

Building Capacity for Resilience on Florida's Coral Reef Through Coral Rescue and Propagation

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In response to Stony Coral Tissue Loss Disease (SCTLD), 19 coral species were collected along Florida's Coral Reef (FCR) by the Florida Coral Rescue project for live gene banking to prevent mortality, preserve genetic diversity, and propagate offspring for use in future restoration. Over 2,500 coral colonies have been collected over seven years and have been expertly cared for in land-based facilities across the USA. Most species have never been held under human care before, but the Rescue project has provided a unique opportunity to learn husbandry needs, develop treatment options, and advance spawning and settlement techniques for each species. Now, after the creation of novel genetic markers (SNPs), breeding and propagation plans are being developed to guide spawning activities to increase genetic diversity and build resilience within Florida coral populations to provide a sustainable source of corals for outplanting. The use of rescue offspring will be a focus of outplanting for species enhancement on the FCR and pathways are being developed to connect rescue partners conducting spawning and propagation with Florida restoration practitioners for grow-out and outplanting. Currently, millions of rescue larvae are being produced within land-based rescue facilities each year and thousands have already been outplanted on the FCR within restoration and research activities. Closing the circle from coral rescue to the outplanting of offspring will dramatically assist in scaling up restoration efforts and promoting the recovery of Florida's Coral Reef.