

September 2009

Newsletter 3/2009

# STENAPA Update

## Destroying the Nature of Statia



*Tire tracks from a joy riding truck on Zeelandia Beach. The tracks came as close as 1 meter to a Leatherback turtle nest.*

Residents of St. Eustatius have been aware for years, in fact since 2001, that the taking of sand from Zeelandia beach and driving on the beach is against the law.

In spite of this awareness, almost every week there is evidence of sand mining or tire tracks visible on the beach. These persons are very much aware that their activities are illegal since they are seemingly only carried out in the wee hours of the morning and very rarely in broad daylight.

Having sea turtles nest on our local beaches is a very rare thing as they are most of them critically endangered. It is the task of the National Parks Foundation to conserve the nature we have here on Statia. This is done through ongoing education programs and through the media. It is very crucial that residents understand what treasures we have here and that they all need to be protected.

Recently another incident has come to light where certain drivers on the way to work at Nustar Energy deliberately try

to run over iguanas that are crossing the road. In one week four larger iguanas have been run over. Accidents always happen, but when eyewitnesses report that it was done intentionally then there seems to be a need for stricter enforcement of the rules that govern the protection of the flora and fauna on the island.

STENAPA would like to remind the general public that Annex II of the Cites convention which Holland and by proxy the Antilles, are signatories to, lists the iguana as a protected species. Punishment for the **intentional** violation of this convention is imprisonment of up to 4 years or a fine of up to Fls 1.000.000,- or both.

The National Parks foundation would like to beseech local residents to respect all nature that we have here on the island. It is in many ways unique and therefore protected.



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### Don't forget...

**Turtles:** Join us March to October for patrols and hatchling releases

**Guided Hikes:** Available for groups of 2 or more

**Botanical Garden:** Open from sunrise to sunset. Great for family picnics and BBQs

**Kids' Clubs:** Snorkel Club, Junior Rangers I and II and Advanced Snorkel Club.

**Captain Dory Preserve:** There is now an eco-friendly camp site on island. Call Stenapa for more information and rates.

## SNORKEL CLUB HAS STARTED

Parents and Guardians are reminded that a new Snorkel Club session started on Tuesday, September 8th. Forms were handed out at all the local schools for parents to sign up their children. This first week was the swim test to see if the children are able to swim properly. There is still plenty of room for any children who

want to take advantage of this after school activity. The children will get a workbook that will teach them many aspects of the marine environment. The cost for the entire 3 month session is Fls 50,- and can be paid in installments. Graduates will receive their PADI Skin Diver certificate and can go on to become Junior Rangers.



Snorkel Club kids enjoying a snorkel at Gallows Bay.

# STENAPA SUMMER CLUB 2009 IN PICTURES



Looking for a Leatherback turtle's nest on Zeelandia Beach during Turtle Summer Club session.



Children making and decorating watering cans out of recycled hard plastic containers at the Botanical Gardens.



Standing at the beginning of the trail about to begin a guided hike to Gilboa's Butterfly Trail.



One group planting out crotons that they grew themselves from cuttings.



On the Marine Park boat "Blue Runner" heading to the snorkeling site at Jenkins Bay.



Enjoying the water. That day they saw jelly fish, an octopus and several stingrays.



## Drilling Workshop/Staff Exchange on Saba



*Checking the equipment before going to the drilling sites on both Marine Park boats.*

In the first week of September four STENAPA staff members and one intern went over to Saba on the Marine Park boat "Blue Runner" for a five day working visit. Three Marine Park staff, Jessica Berkel, Laszlo Charles and MP Manager Tadzio Bervoets were there to attend a drilling workshop while the Botanical Garden Ranger Carlton van Putten and the National Park intern Mark Heusser went to assist the Saba rangers with their bird surveys. The drilling workshop was

conducted by Mr. Paul Ellinger who has held workshops all over the region.

Saba's mooring pins are in place for roughly 20 years now and some if not all are in need of replacing. The workshop began with a presentation and briefing on the first morning and several survey dives in the afternoon to scout out the best spots to put in the new mooring pins.

The second day the group managed to put in 3 of the new pins, with everyone being delegated a task. All of the dive shops on Saba helped out by either filling tanks or sending along divers to assist and learn the techniques for future pin installations.

Unfortunately due to the Tropical storm warning issued for TS Erika, the boats had to be taken out of the water on Wednesday. Stenapa staff spent all day Wednesday assisting with that task as well as securing the Saba Conservation Foundation building which like ours is

located on the waterfront.

On Thursday and Friday, bird surveys continued and the Saba rangers are now very confident with conducting their own surveys unaided. The "Blue Runner" was put back in the water on Saturday, loaded up and the group returned to Statia just after 12pm.

The workshop and travel costs were funded by the Dutch Caribbean Nature Alliance (DCNA).



*Drilling to put in a replacement pin for a yacht mooring. Everyone had a specific task.*

## National Park Staff Visits Local Schools Every Month

From the month of September, National Park staff will be going into all four local primary schools once a month to incorporate nature into schools' curriculum.

A comprehensive lesson plan has been produced by Ms. Maaïke Patrick with the help of staff members of the National Parks Foundation and several interns. The lessons cover a range of topics such as butterflies, medicinal plants, sharks, trees, turtles and coral reefs to name just a few. Some lessons include a presenta-

tion or DvD and most lessons come with an activity sheet for the children. There are also several field trips scheduled for the children so that they can go out and actually see firsthand what they learned about in the classroom setting.

Because October 4th is World Animal Day, the September lessons focused mainly on pets and how to properly feed and care for them. Lessons given in October will start with a short review of this month's lessons to see if the children

remember what they learned about pet care and World Animal Day.

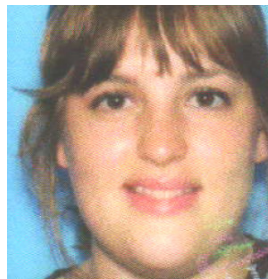
Staff will be visiting the schools in groups of two and taking turns to lead the lessons. The class teacher will be on hand to assist with the children while they are doing their activity. STENAPA is very happy to have the cooperation of the teachers and principals with this program of nature education. And thanks to Stichting Doen and DCNA for funding its development.

## Sea Turtle Program Update

The Sea Turtle conservation program is happy to welcome Ms. Elizabeth Sheets of Alabama as the new Turtle program intern after the sudden departure of Mr. Micah Herriot of Canada.

Although Beth had to come to the island on very short notice, she has fit in well with the program and is already working independently as the lead on night patrols.

Beth is also a scuba diver and helps out with any research dives that need to be conducted in the Marine Park.



Elizabeth Sheets, Turtle Program intern.

### REMINDER

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**It is illegal to anchor, fish, set traps or spear fish in the Reserves. Nothing at all may be removed from the Reserves.**

## St Eustatius: National and Marine Parks and Botanical Gardens



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STENAPA is an environmental not-for-profit foundation on St Eustatius and was established in 1988. The objectives of STENAPA are to upkeep the natural environment, to preserve and protect endangered or endemic species (flora and fauna) and to educate the community about the importance of the protection of the natural environment.

Areas of responsibility include management of the marine park, the national parks and the Miriam C Schmidt Botanical Gardens. STENAPA is legally delegated by the Island Council to manage these protected areas.

President: Irving Brown  
Vice President: Ronnie Courtar  
Treasurer: Ruth Pandt  
Secretary: Ingrid Walther

Next edition of STENAPA Update available soon with articles on:

- A review of the year 2009
- 10 year anniversary celebrations at the Botanical Garden
- What are our invasive species—and what to look out for
- Junior Rangers in action
- Overview from our annual Reef Check

## 10 Years of the Botanical Garden



*Bougainvillea plants blooming in Phase I.*

Very soon preparations will begin for the celebration of the 10th anniversary of the Miriam Schmidt Botanical Garden.

Development began in the garden in 1998 with the first of five phases which is simply called Phase I. Phase I is the perimeter fence, a greenhouse, a pavilion with picnic tables, a main building with toilet facilities, a tool shed, the entrance road, car park and, most importantly a Sensory Garden, Palm Garden and Look out Garden. Phase I is complete and only

needs to be maintained. This is done with the help of local and international volunteers, and interns from abroad.

Many residents have never visited the Garden. This will be a great opportunity to come and look around. A schedule of activities for all ages will be posted nearer to the event..



*Park Ranger Hannah Madden shown with landscaping course certificate and instructor.*

## National Park Ranger Receives Certificate

Park Ranger Hannah Madden attended and successfully completed a course in landscaping this month.

The course, "Landscaping Lawn Beautification" was held by the Tourism Development Foundation and led by Dr. Kimberly Moore of the University of Florida. Lectures were on insects and diseases, weed control, pruning, nutrition and fertilization, water management and much more. There was also hands on work, with participants landscaping around the monument in front of the library, planting aloes by the Museum and placing of a stone pathway.





## Why do we see Crabs in the Quill?

There are two types of crab that live in the Quill: hermit crabs and the large land crabs. Both are primarily nocturnal; however a hike up the Quill will often bring you in close contact with **hermit** aka **soldier crabs** (*Coenobita clypeatus*).



Caribbean **hermit crabs** are omnivorous scavengers that live in colonies of 100 or more. Although born in the sea, these crabs have adapted to live on land and will die if they spend too long in water. In order to breathe, they have modified gills rather than lungs. The high relative humidity of their native environments allows their gills to remain wet and thus to extract oxygen from the air. After heavy rains you will notice large congregations of crabs. These creatures are busy collecting drops of rainwater which they store inside their shells. This store of water can be used in times of drought and is an effective way of preventing dehydration.



(Whelks—a favourite shell of hermit crab)

When they sense hikers approaching, hermit crabs retract into their shell and usually roll directly onto the trail in front of you. You will notice that their shells are not all the same. This is because hermit crabs are not born with a shell. However, due to having a soft rear abdomen, they must find a hard shell for protection. Often they use the empty shells of whelks or other sea snails, however in times of desperation hermit crabs have been seen

using garbage such as bottle necks or plastic containers. As the crab moults and grows, it becomes too big for its shell and must find a larger one to accommodate its body. Fierce fights can break out between hermit crabs over shells, often leading to the death of a crab that does not want to give up its shell and is ripped in half by the attacker.

Hermit crabs have ten legs including two claws. The large purple claw on the outside is the hermit crab's main form of self defence. Should you decide to put your flesh between its claw, it will squeeze tightly and hold on for some time. It has a second, smaller claw which it uses for eating. Hermit crabs reproduce around August every year. The females travel to the ocean where they release fertilised eggs into the sea, often known as 'washing'. The crabs congregate near certain places on the shore. When night falls they leave their shells on the shore, enter the water naked and spawn. This makes them vulnerable to a variety of predators at this time. Once they are done 'washing' the surviving adult crabs return to the land, find a shell from the many recently left by their companions and head back up the Quill. The eggs hatch and spend time in the sea as free-swimming plankton. The hatchlings live in the ocean until their gills are mature enough to be able to extract oxygen from air.

**Did you know?** Hermit crabs love to climb! Many have been sighted climbing trees in the Quill.

**Black land crabs** (*Gecarcinus ruricola*) are also widely distributed across the Caribbean islands. Unlike hermit crabs, black land crabs are rarely seen during the day as the sun dehydrates them. However, take a trip up the Quill after sunset and you will soon come across these large creatures. The light from a flashlight tends to blind them and they will usually freeze and assume a defensive posture, raising themselves up on their legs to look bigger.

Black land crabs are omnivorous scavengers. Their meat is a good source of protein and for many years these creatures were harvested by locals. While this crab is undoubtedly a tough land-living crustacean, it is not reproductively active until it is at least 5 years old. The age of these crabs is determined by their carapace (shell) width. A width of 4-5 inches is



(Typical defence posture) about 5 years old, with width increasing about 1 inch per year. With an expected life span of about 10 years, some can grow to an impressive size. These sizes could potentially influence any laws to protect the crabs, which might be enough to protect the next generation. The spawning season of black land crabs occurs during the full moons from June to December. After the mating, the adult female lays her eggs and carries them under her abdomen for two weeks before migrating to the ocean to release them. The eggs hatch in the sea, where most are preyed upon during their first month of development. The young crabs that survive and make it to land conceal themselves in small chambers off the main branch of burrows of adult crabs of the same species. While very little is known about young crabs, research suggests that they spend the first 3 years of their life underground, feeding upon food collected by adults, while their gill chambers adapt to breathing air.

Although named Black land crabs, these creatures actually have four different morphologies: red, purple, yellow and green. As with all crabs, the black land crab moults its outer shell when it becomes too small and uncomfortable. During a hike up the Quill you might come across these shells and mistakenly think the crab was killed by a predator, however often it is simply the discarded shell. Besides humans, the main predators of black land crabs in the Quill are thought to be birds, though no specific data exists on this.

**Did you know?** Black land crabs will eat virtually anything, even cat food!



## Are Tarantulas really that Scary?

The Quill is home to a large variety of flora and fauna. Often, while maintaining the hiking trails we come across many interesting species, one of which is the tarantula spider. Although portrayed in movies as frightening monsters, these nocturnal creatures are actually rather timid and can be found hiding in their silky burrows under rocks or in the soil. There are around 900 species of tarantula in the world, and Statia is home to the *Cyrtopholis* sp. It is brown in colour and covered in short hairs. Despite its intimidating appearance, the tarantula is not deadly to humans and will never attack unless provoked.

Before biting, tarantulas may signal their intention to attack by rearing up into a "threat posture", spreading and extending their fangs, and (in certain species) making a loud hissing noise. Their next step may be to slap down on the intruder with their raised front legs. If that fails they may turn away and flick stinging hairs toward the pursuing predator. Upon further provocation they may try to leave the scene entirely, but failing this their final response may be to turn suddenly and bite.



(A juvenile tarantula sinks its fangs into a gloved finger)

Tarantulas generally use their venomous fangs to capture and kill prey. The mouth is a short straw-shaped opening that can only suck, so anything taken into it must be liquid. Prey with large amounts of solid parts must be crushed and ground up or predigested, which is done by coating the prey with digestive juices. As with all arachnids, tarantulas must moult their external skin periodically in order to grow, the females continuing to moult after reaching maturity. Tarantulas usually take between 2 to 5 years to reach adulthood, at which point the males immediately begin looking for a mate. After mating, the male makes a hasty retreat and the female lays between 50 and

2000 eggs in a silken egg sac. She will aggressively guard the sac for 6 to 7 weeks until her young are ready to hatch.



(Tarantula spiderlings exit their egg sac)

Despite their fearsome reputation, Statia's tarantulas are themselves the object of predation by "tarantula hawks" (*Pepsis ruficornis*). These large wasps will track, attack and kill large tarantulas in order to feed their larvae. The tarantula hawk is a striking metallic blue colour with bright orange antennae. These insects can often be seen flying around the slopes of the Quill so be sure to keep an eye out. The bright colouring of these creatures is a warning that they are dangerous. According to the Schmidt Sting Pain Index, a sting from the tarantula hawk is said to be second only in pain to the African bullet ant. The stinger in females can grow to a length of 7mm, making them inedible to many predators.



(Tarantula hawk: Photo by A. Sanchez)

Tarantulas need not be afraid of the male tarantula hawk since he does not hunt. Instead, he feeds off the flowers of milkweeds and certain trees. The male has a behavior called "hill-topping", where he sits on top of tall plants and searches for females that are ready to reproduce. However, female tarantulas should be wary of female wasps that search them out in their burrows. Once she finds a suitable prey, she will capture, sting, and

paralyse the spider, then either drag it back to her own burrow or transport it to a specially prepared nest. At this point she lays a single egg on the victim's body and covers the entrance. After hatching, the wasp larva begins to suck the juices from the paralysed but still-living spider. Once it grows a little, the larva plunges into the spider's body and feeds voraciously, avoiding vital organs for as long as possible to keep it fresh. After reaching maturity, the adult wasp emerges from the nest and the whole cycle begins again.

### The Schmidt Sting Pain Index:

**1.0 Sweat bee:** Light, ephemeral, almost fruity. A tiny spark has singed a single hair on your arm.

**1.2 Fire ant:** Sharp, sudden, mildly alarming. Like walking across a shag carpet & reaching for the light switch.

**1.8 Bullhorn Acacia ant:** A rare, piercing, elevated sort of pain. Someone has fired a staple into your cheek.

**2.0 Bald-faced hornet:** Rich, hearty, slightly crunchy. Similar to getting your hand mashed in a revolving door.

**2.0 Yellowjacket:** Hot and smoky, almost irreverent. Imagine someone extinguishing a cigar on your tongue.

**2.x Honey bee and European hornet:** Like a matchhead that flips off and burns on your skin.

**3.0 Red harvester ant:** Bold and unrelenting. Somebody is using a drill to excavate your ingrown toenail.

**3.0 Paper wasp:** Caustic & burning. Distinctly bitter aftertaste. Like spilling a beaker of hydrochloric acid on a paper cut.

**4.0 Tarantula hawk:** Blinding, fierce, shockingly electric. A running hair drier has been dropped into your bubble bath.

**4.0+ Bullet ant:** Pure, intense, brilliant pain. Like fire-walking over flaming charcoal with a 3-inch rusty nail in your heel.

**So, which would you prefer? A bite from a tarantula or a sting from a tarantula hawk?**

### Sources:

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<http://en.wikipedia.org/wiki/Pepsis>  
[http://en.wikipedia.org/wiki/Schmidt\\_Sting\\_Pain\\_Index](http://en.wikipedia.org/wiki/Schmidt_Sting_Pain_Index)