



Mangrove Distributions Along a Shore-to-Upland Gradient in a Salt Marsh-Mangrove Ecotone

Pamela Marcum, Biologist
Nikki Dix, Research Director
Alexandria Knoell, Biologist

GTM National Estuarine Research Reserve

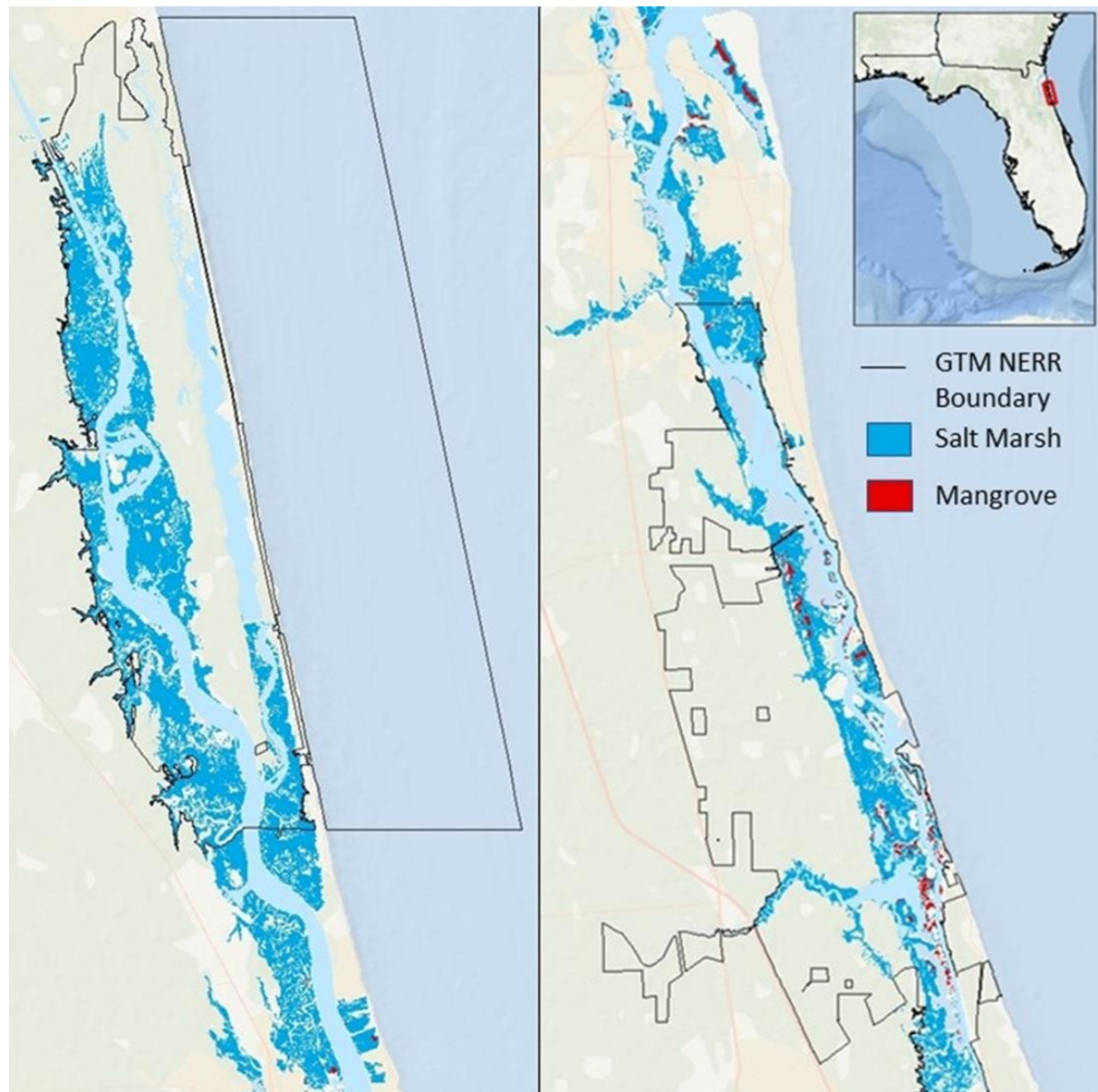




NE Florida Mangroves

2017 CHIMMP Report

Year	Mangrove acres	Salt Marsh acres
1990	4	87,515
1995	56	84,800
2000	1,256	83,290
2004	1,360	82,985
2009	1,573	82,489





NE Florida Mangroves

- *Laguncularia racemosa*
- *Rhizophora mangle*
- *Avicennia germinans*



Photo: FL SeaGrant



Photo: Katja Schulz



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Photo: Robert Harding



NE Florida Mangroves

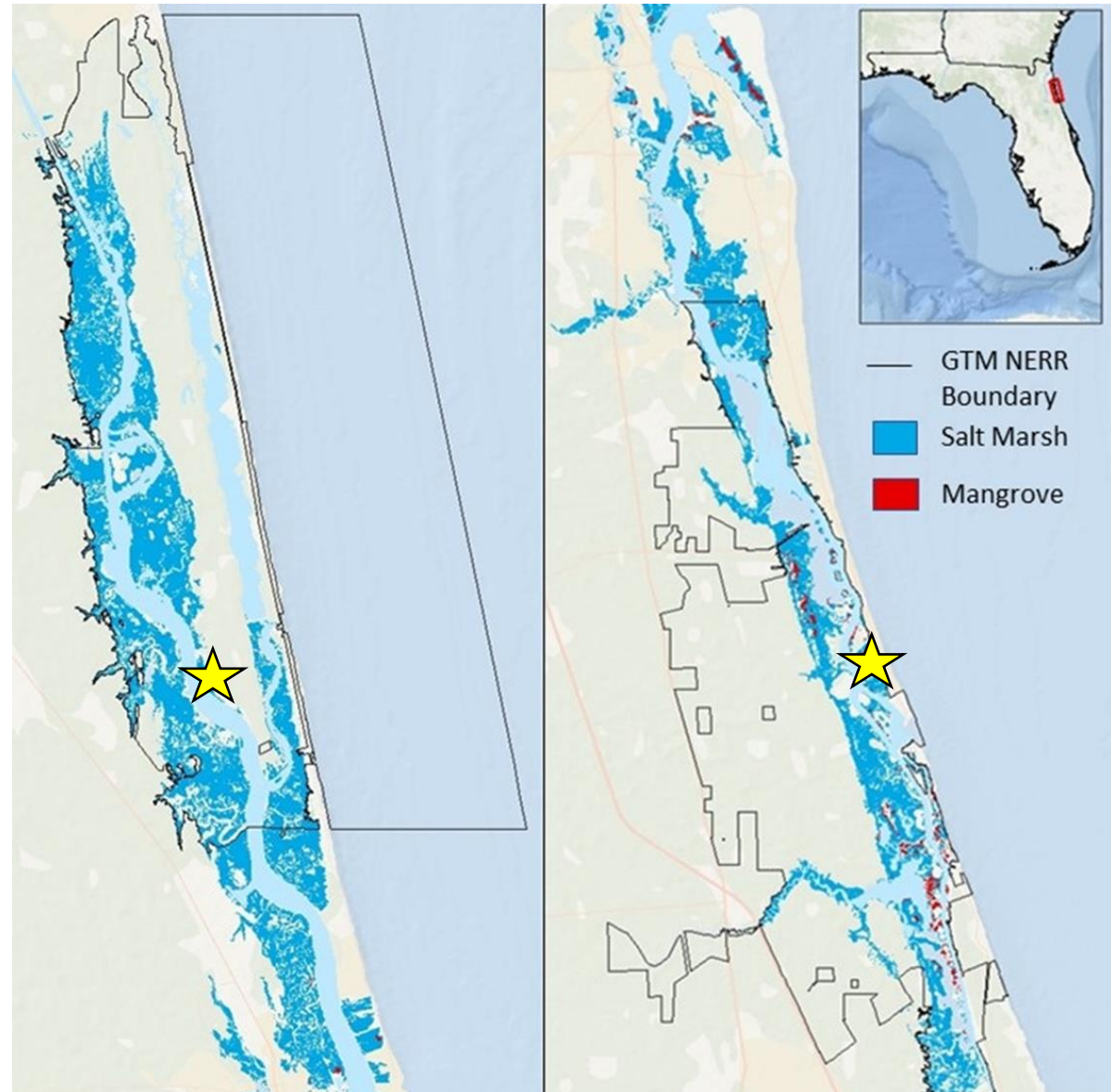
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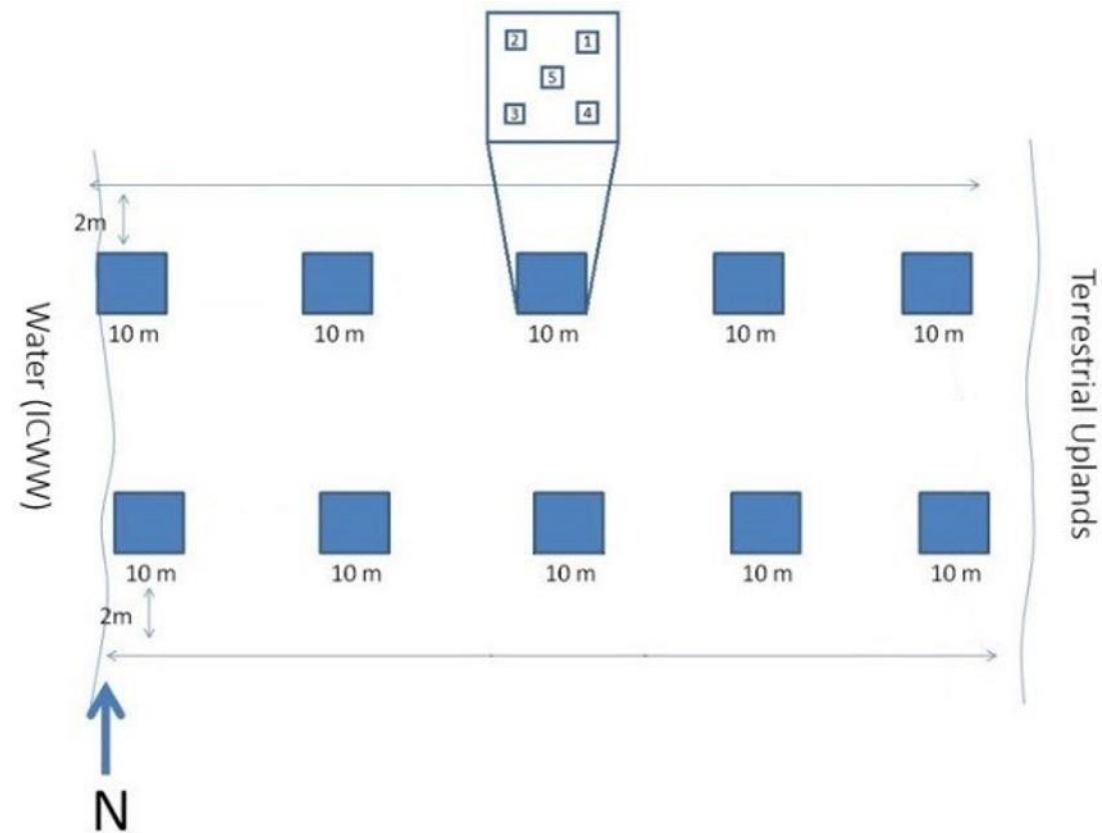
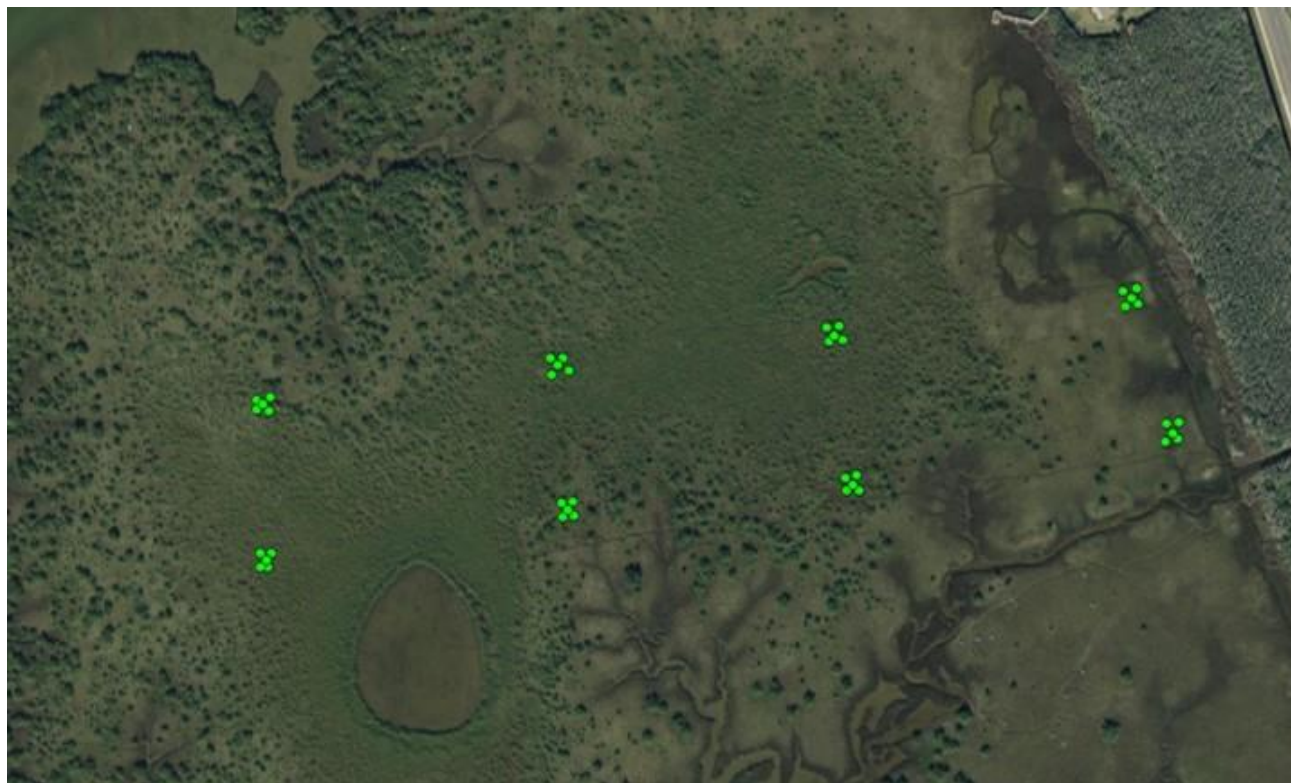
Mangrove Monitoring at GTM NERR

- Range expansion
- Spatio-temporal patterns
- Tree architecture





Mangrove Monitoring at GTM NERR





NE Florida Mangroves

Spatio-temporal patterns

- Species composition and cover
- Stem density
- Canopy height





NE Florida Mangroves

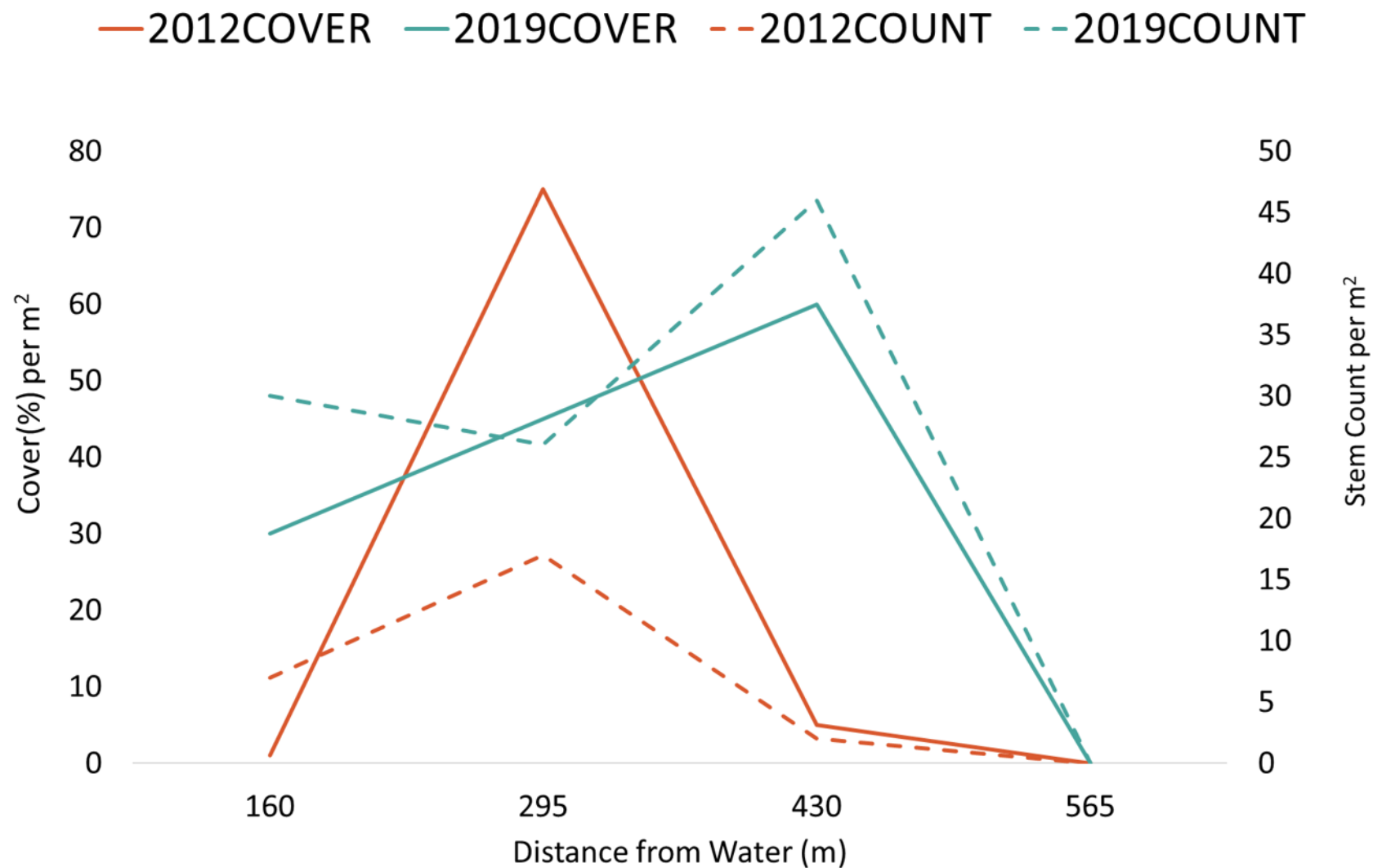
Tree architecture

- Canopy height
- Trunk diameter
- Widest axis



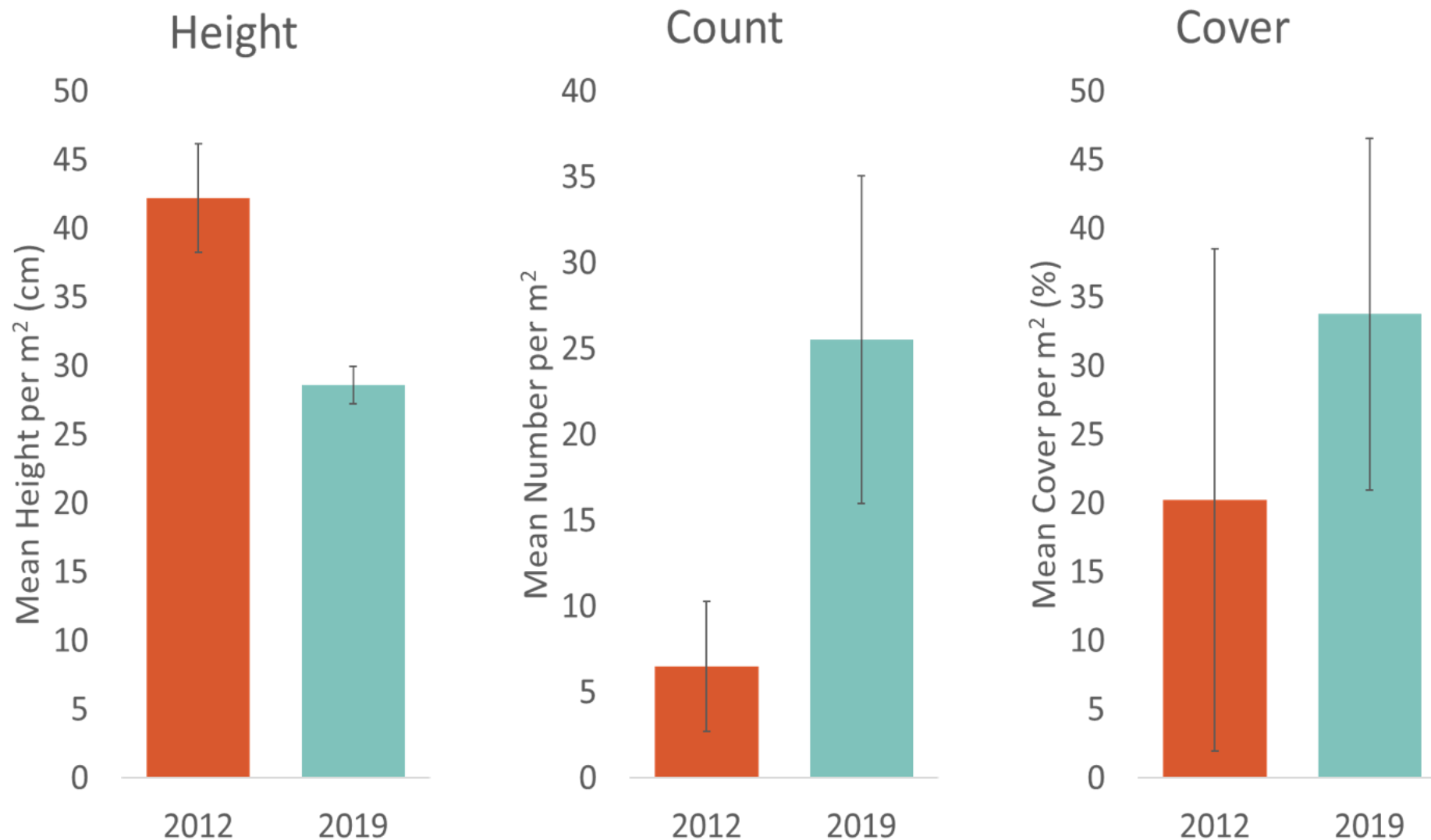


Results – Spatio-Temporal



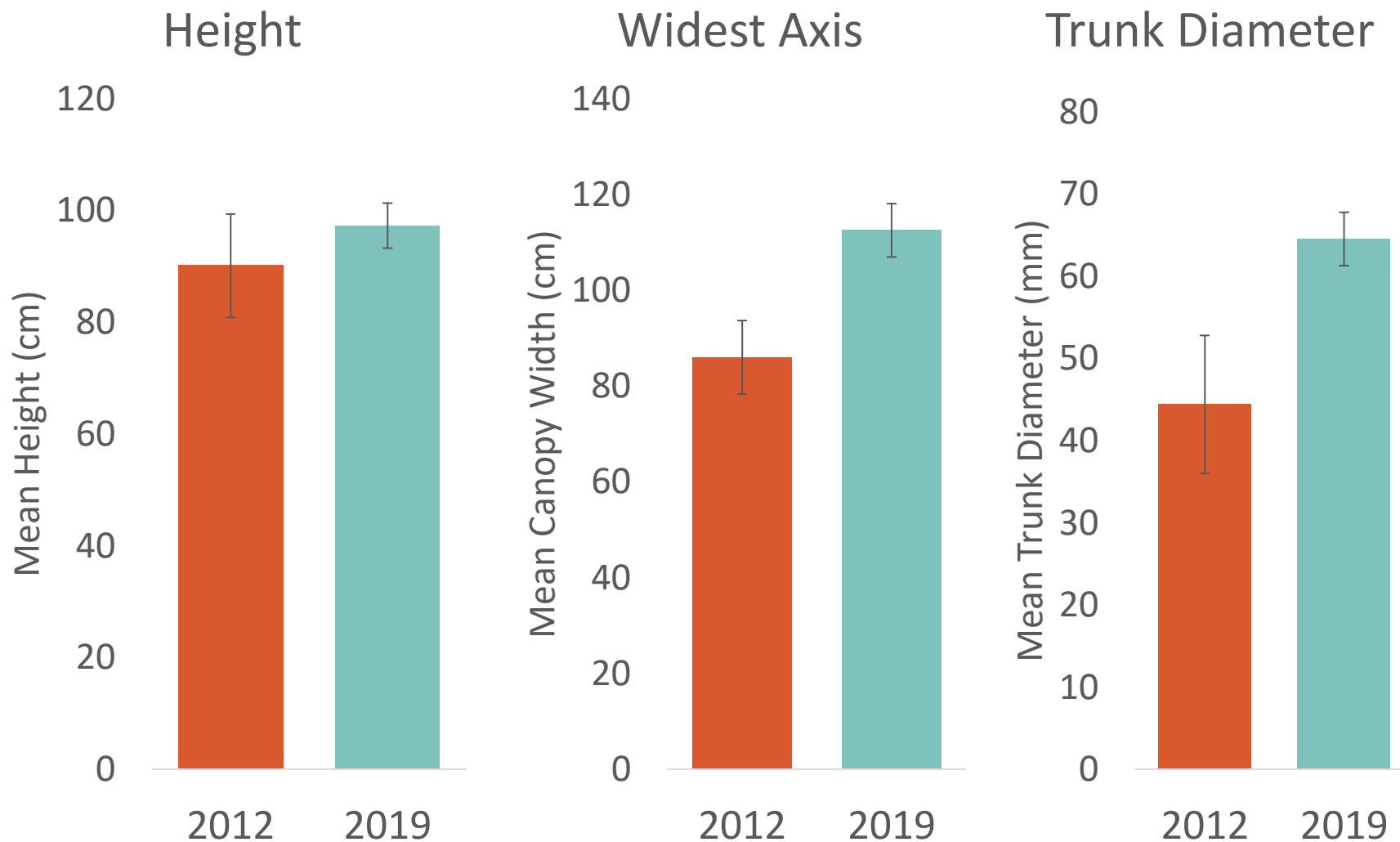


Results – Spatio-Temporal





Results – Tree Architecture





Conclusions

NE Florida mangroves are...

- Dominated by *A. germinans*
- Shrubby in nature
- Increasing density
- Expanding inland

...which means...

- Changes in biological communities
- Climate change impacts
- Increased coastal protection





Thank You!

Pamela Marcum

GTM Research Reserve

Pamela.Marcum@FloridaDEP.gov or 904-823-4523

