



## Southeast Coast Network News October 2021

<https://www.nps.gov/im/secn/index.htm>



Claire Schmidt, SECN coastal technician, looks over salt marsh with a laser rangefinder at Fort Pulaski National Monument during the training data collection trip in August. NPS photo / Stephen Cooper

### New Saltmarsh Monitoring Effort

Saltmarsh habitat is a vital natural resource within the coastal parks of the Southeast Coast Network, but it is threatened by sea-level rise associated with global climate change. Tides and more frequent storms will wash more salt water into the wetlands for longer periods of time, throwing off the balance of salt and freshwater. Marsh plants are used to a specific levels of water and salinity, so if they can't adapt, they will be at risk. The Southeast Coast Network and the University of Georgia are developing a monitoring protocol to track changes in saltmarsh vegetation. It employs remote sensing, the process of detecting and monitoring the physical characteristics of an area by measuring its reflected and emitted radiation at a distance, typically from satellite or aircraft.

On August 11-13, SECN staff visited [Fort Pulaski National Monument](#) to conduct the first field work in support of the new protocol being developed. SECN Physical Scientist Stephen Cooper, along with Aquatic Ecologist Eric Starkey and Coastal Technician Claire Schmidt, collected accurate GPS locations of certain saltmarsh vegetation associations. These point locations will train computer algorithms which classify satellite images into different ground cover types based on the image's pixel values, since different vegetation associations have different reflectance properties when interacting with light. Using these locations and satellite images, SECN staff can quantify saltmarsh area contained within coastal parks. By classifying satellite images collected during past and subsequent years, SECN staff can monitor change in the saltmarsh and provide park resource managers with vital information in relation to global climate changes and sea level rise. Remote sensing monitoring efforts are being refined by the Southeast Coast Network and the University of Georgia and will be piloted at seven SECN coastal parks in FY2022. Following revision and approval, it will be permanently implemented into the network's continuous monitoring plan.



From left, Eric Starkey, Stephen Cooper, and Claire Schmidt participated in the project. NPS photos / Stephen Cooper

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## FY2022 Steering Committee and Board Meeting Goes Virtual

The Southeast Coast Network's FY2022 Steering Committee and Board Meeting set for Nov. 9-10 will be held virtually due to the continued impact of the COVID-19 pandemic. It was scheduled to be held at [Ocmulgee Mounds National Historical Park](#). Last year's meeting was also held online and this year's gathering will follow a similar format. More details are on the way.

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Julianne Montaquila measures one of the large trees at Congaree National Park. NPS photo / Elizabeth Rico

## Thanks Julianne

Julianne Montaquila completed her 20-week Scientists in Parks internship at the end of September. The bulk of her time with the Southeast Coast Network revolved around vegetation monitoring field work. She spent eight weeks at [Congaree National Park](#), two weeks at [Chattahoochee River National Recreation Area](#) and one week at [Kennesaw Mountain National Battlefield Park](#). In addition to assisting the SECN veg team, Julianne spent a week at [Cumberland Island National Seashore](#) helping with sea turtle monitoring, invasive plant control and mapping, and wildlife management. The final weeks of her internship included managing soil sample processing from the 2021 plots, entering vegetation data from [Congaree National Park](#) and [Ocmulgee Mounds National Historical Park](#), and cleaning up gear and doing inventory.

Julianne's internship was a shared position with the Southeast and Caribbean Invasive Plant Management Team (SEC-IPMT). Her work there involved conducting weed surveys at [Congaree NP](#), [Kennesaw Mountain NBP](#), [Chattahoochee River NRA](#), and [Cumberland Island NS](#). She also mapped those data in ArcGIS. She developed a useful cheat-sheet (a laminated form with specimens and notes) to differentiate native *Lespedeza* and nonnative *Lespedeza cuneata* for CONG staff and assisted with the creation of a presentation about IPMT activities for the YCC staff at [Congaree NP](#). Her next adventure is Puerto Rico for a six-week Spanish language immersion course. She plans to start graduate school in 2022. Julianne earned a B.A in Biology from Colgate University last May. Thanks for all your tremendous work!

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## Coastal Ecologist at Estuary Fest

SECN Coastal Ecologist Ches Vervaeke attended Estuary Fest in September. Presented by the Guana Tolomato Matanzas National Estuarine Research Reserve (GTM NERR), Estuary Fest is a free event where people learn about the benefits of the estuaries in Northeast Florida. It was held at the GTM Research Reserve in Ponte Vedra, Florida. Ches was joined by staff from [Timucuan Ecological and Historic Preserve](#) and [Fort Matanzas National Monument](#).

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## SECN Field Work Updates

Approved mission critical travel and monitoring trips are coming to an end for the FY2021 field work season. Here is an update on activities across our parks.

### Coastal Wetlands

Surface Elevation Table (SET) site readings were at [Timucuan Ecological and Historic Preserve](#). Our new Wetlands Elevation Monitoring Protocol is being reviewed at region. SET sites to be monitored during September and November include [Canaveral National Seashore](#), [Fort Matanzas National Monument](#), [Cumberland Island National Seashore](#), [Fort Frederica National Monument](#) and [Fort Pulaski National Monument](#).

### Landbird and Anuran Communities

Automated recording devices (ARDs) were retrieved from [Cape Lookout National Seashore](#) in August. The ARDs at [Cumberland Island National Seashore](#) will be picked up in October or December. The ARDs at the other 2021 parks, [Fort Sumter National Monument](#), [Horseshoe Bend National Military Park](#) and [Kennesaw Mountain National Battlefield Park](#) (all but 2) have been retrieved.

## **Shorelines**

Shoreline data summary reports are being compiled for parks monitored this spring including [Canaveral National Seashore](#), [Cumberland Island National Seashore](#), [Timucuan Ecological and Historic Preserve](#) and [Fort Matanzas National Monument](#). Shoreline data collected by park staff at [Cape Lookout National Seashore](#) and [Cape Hatteras National Seashore](#) have been acquired and are being processed.

## **Vegetation Communities**

Field work for the 2021 vegetation monitoring effort wrapped up with a return visit to [Congaree National Park](#). Other parks completed this season include [Ocmulgee Mounds National Historical Park](#), [Chattahoochee River National Recreation Area](#) and [Kennesaw Mountain National Battlefield Park](#).

## **Wadeable Streams**

Data collected from stream habitat surveys this spring at [Chattahoochee River National Recreation Area](#) are being processed.

## **Water Quality**

A data collection trip by SECN staff was completed for [Congaree National Park](#), [Fort Pulaski National Monument](#), [Cumberland Island National Seashore](#), [Canaveral National Seashore](#), [Fort Matanzas National Monument](#), and [Timucuan Ecological and Historic Preserve](#). Fixed-station time-series data collection continues with assistance from park staff and partners at [Cape Hatteras National Seashore](#), and [Cape Lookout National Seashore](#).

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