

Florida Stony Coral Tissue Loss Disease Response Bulletin - Summer 2019

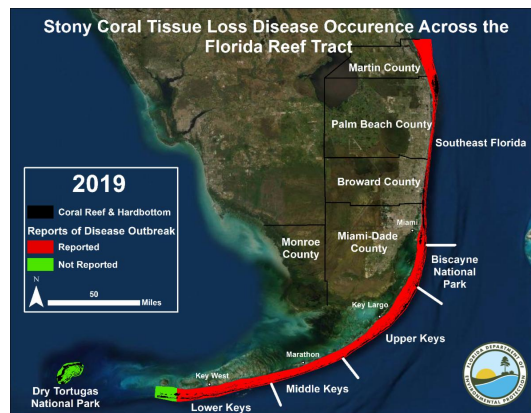


Welcome to the first Florida Stony Coral Tissue Loss Disease (SCTLD) Response Bulletin! These quarterly bulletins will provide high-level updates on the SCTLD outbreak and response efforts with a focus on Florida. As we transition away from the Coordination Calls, these bulletins will be our primary tool for communication to the wider community. If you would like to unsubscribe, you can do that at the bottom of this email. For those who stick around, we are very excited to have a new way to share the exciting updates from the SCTLD Response with you.

General Updates

Florida Disease Progression

Signs of SCTLD have been reported approximately 6 miles west of Western Dry Rocks. Partners participating in Disturbance Report Monitoring (DRM) surveys did not observe any signs of SCTLD in the Marquesas Keys.



Caribbean Disease Progression

SCTLD has now been observed near Ambergris Caye in Belize (on the Mexican border) and in the northern reefs of St. Eustatius, Netherlands Antilles. Credible reports of SCTLD have been received from South Caicos and West Caicos in the Turks



Stony Coral Tissue Loss Disease 7 News Belize

& Caicos Islands. In St. Thomas, U.S. Virgin Islands, the disease has continued to spread eastward and can now be found as far east as Benner Bay on the south coast of the island.

View a map of the full extent of SCTL D reports in the Caribbean

2019 SCTL D Technical Workshop

From August 6-9, Florida Fish & Wildlife Commission's (FWC) Florida Fish & Wildlife Research Institute (FWRI) hosted the 2019 SCTL D Technical Workshop in St. Petersburg, Florida. Over 75 attendees from 29 federal and state agencies, universities, non-governmental organizations and nonprofits participated. Participants spent 2.5 days discussing the future of the disease response, with an emphasis on research, intervention, and restoration. One full day was also devoted to discussing a path forward for coral propagation in Florida, including infrastructure, personnel, and funding needs to conduct widespread reef restoration.



New Partners

Ocean Alchemists (a new company associated with CoreRx) is working to supply intervention partners in Florida and beyond with materials to deliver various disease treatments. The company is also working to develop novel treatments and delivery mechanisms.

2019 Spawning Season



There were several efforts undertaken by response partners related to coral spawning. A team of divers from Nova Southeastern University (NSU), FWC, Florida Keys National Marine Sanctuary (FKNMS), Florida Aquarium, and Coral Restoration Foundation (CRF) conducted field collections of *Dendrogyra cylindrus* spawn at Western Dry Rocks, off Key West. The swimming larvae were transported to the Florida Aquarium for settlement and grow-out. In addition, all the Florida-based holding facilities reported ex situ spawning of rescued corals, including *Montastraea cavernosa*, *Dichocoenia*

Florida scientists announce coral breeding breakthrough; could save global reefs

FOX 13 News - Tampa Bay

stokesii, and *Colpophyllia natans*. Finally, a huge congratulations to our partners at the Florida Aquarium for making history by spawning the endangered *D. cylindrus* through simulated lighting and water cues.

U.S. Coast Guard Best Management Practices

In consultation with the U.S. Environmental Protection Agency, the U.S. Coast Guard released a Marine Safety Information Bulletin titled *Ballast Water Best Management Practices to Reduce the Likelihood of Transporting Pathogens That May Spread Stony Coral Tissue Loss Disease*. These BMPs have been shared throughout the region.

[Read the Marine Safety Information Bulletin](#)

NOAA, EPA, and USCG have identified the need to support research on the link between SCTLD and ballast water, biofilms, and wastewater effluents associated with shipping activities.

Response Team Updates

Management Team

When first formed, the Management Team was intended to serve as a venue for place-based managers, agency representatives, and county governments to hold targeted discussions and produce recommendations to the Executive Coordination Team (ECT). The Management Team was also to be an avenue for the review of projects and response team products. Through time, the Management Team primarily focused on review and discussion of general updates, rather than making recommendations. As such, a Steering Committee is being formed to achieve these objectives. The Steering Committee will fulfill a role that includes authoritative technical decision-making and more effective communication with the ECT.

Research Team

Cheryl Woodley of the National Centers for Coastal Ocean Science joins the Research Team as co-lead with Andy Bruckner, the Researcher Coordinator at FKNMS. The team was restructured at the technical workshop in an effort to improve communication and efficiency. Four sub-teams were created: Histopathology, Coral Immune Health & “-omics,” Pathogen Identification & Microbiome Characterization, and Environmental Factors & Transmission. Two sub-team leads will be responsible for remaining in contact with the team members and serving as communication liaisons to the broader Research Team. The Research Team will have quarterly calls to stay up-to-date on the latest findings, progress, and to discuss potential funding opportunities or roadblocks.

The Florida Department of Environmental Protection (DEP) is accepting project proposals related to research priorities. These proposals must be submitted in a standardized template. Please contact Tori Barker (victoria.barker@noaa.gov) for the template and guidance on how to submit a proposal. If funded, all project deliverables must be submitted by June 2020.

Reconnaissance and Intervention Team

The Reconnaissance and Intervention Team continues to treat priority corals within permitted areas. From Looe Key north through Southeast Florida, nearly 1,600 priority corals have been treated. Amoxicillin treatments still appear to be the most effective lesion-level treatment. The team continues to focus on advancing colony-level treatment options as well as improvements to lesion-level treatments. Ocean Alchemists has provided several new and improved bases that increase acidity and also utilize natural products as alternatives to antibiotics; field applications are awaiting regulatory approval. A probiotic cocktail for *M. cavernosa* is also ready for field trials pending regulatory approval.

In order to evaluate current lesion-level treatment methods, a panel is being convened to review the outcomes of experimental intervention activities undertaken over the past year. The goal is to determine how best to approach treatments given limited resources and to enhance the success of future lesion-level treatments. This panel will include representatives from FKNMS, FWC, and DEP.

Reconnaissance of disease spread continues through multiple partners. Within the last quarter, larger scale recon missions have taken place to enhance our understanding of the location of the disease margin as well as to survey sites for potential coral rescue. In August, the NSU team noted movement of the margin westward by 6.5 miles. A DRM cruise conducted in August confirmed that the disease margin had not yet progressed into the Marquesas Keys. In July, FWC conducted Coral Reef Evaluation and Monitoring Project (CREMP) surveys in the Lower Keys, and Mote Marine Laboratory and Aquarium continued monitoring outplant sites for signs of disease.

Coral Rescue Team

The Coral Rescue Team and the Association of Zoos and Aquariums (AZA) Florida Reef Tract Rescue Project (FRTRP) participants continue to work toward their Phase 2 goals of collecting 3,000 colonies across 15 high-priority species. This summer, the Coral Rescue Team completed three cruises – one in June to the Dry Tortugas National Park and two in August and September to the reefs between Key West and the Marquesas Keys. To date, nearly 1,600 corals have been rescued and are healthy in 13 facilities across eight states. In addition, nearly 400 genetic samples have been processed and are awaiting analysis to create genetic markers.

As with many novel endeavors, there are numerous protocols, best management practices (BMPs), and guidelines to develop and implement in addition to new partners to engage. The FRTRP has convened six working groups: Leadership Team, Coral Holders Working Group, Coral Health Management Advisory Group, Messaging Working Group, Commercial Partners Working Group, and Caribbean Coral Aquarist Training Working Group. Coral Rescue and FRTRP partners have been providing presentations to raise awareness, garner support and identify new facilities for this ever-growing project.

Corals Collected Off Key West Transferred To UM CBS 4 Miami



Coral Propagation Team

The newly-formed Coral Propagation Team was unveiled at the recent technical workshop. The objective of the team is to develop a strategy for the sexual, asexual, and sexual-to-asexual propagation of corals for restoration of the Florida Reef Tract. A Coral Propagation Plan may include infrastructure expansion, species-specific goals, and

genetic management plans, among others. The plan may also include an assessment of the relevant science, technology, infrastructure, and expertise both within and outside of Florida. The Propagation Team will serve as a coordinating hub that can assist with funding requests and facilitate communication across all propagation partners. The team is being led by Lisa Gregg (FWC Programs and Policy Coordinator) and Jennifer Moore (NOAA Fisheries Threatened Coral Recovery Coordinator). As a first step, the team is engaging local partners to gauge interest and needs related to coral propagation.

Restoration Trials Team

There have been numerous conversations over the summer concerning coral restoration, including a three-hour session of the technical workshop devoted solely to the topic. To answer the fundamental question of when it is safe to outplant susceptible corals, a recommendation arose to conduct a replicated study of experimental outplanting throughout the endemic region (from Martin County through the Middle Keys). Partners are working to create a multi-organizational, collaborative proposal to conduct this important work.

The Restoration Trials Team has also been working to collate information on all the restoration activities underway throughout the reef tract, specifically the fate of outplants of susceptible species already on reefs. This information will be incorporated into a document that covers what we know about coral restoration in light of SCTLD. Related to these efforts, team members have been working with the Data Management Team to include relevant restoration information on a unified reef map. Finally, the Restoration Trials Team has been compiling information on targeted laboratory and field experiments that aimed to determine if *Acropora* spp. could be vectors of transmission of SCTLD.

Data Management Team

The focus of the Data Management Team has been on rebuilding the Southeast Florida Action Network (SEAFAN), BleachWatch, and Sea Grant public data entry applications in Survey123 within ArcGIS Online. The team has also been working with researchers at the University of South Florida to develop a statement of work for a portal to display historical and real-time abiotic data from the Florida Reef Tract. They have been meeting with FWRI database managers and programmers to create the framework of the Coral Disease Database. The database would bring multiple aspects of the coral disease response into a single location.



Data Management Team co-lead Nick Alcaraz leads a workshop in St. Croix, USVI, for

On September 4-5, the Data Management Team met with U.S. Virgin Island (USVI) partners from the Department of Planning and Natural Resources (DPNR), National Oceanic and Atmospheric Administration (NOAA), the University of the Virgin Islands, and local strike teams in St. Croix. The first day of training provided an overview of data collection, storage, access, and display tools, and it ended with a discussion of management and research goals for the USVI. The second day focused on specific data collected, data to collect in the future and data tools to be built. Integration of these efforts will allow for data to be leveraged into field-coordination, prediction, analysis, and the creation of explanatory products such as web maps and dashboards. Action items that came out of the training included developing a data folder structure; drafting data-entry best management practices; further refining in-water datasheets; creating a list of existing USVI datasets and contacts; and

territorial resource managers.

developing a dataset schema with fields that each partner should collect during their projects.

Regulatory Team

The Regulatory Team welcomed two new members, Shelby Wedelich and Ivana Kenny Carmola, both from DEP. Presentations on the SCTLD response were provided at both the Port Everglades Interagency Working Group and Managers Meetings with the goal of ensuring that SCTLD is considered within the framework of the Port Everglades deepening project. The team is exploring new compensatory mitigation options for large-scale coastal construction projects that take SCTLD and restoration impacts into consideration. Some alternative options being considered are coral rescue, assisted sexual reproduction, development and application of probiotics, micro-fragmentation and re-sheeting, restoration of degraded reef sites, and the relocation of corals, sponges, and octocorals.

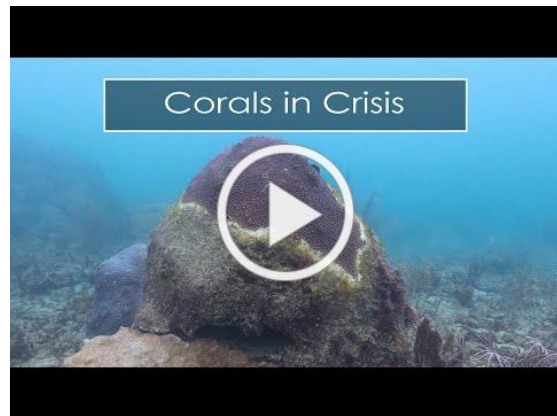
Communications and Outreach Team

The Communications and Outreach Team has been garnering media attention across the country and sharing ways that stakeholders and partners alike can contribute to the disease response effort. In July, FWC initiated the Florida Coral Crew by conducting outreach during lobster mini-season and has had more than 12,000 people sign up to join the Crew.

Florida Coral Crew

Over 200 recreational SCUBA divers have attended Florida Sea Grant disease observer trainings. Participants learned how to identify disease presence/absence and report it to SEAFAN, which is the DEP citizen science program designed to support the overall monitoring of reef resources.

Over the summer, big media hits included a national CBS This Morning report (see bottom right video) and a Spectrum TV story ([Scientists, Lawmakers Fight to Protect Thousands of Coral Off Florida Coast](#) featuring an interview with NOAA Coral Reef Conservation Program Director Jennifer Koss, aired August 16). FWC Chairman Robert Spottswood wrote a [coral reef op-ed, published first on September 17 in the Treasure Coast Palm](#) and shared with media statewide. Contact Katie Purcell



Watch our SCTLD Response Team members in
PBS Changing Seas: Corals In Crisis



How OceanX Scientists Are Fighting Florida Coral Reef Loss
NowThis

(Katie.Purcell@MyFWC.com) for an electronic copy.



Scientists race to save Gulf Coast coral ravaged by mysterious underwater disease
CBS This Morning

Caribbean Coordination Team

The Caribbean Cooperation Team continues to play a central role in communications related to SCTLD throughout the region. In early August, 23 experts representing 18 countries (including all seven Caribbean jurisdictions confirmed with SCTLD) met in Key West to discuss SCTLD throughout the region, including the clinical signs of SCTLD on their reef and potential intervention options. Participants also took the opportunity to field test the treatments applied in Florida. The meeting was organized and supported by MPA Connect, a partnership between NOAA CRCP and the Gulf and Caribbean Fisheries Institute, and funded through a grant from the National Fish and Wildlife Foundation Coral Reef Conservation Fund with NOAA CRCP.

Following the learning exchange held in April, colleagues from the U.S. Virgin Islands have continued to engage with the team to develop an SCTLD response plan. A representative from the USVI Department of Planning and Natural Resources joined the August DAC call to elicit feedback from Florida partners on their draft plan. In early September, NOAA funded an SCTLD data management training for the USVI lead by Nick Alcaez (FWC FWRI). The team is working to provide technical and funding support for an SCTLD response training (funded by a grant from NOAA CRCP). The training will be hosted by the University of the Virgin Islands in St. Thomas this November for coral reef managers and researchers from the USVI, the British Virgin Islands and Puerto Rico.

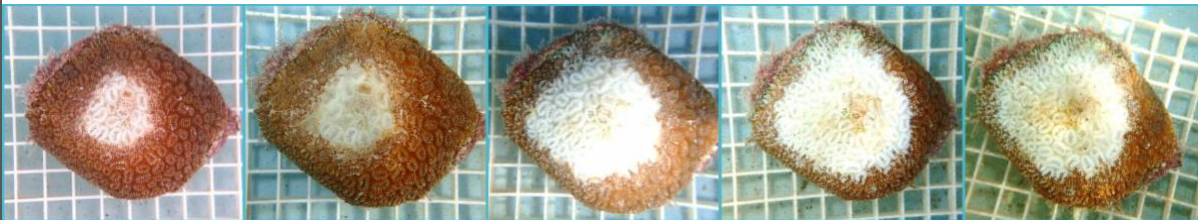


Photo by Karen Neely

Florida Dept of Environmental Protection | Coral Reef Conservation Program | Coral Reef Conservation Program, 1277 NE 79th Street Causeway, Miami, FL 33138

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