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Poplar Island Spring/Summer Newsletter 2019

1 message

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MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND PORT ADMINISTRATION

Poplar Island Newsletter

Spring/Summer 2019

Construction Update

Expansion

Drone Imagery of the Poplar Island Expansion wetland cells and open water embayment.

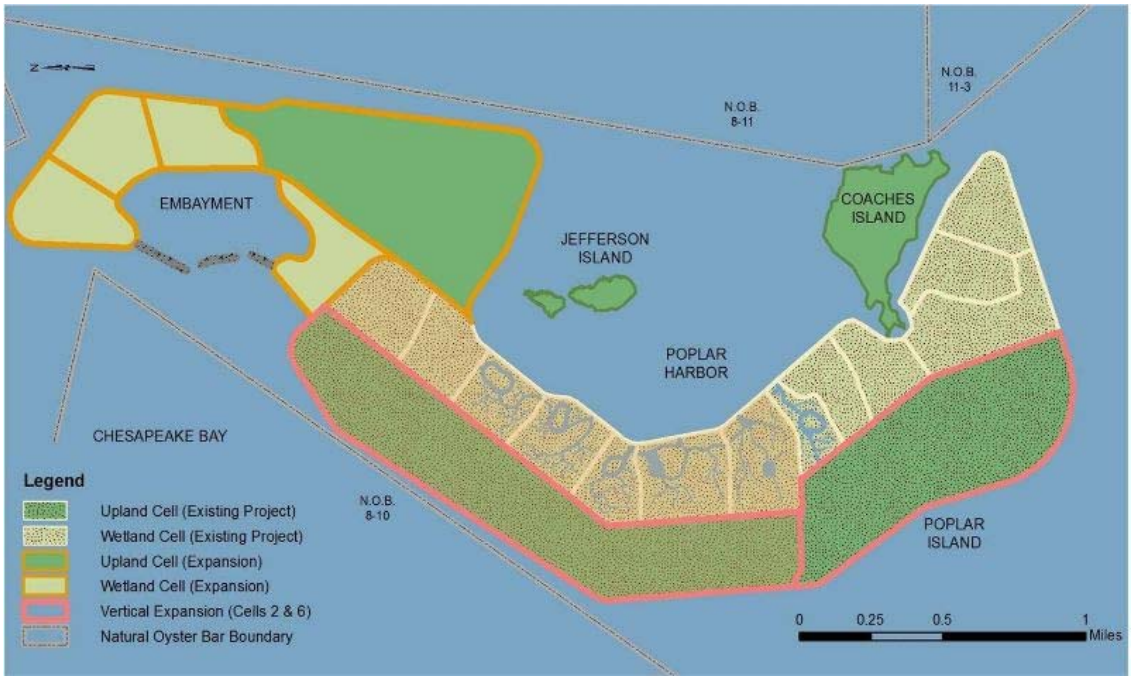
Work on the Poplar Island Expansion has continued to progress throughout the year. The U.S. Army Corps of Engineers (USACE) contractor, The Wesson Group LLC, began onsite in December 2017 constructing the toe and perimeter dikes around wetland Cells 8, 9, & 10, as well as constructing the breakwaters for the open-water embayment. Wesson is expected to finish work by early fall 2019.

The Wesson Group LLC. placing armor stone behind the toe dike around the breakwaters of the open water embayment.

The expansion's next major contractor, H&L Contracting, began work in March 2019 constructing the dike around the upland cell, Cell 11, and are expected to finish in summer 2020.

Upland Cell 11 and the vegetated 1C wetland.

The final expansion contract was awarded to McLean Contracting Company for the installation of the spillway structures in Cell 7 and Cell 9. The work is scheduled for completion in summer 2020 and will keep the project on schedule to place maintenance material in the newly constructed expansion containment cells during the 2020/2021 dredging cycle.



Map of Poplar Island expansion.

The 2019/2020 maintenance dredging contract was awarded to Great Lakes Dredge and Dock Company. The estimated quantity of material that Poplar Island will receive is just over 2 million cubic yards.

Habitat Projects

Shoreline Softening

Planting *S. alterniflora* in between rocks in Cell 4D.

In August, Leah Franzlubbers, a Chesapeake Bay Conservation Corps intern with the U.S. Fish and Wildlife Service (USFWS) conducted a shoreline softening project in Cell 4D, with funding provided through a grant from the Chesapeake Bay Trust. The project technique called “Green Riprap” is a small-scale, low-cost restoration process that homeowners and organizations alike are implementing to improve existing riprap or stone covered shorelines by planting tidal marsh plants within the hardening structures.

S. alterniflora in a degradable coconut fiber pot placed between the rocks.

Cell 4D contains short stretches of stone breakwaters near the tidal inlet, and in order to soften the structure, 165 plugs of *Spartina alterniflora* (smooth cordgrass) were placed in between the breakwater rocks. As the grasses grow, they will bring back important ecological services to the shoreline such as improved habitat, filtration of nutrients, and absorption of wave energy that will ultimately increase the ecosystem value.

Map of "Green Riprap" placement.

Poplar Island and other “Green Riprap” locations that Franzlubbers planted as part of her internship will be monitored for a year to better understand the value of the technique as a shoreline softening tool.

Pollinator Garden

Representative John Sarbanes planting the pollinator garden alongside volunteers.

It has been a great year for the pollinators that call Poplar Island home. This Earth Day, Lillian Schneider, a 2018 USFWS Chesapeake Bay Conservation Corps intern, led the celebration by planning and organizing the planting of a pollinator garden. The garden was planted just outside of the tour building and includes interpretative signage detailing the native plant species and the many pollinators that will benefit. To mark the significance of the project, Representative John Sarbanes along with Poplar partners and volunteers including Chesapeake Bay Trust, Living Classrooms Foundation, and the Maryland Master Gardners were onsite to get their hands dirty and join in on the planting project.

Tiger Swallowtail butterfly enjoying the Milkweed planted onsite.

Although this is the first garden planted especially for pollinator species, Poplar Island's native seed mix which is used throughout the site to stabilize the dike slopes and prevent erosion, includes many pollinator-friendly plant species, such as milkweed which is the only food source for monarch caterpillars.

During the fall migration, USFWS hopes to tag over 1,000 monarch butterflies using Poplar Island as a temporary stopover on their long journey to their wintering grounds in Mexico. Stay tuned for the next newsletter to see if USFWS reached their goal!

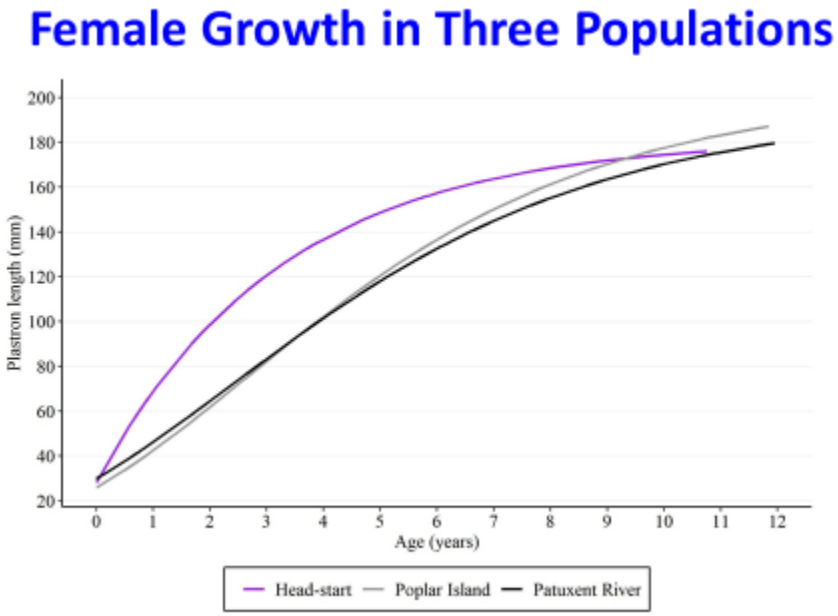
Wildlife Update

Diamondback Terrapins

Female Diamondback Terrapin heading back to the water after nesting.

Diamondback Terrapin populations were in rapid decline in the 20th century due in large part to the overharvesting of the turtles for turtle soup. That along with environmental stressors such as loss of natural habitat, vehicle mortality, bycatch of commercial fishing, and nest predators continue to put strain on the wild turtle populations. Unlike many other animals that take a relatively short time to reach maturity like crabs and fish, the Maryland terrapin population will take on average eight years to reach maturity and lay eggs. Taking longer to mature makes terrapins more susceptible to mortality before they reach maturity, which can slow their population recovery.

Dr. Willem Roosenburg of Ohio University and his “turtle crew” monitors the Poplar Island terrapin population from May to October. This year the turtle crew discovered more than 230 nests, which is one of the highest numbers documented on Poplar Island since monitoring began in 2002. As part of the mark-recapture study, a total of 1,361 terrapins were recorded by the end of the summer, with 750 being recaptures. By the end of the summer 653 hatchlings were measured, notched, and tagged. More will emerge in the fall or overwinter, emerging in spring 2020. This spring, 154 terrapins were released on Poplar Island by students as part of the 2018/2019 Headstart program, and 151 terrapins were placed in the classrooms this fall as part of the 2019/2020 Headstart season.



Headstart Terrapins, Poplar Island wild population, and Patuxent River wild population growth chart by Dr. Willem Roosenberg.

Ohio University has studied three marked populations of Diamondback Terrapins, one wild marked population in the Patuxent River and the marked wild and Headstart terrapins released on Poplar Island, comparing the size of the turtle by measuring plastron (or undershell) length to the age of the turtle. Through this study, Ohio University determined that the Headstarted turtles grow at a faster rate for the first several years compared to both the Poplar Island and the Patuxent River wild populations. The recapture data also show that the Headstarts are reaching reproductive age earlier than the wild populations, around six years of age on average.

Four year old female terrapin found with eggs.

One of the most exciting recaptures of the 2019 season occurred on June 21, when a four-year old tagged female was found nesting off Poplar Harbor. This female terrapin was a part of the 2015 terrapin Headstart year at the Naval Academy Primary School in Annapolis. The young terrapin had eggs at only four years of age which made her half the age of the average mature Maryland terrapin and the youngest ever documented in the state. Understanding the relationship between the terrapin's long life history and its impacts on terrapin population recovery makes this a significant finding for the Headstart program and how similar programs may be beneficial to the larger conservation efforts.

Summer Migration

Juvenile Black-necked Stilt. Photo Credit: Tim Carney

One of Poplar Island's main goals is to restore remote island habitat within the Chesapeake Bay, in part because of its importance as a safe resting spot along the Atlantic flyway. The island's location away from the mainland makes it a relatively predator-free destination to rest and nest. This year was considered a highly successful year for the site with record numbers of individuals, nests, and hatchlings for many of our nesting species. Twenty-three species of birds were confirmed nesting on Poplar Island in 2019, including a first-time nester, the Northern Shoveler.

American Avocet's enjoying the shallow water on Poplar Island.

For the second year in a row, Poplar Island had the highest number of nesting Black-necked Stilts in the State of Maryland, with over 34 nesting pairs and a new State high count of 356 American Avocets observed in September. In 2019, the Maryland State-listed endangered Common Terns were estimated to have 330 pairs nesting on Poplar Island and the Maryland State-listed threatened Least Terns had an estimated 239 nesting pairs. This is the second year in a row that Poplar Island's Common Tern nesting colony was designated as the largest in the State.

Gulls, Glossy Ibis, and Egrets enjoying one of the mudflats in a restored wetland cell.

The Cell 3D egret rookery continues to show how successful habitat restoration can be with even more observed nests this year than in previous years. For the 2019 nesting season, the U.S. Geological Survey (USGS) observed 176 Snowy Egret nests, 233 Cattle Egret nests, 41 Glossy Ibis nests, 2 Black-crowned Night-Heron nests, and 2 Little Blue Heron nests; a total of 454 nests on the 1-acre habitat island, an increase compared to last year (401 nests), and 2017 (316 nests).

One of the many Osprey nests on the island.

This year, Osprey all around the Chesapeake Bay had what experts refer to as a “banner year”, with record numbers of nests and successful fledged hatchlings throughout the region. Poplar Island was no exception with USFWS observing 28 active Osprey nests onsite and in and around Poplar Harbor. Of those, 20 nests had young that fledged and USFWS banded over 50 fledglings, a striking increase from the 13 that were banded in 2018. In a continued partnership with Tri-State Bird Rescue and Research, USFWS placed four Osprey foster chicks in nests located on and around Poplar Island. All four of the foster chicks fledged at the end of the season.

"Little Cooper"

Little Cooper enjoying the sites construction sand stockpile.
Photo Credit: Tim Carney

On July 23 during a bimonthly bird survey, Tim Carney of Maryland Environmental Service observed a Piping Plover stopping by to utilize the construction sand stockpile in Cell 1D. While being only the third recorded sighting of a Piping Plover on Poplar Island made this observation noteworthy, finding that the little shorebird was banded made the finding even more exciting. The USGS Banding Lab reported that the plover is known as “Little Cooper”, “Worsley”, or “Jack the Pumpkin King” depending on where he lands, and he has had quite an interesting journey.

This little plover’s story began on June 19, 2012, near the mouth of the Platte River in Sleeping Bear Dunes National Lakeshore in Michigan where two plover monitors saw a nest with four eggs get washed away by a large wave. The monitors located the eggs and transported them to the University of Michigan Biological Station where two of the eggs successfully hatched. The chicks were hand reared with other plover chicks and were then released near where they were found. “Little Cooper” has since been consistently observed in Canada during nesting season and wintering in Florida. We were excited to be one of his stopovers on his trip down south!

If you want to learn more about “Little Cooper” and other exciting plover stories visit https://www.greatlakespipingplover.org/plover-stories where Poplar Island is mentioned for Little Cooper’s 2019 visit.

Motus Tower

Motus Tower Installed on Poplar Island.

Poplar Island had a new research feature installed to help track Maryland's migratory bird species. The Motus Wildlife Tracking System was installed by the Maryland Department of Natural Resources and features a worldwide array of receivers that can track a variety of wildlife species that have been outfitted with a specialized transmitter that emits a unique signal with a specific radio frequency. Motus tracking is considered a passive form of data collection, an individual with a transmitter only has to come within 15 km (about 9.3 miles) of the antennae to be recorded. The receiver will then record, store the data signal, and identify the species.

If you're interested in seeing what bird species are passing by Poplar Island this fall, the data for each Motus array and other Motus information can be viewed at https://motus.org/.

New Species

Brown Booby

Photo Credit: USFWS National Digital Library

Brown-headed Nuthatch

Photo Credit: USFWS National Digital Library

Least Flycatcher

Photo Credit: Kelly Colgan Azar

Red-eared Slider

Four new species have been added to our overall species list since the last update. Three of the new species are birds, a Brown Booby (top left), Brown-headed Nuthatch (top right), and Least Flycatcher (bottom left). A new reptile was also added to the list, a Red-eared Slider (bottom right).

New Staff

Poplar Island is excited to welcome Meagan Harman and Casey Bradlley as two new operators to the team! They operate the variety of construction equipment on Poplar Island, like the pictures above, that are used to build the restored habitat. We look forward to working with them!

Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island is an environmental restoration project located in the Chesapeake Bay in Talbot County, Maryland. The beneficial use project relies on dredged material collected from the approach channels to the Baltimore Harbor to restore lost remote island habitat within the Chesapeake Bay. The project is funded by the U.S. Army Corps of Engineers and the Maryland Department of Transportation Maryland Port Administration. The MDOT MPA share of project funding is primarily provided through in-kind services conducted by the Maryland Environmental Service on behalf of MDOT MPA.

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