## Supplementary Material

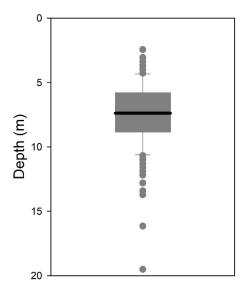


Figure S1. Box plot of *D. cylindrus* colony depth on the Florida Reef Tract. For genotypes with multiple ramets, the depth of only the largest ramet was included. Box shows the quartiles with the mean. Whiskers incorporate the  $10^{th} - 90^{th}$  percentiles. Dots are outliers.

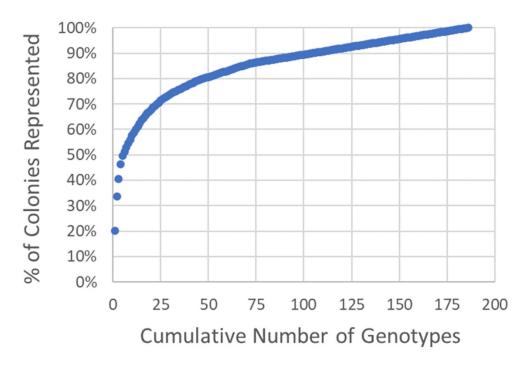


Figure S2. Cumulative curve showing the number of Florida *Dendrogyra cylindrus* colonies represented by distinct genotypes. Fifty percent of colonies were accounted for by the five most populous genotypes.

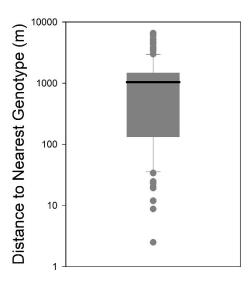


Figure S3. Box plot of logarithmic distances between *Dendrogyra cylindrus* genotypes. Box shows the quartiles with the mean (1037 m). Whiskers incorporate the  $10^{th} - 90^{th}$  percentiles. Dots are outliers.

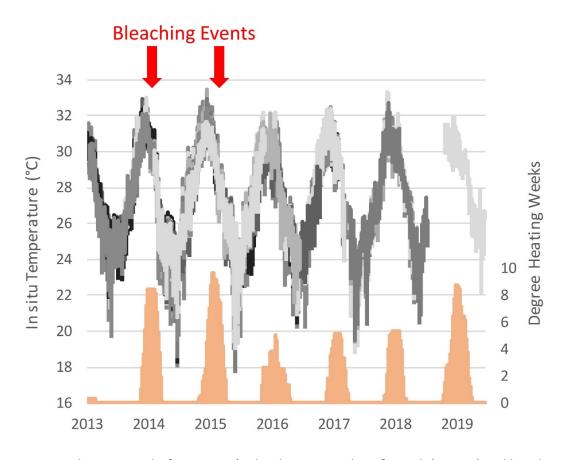


Figure S4. Degree heating weeks from NOAA's Florida Keys Coral Reef Watch (orange) and hourly *in situ* temperature records from *Dendrogyra cylindrus* sites (grey) from 2012-2019. Bleaching events correspond with excessive thermal stress events in 2014 and 2015.



Figure S5. Appearance of unknown yellow band-like disease on *Dendrogyra cylindrus*. Both images are from the Upper Keys in December 2012.