

ABSTRACT

Awareness and understanding of diseases of sessile organisms, specifically scleractinian corals, are increasingly important factors in the preservation of the world's reefs. A baseline study of the level of disease at the Flower Garden Banks National Marine Sanctuary was undertaken between July and September of 2001. The study was conducted on the East and West banks with three, 50m transects at each bank. A total area of 74.11 m² was surveyed using digital video. Analysis of the transects indicated bleaching, black band disease, and unknown disease types as the most frequently encountered disease conditions, accounting for 16.87, 3.25, and 2.49%, respectively, of the total area surveyed. *Millepora* spp experienced the highest percentage of bleaching, with 78.64% of all *Millepora* spp present exhibiting signs of bleaching which accounted for 3% of the total area surveyed. *Montastraea annularis*, the most prevalent coral species present, exhibited the highest levels of bleaching and unknown diseases. The highest percentage of black band disease was seen on *Diploria strigosa*, with 1.51% of the total area surveyed. Forty-four water samples were taken directly from the water column above the coral surface. From the original 44 samples, 36 bacteria were isolated. Bacterial identification included two *Vibrio* species. The highest bacterial cell densities were associated with black band disease. The highest concentration of bacteria, 76 and 46 cells/mL, were found in water above *Porites asteroides* and *P. porites*. Overall, more research remains to be completed at the site, with surveys during the colder-water months to balance the summer sampling. Disease monitoring should also be included as a cornerstone of any coral reef long term monitoring program.