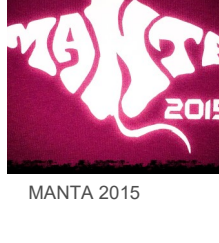
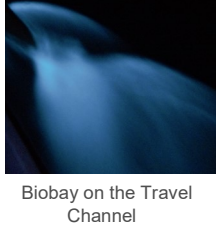


Top stories in this newsletter



MANTA 2015



Biobay on the Travel Channel



Birds of Vieques



We have to conserve water

Note From the President



Welcome to the first issue of the VCHT e-Newsletter! This is going to be our new way of keeping you up-to-date on what's happening at the Trust.

The Trust has so many responsibilities - science education, environmental advocacy, resource management and sustainability - we are a unique organization. No one else does what we do here on Vieques, so we have a lot to tell you.

We want our communications to not only inform our members but, we hope, inspire you to want to support Trust activities - as a volunteer, through financial contributions, and especially by encouraging your friends and neighbors to learn about our work and join us.

That work is critical to the health of our island, so I am asking you to share our story. Click on the "Send To a Friend" link, and forward the e-Newsletter to someone you know who would want to learn more about Vieques, the science of its environment, and about our many plans and programs. Please do that right now. Thank you.

And the new e-Newsletter is only part of our communications story. You can also use this e-Newsletter to link to our new VCHT Web-site. The site has a new look and I know that you'll find it a great place to learn more about the programs and activities that are headlined here.

We will be working in the coming weeks to further improve the site and make it more useful for our members. You'll also find us posting regularly on social media with instant video clips of Trust activities and additional links to our Web-site.

Please join me in thanking Pedro Ayala for creating this newsletter and redesigning the Web-site. He will be the editor of both publications as we move ahead. We are grateful to have his communications talents as part of the Trust staff. Lirio, Mark, Xaimara Jorge and Pedro are all working constantly to meet the Trusts goals and serve our community. The more you know about it, the more I know you will appreciate their hard work.

Thank you for your continuing support.

Ken Storms,
President

Keeping Our island clean



This year the Trust launched an educational campaign about garbage and water reaching water bodies and the beautiful coasts of Vieques. "Everything goes to the sea and the sea is not a trash can" are the slogans that carry the message of preserving our seas and their inhabitants.

La Mágia de Vieques



Rachel Speer
Wise Laboratory of Environmental and Genetic Toxicology
University of Louisville
Louisville, KY

Vieques is full of life, culture, and endless possibilities that extend to researchers and anyone with an appreciation for nature to enjoy. This summer, as a graduate student under the advisement of Dr. John Pierce Wise, Sr. of the Wise Laboratory of Environmental and Genetic Toxicology I embarked on a journey to gather data, embrace a culture, and encourage scientific research in Vieques. I was tasked with collecting leatherback sea turtle hatchlings that were unfortunate not to make it from their nests to the sea. The Wise Laboratory has a "One Environmental Health" approach to our research meaning we try to investigate many different model species in order to gain insight into the overall health of the environment. Our goal was to study sea turtle hatchlings and embryos in order to better understand why they do not survive the development or hatching process and to establish baseline knowledge to be used in conservation efforts. With approximately only 1 out every 1000 turtles surviving to reproductive age every turtle is vital to the recovery of their threatened population.

We specifically investigate the levels of metals in a variety of organs to evaluate whether contamination may play a role in the survival rates of sea turtle hatchlings. Additionally, we evaluate the level of DNA damage to determine a baseline for future investigative work. This future work relies on establishing cell lines from the sea turtle hatchlings; a process that begins in the lab at VCHT and is ongoing at our home base at the University of Louisville. I worked closely with the U.S. Fish and Wildlife Service to collect the turtle samples and then took these samples to VCHT for processing and to run experiments. We are also interested in the invasive lionfish that burdens the waters of the Caribbean. On several occasions with the help of Mark Martin I caught lionfish to use for scientific experiments and gather data on their presence in Vieques.

Although we had a busy and successful season working with the turtles, we also found time to become integrated into the research at VCHT including the monitoring of the bioluminescent bay and a new, exciting project to evaluate light pollution levels in Vieques. Undeniably, I was completely taken with the magic of the bioluminescent bay and was fortunate to aid in the weekly collection of water samples and cleaning of the USGS station in the bay. On one evening we happened to be in the right place and the right time to save a hawksbill sea turtle hatchling caught in the sargassum that has overtaken many of the beaches in Vieques this summer. After United States Fish and Wildlife Service determined that the turtle was fit for its great journey in the sea, we released it right outside the bioluminescent bay as visitors watched on with awe and hope. On an equally exciting evening I was fortunate to have been a part of taking the first ever photometer reading in the waters of the bioluminescent bay. Tackling two research objectives at once, every Tuesday night we used the photometer to measure the darkness of the night sky while taking water samples in the bay. The darkness of the night sky directly affects the quality of the bioluminescent bay as well as activities of the local species such as sea turtle nesting and hatching. The data obtained through the photometer readings will be used in evaluating and protecting Vieques as the island continues to develop.

An important part of the development of Vieques lies in the ongoing research of the island and increasing the public's knowledge of the environment. Informing the public about exciting research in Vieques and encouraging ecological responsibility was another goal we were able to achieve primarily through involvement with the MANTA programs. I demonstrated various scientific processes for the MANTA kids ranging from the processing of the sea turtle hatchlings and looking at chromosomes under a microscope to taking photometer readings in the bioluminescent bay. Additionally, I spent many days helping with MANTA activities such as snorkeling to search for invasive lionfish and cleaning up garbage in the ocean and on the beaches. My involvement in the MANTA programs was one of the most special parts of my summer in Vieques. I was able to share the exciting world of research with the MANTA kids and importantly bring inspiration for future researchers who will be integral to the protection and future of Vieques. I can truly say that I had a magical experience in Vieques and am grateful for the opportunity to be a part of so many exciting and important projects geared towards the conservation of this amazing place. I will certainly be back, and look forward to the future of our research in Vieques.

Sargassum: a growing concern, can we use it?



The shorelines of the Caribbean have been getting filled with large mounds of sargassum. Sargassum is a free floating algae that has mostly a floating lifecycle. It accumulates in large mats and creates an important ecosystem in the open water. The protection and food source that it provides marine organisms benefits from microscopic invertebrates to large schooling mahi-mahi, seabirds, marlin and other gamefish. The species of this algae found in the Caribbean are Sargassum fluitans and Sargassum natans.

There has recently been a substantial increase in the amount of sargassum that accumulates in our shoreline. Although it is a natural event, this increased amount does present some possible adverse effects on our beaches, seagrass beds, coral reefs and bioluminescent bays. Laguna Grande, the bioluminescent bay in Fajardo, is currently being studied to determine if there is a correlation between the large amount of sargassum that entered the bay and a recent decline in bioluminescent dinoflagellates. Laguna Grande also reported a fish mortality event where dozens of fishes and crustaceans from several species were found dead in the water. The species found in Laguna Grande included tarpon, pufferfish, moray eels, ballyhoos and shrimps.

In Puerto Mosquito we have had sargassum but it apparently hasn't created a substantial problem in the bioluminescent dinoflagellate populations; this is still being investigated. The VCHT lab did report finding several dead fish within the sargassum in the shoreline. The species were of the frogfish and filefish variety, both of which are usually associated to this algae. We continue to monitor Puerto Mosquito for this and any other new events that may be occurring due to our changing world. The effect that the accumulation of this macro algae is having on the ecosystems and tourism is a problem that requires the collaborations of scientists, the tourism community, government and the residents since it affects over 40 municipalities of Puerto Rico and thousands of beaches in the Caribbean.

As part of our speaker series the VCHT recently featured a talk by Dr. Roberto González Castellanos President of the Scientific Council and of the Biotechnology Center at the Polytechnic University of Nicaragua. They were brought to Vieques by the Syracuse University Center for Sustainable Community Solutions (CSCS) in an effort to educate and study possibilities of turning the sargassum problem into a solution. They are studying innovative applications of the different stages of decomposition of the algae that range from cattle feed to composting and energy sources. They are working with several local agencies in the development of strategies to manage what could be a growing problem. It is not known if this increase of sargassum will continue or what cycles it will have. Some biologists from the University of Puerto Rico theorize that the arrival of such quantities may be a combination of climate change, extreme temperatures and El Niño. One of the leading theories is that the Sargasso Sea has been losing larger masses of its algae more frequently than before. Other theories include pollution, low winds, new current patterns in the oceans and a series of combinations of these factors. The speakers gave two presentations that detail their work in Yauco, Puerto Rico and Nicaragua. The experts explained how the collected material is being processed and the need to educate communities of safe handling and transportation practices being applied today. They are working with local agencies and NGO's in Puerto Rico and Vieques to promote education on the subject and establishing working groups and protocols to prepare for years to come. Ana Arache from the Syracuse University Center for Sustainable Community Solutions (CSCS) coordinated the visit and is working on including sargassum in her composting initiatives. '

Look for this and other news and a report by the speakers in our new website www.vcht.org

