

# SEA Currents

The Newsletter of Caribbean SEA (Student Environmental Alliance)  
and TenneSEA Kids 4 Clean Water



Volume 6

October, 2010

**We love Maria!!**

## Rainforest to Reef Clean Water Camp in St. Lucia



Choiseul camped high up in the rainforest above the banana fields of Mahaut and enjoyed hearing and seeing the endemic St Lucia parrots every day. In the rainforests, the streams run clean even after a tropical downpour but the day we went snorkeling showed the kids why erosion control is essential....they couldn't see anything on the reefs, the water was so muddy! Even with the disappointment, it was a great lesson. We all learned from the models installed by the IWCAM project and the kids all thought the constructed wetlands would be a great addition to their villages! How do we fund it? Mathurin, our fabulous cook, showed us he's also a real mountain man and led us up

Piton L'Esprit where we all got to touch the huge boa constrictor we found near the trail. The tarantula in the shower was also a big hit, but not for the boy who discovered it! Brendan was our resident critter catcher and inspired all the kids with his knowledge and fun. He and Maria were an indomitable duo in leading the camp, with lots of help from our student leaders and two teachers who joined us! These kids have big plans for improving their communities this year. I can't wait to see what they accomplish!



Maria Cooksey, UTC Senior Environmental Science major, has been working with us since last winter. She is AWESOME!! In this picture, Brendan Morris, graduate student

For our 4th annual Watershed Camp, sponsored by St Lucia Electricity Services, Ltd, kids from Dennery, Marigot, Forestiere, and

studying entomology in Dominica, and Keiwa Simpson, one of our local St. Lucian youth leaders, pose with Maria, who may be short in stature, but is not to be underestimated! The kids love her and her ideas, energy, creativity, daring, and knowledge combine to make her this amazing individual whom we are very fortunate to call our intern! Just ask her about Carnival....or getting back across the bay when the water taxi driver was asleep. Life is an adventure and Maria certainly knows how to squeeze the most out of it. Keiwa and Brendan share that passion for life.

## Rotary Club of Dominica officially hands over the Mero public toilet and wastewater garden!



Adler Hamlet deserves to be Rotarian of the Year in Dominica this year! He coordinated the on island efforts to rebuild the public toilet and construct the first wastewater garden in Dominica which was funded by a Rotary Foundation Matching Grant to the Conyers, Georgia Rotary Club in partnership with 3 more clubs! The official handing over ceremony was held on the beach in Mero and Barbara McCarthy, the

President of the Rotary Club of Conyers, Georgia traveled to Dominica for the ceremony! Mary Beth Sutton was also there, not just as a representative of Caribbean SEA, but also of the North River Rotary Club of Chattanooga, who also supported this project. Dr. Les Behrends, wetland designer, traveled twice to Dominica to ensure the wetland was constructed and worked properly. We tested the water throughout the wetland the day before the ceremony and Dr. Behrends was especially proud to hear that the levels decreased from tens of thousands of E. coli per 100mL in the septic tank to less than 100 E. coli in the effluent water! The wetland works!! Local Dominican teacher, Liz Madisetti, led the Clean Water

Camp for Mero kids assisted by her husband, Arun, and amazing grad student, Brendan Morris. DOWASCO will help continue testing to ensure the wetland works properly and the kids and parents in Mero village will



make sure their wastewater garden looks awesome!

Rotarians and Mero residents at the Grand Opening Ceremony!



## Removing poo from the rivers in Mabouya Valley



Biogas Digester, Composting shed, car wash filter, and constructed wetland....what do they have in common? They are all new waste treatment demonstration facilities constructed in the past two years to begin to alleviate the wastewater loading in the rivers of Mabouya Valley, St Lucia. When the pig farms began expanding, the water quality declined precipitously. The

incidence of intestinal illnesses rose with the decline in water quality. The UN sponsored IWCAM project in St Lucia partnered with us and we joined forces to construct several demonstration facilities to encourage local farmers and homeowners to use the waste as a resource and not send it to their drinking

water source! The most innovative part of the project was the Payment for Environmental Services contract between one of the pig farmers and the Vegetable Farmer downstream who needs cleaner water. Mr Mathurin agrees to reduce his waste input to the river while CARDI helps him maintain his waste facilities (and buys the composted pig manure!). This is also where Jonathan oversaw construction of the biogas digester.



Constructed wetland at Au Leon

While the area still lacks appropriately treated drinking water, every effort to reduce the waste will also improve the health of the people and the coral reefs and fisheries just off the coast! Our part of the project was funded through the National Fish and Wildlife Foundation.



## Why Does Keiwa work with Caribbean SEA?



I enjoy being part of the Caribbean SEA because i get to work with honest and loving people who have a real desire to protect and sustain our environment. Also, being a SEA member , I have been presented with many opportunities to do exciting activities that help better the environment and that have elevated my skills in the marine field . In addition, i have learned and keep on learning skills about working together as a group with a joint mission in mind. It's fun and trying... but mostly fun being part of SEA. I Love it!!!

—Keiwa Simpson, Marigot Village, St. Lucia



Keiwa and Menalick kayak across the bay to take water samples. Something to note: Keiwa has now decided to study marine biology and environmental policy at university so she can have more impact on how the environment is treated.

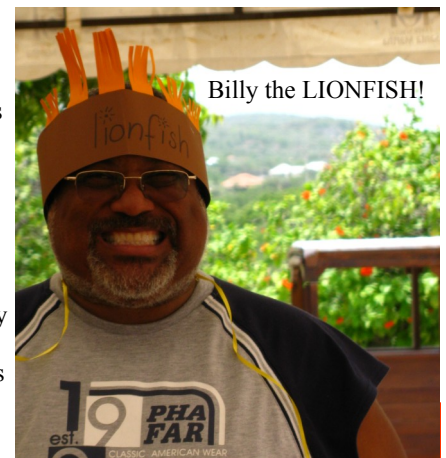
## Curacao teacher facilitators

Lee's Reef Project in Curacao has been our partner for over 5 years. Now they are transitioning to a greater leadership role for the project by local Curacaoans. Last year we began training a small group of Banda Bou teachers to be the liaisons and trainers for the rest of the teachers in our efforts to include activity based environmental education and conservation in the schools. Now these teacher facilitators are stepping into leadership of Lee's Reef Project as well. They are a diverse



Activities under the Kapok Tree!

group, yet most teach within the Catholic school system on the island. The Catholic School Board has been very supportive of our efforts and is even giving them continuing education credit for their work with us and they have helped sponsor our programs. We focused on specific environments of Curacao this year in our training, particularly mangroves, lionfish, and oil spills. The teachers were very curious about the impact of the Gulf Oil Spill, particularly since they have a refinery on island! These teachers are always seeking songs and drama to spice up their teaching, so let us know if you have any good nature songs you can share.



Billy the LIONFISH!



## Just look next door.....

Cornelius Isaac and I were going round and round about this biogas digester we were planning to build at a pig farm in St Lucia. He wanted to get the folks from Costa Rica to come, but I wanted him to find a local contractor.



The SOLUTION was actually right next door.....Jonathan Vickery, my next door neighbor, owner of Bavarian Auto and part time contractor didn't really know what he was saying when he agreed to help us build the first biogas digester....but we sure are glad he agreed! He has made it through the frustration and long hours of toiling without the benefit of electricity or all of the sup-

plies we take for granted here in the U.S. To his credit, he has not given up....indeed, he now has many friends in St, Lucia, John Verity among them! On one of Jonathan's trips, the drought situation was so dire that the resorts were importing water from other islands. Jonathan helped John rig up a water system so that Mango Beach Inn could not only collect any rain-water that fell, but also get water from a direct line from across the bay. I really don't think Jonathan regrets getting volunteered for this project....he can't quit working on it! Just as I was typing this, he called with more ideas. What a fantastic "volunteer!!"

Anyone else out there want to help?

Mary Beth Sutton

Executive Director



## Focus on our sponsors

**Mango Beach Inn,  
Marigot Bay, St. Lucia**



Judith and John Verity, owners of Mango Beach Inn in Marigot Bay, St. Lucia, have been wonderful supporters ever since we met on the water taxi going across Marigot Bay. There are no roads to the opposite side of the bay, so if you have to get over, it's by Captain Bravo's water taxi! The Veritys own and operate Mango Beach Inn, a relaxing B&B which caters to families and is rated very highly by Trip Advisor. Their Rainforest Hideaway Restaurant is at the bottom of their hill and it consistently is ranked the best restaurant in St. Lucia. We often see Queen Angelfish and tarpon under the dock, so they are looking for them here with our underwater viewer. Check them out : [mangobeachmarigot.com](http://mangobeachmarigot.com).



## Engineers Without Borders head to Jamaica!



EWB headed back to Jamaica in September! With support from Dalton Baptist Church and several of the engineering companies where these engineers are employed, the dream of a road to Naylor's Hill has nearly arrived. Folks settled on the hill, but without any services like water or electricity or even access by road. They have a rocky path which serves as the main thoroughfare, for young and old. Ms Precious Sherriah, a local teacher and head of the Naylor's Hill Improvement Committee keeps the faith alive that somehow, someday, some day she will be able to get off the hill when it rains. Electricity and water have now come to the hill....but most of the electric lines would hit you in the face if you try to walk under them. And there is no sewerage. We have our work cut out for us since now that water has arrived on the hill, so have toilets

....but they all empty into the stream. But first, the engineers will get the folks some road access, then we can get them to help on the sanitation issues! Three Cheers for EWB!





## INTERN HIGHLIGHTS: Maria's Reflections on Clean Water Camps in Tennessee and St. Lucia

I will never forget the third day of the Tennessee Clean Water Camp - we had some downtime and we were trying to entertain the kids when one of them asks "Can we go play in the creek again?" and another immediately pipes up "Yeah! Can we? That was fun! I wanna catch more crawdads and bugs!". It was at that moment that I knew the camp would be a success. There are not many things more heartening to hear than a child discovering an enthusiastic love for nature. I had



lost my voice already by that time but I could not help but voice my excitement that these kids were not only wanting to go to the creek, but wanting to get out the nets and magnifying glass so that they could be amateur field biologists. The camp in St. Lucia did a particularly great job of teaching the kids the value of nature and helping the kids come up with ways that they can protect it. My favorite part of the camp in St. Lucia was seeing the kids picking up litter everywhere they went, without even being asked. At the end of the camp, we had meetings between the different communities on the island and it was so obvious that the kids could not only pinpoint the environmental problems in their neighborhoods, but that they could come up with viable solutions that they wanted to implement! Hopefully soon, with the creation of some neighborhood environmental clubs, some of these solutions



will start to take hold.

During both camps, I often had flashbacks to my own childhood camp experiences that ultimately were the seeds that sprouted my desire to be an environmental science major. It's too soon to tell if we inspired any future science careers, but I can say with confidence that we sparked a scientific mindset into at least some of the kids. In my mind, that's the best thing we ever could have asked for. —Maria Cooksey

## INTERN HIGHLIGHTS: St Lucia and Dominica Camp Experiences from Brendan

Choosing to join the Caribbean S.E.A. crew in St. Lucia for this year's summer camp was one of the best decisions I've made regarding my passion for outreach education. The week was full of activities where I was often learning right alongside the students. Many of the kids were seasoned campers and were eager to keep building on the knowledge they had gained during previous sessions...some were even brave enough to hold a giant tarantula. Whether we were plotting our next attempt to 'mush' each other or looking for prawns in the river, I enjoyed an action packed week with a great group of future decision makers.



Later in the summer I had the chance to assist with the Clean Water Camp in Mero, Dominica. One day we sampled the new wastewater garden to see if it is operating correctly. Wow, some of that water is nasty! We ran into a bit of a hiccup when we were sampling the wastewater garden...where do we grab the samples?! We ended up taking one from



the pipe right above the septic inflow (GROSS! I took that one and never want to touch my hand again!). We got a good sample from the third compartment because we rigged a little sample tube and dropped it down. In any case, the first sample was significantly different from the third. It is amazing that there was such a dramatic reduction, but I guess the wetland is doing its job! We also sampled from the two rivers, and the drainage ditch (poo river). The South river doesn't look so bad but the North river, wow, I can't believe the tourists bathe in it, the bacteria plate was covered. On the day we went to Macoucherie River to collect invertebrates

and bathe, it was so much fun! The kids were great. One boy, Azizz, is BRILLIANT. He had so many questions about bugs, shrimp, fish and everything else; I could barely pry the net out of his hand! He's going to be an entomologist. Karisha, one of the older girls is the Keiwa of Mero, I think. It would be great to get her started on an ongoing water monitoring project or something. My favorite moments were during the field trips we took, many of the kids had never been snorkeling or whale watching before. During my time working with both Lucian and Dominican students, I was constantly inspired by the power of young minds working together. Nothing is better than witnessing kids realize that THEY hold the reins to the future of our world. —Brendan Morris





# TenneSEA Kids 4 Clean Water Summer Camp on the South Chickamauga Creek

Our Kids 4 Clean Water camp this summer at Audubon Acres was amazing. The partnerships that developed to make it happen provided a marvelous working group. Hamilton County Water Quality,



especially Leah, Adam, and Mark, were wonderful. Randy Hale with North River Geographics stumped some kids with his geocaching. Susan Holmes from Tennessee American Water Company taught about cleaning the water. Tammy Hutchison taught about creek critters! South Chick members led the canoe trip and the field trip around the watershed. It wouldn't have been possible without these great partners. How-



ever, from the kids' perspective...they LOVED getting in the water. Every day we gave them an opportunity to get a little, or a lot, WET. We definitely mixed the fun in with the learning and as my daughter said, it was "the best camp I have ever been to" and she has been to LOTS of our camps, too! Lake Crisp got up the Monday morning after camp was over and was CRUSHED that he wasn't going back to camp. John Kirksey loved catching creek critters and said that people need to take better care of the water.

Comments from the parents and grandparents included: "They couldn't stop talking about the crawdads

what it's all about!"

and the bugs. The canoe trip was the highlight, even though they turned over! Thanks for bringing science and nature alive for my son."

Our goal is to bring more awareness about watersheds and how to keep our water clean to these youngsters, but also to make sure they have fun and appreciate nature. Normal Park 8th grader, Jeff Davis, sums it up best, "When you hear water camp you might think of swimming and water parks. Our camp was much more fun than that. We got to learn about nature and how we can affect it. Even the slightest decision can make a huge difference either a world away or right next to you." I think Jeff got the picture. That's



Katie Morgan and Isaac Yeager found the most interesting piece of trash!



## Highlights of the Signal Mountain and South Chick Field Trips

Water sampling around Signal Mountain was an interesting event. Especially when we visited creeks near several kids' houses. We visited WRUD in Walden and the wetlands at North Chick which treat acid mine drainage. The kids measured the pH change and found how effective these wetlands are in raising the pH! We also found lots of life in the lowest wetland. Bee Branch near Miles' house was pretty gross, but the most interesting find was



"hidden" behind Corbin's house where the stream went through the remains of an old strip mine! The pH of the creek coming through the old strip mine was measured by the kids at 3.5!!!! Maria accompanied the kids who enjoyed the South Chickamauga Creek Watershed field trip.

They were treated to the wetland restoration at Heritage High School and investigated the impact of land use and Hamilton Place

on the erosion and pollution in the South Chickamauga Creek Watershed. Bill Phillips with Envision Ecology and Sandy Kurtz, South Chickamauga Creek Greenway Alliance President led the trip.



## TenneSEA Kids 4 Clean Water needs office (and Beach Party!) volunteers!!

Annette Vega is simply wonderful.. She has been keeping the books for Caribbean SEA for 6 years! We need some more office type help, otherwise our director gets crazy and out of hand! We have an office at the Mountain Arts Community Center on Signal Mountain and could use organizational /business assistance! Anyone out there courageous, organized, or good at party planning? Call Mary Beth!



# Caribbean SEA

*Our mission is to empower students to lead their communities to protect and restore their local environment through collaborative watershed projects.*

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**SAVE THE  
DATE!!!**

**Caribbean Beach Party  
March 11, 2011!**

## **St. Lucia Scholarship Fund Established!!!**

Thanks to several generous donations, we are now taking applications for our FIRST Caribbean SEA scholarship. The recipients will be deserving young St. Lucians who have already worked with us or will commit to assisting with Caribbean SEA's environmental efforts in St Lucia. Students may be awarded a partial or full scholarship for a year of study at Sir Arthur Lewis Community College or University of the West Indies. The good news is that several of our student leaders are eligible for the scholarships. If you wish to donate to the scholarship fund so we can continue this support of our students, please designate your donation to "St Lucia Scholarship Fund" whether you donate online or by mail. THANKS!



Those pesky pollutants....  
I do not like them in a box  
I do not like them on the rocks  
I do not like them in a stream  
And when I see them, I want to scream  
So please be kind  
To nature's mother  
For much like you  
She compares to no other!  
——Leah Crisp, HC Water Quality

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for helping us print our newsletter!**