River, Estuary & Coastal Observing Network

SCCF's River, Estuary, & Coastal Observing Network (RECON) was deployed in late 2007. It is a fully integrated and portable real-time water quality monitoring system. A total of seven in-water sensor arrays from Satlantic are currently deployed at fixed locations spanning over 90 miles from Moore Haven at the western mouth of Lake Okeechobee to Pine Island Sound and down into the Gulf of Mexico. An eighth sensor array is used for mobile real-time measurements. Data are transmitted every hour to a server which updates an interactive website accessible to scientists as well as the public and governmental agencies.

The parameters measured are nitrate, chlorophyll *a*, turbidity, conductivity/salinity, temperature, dissolved oxygen, depth, and colored dissolved organic matter at all locations. Currently, the Gulf of Mexico sensor also employs an Aquadopp 2-d current profiler which measures current, flow, and direction.

To view the RECON website, please visit:
http://recon.sccf.org

Why RECON Matters

The data collected from RECON provides accurate descriptions of the present state of the oceans, including living resources. It is enabling researchers and scientists to develop a continuous forecast of the future conditions of the sea for as far ahead as possible and will aid in forecasts related to climate change.

Mission Statement

To investigate the status and trends of inshore/near-shore habitats and their associated faunas and floras, in and around Sanibel and Captiva and adjacent localities. The goal is to improve our understanding of local estuarine processes, especially as they are affected by natural and anthropogenic disturbances from the local watershed and upstream areas.

About the Foundation

The Sanibel-Captiva Conservation Foundation, Inc. (SCCF) is a not-for-profit organization dedicated to the preservation of natural resources and wildlife habitat on and around Sanibel and Captiva. Since 1967, SCCF has acquired and preserved over 1,800 acres of environmentally sensitive land on and around the islands. This land includes critical wildlife habitats, subtropical plant communities, and tidal and freshwater wetlands along the Sanibel River.

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Sanibel-Captiva Conservation Foundation

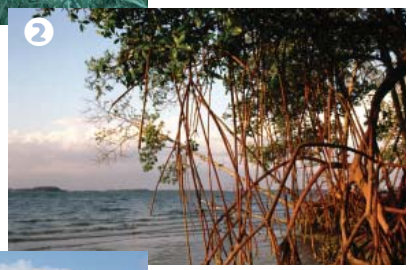
Location & Facilities

The SCCF Marine Laboratory is located on Tarpon Bay, within the confines of the J.N. "Ding" Darling National Wildlife Refuge on the barrier island of Sanibel-Captiva, Florida. Our GPS coordinates are latitude: 26°26' 36.12"N, longitude: 82°05'03.71"W

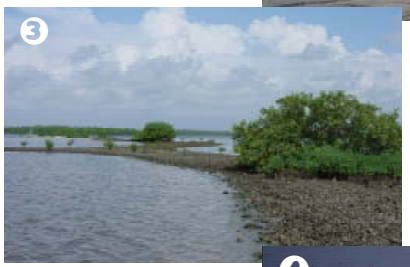
The 2,800 ft^2 building includes office space for all lab staff as well as two laboratories, a small library, conference area, and a workshop. On the property are two additional smaller buildings, one of which is a temperature controlled laboratory; the other houses the RECON project maintenance shop.

Nearby habitats include:

❶ seagrasses



❷ mangroves



❸ oyster reefs

❹ sandy-muddy bottoms, all with a diverse assemblage of marine and estuarine species.

Recent & Current Research

The research conducted by the laboratory includes both short-term, externally-funded grants and longer-term projects funded by a mix of grants and private contributions. Lab staff work with scientists and local, regional and state agencies to assess critical habitat status and trends, various plant and animal species, and associated water quality.

Projects/Programs

- Monitoring seagrasses, SAVs, mangroves, oyster reefs, and related 'water quality,' mangrove and seagrass recovery/restoration
- Drift macroalgae, benthic ecology, non-natives, fish age and growth, bay scallop populations
- SAV light requirements and interactions with sediment bacterial communities
- Landscape ecology, spatial analyses, GIS, geostatistics, remote sensing, wildlife habitat modeling and mapping

Resources

The laboratory has four vessels ranging in size from 12' to 23' and three vehicles. It also has an array of lab and field equipment including: -20°C and -60°C freezers, dissecting and compound microscopes with fiber optics, Turner fluorometer, micropipettors, both centrifuge and microcentrifuge, an array of electrophoresis and related instrumentation, autoclave, waterbath and incubator, g to mg balances, water quality multiprobes (Campbells, YSIs, and Hydrolabs), Hach Spectrophotometer with digestor, pyranometer, Biospherical multi-channel logging light meter, spherical quantum sensor, dataloggers, chillers and heaters, hot plate/stirrers, and a YSI BOD meter. Additional field sampling and dive gear also on hand.

Please visit the laboratory's website at www.sccf.org for more detail.

Senior Staff

Loren Coen, Ph.D. Director and Senior Scientist
Research Interests: marine ecology, plant-animal interations, shellfish and related restoration ecology, invasive species

Eric Milbrandt, Ph.D. Senior Scientist
Research Interests: mangrove & SAV ecology/restoration, microbial ecology, water properties

Richard Bartleson, Ph.D. Senior Scientist
Research Interests: seagrass biochemistry, ecosystem ecology/modeling, nutrient cycling

Alex Rybak, Ph.D. Senior Scientist
Research Interests: GIS, GPS, remote sensing, database design, spatio-temporal modeling