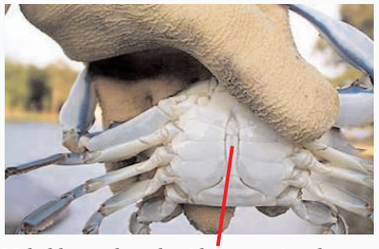
Natural Coasts

Beautiful Swimmers

Brilliant blue claws and legs give the Atlantic blue crab its common name while its scientific name, *Callinectes sapidus*, translates to beautiful - swimmer - savory. Aggressive and fearsome blue crabs stand with upraised claws against predators. Paddle-like back legs are excellent for swimming and six middle legs are used for walking over bay bottoms, often sideways. Strong claws grab food of small fish and shellfish. Blue crabs thrive in the brackish waters of Long Island's South Shore Estuary.

Over its three to four year lifespan in the Estuary, blue crabs feed voraciously in warm seasons and repeatedly molt by shedding their hard shell called an exoskeleton. Female blue crabs mate once in their lifetime. The male "cradle carries" the female as she molts enabling her to capture the male's sperm in a special pouch. Once the female's shell hardens, the male releases her. Later the female fertilizes up to eight million eggs with the stored sperm. She then carries the fertilized eggs, called embryos, as an external abdominal mass. The embryos hatch as crab larvae and currents carry them into the ocean. The larvae molt many times until they are very small crabs and re-enter the Estuary where submerged aquatic vegetation provides protective cover. Blue crabs can grow up to nine inches in diameter. In autumn, they bury in mud and are dormant all winter, reemerging in the spring. Blue crabs are fished commercially and recreationally for their sweet tasting meat.



Male blue crab undersides are pointed like the Washington Monument and the claws are sky blue.

Female blue crab undersides are rounded like the United States' Capitol Dome and the claw tips are red.

Atlantic blue crab, female (*Callinectes sapidus*)

This sign was prepared for the New York State Department of State with funds under the Environmental Protection Fund Local Waterfront Revitalization Program.

New York State Department of State, Division of Coastal Resources

Enjoying the Coast

Fast Sailing

Sailboat racing on Great South Bay has been a favorite pastime since Long Island's South Shore became a popular summer destination in the late 1800s. Until that time, most sailboats were working boats used to fish, harvest shellfish and transport passengers and goods. In 1906, the Great South Bay Racing Association began organizing sailboat races, called regattas. As community yacht clubs formed and grew sailboat racing flourished.

Today's regattas include distinct types or classes of sailboats called "one-designs" built for shallow Bay waters. An insignia on the sail identifies the boat's unique class. Competition among one-design sailboats provides a fair and consistent measure of a sailor's skills. Sailboat racing is just one of many maritime traditions that inspire a life-long appreciation of Great South Bay.

Optimist, (lower left) Less than 8 feet long, this single-handed sailing dinghy is intended for young sailors. It is a popular junior racing sailboat on Great South Bay and throughout the world. Many of today's best sailors learned their skills in an Optimist and moved up in classes to a lifetime of sailing.

Flying Scot, (lower right) Safe, unsinkable and stable, the "Scot" is a nationally recognized racer and popular pleasure boat. At 19 feet long, this one-design fiber glass boat with an aluminum mast and boom has been in continual production since 1957. About 175 Scots sail in the Great South Bay fleet.

Narrasketuck, (main image) Designed specifically for sailing on Great South Bay, this 20-foot sloop first appeared in 1935. Easily recognized by the red Indian-head insignia on its sail, the "Tuck" remains one of the most popular competitors in local regattas.

Sailing an Optimist

Sailing the Flying Scot

Narrasketucks on Great South Bay

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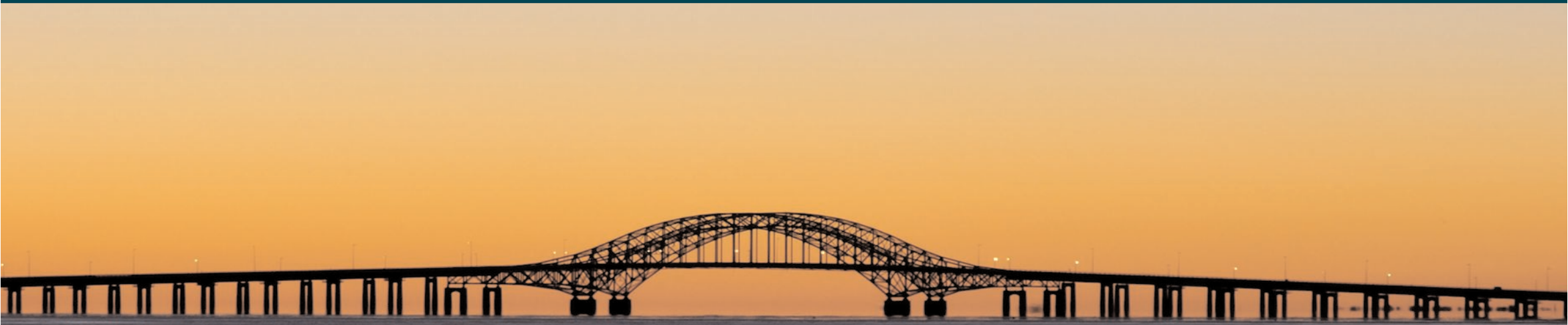
Living on the Coast



Road to the Ocean

Only a few generations ago travel between Long Island and the Fire Island beaches could only be achieved by boat. The construction of the Robert Moses Causeway – an eight-mile long, elevated highway of concrete and steel – made the beaches accessible to automobiles. It was named after Robert Moses, New York State's most prolific builder of public works between 1924 and 1968.

Opened to traffic in 1954, the first section of the Robert Moses Causeway connected West Islip to the east end of Jones Island. It was now possible to drive over the Great South Bay to Captree State Park and then over the New York State Boat Channel to Ocean Parkway and continue on to Jones Beach State Park. The final section of the causeway was completed in 1964. It spanned Fire Island Inlet providing access from Jones Island to Long Island's oldest park, then known as Fire Island State Park. In anticipation of increased attendance, improvements were made and the park was renamed Robert Moses State Park.

Today, the graceful arches of the Robert Moses Causeway's bridges are famous South Shore landmarks.

The southern section of the Robert Moses Causeway crosses Captree Island and Jones Island before reaching Robert Moses State Park on Fire Island.

Main Image: Looking to the east, the sun rises over the Great South Bay section of the Robert Moses Causeway.

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New York State Department of State, Division of Coastal Resources

Protecting the Coast

Great South Bay Shellfishing

In the mid-1970s more than half of the hard clams consumed in the United States were harvested from Great South Bay. This abundance of hard clams supported a thriving shellfish industry of commercial and recreational harvesters, seafood marketers and restaurateurs. The constant high demand for hard clams led to overharvesting and the eventual decline in the population of hard clams. Natural predation, damaging algal blooms and polluted stormwater runoff further decimated the population and by the early 1990s the harvest had reached the lowest level ever recorded.

Efforts are underway to restore the Great South Bay hard clam population. Certain areas of the Bay are set aside as protected "spawner sanctuaries" and are closed to commercial and recreational harvest. Adult hard clams are transplanted into these sanctuaries where they can spawn without disturbance. In addition to re-establishing hard clams, the Town of Islip has implemented an aquaculture program for other shellfish species including bay scallops, blue mussels, razor clams, American oysters and soft shell clams. Entrepreneurs participating in the program lease underwater plots of land from the Town for shellfish cultivation. They purchase young shellfish, called "seed," from hatcheries and "plant" them on the leased underwater land or in the water column. After a grow out period marketable size shellfish are harvested and sold.

Continued restoration of viable shellfish populations and a sustainable shellfish industry are challenging tasks. All shellfish remain threatened by pollution, marine predators, algal blooms and a lack of food sources.

Commercial and recreational clamming boats on Great South Bay in the early 1970s.

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New York State Department of State, Division of Coastal Resources

Historic Coasts

The United States Life-Saving Service on Fire Island

Local history of the United States Life-Saving Service (USLSS) dates back to the War of 1812 between the United States of America and Great Britain when William Baker organized the first team of volunteer surfmen to patrol Fire Island looking for British war ships. After the war, ship commerce and travel increased significantly along the East Coast resulting in many ship wrecks and lives lost. In the approach to New York Harbor alone from 1839 to 1849 there were 338 ship-wrecks. In response to the growing need for water rescues a group of philanthropists established the Life-Saving Benevolent Association of New York. They built ten life-saving stations on Long Island, including three on Fire Island. Life-saving stations continued to be added along the United States' coasts, including more on Fire Island. In 1871 the U.S. Congress organized this fledgling network of stations into the USLSS. Over the course of 44 years 400 men served in the USLSS at seven Fire Island life-saving stations and rescued 7,000 people from 721 stranded ships. In 1915 the USLSS was merged with other federal government agencies to form the U.S. Coast Guard.

Four generations of William Baker's family served as surf-men and keepers (the person in charge) at the Lone Hill, Fire Island, Bellport, and Point O'Woods life-saving stations, collectively they came to be known as the Baker Boys. It is believed that a member of the Baker family participated in nearly every rescue made in the waters off of Fire Island between the Bellport and Fire Island life-saving stations.

When a wreck occurred surfmen would launch surf boats outfitted with a breeches buoy, a Lyle gun (a short-barreled cannon designed to fire a projectile attached to a rope) and a system of pulleys to rescue victims in the water and trapped on distressed ships.

On June 17, 1906 the Vincenzo Bonanno, an Italian steam ship, ran aground on a sandbar in heavy fog two miles east of Fire Island. The Bonnano's captain and crew were rescued by a volunteer life-saving crew and brought to the Point O' Woods life-saving station on Fire Island. The image shows Charles Baker (left), keeper of the station with his son, surfman Ben Baker (center) and wreck master Ben Dunbar (standing) posing in front of the stranded steamer a day after the rescue.

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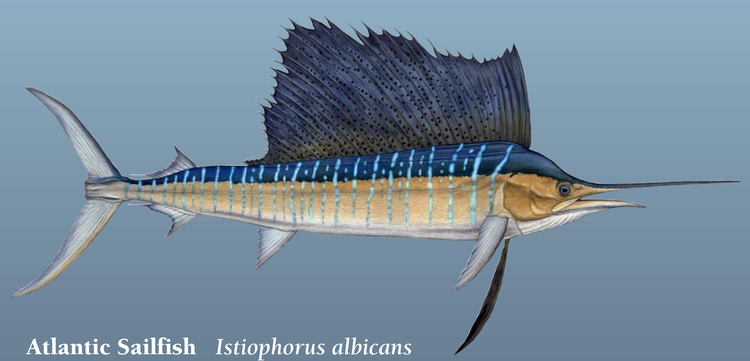
Natural Coasts

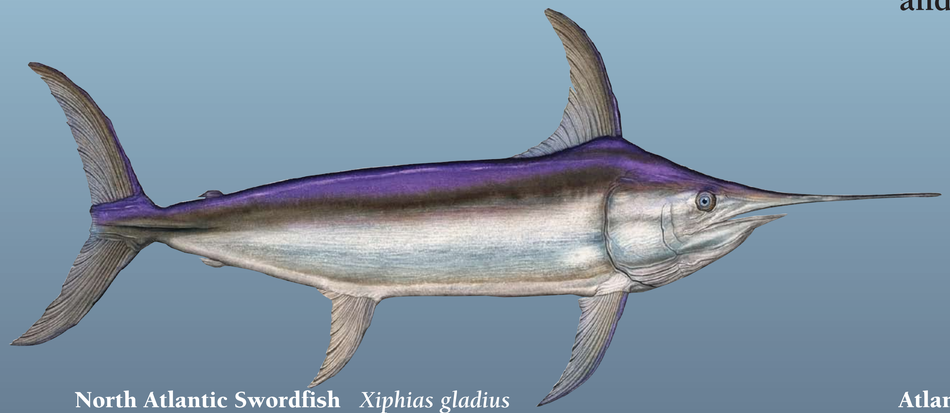
Game Fish off Islip

Large game fish including sharks, swordfish, tunas and billfish – fish with long, round bills extending from their upper jaws – such as marlins and sailfish cruise the Atlantic Ocean off the Town of Islip. All are highly migratory, travelling thousands of miles in search of prey. They feed voraciously on smaller fish and cephalopods such as squid. Game fish are among the fastest swimmers in the ocean. Some species can weigh up to 1,400 pounds and reach 15 feet in length, making them highly desirable by the sport fishing industry.

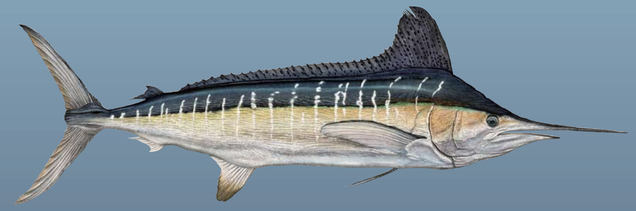
Game fish are hunted by humans for food. Industrial-scale international fishing fleets using non-selective fishing methods have significantly reduced the populations of many game fish species worldwide, most notably the Atlantic bluefin tuna. When game fish stocks are reduced populations of prey fish and other marine animals lower on the food chain increase, creating an imbalance in the marine ecosystem. Depleted stocks of game fish can be restored with international cooperation, use of responsible commercial fishing methods and careful catch-and-release recreational fishing. Using sustainable fishing methods protects and enhances game fish populations and maintains the balance of the ocean ecosystem.



Atlantic Sailfish *Istiophorus albicans*
Named for its spectacular dorsal fin, this billfish grows up to 10 feet long and can weigh 90 pounds. It may be the fastest swimmer of any fish, approaching speeds of 70 miles an hour.



North Atlantic Swordfish *Xiphias gladius*
Growing up to 15 feet long and weighing more than 1,000 pounds, swordfish are among the fastest swimmers. Like a gladiator, they use their flattened, sword-like bill to stun and slash their prey.



Atlantic White Marlin *Kajikia albida*
Weighing as much as 180 pounds and growing up to eight feet in length, these solitary billfish are highly sought after by recreational fishers for their fighting strength and speed when hooked.

Yellowfin Tuna *Thunnus albacares*
Growing up to 6 feet long and weighing 300 pounds or more, this fast-swimming, torpedo-shaped fish travels in schools. Bright yellow fins give the species its common name.

Atlantic Shortfin Mako Shark *Isurus oxyrinchus*
This high-leaping, fast-swimming fish, a top predator of the ocean, can grow up to 14 feet long and weigh 1,000 pounds. Its long, slender and menacing teeth are visible even when the mouth is closed.

Atlantic Bluefin Tuna *Thunnus thynnus*
Largest of the tunas, the bluefin grows up to 14 feet long and weighs nearly 1,500 pounds. Torpedo-shaped for fast swimming, it is the most commercially and recreationally valued species of Atlantic tuna and the most endangered.

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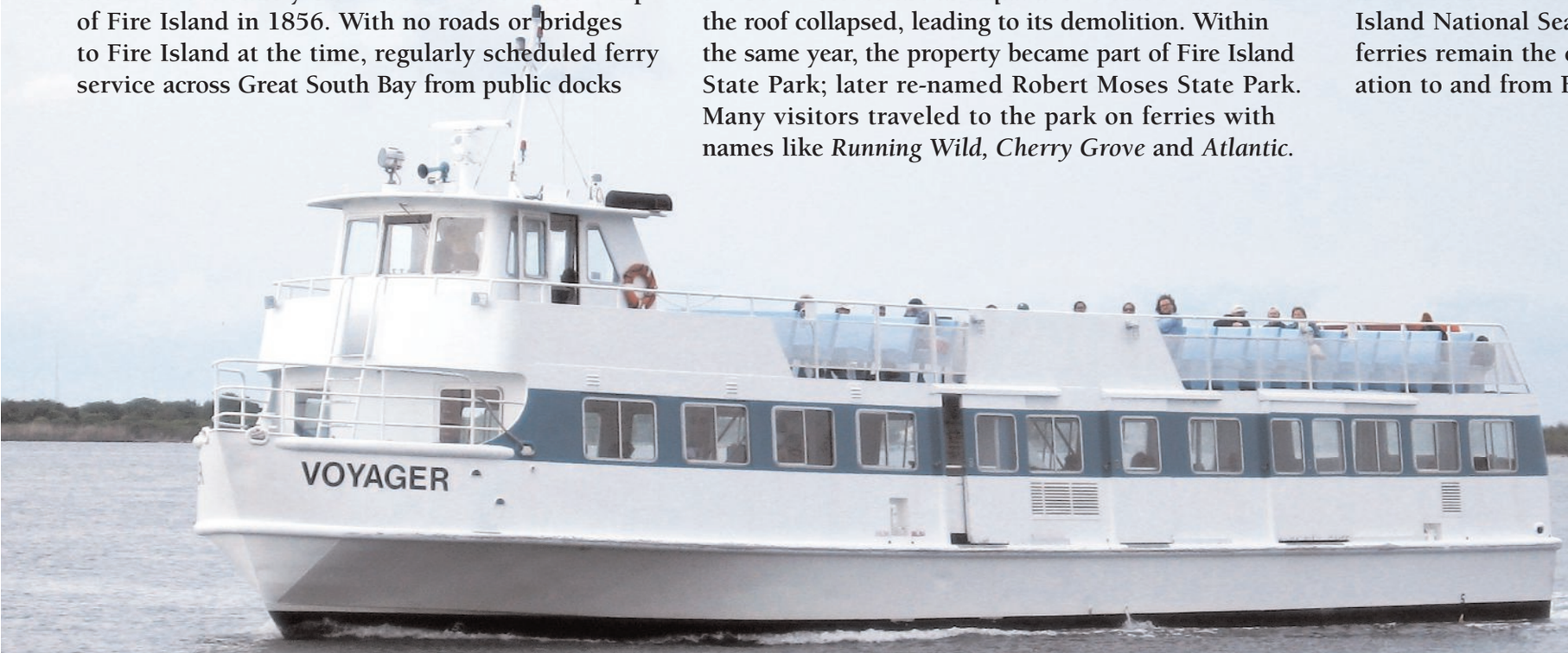
Enjoying The Coast

Fire Island Ferry Boats

For much of its history Fire Island was a remote and wild place. With the exception of a whaling station built in the 1600s, there were no year-round human inhabitants until the first lighthouse was built in 1826. Large numbers of summer visitors began to arrive from the mainland following the construction of the stately Surf Hotel on the western tip of Fire Island in 1856. With no roads or bridges to Fire Island at the time, regularly scheduled ferry service across Great South Bay from public docks in South Shore communities provided the only transportation from Long Island to Fire Island. As ferry service increased several summer communities were established on Fire Island.

During the cholera scare in 1892, New York State bought the Surf Hotel to use as a quarantine station. In 1908 the roof collapsed, leading to its demolition. Within the same year, the property became part of Fire Island State Park; later re-named Robert Moses State Park. Many visitors traveled to the park on ferries with names like *Running Wild, Cherry Grove* and *Atlantic.*

With the completion of the Robert Moses Causeway in 1964 visitors could now drive to most of Fire Island, leading to a decline in the need for ferry service. However, for the residents of Fire Island's bustling summer beach communities of Saltaire, Fair Harbor, Seaview, Ocean Beach, Cherry Grove and Kismet and for visitors to most of the Fire Island National Seashore, established in 1964, ferries remain the only viable means of transportation to and from Fire Island.



Today, modern diesel ferries, such as the Voyager, travel across Great South Bay from the Main Terminal in Bay Shore to Saltaire and Seaview on Fire Island in 30 minutes.

A small fleet of steam powered ferries brought summer guests to the Surf Hotel daily. This large hotel could accommodate up to 1,500 guests. *Post card of the Surf Hotel, c. 1902.*

Several ferries named Fire Island Queen have serviced Fire Island communities since the late 1940's. *The Fire Island Queen c. 1950.*

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Historic Coasts

Ockers West, one of the Ockers Oyster Company oyster and boat shanties c. 1912. Here oysters were "floated" in freshwater racks, culled and packaged for shipment. The building is now part of the Long Island Maritime Museum.

Ockers' Oysters

Jacob Ockers was born in 1847 to a Dutch oystering family that emigrated to the United States of America in 1851 and settled in the Town of Islip. At an early age he worked with his father culling oysters harvested from Long Island waters. In 1865 Ockers obtained underwater land leases to cultivate and harvest oysters and by 1876 he had started the Ockers Oyster Company. His business's growth was instrumental in the expansion of Long Island's oyster industry and Ockers soon became known as "Sayville's Oyster King."

Ockers was the first to promote oysters from Great South Bay (part of the Long Island South Shore Estuary) as Blue Point Oysters and first to sell and ship them to the important European Market. By the early 1900s Ockers was exporting 25,000 barrels of live oysters a year to Europe.

In 1912 Ockers sold the Ockers Oyster Company to the Sealshipt Oyster System, where it became a stand-alone subsidiary and was renamed The Bluepoints Clam & Oyster Company. Not long after Ockers sold to Sealshipt they went out of business. In 1914 Sealshipt's assets were sold at auction and the new owners reorganized it as North Atlantic Oyster Farms. The Bluepoints Clam & Oyster company was unaffected by the demise of Sealshipt. It continued to operate as a subsidiary of North Atlantic Oyster Farms with Ockers overseeing operations until his death in 1918. The Bluepoints Clam & Oyster Company was renamed again in 1922 as The Bluepoints Company and remained in business until 1999. Bluepoints' underwater lands were donated to the Nature Conservancy in 2002.

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