

Desecheo Island Reef Assessments

a joint effort of ReefKeeper International
and the Comité ProFondo Marino de Desecheo
to protect Desecheo Island's coral reefs

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Puerto de Botes and Cable Reefs May 1998

In May of 1998, ReefKeeper International, in conjunction with its ReefMonitor Affiliate group Comité ProFondo Marino de Desecheo, gathered bottom survey data from Puerto de Botes and Cable Reefs off Desecheo Island, Puerto Rico. These reefs are located to the south of Desecheo Island, at 18°N23.082'/ 67°W29.340' and 18°N22.920'/ 67°W29.325', respectively, in water depths between 15 and 19m.

Surveys were completed on these reefs to determine percent bottom cover occupied by corals off Desecheo as well as coral health, distribution, and species abundance. These surveys were conducted as part of an ongoing Rapid Reef Assessment of the island's reefs in support of a rulemaking request to declare Desecheo Island waters a Puerto Rico Natural Reserve.

Rapid assessment data has also previously been collected and reported for four other Desecheo Island Reefs: Candlesticks, Candy Land, Puerto Canoas, and South Gardens.

Overall Results

Overall, Puerto de Botes and Cable Reefs featured high to moderate coral cover (52%-38.4%), low to moderate algal cover (8.6%-23.7%), moderate abiotic cover (36.9%-28.8%) and low quantities of Palithoa sp. (false coral), soft coral, or other biotics (see graph on back).

Puerto de Botes and Cable Reefs also featured high horizontal visibilities, ranging from 16 to 20m.

The overall health indices for these reefs indicated that there were high percentages of healthy corals (93.2%-98.7%) and correspondingly low percentages of sick (2.9%-0%) or bleached corals (3.9%-1.3%) present. However, recent (October '98) reports indicate that a widespread coral bleaching event is occurring off Desecheo as part of a Caribbean-wide phenomena.

Finally, these reefs contained a relatively high abundance of coral species, ranging between 11 and 8 identified species. This, however, did not include a significant number of corals that were counted for bottom cover but were not identified by species (20% unidentified at Cable Reef and 23% unidentified at Puerto de Botes Reef). Therefore, coral species abundance on these reefs should be significantly higher than reported here.

Puerto de Botes Reef

Of the two reefs, Puerto de Botes was in better condition, with a higher percent coral cover (52%), a lower percent algal cover (8.6%), and a moderate abiotic cover (36.9%).

In addition, Puerto de Botes featured a greater coral species richness than Cable Reef, with a total of 11 identified coral species. Of the identified coral species, *Montastrea annularis* (Boulder Mound Coral) and *Porites porites* (Finger Coral) occupied the highest percentages of bottom cover, with 54.3% and 9.5%, respectively.

Coral health for Puerto de Botes, however, was lower than Cable Reef, with a health percentage of 93.2%, a sickness index of 2.9%, and a bleached percentage of 3.9%.

Cable Reef

Cable Reef was somewhat less luxuriant than Puerto de Botes, with a moderate percentages of coral cover (38.4%), algal cover (23.7%), and abiotic cover (28.8%).

Coral species abundance for Cable Reef was also lower than Puerto de Botes Reef, with 8 identified coral species. Of the identified coral species, *Montastrea annularis* (Boulder Mound Coral) and *Montastrea cavernosa* (Great Mound Coral) occupied the highest percent bottom cover, with 48.1% and 7.8% cover, respectively.

Coral health for Cable Reef was, however, higher than Puerto de Botes Reef, with a coral health percent of 98.7%, a sickness index of 0%, and a bleached percent of 1.3%.

Conclusions

The two reefs surveyed (Puerto de Botes and Cable Reefs) were in relatively good condition. There's only a slight incidence of algal encroachment on Cable Reef, and slight coral bleaching on Puerto de Botes Reef. These findings further support creation of a Desecheo Island Natural Reserve to preserve the coral's good condition.

Additional Desecheo Island reef sites will be assessed by December of 1998.

Thank You,
Volunteers!
Nilda Jimenez
Felix Lopez
Jose Rafols

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**Percent Bottom Cover
Desecheo Island, Puerto Rico
Reef Assessments
May 1998**

