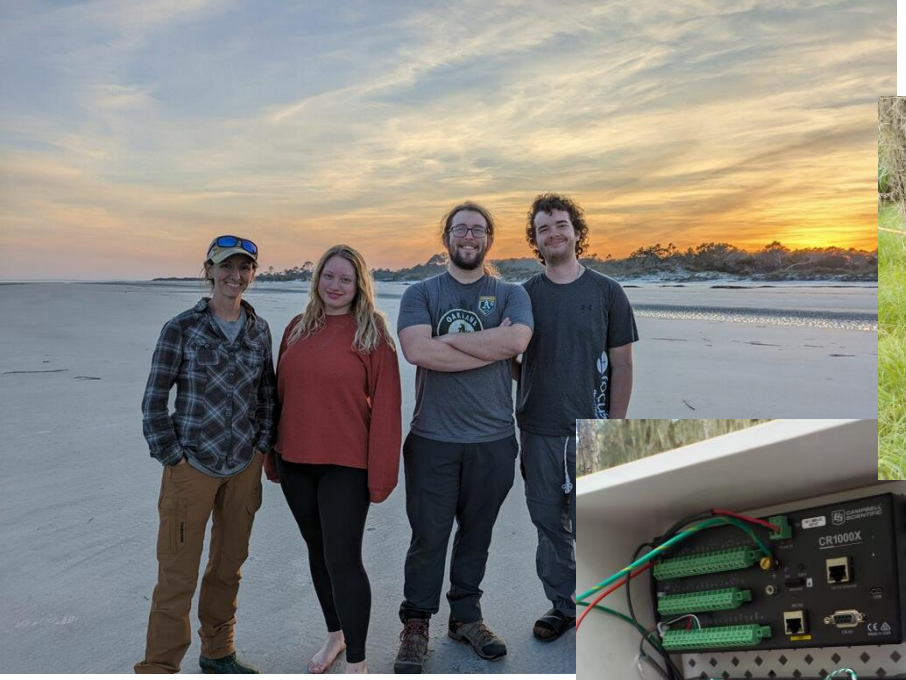
Moore Ecohydrology Lab Research
Georgia Southern



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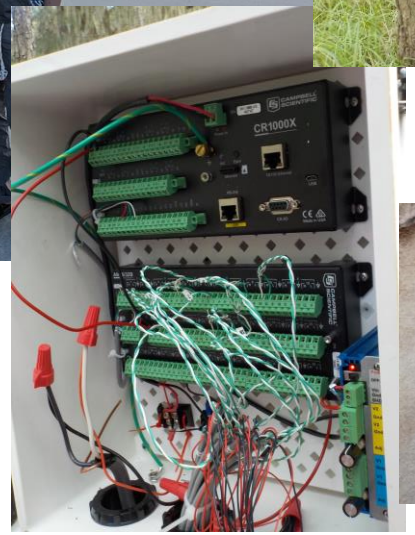


Current Research Focus

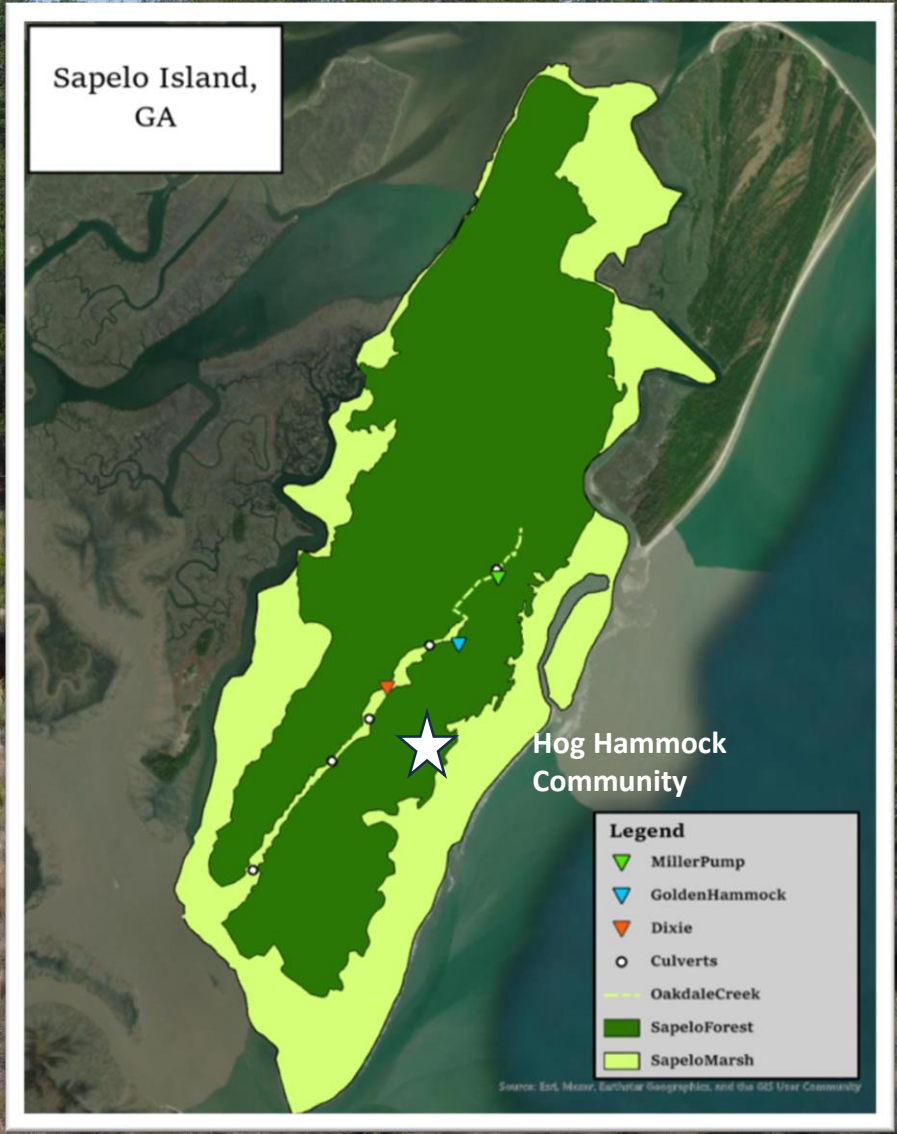
How water consumption by forests counteract coastal flooding risk

- Long term changes in tree health, growth rates, physiology
- Seasonal dynamics of tree water consumption with varying salt stress

Improve understanding of barrier island hydrology

- Quantify land-to-water, water-to-land, land-to-atmosphere
- Reconcile a dual seawater-freshwater water balance
- Inform land and coastal managers

Interior Forest Dieback from SLR



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So far, what we know...

- Channel carries salty tidal pulses deep into the island interior forests, especially during monthly spring tides
- Channel outflows become important following rain events
- Groundwater is saltier closer to the inlet and closer to the channel, and gets saltier when it rains
- Daytime high tides do not reach up as far as nighttime
- Tidal harmonics are visible in the groundwater
- Trees on the edge of the marsh are stressed
  - Lower leaf area and slower growth
  - Lower water use