
In Remembrance of Elsa Thompson, 1934–2019
BIRD WATCHER'S
DIGEST
Species Profile
Northern
Goshawk
by Pete Dunne
Scott
Weidensaul:
The Real
Pampas
Far Afield
Florida Panhandle
Birding

New Life After Hurricane Sandy

JoAnne Castagna

In the spring of 2017, Harry Strano, a wildlife biologist, was walking on the shore in Deal, New Jersey, when he was pleasantly surprised. He saw a pair of clownish-looking birds building a nest.

Others probably noticed them as well, with their long legs, bright yellow eyes, and long, striking red-orange bills. These birds are American oystercatchers—a state special concern species, meaning their population is in decline and at risk of becoming threatened.

Jen LaStella, another wildlife biologist, believes the birds are returning to the shore because of a beach nourishment project performed by the U.S. Army Corps of Engineers, New York District.

"The beaches created by the replenishment provide ample space and opportunities for shorebirds to rest, forage, and even nest," said LaStella, who, with Strano, is performing environmental construction monitoring for this Army Corps project and works for Amy S. Greene Environmental Consultants, Inc.

Beach Nourishment Project

The Atlantic Coast of New Jersey Sandy Hook to Barnegat Inlet Beach Erosion Control Project was the largest beach nourishment project ever undertaken by the U.S. Army Corps of Engineers.

The project aimed to improve resiliency and reduce coastal storm risk to the shoreline and, as an added benefit, provide habitat for various rare, threatened, and endangered wildlife—like the American oystercatcher—that make the shore their home.

J. LASTELLA

The project began in 1994 and was constructed by the Army Corps' contractor Manson Construction Company. Amy S. Greene Environmental Consultants was the subcontractor that provided construction-monitoring services for rare, threatened, and endangered species.

The project encompassed 21 miles of the Monmouth County, New Jersey, shoreline that extends from the Township of Sea Bright down the shore to the Manasquan Inlet.

The Army Corps worked on this project in cooperation with its non-federal sponsor, the New Jersey Department of Environmental Protection (NJDEP), and maintained close coordination with the U.S. Fish & Wildlife Service.

The work included pumping offshore sand onto the shore to reinforce the natural protection to the upland afforded by the beach, and therefore reduce risk due to wave damage and inundation.

The completed project widened the shoreline 400 feet and built up the beach 10 feet above sea level. "This project is the world's biggest beach-fill project in terms of sand volume," said Anthony Ciorra, Chief, Hurricane Sandy Branch, New York District, U.S. Army Corps of Engineers.

The project also included notching—removing rock known as armor stone—from three existing groins from Elberon to Loch Arbour. A groin structure extends out from the shore into the water, interrupts water flow, and limits the movement of sand to prevent beach erosion and increase resiliency.

In addition, 10 existing stormwater outfall pipe extensions were lengthened. These pipes carry stormwater from the land to the ocean.

In 2012, 18 miles of the 21-mile project were completed. At this time, Hurricane Sandy devastated the region, removing 5 million cubic yards of sand from the shore—enough sand to fill New Jersey's MetLife Stadium.

In early 2013, the Disaster Relief Appropriations Act of 2013 (better known as the Sandy Relief Bill) was passed, authorizing the Army Corps not only to repair engineered beach projects by replacing the sand lost during Sandy, but also to restore them to their original design profiles.

Since Sandy, the Army Corps has repaired the 18 miles of shoreline that were damaged

American oystercatcher and its offspring.

L. DANGER

and replaced 7.7 million cubic yards of sand to the shore.

Work then began on completing the remaining three miles of the project, between Deal and Elberon.

On this project, as with all Army Corps beach nourishment projects, the Army Corps implements measures to protect and minimize impacts to rare, threatened, and endangered species.

Protecting Endangered Species

In addition to the American oystercatcher, species of concern in New Jersey include the federally listed threatened and state endangered piping plover and the seabeach amaranth plant, as well as the state endangered least tern. The measures are focused on the life and habitat requirements of federally listed species, including the piping plover, but other species benefit as well.

Peter Weppler, Chief of the Environmental Analysis Branch, New York District, U.S. Army Corps of Engineers, said that work on these measures was performed only when it would not pose a threat to the species. For example, sand was not placed on the shore between March 15 and August 15, because this is the time of year that the piping plover nests on the shore. During this time, sand placement did occur in portions of the project where piping plovers were determined not to be nesting.

"In addition, we also placed string fencing on the project property to delineate areas used by piping plovers, and we set up protective buffers around these areas," said Weppler.

Another important measure was hiring environmental construction monitors, including LaStella and Strano. Tasks the monitors performed included creating a monitoring plan in cooperation with the project team; conducting regular field surveys to identify rare, threatened, and endangered wildlife and plant species; recording behaviors, locations, and potential threats to these species; and documenting all other wildlife and plant species observations within and adjacent to the project area.

In addition, the monitors provided recommendations for avoiding and minimizing potential impacts to wildlife and ecological communities and for educating the public while on the project site. Strano said that public education is important in making beach visitors aware, more understanding, and therefore more tolerant of any inconveniences associated with protected beach areas.

Return of the Oystercatcher

LaStella began monitoring the project in 2016. During the first monitoring season, she observed American oystercatchers foraging and displaying courtship behaviors; however, they did not establish any nests that year.

She said that over the course of the year, natural coastal processes—the ocean currents and weather—helped reshape the newly constructed beach to form tidal flats and gentler slopes. The beach now provides much better foraging habitat, particularly during low tide.

During the 2017 nesting season, Amy Greene's wildlife biologists observed three pairs of oystercatchers attempting to nest within the project area and several other groups of American oystercatchers frequenting the area to forage and rest.

Of the three nests, she witnessed one nest successfully hatch three eggs, which resulted in one fledgling. She said that the success of this nest was likely due to protective measures and buffers that were implemented during construction, as well as the presence of jetties immediately north and south of the nest that provided protection from predators, such as crows and gulls. She also believes that the construction itself likely deterred some of the normal beach activities in the vicinity of the nest, which likely contributed to the success of this nest.

Strano believes the cooperation of the construction workers also helped. "It was very exciting to discover the American oystercatcher nest inside the work area; however, we were a bit apprehensive. We knew it would be a tre-

American oystercatcher, juvenile.

'Protecting shorebird nesting habitats often equates to protecting dune and beach systems and all of the species that inhabit these systems.'

mendous challenge to rear chicks at this location, because there are multiple threats at this and other beachfront locations, including foxes, dogs, storms, occasional vehicles, and overly enthusiastic beach visitors."

"We were encouraged by the immediate cooperation and interest in the birds expressed by the on-site construction crews. The crews' willingness to follow our guidance immediately eased some of our concerns. The adequate planning, cooperation, and open communication of all stakeholders resulted in effective protections for these birds without major delays to the project," he said.

"One construction worker bought binoculars and a bird book, and others excitedly reported their bird observations to me from the day prior," LaStella said.

"Protecting shorebird nesting habitats often equates to protecting dune and beach systems and all of the species that inhabit these systems," Strano said.

He added that if you study American beach-grass dune communities, which are often a component of beach nesting bird habitats, you will notice a stunning variety of organisms that rely on these systems. Migrating birds, such as certain songbirds and raptors; numerous butterflies and other pollinating insects; and even some reptiles and amphibians, such as eastern box turtles and Fowler's toads, are all found in these communities.

He added that protecting the beach and dune systems, particularly the American beach grass communities, also helps protect the adjacent landward properties from storm surges and flooding.

Not only are LaStella and Strano extremely happy about the environmental benefits of this coastal storm risk management project, but environmental agencies are, as well.

"The NJDEP's Endangered and Non-Game Species Program and the New Jersey Audubon expressed their excitement to us about the nesting success of these American oystercatchers, a bird that is part of the NJDEP's shorebird protection plan," said LaStella.

The project was completed in 2017 but will receive periodic sand replacement. "The project will not completely protect from another storm like Hurricane Sandy, but it will greatly reduce the negative impacts," said Ciorra.

"I am passionate about the protection of wildlife and its habitat, and am therefore grateful that we had the opportunity to provide environmental construction services for the Army Corps' beach nourishment projects," LaStella said. "Development and construction projects will continue as long as we inhabit Earth, so finding a balance between progress and protecting the natural world is essential and rewarding in so many ways."

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AMY S. GREENE

A few facts about the American oystercatcher

They stand nearly a foot and half tall, have black-and-white feathers, bright yellow eyes, and a long, bright orange bill. They make loud calls and exhibit gregarious behavior.

They are listed as a species of special concern in several coastal states, including New York and New Jersey. This means that there is an inherit threat to their population, or there is evidence of recent population declines.

They are threatened by human disturbances, habitat loss from coastal development, a host of predators, and flooding events.

Their primary food sources are oysters, clams, and mussels. They use their strong bills and tongues to pry open shells.

They breed in March on New Jersey's coastal beaches, inlet systems, and salt marshes.

Adults typically lay one to three eggs. After the chicks are fledged, most migrate to the Southeast.

For more information about the American oystercatcher, please visit: tinyurl.com/CWNJ-AMOY.