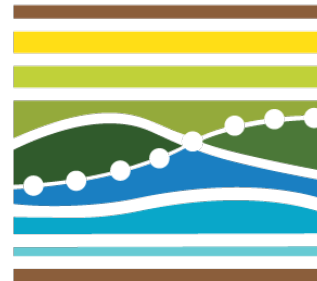


Georgia Coastal Ecosystems

MERRYL ALBER

LTER SCIENCE COUNCIL MEETING 2018

MADISON, WI



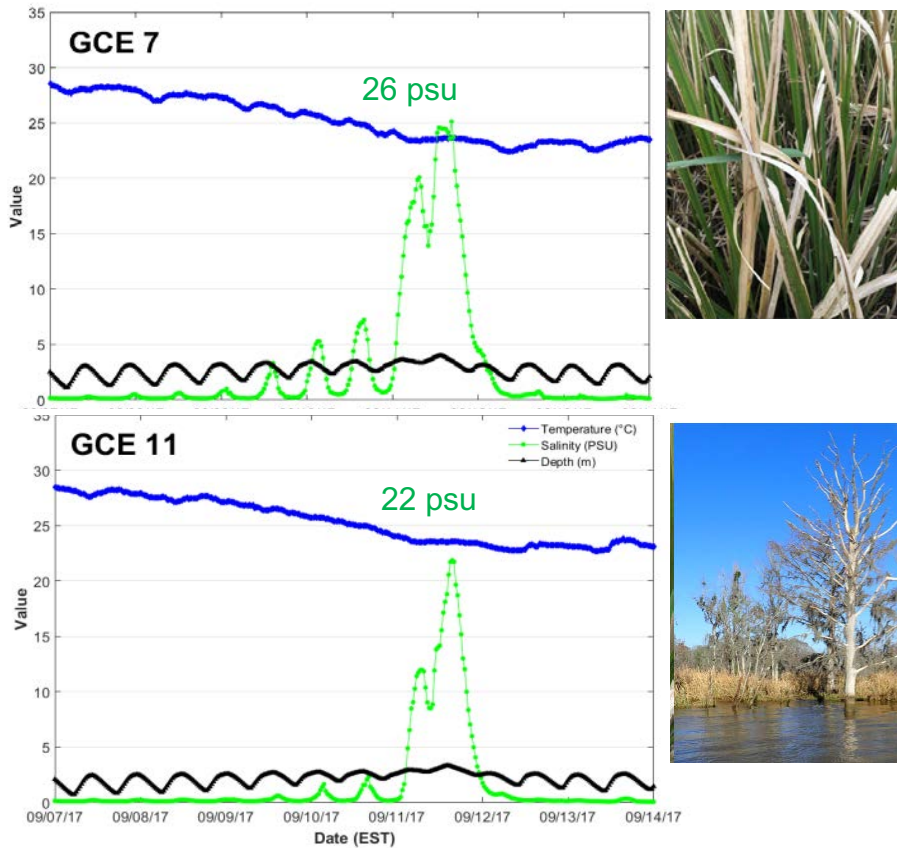
NATIONAL SCIENCE FOUNDATION

LTER NETWORK

LONG TERM ECOLOGICAL RESEARCH

Site News

Hurricane Irma: ~ 1 m surge



Connectivity

Home > News

Nifong and Silliman 2017

Discovery

Alligators, rulers of the swamps, link marine and freshwater ecosystems

'Gators follow the tides to find food, ferrying nutrients as they go



Just when you thought it was safe on the beach...alligators are there, too, scientists find.

[Credit and Larger Version](#)

Current Biology
Magazine

Silliman et al. 2018

November 2, 2017

Essay

Are the ghosts of nature's past haunting ecology today?

GCE-IV Proposal

Total: 22 PIs

- 16 returning
- 3 leaving
- 6 new

Focused on
Disturbance

Organic Matter - Who/How

Current Measurements:

In the marsh: Soil organic matter across the domain (Craft et al. 2006)

In the water: DOC, DON, Particulate C,N

- River sampling: monthly
- Estuary stations: quarterly at 8 sites; monthly at 2 sites

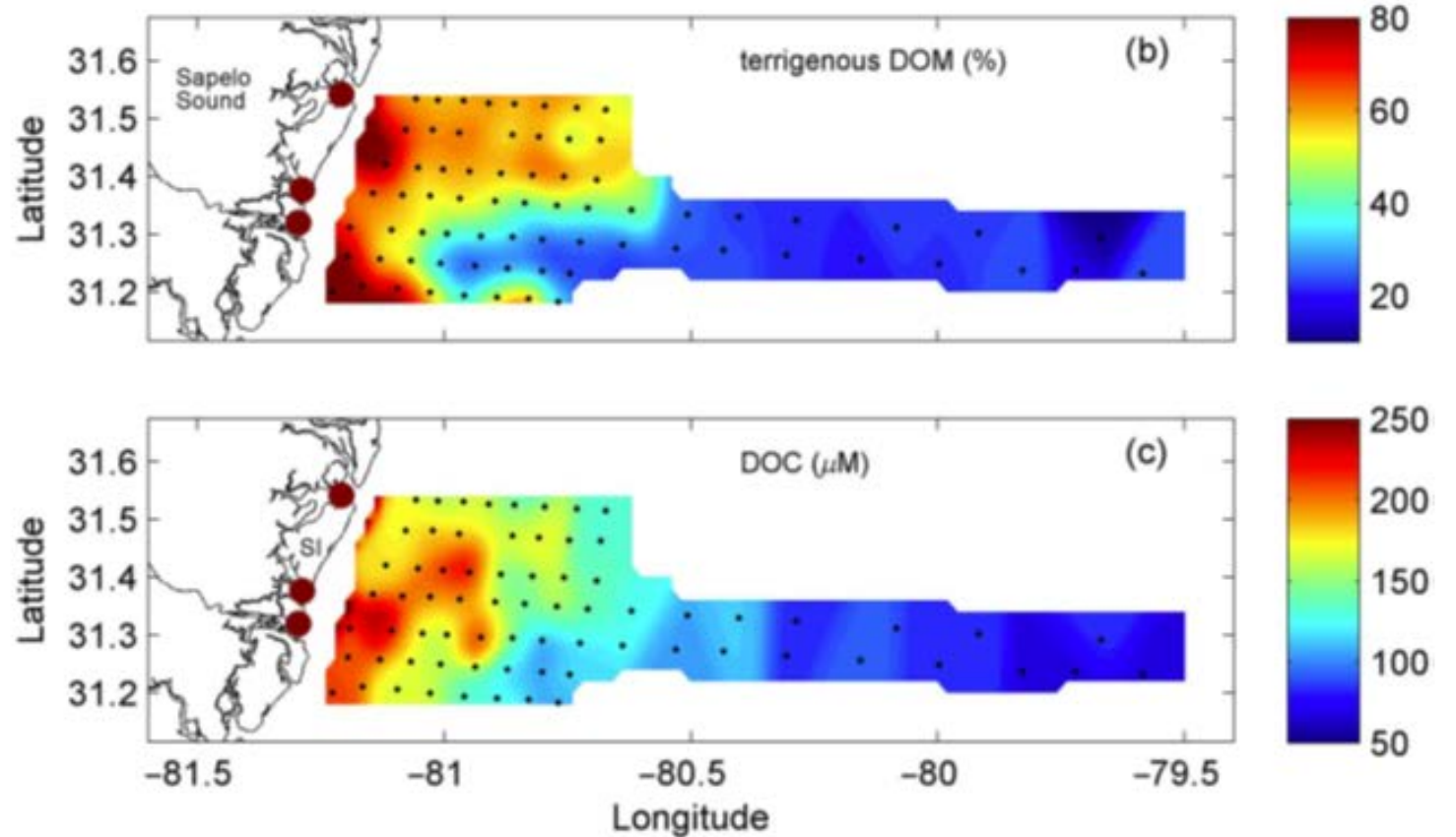
Proposed Additions for GCE-IV:

In the marsh: Soil organic matter as part of standard disturbance characterization

In the water: Molecular signature of DOM (ultrahigh resolution mass spectrometry; Medeiros et al. 2015)

Organic Matter - Results

- River discharge affects estuarine DOM composition: high flow = terrigenous; drought = marsh signature
- Microbes preferentially degrade compounds of marine origin
- Seasonal patterns of DOM in the coastal ocean tracked through optical absorbance



Medeiros et al. (2015; 2017a; 2017b)