



# NEGRIL MARINE PARK NEWS

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## The Doctor presents "Green Algae" in Negril

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In the recent weeks of March, Dr. Brain Lapointe from Harbor Branch Oceanographic, volunteered his time to Negril Coral Reef Preservation Society. Dr. Lapointe was visiting Negril to update scientific data and to assist the NCRPS Rangers with information regarding coral reefs declining ecosystem. Fortunately, Dr. Lapointe is no a stranger to NCRPS. He has been visiting Negril since 1992 and is actively involved in coastal management and preservation of the reefs within the Marine Park. In his recent visit Dr. Lapointe spent many hours teaching new volunteers and Rangers the harm of the Green Tide. NCRPS gathered crucial data by doing collective fieldwork and water sampling out of Green Island, Orange Bay, Rock House and Yacht Club. Dr. Lapointe finished his week with an informative seminar regarding this killer Green Tide. The seminar was held in Sunset at the Palms hotel, with 21 guest attending. Dr. Lapointe outlined the occurring threat Negril faces with the invading Green Tide (*Caulerpa Taxifolia/Racemosa*). He also explained reasons for the increase numbers of Parrot Fish (*Scaridae*) and Sea Urchins (*Diademas*). In recent year fishermen have noticed their growth and abundance throughout the Marine Park. Dr. Lapointe's hypothesis is that these two herbivores play a key role in the deteriorating coral reefs as for the Green Algae.

"Negril experienced their first algae bloom in 1992," Lapointe states. The Green algae (*Caulerpa Racemosa*) are similar to a "cluster" of grape-like circles attached by a tiny stem-like branch. This algae produces low oxygen which, in time, suffocates the coral, killing it immediately. Other forms of algae, such as, Large-Leaf Hanging Vine (*Halimeda copiosa*) create and veil that over grows the coral, killing them as well. Large-Leaf Algae are thought to be a major cause of calcium carbonate to the reefs and sand. Dr. Lapointe also stated that Negril's environment is declining on three levels 1.) Local 2.) Regional 3.) and within the Ecosystems, due to nutrient enrichment caused by sewage out falls. These nutrient enrichment sites impacts the coastal areas by releasing high counts of nitrogen and phosphates creating algae blooms or "Killer Algae." The algae blooms not only affect the coral reef but also greatly affect the tourist industry. Deforestation of cane has another impact on the reefs, the nutrients increase nitrogen, which flows into the ground and rivers. The burning of the cane is the number one source of human nitrogen in the Negril region. Dr. Lapointe's main focus of cause and effects of the Green Algae blooms were the Negril's sewage ponds. He spoke of them as being "designed to small" and "less efficient." Thus causing sewage spills and high counts of phosphates and nitrogen to be released into the rivers and seas. Over time predicting that these ponds will play a crucial role in the deteriorating beaches and reefs. The seminar was concluded with intense questions and debates the guests had about Dr. Lapointe's presentation. A special thanks goes out to everyone who participated in this activity; NEPA, U.S. Peace Corps, Discovery Bay Marine Lab, Montego Bay Marine Park, NWC and The Gleaner. NCRPS would also like to thank Dr. Brain Lapointe, once again, for his time and effort.

### Did you Know...

- When conchs are first hatched, they are no more than a speck in the water that floats with other tiny creatures for about 3 weeks. In this stage they are considered plankton!
- Coral reefs cover less than 0.2% of the ocean floor and are estimated to contain approximately 25% of the ocean species! WOW!
- Negril plays host to over 24 different species of Starfish!

## Transect's in the Marine Park



Linval analyzing algae collected on a Transect



Rangers conducting a Transect

What is a transect?

A transect is a three-person job that usually takes about an hour underwater. The purpose of the transect-dives has three main characteristics. The first characteristic is to role out a 25 meter line along the reef and every few feet a square foot quadrate is thrown, 3 meters in width, along the transect line. Where the quadrate lands, a person will then collect the entire algae within that area. The algae will be collected a total of ten times along each individual transect line.

The second characteristics of the dive is to count the number of urchins that rest within the 3 meter transect area. There are four different types of urchins that we detect in our dives and are surveyed. The 4 species consist of the Long Spined Urchin, (Diadema Antillarum) the Reef Urchin, (Echinometra Varidis) the West Indian See Egg, (Tripneustes ventricosus) and the Slate-Pencil Urchin (Eucidaris tribulooides). The most commonly found urchin would be the Long Spine Urchin (Diadema). The data that is collected is then documented for further use in the future of NCRPS. This will enable NCRPS to prove numerous statistics, such as the pollution levels and the deterioration impact on the reefs. Science proves that once water is polluted algae will bloom and when this occurs you will see a rise of herbivores such as the sea urchins.

The third characteristic of the dive is Benthic transecting or videotaping the surrounding ecosystem around and on the 25-meter transect line. This task is usually performed by Everton Frame, the lead Ranger of the dives. This visual reference, can be used in the future for case studies and testing theories. The data which is then collected and returned to headquarters is analyzed in the lab and stored in data books. These transects are preformed throughout the Marine Park and are conducted every 3 months. At the site the team will survey both shallow (2-6m) and deep (7-13m) reefs. In total completing 4 transects, collecting 40 bags of algae per dive. In recent years two additional sites have been added to the transect dives, The Lighthouse and Rock House.



Rangers installing Replenishments zone signs



Buoys marking their zone within the Marine Park

## “Respect” to the Marine Park Buoys

Over the last decade Negril’s Marine Park Rangers have been battling with a series of conflicting issues regarding the Fishermen and Water Sports instructors. The Jamaican word “Respect” is carelessly used between the two groups of individuals. Over time losing its true definition, “Deserving the highest regards for each other.” In hopes to settle these conflicting differences the Marine Park Rangers have installed water buoys throughout the Marine Park. Each buoy is designed with its own characteristic and importance to the Marine Park. The orange buoys are fish replenishment zones. These areas are used as a breeding ground for fish and are very delicate areas. There are 6 replenishment zones located in the Negril Marine Park. There is absolutely no fishing or recreational activities (including any type of water sport) in these zones. In 1991, 37 dive sites were given white and blue buoys. These white and blue buoys serve as two purposes: to inform the divers of popular sites and to allow their boat to secure themselves with out anchoring on the coral. In 1995, red and white buoys were placed in 155 locations, ranging from South Negril River to Point Village. The buoys mark the swimming lanes and strongly advise the swimmers to stay within the designated area. They are placed 300ft from the shoreline and 155ft apart from each other. Motorized vehicles are not permitted in these areas. The buoys marked with red tops are entry lanes for watercrafts, 11 buoys have been placed throughout the Marine Park (Long Bay area). These allow motorized crafts to exit and enter. These buoys have been placed in their designated area to serve and protect the public. By allowing these buoys to serve their intended purpose, we gain a certain amount of respect for each other and the Marine Park. By respecting one another, the coral reefs will benefit, and eventually replenished the ocean. So please respect the buoys, and each individual person.

## Marine Park Regulations

When asked the question “Do you know where the Marine Park is located?” the majority will reply “Where?” Negril’s Marine Park was established in 1992, when the community of Negril became concerned for the rapid decrease of the coral reefs and sandy white beaches. Drafted June 8, 1992, the NATURAL RESOURCES CONSERVATION AUTHORITY ACT, (Section 38) established the rules and regulations of the Negril’s Marine Park. These Rules and Regulations are not only established to protect the declining environment, but to advise to the public of the Marine Parks purposes. By informing the public of the Rules and Regulations, we are reassuring the environments safety. Which in time will allow our children to benefit from the corals natural recourses. Regulation 12, states that a person shall not discharge or have any possession in a marine park any air rifle, or other firearm, bang sticks, spear gun, harpoons, ect. that are potentially harmful to fish or wild life or to the reef structure and dangerous to human safety. If found liable, a person my be convicted before a Resident Magistrate to imprisonment or a fine no greater then ten thousand dollars. By becoming aware of the Marine Park, we educate ourselves about the potential threats that we may cause to the reef and Marine Park. The Rules and Regulations not only serve as guidelines, they also maintain authority. If you have any questions regarding the NATURAL RESOURCES CONSERVATION AUTHORITY ACT, please stop by NCRPS headquarters and feel free to ask any question’s you may have.



Sea Turtles are often killed illegally with the use of Spear Guns and Harpoons

## NCRPS Volunteers and Staff

NCRPS would like to welcome their new staff and volunteers to the Negril community. Hello my name is Vernon Somerville and I am the newest addition to the NCRPS staff members. I am 22 years old and have been working with NCRPS since January. I have received training in many different fields of Ranger work. Including water samples collection, water sampling and testing, fish identification, reef monitoring, rules of the Marine Park, zoning, basic boat operation and many other areas of concerns. I look forward to being apart of this team. In addition NCRPS would also like to welcome Casey Ryan and Deneve Sam.

Hello we are volunteers from the United States, from the University of Long Island. We have been volunteering our time with NCRPS and the Marine Park since February and will be here until mid May. Our job at NCRPS is to patrol the Marine Park and inform the public about the Coral Reefs located within the Marine Park. We look forward to being any assistance to the Marine park.



Vernon Somerville NCRPS  
Newest Member

## Discovering Coral

In January’s 1999 issue of NATIONAL GEOGRAPHIC, they ran an article of “Coral in Peril.” In the issue they discuss the dangers that Jamaica’s coral reefs face due algae. “The culprits: over fishing, pollution, and sediment runoffs.” (National Geographic, 37) To understand this fragile, endangered ecosystem, we must understand the actual coral reef itself. A reef is composed of a living coral polyp. Polyps have mouths and tentacles that extend, sweeping for plankton and other organic matter. They produce calcium, by extracting the minerals from the water, in time making a skeleton of calcium and limestone. When the polyps die, their offspring build upon their remains. Giving coral their distinctive look. Reefs take millions of generations to develop the unique structure, which is so delicate to any type of contact (human or natural). There are many mysteries behind these fragile reefs that scientists are discovering. Research shows that corals are making scientific breakthroughs in medicine, including compounds against asthma, heart disease, leukemia, viruses including HIV, and many others. Reefs host almost all aquatic plants and animal species, in the world, pretty impressive. There are about 67 different species of coral, found within Negril’s Marine Park. By exploiting the reefs we are not lonely losing magnificent creatures, we are effecting the future to come.



Elkhorn and Sponge Coral

Negril’s Marine Park





For our children's children.....

*The Mission of the Negril Coral Reef Preservation Society is to protect and preserve coral reef ecosystems, locally, regionally, and globally, through education, research, training, monitoring, lobbying, and the creation of marine protected areas.*

### Negril Coral Reef Preservation Society

Negril P.O. Box #2725  
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West Indies

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## Join NCRPS and Support the Negril Marine Park!

You can support the Negril Marine Park and help protect the fragile coral reef ecosystem by becoming a member of the Negril Coral Reef Preservation Society.

Members receive newsletters.

I wish to become a member of NCRPS (Membership fees are for a one year period)

- Business Membership, \$1000 JA/\$50 US
- Family Membership, \$700 JA/\$35 US
- Full Individual Membership \$500 JA/\$15 US
- Student Membership, \$50 JA/\$5 US



I wish to make a tax deductible donation to NCRPS to benefit the Negril Marine Park

(NCRPS is registered as a non-profit, charitable organization in Jamaica, West Indies)

Enclosed is my tax deductible contribution of \$ \_\_\_\_\_

NAME \_\_\_\_\_ TELEPHONE \_\_\_\_\_

ADDRESS \_\_\_\_\_ E MAIL \_\_\_\_\_

Please make cheques payable to: NCRPS, Negril P.O. Box #2725, Westmoreland, Jamaica, West Indies

### US TAX DEDUCTIBLE DONATIONS THROUGH FRIENDS OF JAMAICA USA

NCRPS works in partnership with Friends of Jamaica (FOJ) USA, a US based organization dedicated to providing economic assistance to organizations in Jamaica. FOJ is recognized by the US Internal Revenue Service as a non-profit charitable organization, 501 (c) (3). All contributions made to NCRPS through FOJ are US tax deductible. FOJ will retain 5% of all contributions for administrative purposes. Those wishing to make donations to NCRPS through FOJ will become members of FOJ and receive membership benefits. [www.friendsofjamaicausa.org](http://www.friendsofjamaicausa.org)

Please make cheques payable to Friends of Jamaica USA, 7124 Ryan Ranch Rd., El Dorado Hills, Ca 95762