**Supplementary Materials**

Supplementary Table S1. Combined data for all coral species with lesions within East and West Flower Garden Bank Long Term Monitoring (FGB LTM, northwest Gulf of Mexico) sites from Diver Propulsion Vehicle (DPV) and diver surveys.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Species** | **East FGB** | | **West FGB** | |
| **Colonies with Lesions in DPV Surveys** | **Colonies with Lesions from Diver Counts** | **Colonies with Lesions in DPV Surveys** | **Colonies with Lesions from Diver Counts** |
| *Orbicella franksi* | 0 | 0 | 0 | 1 |
| *Pseudodiploria strigosa* | 5 | 12 | 7 | 35 |
| *Colpophyllia natans* | 4 | 4 | 2 | 5 |
| *Orbicella faveolata* | 7 | 5 | 12 | 11 |
| *Orbicella annularis* | 0 | 0 | 1 | 1 |
| *Siderastrea siderea* | 0 | 0 | 1 | 4 |
| **Total** | 16 | 21 | 23 | 57 |

Supplementary Table S2.

Percent cover, coral species, total number of coral colonies observed and number with disease lesions, and prevalence with 95% upper and lower confidence intervals for East and West Flower Garden Bank (FGB, northwest Gulf of Mexico) repetitive monitoring stations.

| **Location** | **Photostation** | **Percent Coral Cover** | **Coral Species** | **Total colonies** | **Total lesions** | **Prevalence (% with lesions)** | **95% CI** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| East FGB | 101 | 48.31 | 7 | 40 | 1 | 2.50 | 0.06, 13.16 |
| East FGB | 102 | 67.71 | 7 | 65 | 0 | 0.00 | 0, 5.52 |
| East FGB | 103 | 53.54 | 3 | 43 | 0 | 0.00 | 0, 8.22 |
| East FGB | 104 | 75.51 | 8 | 48 | 1 | 2.08 | 0.05,11.07 |
| East FGB | 105 | 24.21 | 5 | 36 | 1 | 2.78 | 0.07, 14.53 |
| East FGB | 106 | 50.56 | 8 | 75 | 0 | 0.00 | 0, 4.80 |
| East FGB | 107 | 33.33 | 7 | 48 | 0 | 0.00 | 0, 7.40 |
| East FGB | 108 | 25.26 | 7 | 45 | 3 | 6.67 | 1.40, 18.27 |
| East FGB | 109 | 59.18 | 7 | 49 | 1 | 2.04 | 0.05, 10.85 |
| East FGB | 201 | 84.21 | 7 | 36 | 2 | 5.56 | 0.68, 18.66 |
| East FGB | 202 | 90.91 | 8 | 40 | 1 | 2.50 | 0.06, 13.16 |
| East FGB | 203 | 52.04 | 5 | 51 | 0 | 0.00 | 0, 6.98 |
| East FGB | 204 | 68.75 | 4 | 61 | 1 | 1.64 | 0.04, 8.80 |
| East FGB | 205 | 68.04 | 5 | 37 | 1 | 2.70 | 0.07, 14.16 |
| East FGB | 206 | 60.00 | 5 | 33 | 2 | 6.06 | 7.4, 20.23 |
| East FGB | 207 | 67.02 | 4 | 58 | 0 | 0.00 | 0, 6.16 |
| East FGB | 208 | 67.35 | 4 | 37 | 2 | 5.41 | 0.66, 18.20 |
| East FGB | 209 | 79.17 | 7 | 96 | 2 | 2.08 | 0.25, 7.32 |
| East FGB | 210 | 65.31 | 4 | 36 | 2 | 5.56 | 0.68, 18.66 |
| East FGB | 211 | 56.70 | 7 | 52 | 1 | 1.92 | 0.05, 10.26 |
| East FGB | 212 | 81.63 | 7 | 35 | 0 | 0.00 | 0, 10.00 |
| East FGB | 301 | 90.63 | 5 | 34 | 4 | 11.76 | 3.30, 27.45 |
| East FGB | 302 | 77.00 | 5 | 50 | 1 | 2.00 | 0.05, 10.65 |
| East FGB | 303 | 70.83 | 5 | 57 | 1 | 1.75 | 0.04, 9.39 |
| East FGB | 304 | 42.11 | 5 | 45 | 0 | 0.00 | 0, 7.87 |
| East FGB | 305 | 62.63 | 7 | 25 | 0 | 0.00 | 0, 13.72 |
| East FGB | 306 | 83.87 | 7 | 36 | 1 | 2.78 | 0.07, 14.53 |
| East FGB | 307 | 61.22 | 5 | 40 | 0 | 0.00 | 0, 8.81 |
| East FGB | 401 | 79.79 | 4 | 27 | 3 | 11.11 | 2.35, 29.16 |
| East FGB | 402 | 65.00 | 5 | 34 | 2 | 5.88 | 0.72, 19.68 |
| East FGB | 403 | 57.45 | 6 | 38 | 4 | 10.53 | 2.94, 24.81 |
| East FGB | 404 | 74.49 | 5 | 28 | 0 | 0.00 | 0, 12.34 |
| East FGB | 405 | 58.95 | 5 | 32 | 2 | 6.25 | 0.77, 20.81 |
| East FGB | 406 | 61.86 | 5 | 38 | 1 | 2.63 | 0.07, 13.81 |
| East FGB | 407 | 42.11 | 4 | 29 | 0 | 0.00 | 0, 11.94 |
| East FGB | 408 | 60.87 | 4 | 25 | 1 | 4.00 | 0.10, 20.35 |
| East FGB | 409 | 55.91 | 4 | 27 | 0 | 0.00 | 0, 12.77 |
| West FGB | 501 | 69.79 | 4 | 44 | 4 | 9.09 | 2.53, 21.67 |
| West FGB | 502 | 72.34 | 3 | 50 | 2 | 4.00 | 0.49, 13.71 |
| West FGB | 503 | 63.54 | 6 | 53 | 0 | 0.00 | 0, 6.72 |
| West FGB | 504 | 68.75 | 6 | 36 | 2 | 5.56 | 0.68, 18.66 |
| West FGB | 505 | 83.87 | 4 | 36 | 0 | 0.00 | 0, 9.74 |
| West FGB | 506 | 68.42 | 6 | 48 | 1 | 2.08 | 0.05, 11.07 |
| West FGB | 507 | 69.89 | 8 | 46 | 0 | 0.00 | 0, 7.71 |
| West FGB | 508 | 77.55 | 7 | 42 | 0 | 0.00 | 0, 8.41 |
| West FGB | 509 | 60.00 | 6 | 45 | 0 | 0.00 | 0, 7.87 |
| West FGB | 510 | 46.32 | 4 | 40 | 0 | 0.00 | 0, 8.81 |
| West FGB | 511 | 50.52 | 6 | 38 | 0 | 0.00 | 0, 9.25 |
| West FGB | 512 | 70.00 | 6 | 50 | 1 | 2.00 | 0.05, 10.65 |
| West FGB | 513 | 65.98 | 6 | 28 | 0 | 0.00 | 0, 12.34 |
| West FGB | 601 | 58.33 | 8 | 37 | 1 | 2.70 | 0.07, 14.16 |
| West FGB | 602 | 67.68 | 5 | 28 | 4 | 14.29 | 4.03, 32.67 |
| West FGB | 603 | 68.75 | 7 | 67 | 0 | 0.00 | 0, 5.36 |
| West FGB | 604 | 53.13 | 7 | 57 | 0 | 0.00 | 0, 6.27 |
| West FGB | 605 | 54.64 | 6 | 43 | 2 | 4.65 | 0.57, 15.81 |
| West FGB | 606 | 65.59 | 5 | 51 | 0 | 0.00 | 0, 6.98 |
| West FGB | 607 | 80.21 | 7 | 36 | 1 | 2.78 | 0.07, 14.53 |
| West FGB | 608 | 42.71 | 9 | 32 | 1 | 3.13 | 0.08, 16.22 |
| West FGB | 609 | 69.47 | 6 | 35 | 1 | 2.86 | 0.07, 14.92 |
| West FGB | 701 | 72.73 | 5 | 56 | 1 | 1.79 | 0.04, 9.55 |
| West FGB | 702 | 66.67 | 4 | 60 | 0 | 0.00 | 0, 5.96 |
| West FGB | 703 | 75.26 | 9 | 43 | 2 | 4.65 | 5.7, 15.81 |
| West FGB | 704 | 41.67 | 7 | 78 | 2 | 2.56 | 0.31, 8.96 |
| West FGB | 705 | 75.76 | 6 | 49 | 0 | 0.00 | 0, 7.25 |
| West FGB | 706 | 70.53 | 7 | 93 | 4 | 4.30 | 1.18, 10.65 |
| West FGB | 707 | 58.97 | 8 | 82 | 2 | 2.44 | 0.30, 8.53 |
| West FGB | 708 | 86.17 | 5 | 46 | 4 | 8.70 | 2.42, 20.79 |
| West FGB | 709 | 56.84 | 7 | 89 | 0 | 0.00 | 0, 4.06 |
| West FGB | 801 | 63.16 | 6 | 28 | 1 | 3.57 | 0.09, 18.35 |
| West FGB | 802 | 81.44 | 6 | 75 | 0 | 0.00 | 0, 4.80 |
| West FGB | 803 | 82.83 | 5 | 63 | 0 | 0.00 | 0, 5.69 |
| West FGB | 804 | 76.00 | 7 | 24 | 0 | 0.00 | 0, 14.25 |
| West FGB | 805 | 82.47 | 7 | 40 | 0 | 0.00 | 0, 8.81 |
| West FGB | 806 | 77.89 | 6 | 49 | 0 | 0.00 | 0, 7.25 |
| West FGB | 807 | 65.63 | 5 | 44 | 1 | 2.27 | 0.06, 12.02 |
| West FGB | 808 | 61.86 | 8 | 69 | 1 | 1.45 | 0.04, 7.81 |
| West FGB | 809 | 54.00 | 5 | 22 | 0 | 0.00 | 0, 15.44 |
| West FGB | 810 | 78.79 | 5 | 49 | 5 | 10.20 | 3.40, 22.23 |

Supplementary Figure S1. Daily mean seawater temperature (°C) at East Flower Garden Bank (FGB, 21 m) and West FGB (27 m) from June to August 2022. The threshold known to trigger bleaching at FGB is 50 days above 29.5 (°C); however, temperatures did not exceed this threshold in 2022 (27 days at EFGB and 21 days at WFGB).

Supplementary Figure S2. Satellite derived daily mean surface salinity (psu) at East Flower Garden Bank (FGB) and West FGB in 2022.