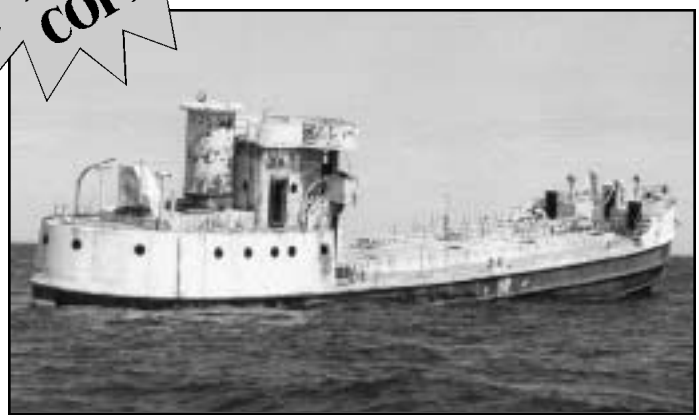
NJ REEF NEWS

FREE COPY

2006 Edition



Helis (above and below).

New Jersey's new wrecks already teeming with life

Deep in the Atlantic Ocean, several miles off New Jersey's famed coastline, an amazing assortment of tiny marine animals are transforming a trio of newly sunken wrecks into habitat for marine life and havens of recreation for divers and anglers alike.

At the wrecks, deployed last year as part of the state's Coast 2005 initiative, mussels, barnacles, anemones, sponges, coral, hydroids and bryozoa attach to metal surfaces and begin to grow. By the end of summer, a 3-inch-thick living carpet will cover the vessels. This biological shag rug offers an abundance of food and shelter from predators for a diverse community of mobile invertebrates, including crabs, shrimp, worms, snails, starfish, urchins and amphipods. Fishes commonly found on reefs, such as sea bass, tautog, pout, triggerfish and porgy, also will find homes within and near the wrecks, feeding on both the encrusting growth and the mobile invertebrates. Fluke, bluefish and sharks will visit the wrecks, too, looking for an easy meal.

The DEP acquired the three vessels—a tanker, a ferry boat and a tug with a $100,000 appropriation to promote the value of the state's ocean reef-building program.

–continued p. 2–

Elizabeth (left and right).

New Jersey Department of Environmental Protection

Division of Fish and Wildlife

Lisa P. Jackson, Commissioner Jon S. Corzine, Governor

Bay Jack (left and right).

The first vessel deployed a 170-foot tanker obtained from the Philadelphia Naval Shipyard, was sunk on the Garden State North Reef Site last May. The vessel was built for the Navy during World War II. Only five days after the sinking, local divers reported that sea bass and tautog were living on the wreck. The vessel, formerly designated YO-153, was renamed Helis, after the beluga whale that wandered up the Delaware River during spring last year.

A 194-foot ferry boat, dubbed Elizabeth, was the second vessel sunk. Built in 1901, the steam-powered ship spent its first 50 years ferrying cars and passengers between Jersey City and Manhattan. It later served as a floating information center and finally, was a restaurant. It had to be raised from a dock in Philadelphia, where it had sunk three years earlier. The vessel then was completely gutted, and its steam engine was removed and donated to a museum. Sunk on the Cape May Reef Site, the ferry features unobstructed access through its car and passenger decks. With its upper deck situated only 30 feet below the surface, the ferry should become a premier location for diving.

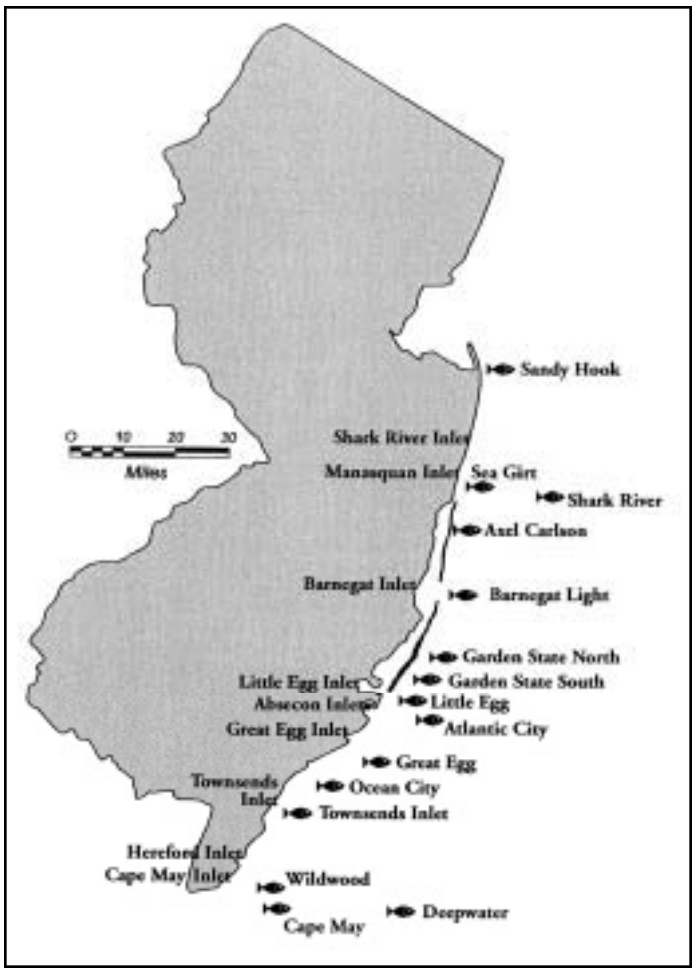
Last November, the Bay Jack, a 60-foot tugboat, became the first structure sunk on the Townsends Inlet Reef Site. The vessel was sunk in a depth of 60 feet. (See related story on p. 9.)

The sinkings demonstrate New Jersey's commitment to enhancing its marine environment. Shipwrecks not only provide vital habitat for marine life, they also are an important resource in coastal communities, benefiting fishermen and divers and boosting the state's fishing industry.

Objectives of the Reef Program

New Jersey's Reef Program is administered by the Department of Environmental Protection's Division of Fish and Wildlife. The objectives of the program are to construct hard-substrate, reef habitat in the ocean for certain species of fish and shellfish, new fishing grounds for anglers, underwater structures for scuba divers and economic benefits to the fishing industry.

In constructing and managing reefs, the goal is to spread the benefits of reef resources to as many people as possible. The intent of the program is not to change New Jersey's marine environment, but rather to enhance a small portion, less than one percent of the sea floor, to benefit 150 species of marine life that prefer structured habitat.



New Jersey's Artificial Reef Network.

2005 Reef Adoptions

Bomber's Ridge

A rock ridge on the Axel Carlson Reef Site was sponsored by Bobby and Hannah Helbig and Callie and Andrea Wilber, in memory of Raymond and Hilda Rodweller.

The following reefs were constructed on Sept. 22, 2005:

M.T. Foster's Reef

A Reef Ball reef, sponsored by Linda Foster, was constructed on the Little Egg Reef Site.

Ballinger/Liss Reef

A Reef Ball reef, sponsored by the Ballinger and Liss families, was constructed on Little Egg Reef Site.

John V. Slowe Reef

A Reef Ball reef, sponsored by Carrie Zipf Slowe, was constructed on the Little Egg Reef Site.

Patrick F. Madison Memorial Reef

A Reef Ball reef, sponsored by family and friends and friends at Mar-Vel International, was constructed on the Little Egg Reef Site.

Charles A. Blumenfeld Reef

A Reef Ball reef, sponsored by Alan, Helen, Hana and Joey Blumenfeld, was constructed on the Little Egg Reef Site.

Bassbarn Reef

A Reef Ball reef, sponsored by the bassbarn.com, was constructed on the Little Egg Reef Site.

Thomas Mankowski

A Reef Ball reef, sponsored by family and friends, was constructed on the Little Egg Reef Site.

FRTC South Reef

A Reef Ball reef, sponsored by the Forked River Tuna Club, was constructed on the Garden State South Reef Site.

Joe Marshall Reef

A Reef Ball reef, sponsored by Joseph and Jay Gemberling and James R. Slim, was constructed on the Garden State South Reef Site.

Michael C. Pluta Reef

A Reef Ball reef, sponsored by family and friends, was constructed on the Garden State South Reef Site.

Billy da Butch Reef

A Reef ball reef, sponsored by the Wednesday crew of the Mary M III and Captain Sam Rascigno, was constructed on the Garden State South Reef Site.

Fishin' Hole Reef

A Reef Ball reef, sponsored by members of Barnegat Fishin' Hole, was constructed on the Garden State South Reef Site.

Shawn Dilkes Reef

A Reef Ball reef, sponsored by the Beach Haven Marlin and Tuna Club, was constructed on the Little Egg Reef Site for the recipient of the Ed Hall Service Award.

Kurt Horensky Reef

A Reef Ball reef, sponsored by the Beach Haven Marlin and Tuna Club, was constructed on the Little Egg Reef Site for the recipient of the Ed Hall Service Award.

Captain Ken Keller Reef

On June 9, a reef, sponsored by family and friends, was constructed of concrete castings on the Axel Carlson Reef Site.

Anthony T. D'Alessio

A rock ridge, sponsored by Patrick D'Alessio, friends of Dr. D'Alessio and staff of Dover Hospital and St. Clares, was constructed on the Axel Carlson Reef Site.

Drifter's Reef

On June 9, a reef, sponsored by the Greater Point Pleasant Charter Boat Association, the Manasquan River Marlin and Tuna Club and the Ann. E. Clark Foundation, was constructed of concrete castings on the Axel Carlson Reef Site.

Sean's Reef

A reef of concrete castings, sponsored by friends of John and Rhonda, was constructed on the Barnegat Light Reef Site in memory of Sean Beatty.

Remo's Mountain

A rock mountain, sponsored by friends in memory of Remo Montella, was constructed on Shark River Reef Site.

Woody's Reef

A Reef Ball reef, sponsored by close friends of Robert Woodring, was constructed on the Garden State South Reef Site.

Joseph W. Ertle Reef

A rock mountain, sponsored by George Ertle, was constructed on the Axel Carlson Reef Site in memory of his father.

2005 Reef Habitat Sponsors

- The Rainbow Rod and Gun Club sponsored the Frank J. Krzos Reef
- Capt. Dave Haines.

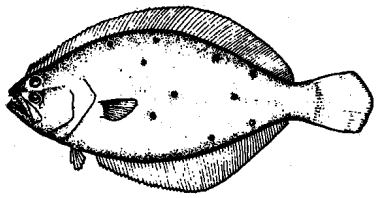
New Wrecks in '05

thebassbarn Maelstrom—a 71-foot commercial fishing boat was sunk on the Wildwood Reef on April 16, at DGPS coordinates 3857.412 7441.346. The vessel was sponsored by the bassbarn.com.

Pair of Kings—a 132-foot tanker barge was sunk on the Wildwood Reef on August 10 at DGPS coordinates 3858.03 7441.07. The vessel was sponsored by the Ann E. Clark Foundation and thebassbarn.com.

Ed Hall—a 62-foot excursion boat was sunk on May 4 on the Garden State South Reef Site at DGPS coordinates 3933.661 7406.204. The vessel was sponsored by the Beach Haven Marlin and Tuna Club in memory of Ed Hall.

Jet Trader—a 170-foot tanker was sunk on the Atlantic City Ref Site on September 2 at DGPS coordinates 3913.85 7412.51. The vessel was sponsored by Cleanwater of New York.



MRMTC Members Memorial Reef—a 100-foot tug was sunk on January 9 on the Axel Carlson Reef Site at DGPS coordinates 4003.187 7359.283. The vessel was sponsored by the Manasquan River Marlin and Tuna Club and the Ann E. Clark Foundation.

New Wrecks in '05

Four of Clubs—a 75-foot tug was sunk on January 9 on the Axel Carlson Reef Site at DGPS coordinates 4003.181 7359.310. The vessel was sponsored by the Ann E. Clark Foundation, Manasquan River Marlin and Tuna Club, DVD Divers and Ocean Wreck Divers.

Shamrock—a 48-foot deck barge was sunk on September 12 on the Ocean City Reef Site at DGPS coordinates 3909.935 7433.940. The vessel was sponsored by Shamrock Marine Towing.

Donna's Star—an 82-foot trawler was sank on December 20 on Townsends Inlet Reef Site at DGPS coordinates 3906.36 7406.30. The vessel was sponsored by friends of Donna and Atlantic Capes Fisheries.

Accomplishments, 1984-2005

Since the inception of the Division of Fish and Wildlife's Reef program in 1984, 3,608 patch reefs have been built on New Jersey's network of 15 ocean reef sites. A patch reef is a several-square-yard to several-acre reef created by sinking a ship or placing a barge load of other material on the sea floor. In 2005, 228 patch reefs were constructed.

Reef Material	Patch Reefs Built in 2005	Total Patch Reefs Built 1984-2005
Rock	183	1,968
Concrete	15	236
Reef Balls	17	137
Concrete Castings	2	44
Vessels	11	139
Army Tanks	-	397
Other	-	500
Total	228	3,608

The Reef Food Chain

When it comes to ocean reefs, there is a lot more down there than just fish.

In terms of numbers and weight, also referred to as biomass, fish represent only a small portion of the marine life on a reef. In a nine-year study of marine life colonization of reef structures, Fish and Wildlife biologists found that fish account for 4.5 percent of the biomass of the marine life community inhabiting a reef. Young-of-year fish represent 1.2 percent and adult fish are 3.3 percent of the total.

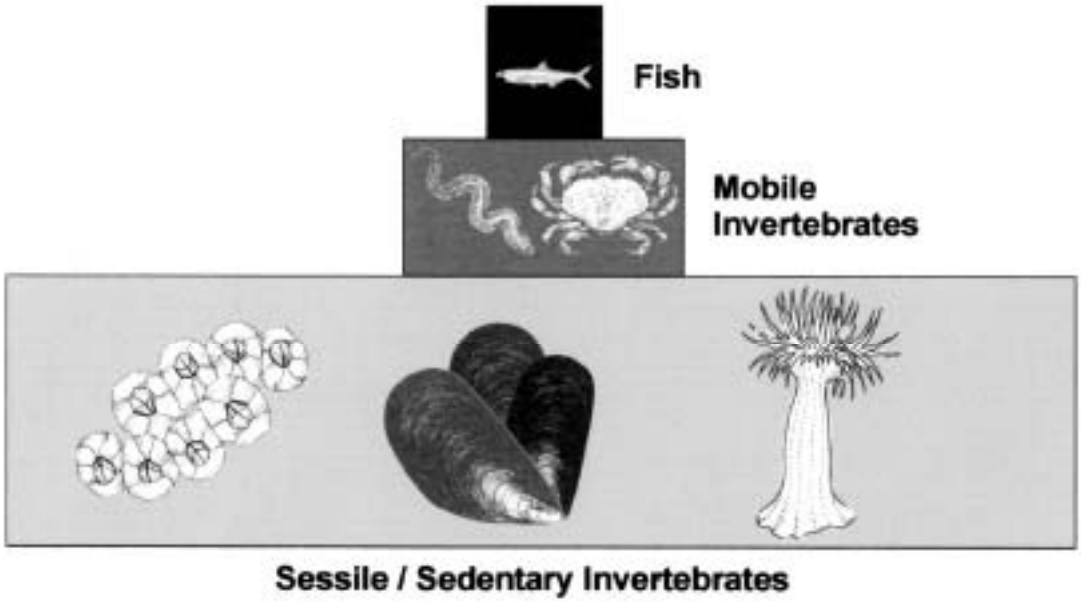
The most abundant group, forming the base of the food-chain pyramid, comprises sessile invertebrates such as mussels, barnacles, anemones, bryozoans, hydroids, tube worms and coral. These animals spend their entire lives anchored to reef structures. They carpet the reef in abundance and account for 84.5 percent of total reef biomass.

Inside the living carpet is a wide variety of mobile invertebrates such as crabs, shrimp, starfish, urchins, snails, worms and isopods, accounting for 11 percent of reef biomass. These animals seek shelter within this living carpet.

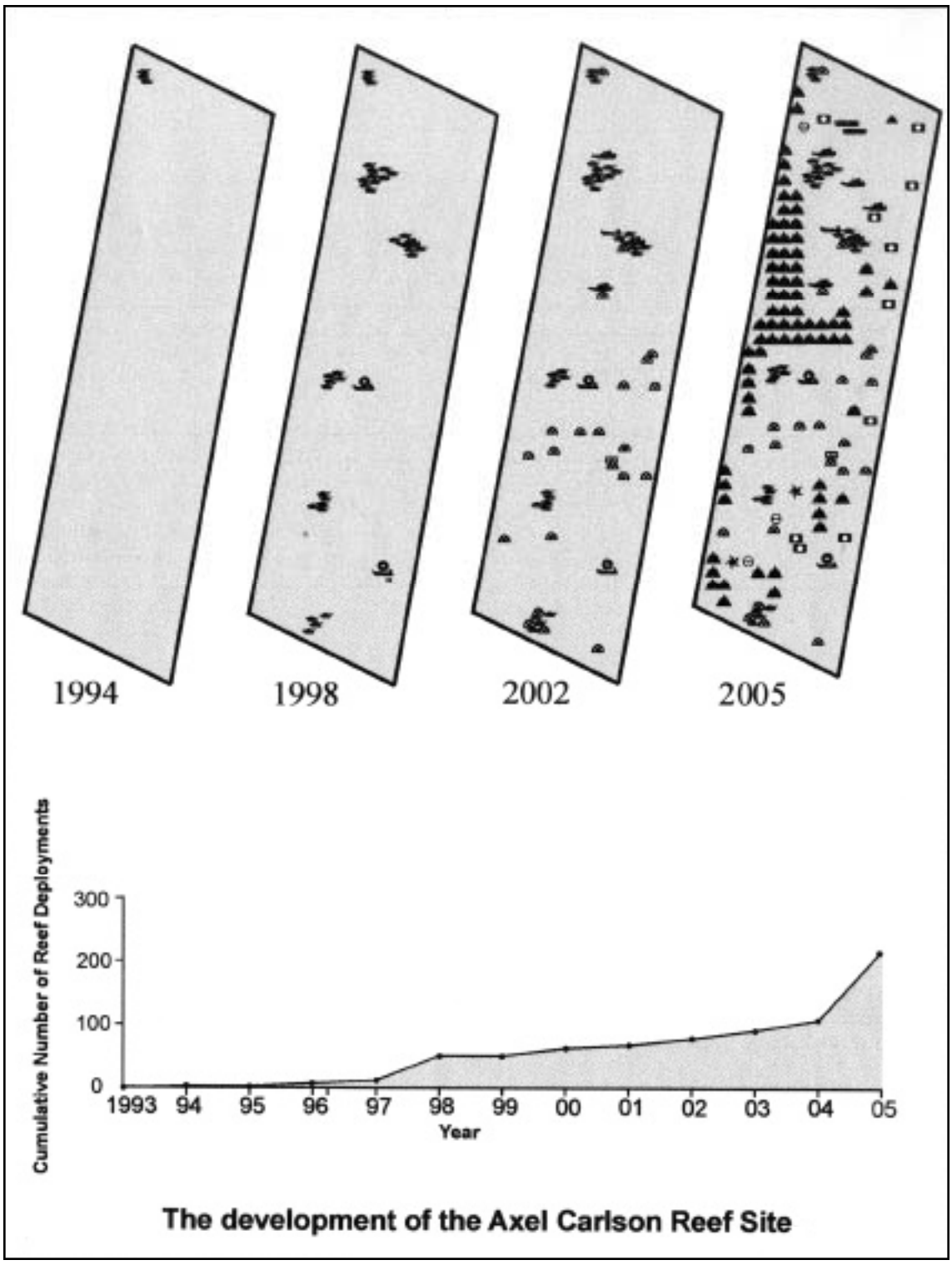
Fish feed on both the attached and mobile invertebrates. In a healthy habitat, the food-chain pyramid's lower levels, composed of forage organisms, are much larger than the top level, which consists of apex predator fish. To use a land-based comparison, you can't have more lions than antelope.

These findings suggest that New Jersey reefs provide a productive habitat for use by marine fish.

	Mean Biomass g/m²	Percentage
Fish	3,949	4.5
Mobile Invertebrates	9,464	11.0
Sessile / Sedentary Invertebrates	73,712	84.5



Approximate food chain relationships among fish, mobile invertebrates, and sessile/sedentary invertebrates on New Jersey reef habitats.



The development of the Axel Carlson Reef Site

The Growth of the Axel Carlson Reef

In just a dozen years, the Axel Carlson Reef Site has grown from a patch of bare sand to more than 280 reefs for use by anglers and divers. The rapid development of this site is largely due to the generous donations of many sports clubs, organizations and individuals who paid the costs of preparing and delivering reef materials to the site. Notable contributors included Greater Pt. Pleasant Charter Boat Association, Manasquan River Marlin and Tuna Club, Ann E. Clark Foundation, Jersey Coast Shark Anglers, Ocean Wreck Divers, Bay Head Shores Fishing Club, New York Sea Gypsies, New Jersey Council of Dive Clubs, Norma K, Herb Segars, North East Mako Owners Club, Riviera Beach Boat Club, New Jersey Grady White Mariners Club, John Visceglia, DVD Divers and many others.

Exelon Reef

Exelon Corporation, new owners of the Oyster Creek Nuclear Generating Station, provided a grant to construct a 46-acre reef on the Barnegat Light Reef Site.

More than 1,000 tons of concrete castings are slated to be spread out on the sea floor to create additional drift fishing opportunities for anglers.

Bill Figley catches a tog that was tagged and released.

Ana Taboada, 6, caught her first sea bass on the Sea Girt Reef.

DEP adding new reef site outside Townsends Inlet

The New Jersey Department of Environmental Protection announced it would build a new reef site off the coast of Cape May County to enhance its nationally recognized network of 15 artificial reefs while strengthening marine resources, improving recreational opportunities and boosting the state's economy.

Recently approved by the U.S. Army Corps of Engineers, construction of the reef, to be situated approximately 3.8 nautical miles southeast of Townsends Inlet in Cape May County, will be funded almost entirely through private donations. Some 800 reef-ball habitats are scheduled for deployment this summer on the Townsends Inlet reef site.

The reef site measures slightly more than one-half square mile with a depth between 49 feet and 66 feet. Its inshore portion will be used as a drift fishing area; the offshore portion will be reserved for vessels to accommodate diving. The new reef will become part of the state's Artificial Reef Program, administered by the DEP's Division of Fish and Wildlife.

Artificial reefs play a key role in supporting New Jersey's marine fishing and diving industries, and contribute more than $50 million to the state's economy every year. These reefs also benefit the environment by providing new habitat for marine life. In fact, one out of every five fish reeled in by recreational anglers in New Jersey's salt waters during 2000 was caught on a reef site.

Coordinates for the Townsends Inlet Reef are:

Corner	Latitude	Longitude
NE	39° 06.700'	74° 36.000'
NW	39° 06.700'	74° 37.500'
SE	39° 06.250'	74° 36.000'
SW	39° 06.250'	74° 37.500'

The new TI Reef is expected to be a premier fluke drifting area.

Fishing and diving clubs throughout New Jersey provide financial assistance to make scheduled reef-material deployment a reality. Divers, anglers and other outdoor enthusiasts interested in helping to enhance fishing grounds in the Garden State are encouraged to learn about the DEP's Adopt-A-Reef Program.

For more information on the Artificial Reef Program, visit www.njfishandwildlife.com/artreef.htm. Or call the Artificial Reef Program at (609) 748-2020 or write to the Division of Fish and Wildlife at P.O. Box 418, Port Republic, NJ 08241, Attn: Reef Adoption Program.

What's in Store for 2006

Rock	500,000 cubic yards
Reef Balls	600
Concrete Castings	300
Vessels:	65' Commercial trawler 178' Tanker barge 90' Deck barge

Side scan sonar image of the Veronica M tug sunk on the Axel Carlson Reef Site *(Courtesy of Vince Capone, Enviro Scan)*

After putting New Jersey's artificial reefs on the map, Figley and Preim chart new courses

Bill Figley, whose name is synonymous with reef building in the Garden State, retired in December after 30 years of dedicated service as a fisheries biologist for the New Jersey Department of Environmental Protection's Division of Fish and Wildlife.

During his 22-year tenure as Reef Coordinator, Figley supervised the construction of more than 3,600 ocean reefs from 14 million tons of reef material, making New Jersey's Artificial Reef Program the largest in the nation.

In addition to his reef-building activities, Figley is recognized nationally as a leader in temperate water reef research and conducted numerous studies both on reefs and on the kinds of people who frequent them.

Between 1979 and 1991, he conducted New Jersey's big-game fishing survey, collecting statistics on the sport catch of marlin, tuna and sharks. He documented the locations of New Jersey's prime fishing grounds, which the DEP now uses to protect these areas from environmental degradation. He also published many informational pamphlets on party and charter boats, boat liveries, fishing access, saltwater fish and fishing.

Anglers, charter-boat captains and divers from Sandy Hook to Cape May have benefited immensely from Figley's work. He regarded his profession as an "awesome responsibility" and worked every day to improve New Jersey's marine environment and enhance recreational opportunities for sportsmen and sportswomen throughout the Garden State.

During retirement, Figley plans to do a great deal of fishing and hunting. So, if you see him on the fishing grounds, say hello and thank him for all his good work.

Another member of the reef team, Barry Preim, a fisheries technician, retired after 35 years with the Division of Fish and Wildlife. In addition to work at sea during reef-building activities, he was responsible for preparing the charts, which now guide anglers and divers around the reef sites, and other published graphics that promoted the Reef Program and made it into success that it is today.

Bill Figley's last deployment.

REEF FISHING EVALUATION

Please use your reef fishing experience to help us assess the effectiveness of reef sites and reef structures in providing fishing opportunities for anglers.

I am a: □Party Boat Captain □Charter Captain □Private Boat Angler □Party/Charter Angler

During 2005, approximately how many fishing trips did you make to NJ artificial reef sites? ____ trips

Rate the species you fish for on the reefs:

Rating System P = Primary Target; S = Secondary Target (Blank) = Don't fish for

Fluke	Sea Bass	Tog	Porgy	Ling	Triggerfish	Cod/Pollock

Rate the reef structures for catching the following species

Rating System 3 = Excellent 2 = Good 1 = Fair 0 = Poor Blank = No Opinion

Structure	Fluke	Sea Bass	Tog	Porgy	Ling	Triggerfish	Cod
Drift Fishing Areas							
Rock							
Concrete							
Wrecks							
Army Tanks							
Subway Cars							
Reef Balls							
Pipe (concrete castings)							
Tire Units							

Rate the following reef sites for catching the following species

Rating System 3 = Excellent 2 = Good 1 = Fair 0 = Poor Blank = No Opinions

Reef Site	Fluke	Sea Bass	Tog	Porgy	Ling	Triggerfish	Cod
Sandy Hook							
Shark River							
Sea Girt							
Axel Carlson							
Barnegat Light							
Garden State North							
Garden State South							
Little Egg							
Atlantic City							
Great Egg							
Ocean City							
Deep Water							
Wildwood							
Cape May							

Please mail to: Reef Program, Division of Fish and Wildlife, Bureau of Marine Fisheries
P.O. Box 418, Port Republic, NJ 08241, or Fax: 609-748-2032.

Reef-Related Web and E-Mail Sites

njfishandwildlife.com
NJ Division of Fish and Wildlife, Reef program information

njscuba.net
Reef construction, reef studies, photos

gotosnapshot.com
Reef shipwrecks, reef structures, underwater photos.

Realfish-underwater.com
Diving, video, marine art

wreckvalle@aol.com
Diving, current events

subanj.org
NJ Council of Dive Clubs

Get Reef Updates Via E-mail

If you would like to receive periodic updates about New Jersey's reef-building activities, including photos and coordinates, send us your e-mail address.

PRINT CLEARLY

NAME: _____

PHONE: _____

E-mail: _____

I am (check all that apply):
☐ angler ☐ diver ☐ charter captain
☐ party boat captain ☐ commercial fisherman
☐ researcher ☐ marine industry representative

Mail to: Reef Program, Division of Fish and Wildlife, P.O. Box 418, Port Republic, NJ 08241

New leader named for artificial habitat program

Hugh Carberry, a 17-year veteran of the DEP's Division of Fish and Wildlife, has been selected to serve as the new coordinator of New Jersey's innovative Artificial Reef Program.

Before becoming coordinator, Carberry served as a supervising biologist for the Fish and Wildlife's Bureau of Freshwater Fisheries, heading up its Research and Management Section.

During his career, Carberry documented spawning locations of river herring and American shad, wrote fisheries management plans for lakes and reservoirs, and coordinated Freshwater Fisheries' Artificial Reef Program. He also worked as a laboratory technician for the Bureau of Shellfisheries and as a boat captain of a 32-foot research vessel. He earned a bachelor's degree in Marine Science from Stockton State College in 1988.

A devoted marine angler, Carberry lives to fish on New Jersey's inshore and offshore fishing grounds.

REEF PROGRAM
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF FISH AND WILDLIFE
P.O. BOX 418
PORT REPUBLIC, NJ 08241