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- Student: Environmental Science MS program
- Advisor: Dr. Jim Gibeaut
- Project title: *Sargassum*: ugly invader or coppice mound creator?



Purpose

The purpose of my study was to evaluate the relationship between beach cast *Sargassum* wrack and the entrapment of aeolian transported sediment.



Beach Cast Fate

- Eaten by organisms
- Decomposition
- Natural relocation through wind and waves
- Beach maintenance
 - Front stacking
 - Back stacking
 - Notch and fill



Research Focus

- “[S]argassum does positively increase growth in these dune plants.” – Williams and Feagin (2010)
- Can beach cast wrack physically promote coppice mound formation through the enhancement of sediment collection and deposition?



Data Collection

- 3 Objective Questions
- 10 Days; July-September
- 1 Trial; 3 Replicates
- 3 Hour Sampling Window



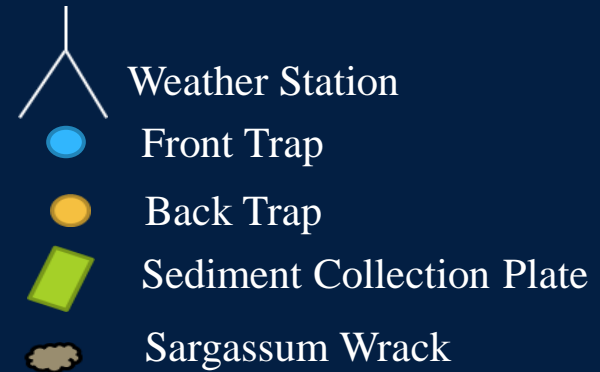
Photo: M. Rittenhouse



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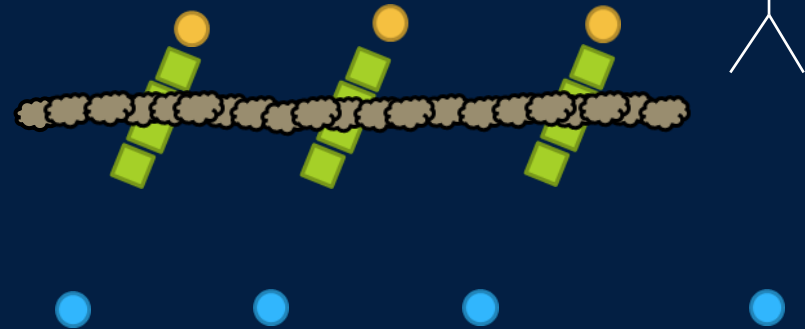
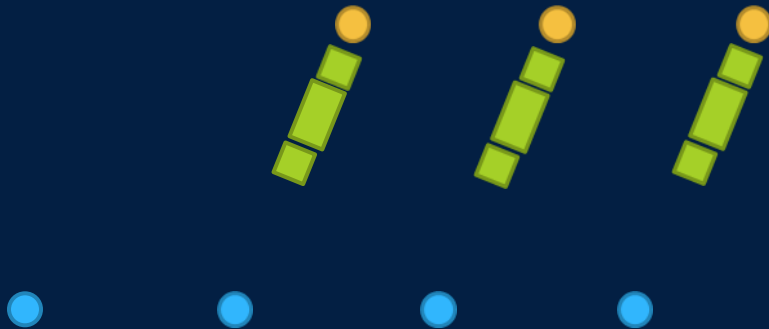
Data Collection

- Treatment Areas: Control & Sargassum
- Traps Modified from Leatherman (1978)
- Weather Station



Control Treatment

Sargassum Treatment



Wind Direction ↗

Shoreline

Summary

- Sediment transport downwind not affected by *Sargassum* wrack
- *Sargassum* had sediment trapping efficiency of 9%
- *Sargassum* wrack enhanced sediment deposition on site
- Sediment deposition greater upwind of *Sargassum* wrack



Photo: M. Rittenhouse



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Additional Work:

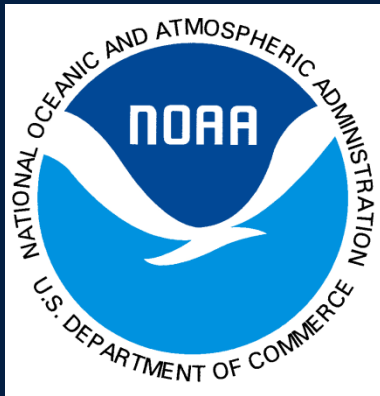
- Evaluate grain size distribution
- Analysis of covariance with environmental parameters
- Create a sediment deposition model for coppice mound development



Photo: M. Anderson

Acknowledgments

- National Oceanic and Atmospheric Administration, Office of Education Educational Partnership
- Environmental Cooperative Science Center
- Harte Research Institute, Texas A&M University-Corpus Christi
- Hans and Patricia Suter Endowment



“This publication was made possible by the National Oceanic and Atmospheric Administration, Office of Education Educational Partnership Program award (NA11SEC4810001). Its contents are solely the responsibility of the award recipient and do not necessarily represent the official views of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration. This material is based upon [work] supported by the National Oceanic and Atmospheric Administration, Educational Partnership Program, U.S. Department of Commerce, under Agreement No. [NA11SEC4810001]”