts. This can be done establishing 12" minimum size limit for New Jersey Weakfish. Such a size limit will proportionally reduce everyone's catch.

This size limit will protect weakfish stocks, allow sport and commercial industries to continue and permit recreational boaters to pursue one of New Jersey's unique past times.

5. Vatel, Henry XIV's chef, committed suicide when what fish was not delivered in time for a banquet?

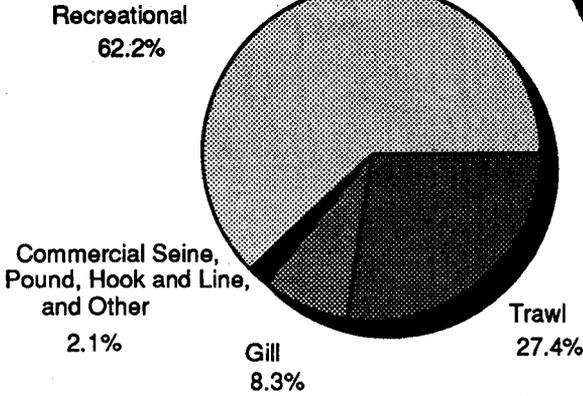
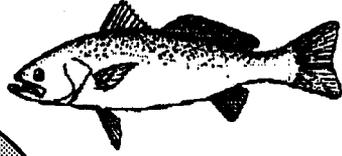


NJ Weakfish Landings



Total NJ Weakfish Landings By Gear

1981-1987

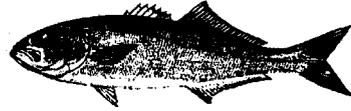


Answers to trivia

1. St. James, 2. A Wisconsin fish boil which is traditionally made with whitefish and new potatoes, 3. The Stone crab, 4. Elizabeth I in her efforts to make England self-sufficient, 5. Sole



THE SUMMER BLUES



Being one of the most popular sportfishes that swim in our waters, the bluefish (*Pomatomus saltatrix*) has no counterpart for ferocity in the ocean. History has it that in 1870, "a school of bluefish swept into Barnegat Inlet, driving millions of bushels of menhaden before it, until every stream, inlet and even the surrounding meadows were teeming with the terrified fish."

In New Jersey the bluefish is renowned for its incredible fighting ability and is considered a superb game fish by sportsfishermen who land over 90% of the catch. Each summer fishermen are lured to the surf and charterboats in search of a good fight. These feisty, bluish gray fish with silver undersides can grow to twenty pounds but most of the commercial and sports catch is in the four to twelve pound range. Because of low prices commercial trawlers catch bluefish as an incidental harvest and when it hits the retail market, its at bargain prices, making it an economical fish to buy. It should be kept in mind that bluefish spoil quickly within hours of being caught and should be gutted and iced down as soon as possible.

Bluefish migrate in the spring and summer from southern to northern waters to spawn. In the fall, migration is reversed and the fish return to warmer, southern waters. Smaller bluefish occur in the bays during the early spring and fall and range in size from tiny snappers, excellent when pan-fried, to baby blues averaging one to one and a half pounds.

The meat of bluefish is soft textured with moist loose flakes. While being fairly dark, the flesh cooks to light off-white. Taste-wise smaller bluefish, which feed on crustaceans tend to be delicate and sweet while larger bluefish, which feed on larger, oilier fish are richer in flavor. Larger bluefish, due to their high oil content, are best when broiled, baked or grilled over a charcoal fire. One of the benefits of eating oily fish such as bluefish is that they contain a high level of polyunsaturated fats called omega-III fatty acids which are believed to reduce the risk of coronary heart disease. Bluefish makes an excellent salad and smoked bluefish, a real taste treat, can be used to make smoked bluefish pate. This summer enjoy "catching the blues" and sample these delicious recipes.

Nutrition Information

For 3.5 oz. edible portion

| | | | |
|-----------|----------------|---------|----------------|
| Calories | 117 | Protein | 20.5 grams |
| Fat | 3.3 grams | Sodium | 74 milligrams |
| Potassium | 420 milligrams | Iron | 0.6 milligrams |



BLACKENED BLUEFISH

This recipe generates a lot of smoke and is best done outdoors!

Ingredients

- 3 Bluefish fillets
- 1/2 pound (2 sticks) unsalted butter, melted

Seasoning Mix

- 1 Tbsp sweet paprika
- 1 tsp onion powder
- 1 tsp ground pepper
- 3/4 tsp black pepper
- 1/2 tsp dried oregano leaves
- 2-1/2 tsp salt
- 1 tsp garlic powder
- 3/4 tsp white pepper (preferably cayenne)
- 1/2 tsp dried thyme leaves

Method:

Prepare heavy skillet on outdoor grill at least ten minutes or until a white ash forms on the skillet bottom. Thoroughly combine the seasoning mix ingredients in a small bowl. Dip fillets in the melted butter so that both sides are well coated; then sprinkle seasoning mix generously and evenly on both sides patting it with your hand. Place in the hot skillet. Add a tablespoon of butter over the top of the fillets. Cook for 3-4 minutes on each side until charred. Serve with a squeeze of fresh lemon juice.

Serves 6

BLUEFISH CAKES

Ingredients

- 1 pound bluefish fillets
- 1 cup mashed potatoes
- 1 egg beaten
- 1 Tbsp grated onion
- 1 Tbsp chives
- 1 tsp Worcestershire sauce
- 1/2 tsp lemon pepper
- Pinch salt
- Fat, or oil, for frying



Method:

Poach fillets until fish flakes easily with a fork. Combine remaining ingredients. Fold in the flaked fish. Mold into 6 or 8 cakes. Pan fry until golden brown. Drain on a paper towel.



Fish and Seafood Legislative Summary

Below is a listing of Legislative appropriations pertaining to the fish and seafood industry for the 1990-1991 session. If you would like to comment on any of these proposed bills you may either submit written testimony to the Office of Legislative Services or contact their office for a schedule upcoming public hearings. For more information please contact: Office of Legislative Services, Legislative Budget and Finance Office, Room 431, State House Annex, CN-068, Trenton, New Jersey 08625 (609) 292-1170.

1990-1991 SESSION ASSEMBLY BILLS

- No: A-1514 (A-4236)
Purpose: Appropriates \$75,000 to the Maurice River Oyster Culture Foundation.
Sponsor: Stuhltrager
- No: A-3430 (S-2674 Palaia)
Purpose: Regulates taking of Menhaden.
Sponsor: Jacobson, Villapiano, Mecca
- No: A-3093 (S-935 A-2135)
Purpose: Appropriates \$1,200,000 for oyster propagation and related projects.
Sponsor: LoBiondo, Stuhltrager
- No: A-3094 (S-934)
Purpose: Appropriates \$600,000 for oyster propagation and disease control projects.
Sponsor: LoBiondo, Collins
- No: A-465 (A-4235)
Purpose: Creates shellfish industry Task Force; \$10,000.
Sponsor: Salmon
- No: A-872 (A-4721)
Purpose: Transfers shellfish and Div. Fish, Game & Wildlife to DOA
Sponsor: Villapiano, Jacobson
- No: A-3774
Purpose: Directs DEP adopt regulations regarding taking of certain shellfish.
Sponsor: Salmon
- No: A-1940 (A-3671)
Purpose: Establishes a special account for the stranded marine animals.
Sponsor: Moran, Connors
- No: A-1941 (A-3672)
Purpose: Creates Marine Mammal Stranding Study Commission, \$25,000.
Sponsor: Moran, Connors
- No: A-3286
Purpose: Regulates taking of fish with nets, taking of weakfish in Delaware Bay.
Sponsor: Collins, Stuhltrager
- No: A-2154 (A-572)
Purpose: Establishes a Division of Aquaculture in the Department of Agriculture.
Sponsor: Rocco
- No: AJR 20 (AJR 123)
Purpose: Requests withdrawal of proposal to limit taking of bluefish.



Sponsor: Villapiano, Doyle
No: A-1894 (A-1083)
Purpose: Creates "Commercial Fisheries Assistance Loan Fund", \$5,000,000
Sponsor: Moran, Connors
No: A-1172 (A-3114)
Purpose: Permits disabled person to obtain resident's fishing license at a reduced fee.
Sponsor: Kalik
No: ACR 121
Purpose: Urges PSE&G protect marine life at Salem Nuclear Generating station.
Sponsor: Salmon
No: A-1033 (A-4848) (S-2395 Palaia)
Purpose: Establishes reward for finding and turning in lost or abandoned fishing nets.
Sponsor: Kronick, Schluter

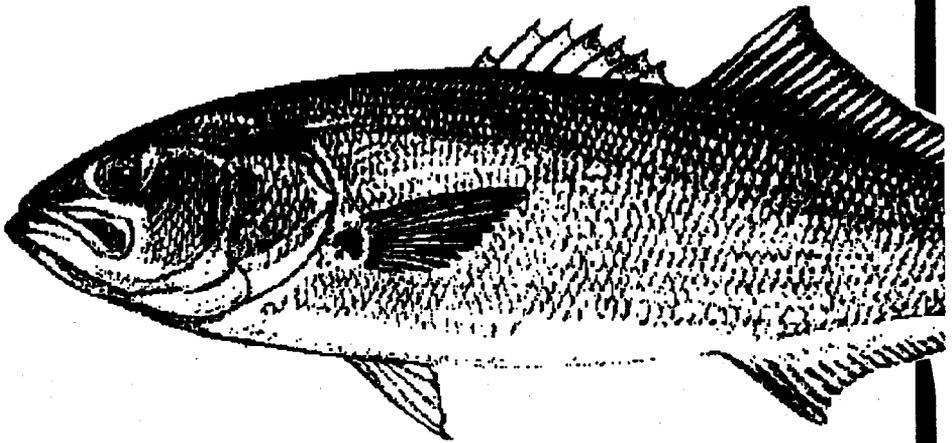
1990-1991 SESSION SENATE BILLS

No: S-1770 (S-2480)
Purpose: Establishes an autumn harvest season for oysters.
Sponsor: Zane
No: SR 52
Purpose: Memorializes Congress to take appropriate action to discourage drift-net fishing by certain foreign fleets.
Sponsor: Connors, Bubba, Bassano, Cafiero
No: S-1520 (S-3230) (A-2648 LoBiondo)
Purpose: Appropriates \$250,000 for fish and seafood development and promotion.
Sponsor: Connors
No: S-1506 (S-2218) (A-1932 Moran, Stuhltrager)
Purpose: Transfer shellfish law enforcement to Marine Bureau. H 59 696 696 0 0 696 0 1 1 0H
Sponsor: Connors, Bubba
No: S-1486 (S-1329)
Purpose: Requires that clam license fees fund shellfish protection.
Sponsor: Connors
No: S-1442 (S-3638) (A-3385 Schuber)
Purpose: Prohibits sale of striped bass and imposes closed season.
Sponsor: Bassano
No: SCR 19 (SCR 135) (ARC 3, ARC 48, ARC 86)
Purpose: Expresses the sense of the Legislature that the United States take action to declare striped bass a game fish.
Sponsor: Russo, Palaia, Assemblyman Doyle
No: S-1447 (S-3787) (A-2922)
Purpose: Revises size limits for taking striped bass.
Sponsor: Bassano



MARK YOUR CALENDARS!!

Two important workshops on Seafood Handling and Mandatory Inspection are planned for November. For more information, contact NJDA at (609) 984-6757.



For any information relating to this publication or to receive any of our program's promotional materials, please contact:

New Jersey Department of Agriculture, Fish and Seafood Development Program
CN 330, Room 204
Trenton, NJ 08625
or call (609) 292-2472

FISH TALES is a quarterly publication made possible through the cooperation of the New Jersey Department of Agriculture, the New Jersey fish and seafood industry, the NJMSC and the FATEC of Rutgers University.

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