

Reef Balls Press Release

Over the last three decades, development activities along the West and South coasts of Barbados have been linked to a decline in the abundance and diversity of both the bank and fringing reefs around the island. Management and monitoring activities by the Coastal Zone Management Unit (CZMU) have served to reduce the negative effects of coastal developments on marine communities.

In an effort to supplement these Government activities, in July 2004, the Barbados Marine Trust (BMT) implemented the Reef Ball Pilot Project (first of its kind in Barbados), which involved the deployment of thirty (30) reef balls off Hastings. Reef Balls are a new category of reef enhancement called, "Designed Reefs." They are made of a special, marine friendly concrete and are designed to mimic natural reef systems. Reef balls are used around the world to create habitats for fish and other marine and freshwater species.

After the reef balls were deployed, fish abundance at the experimental site was observed to have doubled in less than one month. Additionally, fish diversity increased three-fold in the same period. It was noted that both adult and juvenile fish contributed to this increase. There appeared to be a low degree of migration of mature fish from the natural reefs but the impact on these reefs appeared to be negligible. Though observations are preliminary, evidence appears to indicate that migrant fish may be starting to reproduce at the reef ball site, thereby increasing fish abundance independently of the surrounding natural reefs. This can be seen by the eggs of fish species found on the reef balls.

There has also been significant coral recruitment at the reef ball site. Of 4 of the reefballs sampled, all had >60 coral recruits (of 3 or more species) and one single reef ball had over 100 coral recruits.

On September 9, 2005, two months after the reef balls were deployed, the eye of Hurricane Ivan, a Category 4 hurricane, passed approximately 80 miles south of Barbados. The hurricane caused powerful waves to slam the south coast of Barbados, resulting in damage to many fringing, patch and bank reefs, as well as man-made coastal defense structures. Shortly after the passage of the hurricane, fish abundance at the reef ball site had returned to the pre-deployment levels when the area was dominated by coralline sand. However, during the four (4) months following the hurricane, abundance once again began to show an increase. By early 2005, fish abundance was approximately five (5) times higher than they were immediately after Ivan had passed.

Monitoring of the Reef Ball Pilot Project will continue until September 2005, which will provide eighteen (18) months of continuous data. A continuous effort will also be made to assess any potential impacts of the reef balls on surrounding natural reefs. Upon conclusion of the analysis of the data obtained from the Pilot Project, the BMT will prepare a White Paper which will advise and direct the Government of Barbados and the BMT on the future deployment of reef balls at other marine locations around the island. Possible sites under consideration by the BMT are Oistins, Carlisle Bay, Atlantis Submarine reef, Folkestone Marine Park and Cobblers Cove.

11-Mar-06



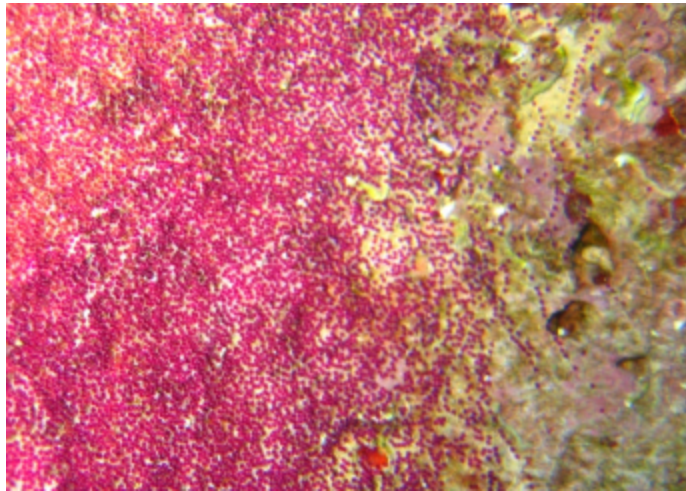
Before



After



Fish and Coral recruit on reef ball



Fish (Sergeant Major) eggs on Reef ball