

Status of Stony Coral Tissue Loss Disease across the northern coast of the Dominican Republic: What do we really know?

Estado de la Enfermedad de Pérdida de Tejido en Corales Pétreos en la costa norte de la República Dominicana: ¿Qué es lo que realmente sabemos?

Statut de la maladie de perte de tissu Stony Coral sur la côte nord de la République Dominicaine: Que savons-nous vraiment?

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EXTENDED ABSTRACT

Stony Coral Tissue Loss Disease (SCTLD) is a deadly condition recently described in the Caribbean. In six years, it has spread out rapidly while killing major reef builders in the region. In the Dominican Republic (DR), the disease was first noticed in Cayo Arena in 2019. Since then, scattered reports of SCTLD affecting corals along the Northern Coast of the country have increased. However, the lack of a systematic monitoring program hampered local and regional comparisons on SCTLD prevalence in the DR. Here, we present the status of SCTLD across the Northern Coast of the DR across various spatial scales encompassing hundreds of meters to thousands of kilometers. We found high spatial variability on SCTLD prevalence across locations and sites. Higher prevalence was observed in Samaná Bay (6,5% - 59%), and Galeras (28,6% - 30,8%). All sites across the west northern coast had a prevalence below 5%, except for Sosúa (16,6%). However, about 80% of the colonies surveyed in this area likely died in 2019 during a prolonged SCTLD epizootic event which eradicated species such as *Dendrogyra cylindrus* and other meadrinids. New observations on active SCTLD affecting juveniles and recruits of *Pseudodiploria strigosa*, *Dichocoenia stockesii*, *Siderastrea siderea*, *Eusmilia fastigiata* and *Orbicella spp.* are presented. Furthermore, a new behavior of the sea star *Oreaster reticulatus* eating sloughing SCTLD tissues was observed. Our results indicate that SCTLD is a serious and poorly understood problem for coral reef health in the DR.

KEYWORDS: Coral reefs, SCTLD, Epizootic event, Prevalence.

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