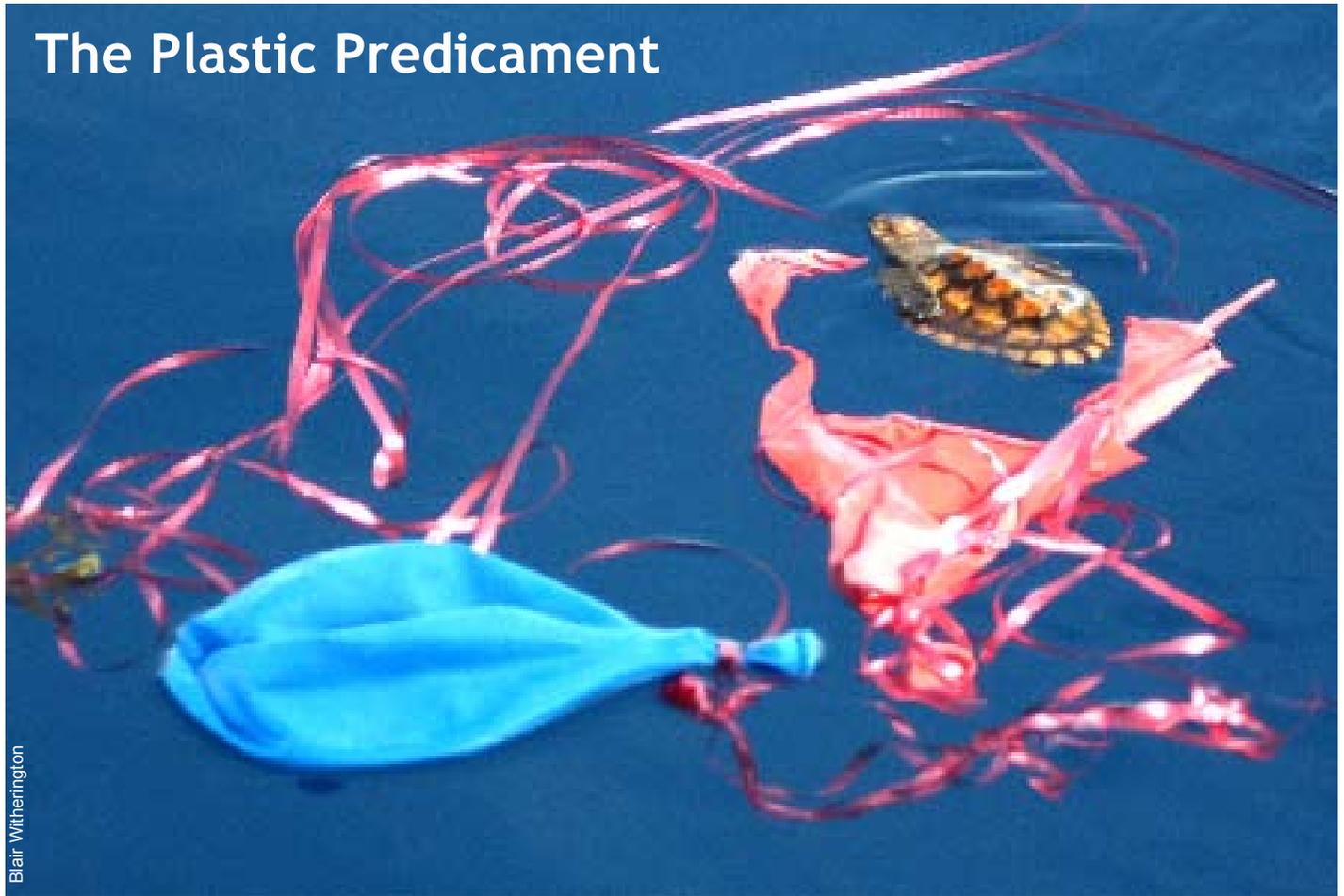


VELADOR

Science-Based Sea Turtle Conservation Since 1959

Issue 2, 2015

The Plastic Predicament



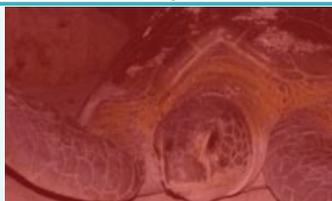
Blair Witherington

Ask a fifth grader how long it takes for a plastic bag to decompose and the likely answer is 1,000 years. Grocery stores tout similar information on recycling bins outside their entrances. Many people mistakenly believe that, given enough time, not just bags but all plastics degrade completely.

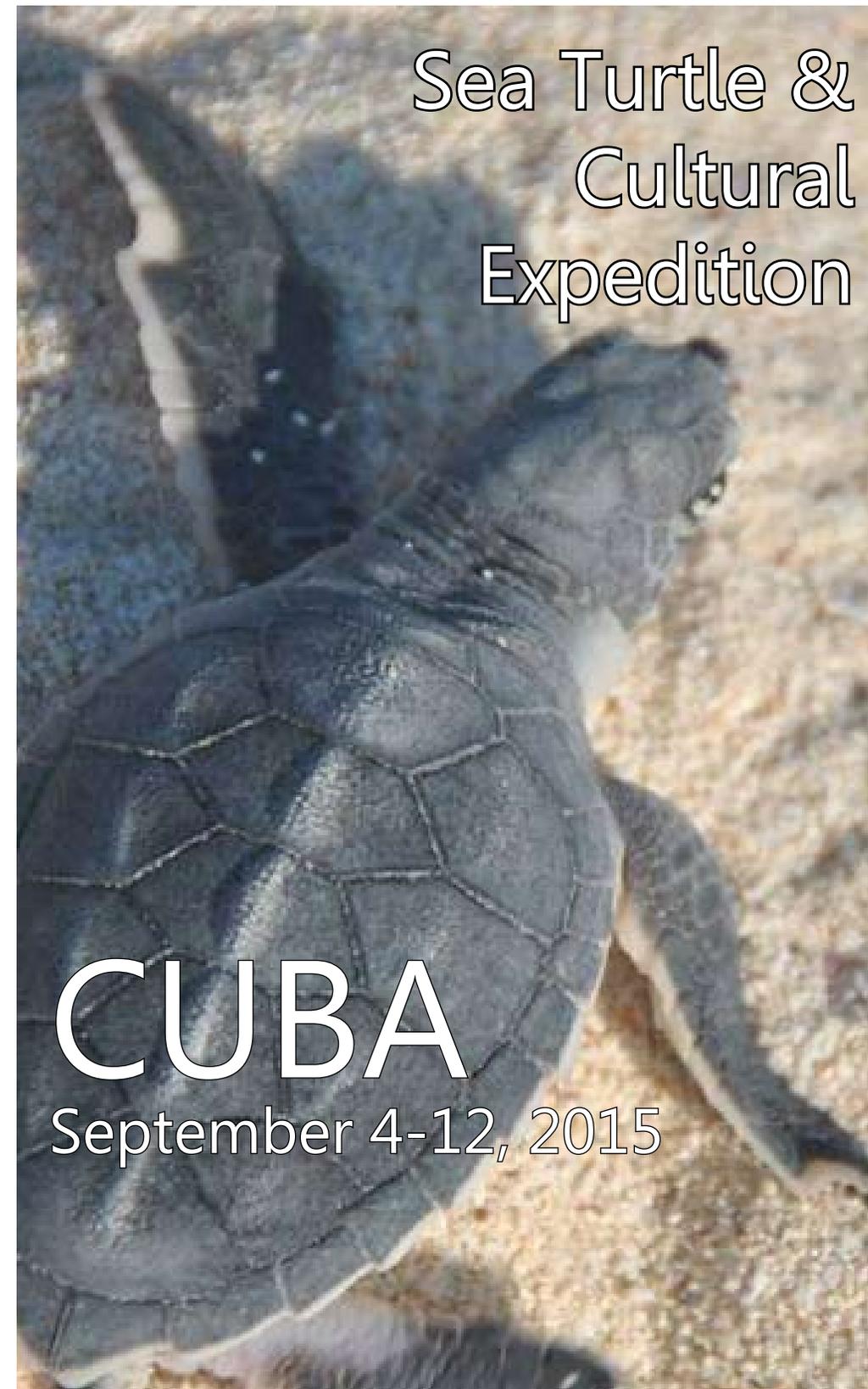
Plastic decomposes into smaller and ever smaller pieces, but out-of-sight does not mean out-of-existence. With few exceptions, the plastics produced in the last 60-70 years will last for hundreds of thousands of years, and sea turtles and other marine organisms will be facing the consequences.

continued on page 3...

Panama Update: New Outreach & Educational Program in Bocas del Toro



Join STC on a Sea Turtle and Cultural Expedition to Cuba!



Sea Turtle & Cultural Expedition

CUBA

September 4-12, 2015

Join STC as we explore Havana and the Guanahacabibes Peninsula in search of culture and sea turtles. Reserve your spot now.

Visit www.conserveturtles.org to learn more.

VELADOR {bel.a.dor}

In Caribbean cultures, **Velador** translates as “one who stands vigil” —referring to turtle hunters who waited at night for turtles to come ashore. Now STC claims this title for its newsletter, and around the world STC’s researchers and volunteers are replacing poachers as the new veladors. The **Velador** is published for Members and supporters of the nonprofit **Sea Turtle Conservancy**. STC is dedicated to the conservation of sea turtles through research, advocacy, education and protection of the habitats upon which they depend.

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... from cover

Light weight, versatility, strength, ease of production, and relatively low cost make plastics such as acrylic, nylon, polyethylene, polypropylene, and styrofoam attractive for many uses. Most plastics are petroleum-based; they consist of simple polymers, molecules of carbon and hydrogen that link together to form chains. In the 1930s Bakelite emerged as the first man-made plastic, but plastic manufacturing did not develop until after World War II. Since then, one billion tons of plastic have been produced, the equivalent of 1,030 commercial airplanes.

Discarded plastics threaten wildlife and ecosystems everywhere, but the dangers are greatest in the oceans. Astoundingly, more than 80% of the enormous quantities of plastics at sea were disposed of on land. Plastics wash up on beaches around the world every day, with even the most remote areas affected. Transported by currents and ocean gyres, plastic debris is often concentrated. Seven major tropical ocean gyres of trash, more than 90% of which is plastic, have been identified in the last several decades, including the 10 million square mile Great Pacific Garbage Patch (North Pacific Subtropical Gyre) between Hawaii and California. Unfortunately, floating debris is literally the tip of the plastic iceberg. In some parts of the Great Pacific Patch, trash is also found many feet below the surface.

Considerable attention has been focused on the threats of marine debris associated with marine wildlife entanglement, injury and death as well as the ingestion of plastic for food, such as albatross chicks and sea turtle hatchlings that die from intestinal blockage or starvation because their bellies are full of plastic. These are compelling dangers, but the worst threats from decomposing plastics in the oceans are less obvious.

The raw materials of plastic manufacturing are called “nurdles,” little plastic cylinders (two milli-



Increasingly, jurisdictions across the country are restricting the use of plastic bags. In Florida, however, state legislation passed under pressure from the plastics industry prevents communities from enacting local bans. Photo by NOAA.

... meters tall) that are melted during manufacturing. At sea, nurdles and degrading plastic fragments attract and strongly concentrate resilient poisons like DDT, PCBs (polychlorinated biphenyls), and other toxins. PCBs, which make plastic more pliable, disrupt hormones and interfere with natural functions like reproduction. When nurdles are eaten by jellyfish and salps, the most abundant filter feeders in the oceans, which in turn are eaten by higher predators, they move up the food chain. For long-lived species like sea turtles, plastics in the food chain can only have adverse consequences.

In recent years, biodegradable plastics have received attention. These products are manufactured from natural plant sugars, like those found in corn, and are broken down by bacteria. Consumers should carefully read labels because some so-called biodegradable plastics do not break down completely. Biodegradable polyester has also been developed from bacteria, and research continues. Using corn to produce biodegradable plastics affects human food production and resource use directly and indirectly.

So what is the future of plastic in the 21st Century? Will we develop and use biodegradable plastics widely? How many thousands of years will it take for bacteria to evolve to consume the plastics made to date? As research continues, let's hope for a positive change and do our best to use and discard plastics wisely. 🌱

What YOU can do:

- * Eliminate unnecessary plastic in your home
- * Recycle plastics
- * Advocate for responsible corporate action on plastic
- * Support local bans on plastic bags

By Marydele Donnelly
Director of International Policy

Classroom Spotlight

Second-grade students raise money for sea turtles through Read-A-Thon

Second-grade students from Muller Elementary Magnet School in Tampa, Florida, recently made a generous donation to STC after conducting a special Sea Turtle Read-A-Thon.

In September 2014, Linda Grady, the school's media specialist, gave lessons to the school's second graders about sea turtles and the threats they face. During one lesson, classes played a sea turtle survival game in which some students portrayed "threats," such as fishing nets and oil spills, and other students behaved as "sea turtles" trying to safely swim across the room. Each of the three classes that participated also adopted a turtle during the 2014 Tour de Turtles and regularly checked each turtle's progress online at www.tourdeturtles.org.

With the students already curious about sea turtles, Ms. Grady said it made perfect sense to create a community service project to benefit sea turtles. Before the Read-A-Thon, which took place in January 2015, students asked friends and family to sponsor their reading efforts. Sponsors pledged donations to the students based on how many books he or she read, and the proceeds were donated directly to STC.

During the two-week event, the 52 students who participated read a combined 533 books, and one student read an impressive 24 books! The grand total raised by the students for their reading efforts was \$189.37, a donation to sea turtle conservation that will leave a lasting impression on all the students who participated. Ms. Grady reports that the Read-A-Thon experience was rewarding for both students and teachers, and she hopes to host a similar project again in the future!

Thank you to Muller Elementary Magnet School for supporting sea turtle conservation!

By Lexie Beach
Communications Coordinator



Media Specialist Linda Grady teaches students at Muller Elementary School about threats to sea turtles.



Above, students took part in a Read-A-Thon to raise donations to "Adopt-A-Turtle" from STC.

Below, students gave presentations on what they learned from the books they read.



Sponsorship Spotlight

Tour de Turtles Welcomes New Sponsor, Pacsafe

Sea Turtle Conservancy (STC) is excited to welcome new turtle sponsor Pacsafe to the Tour de Turtles (TdT) marathon this year! Pacsafe is sponsoring a green turtle that will be tagged and released from Tortuguero, Costa Rica, in July. Along with their turtle competitor sponsorship, Pacsafe recently launched the Pacsafe Turtle Fund, which also provided a grant in support of the TdT educational program.

Outpac Designs Limited, the makers of Pacsafe, was established in 1998 by two Australian friends who traveled all over the world. Their own experiences and those of the travelers they met convinced them of the need for durable, theft-resistant travel gear. From there, the eXomesh anti-theft technology was born, which formed the award-winning Pacsafe anti-theft backpack protector, complete with a sea turtle logo.

Pacsafe's creators were inspired by the sea turtle and its independent global wanderings. Today, Pacsafe's Turtle Fund works with local communities at the grassroots level to preserve sea turtles and protect their natural habitats by supporting research, education and training programs on behalf of these majestic creatures.

"As a company, we believe in sustainability and doing everything we can to work with local communities to ensure the sea turtle doesn't become



pacsafe
smart travel gear

extinct," said Magnus McGlashan, Managing Director.

Since its launch in May 2014, the Turtle Fund has provided funds for sea turtle conservation projects around the world that support endangered sea turtle species. Pacsafe chose to support three sea turtle projects in 2015, including STC's Tour de Turtles program, all of which were chosen for their innovative approaches to turtle conservation, research and education.

"We love how Tour de Turtles makes sea turtle conservation educational and fun, while making it accessible to a greater audience and younger generation," McGlashan said.

Pacsafe has chosen to name its turtle competitor "Pawikan." McGlashan explained that Pawikan means 'sea turtle,' in Tagalog, the language spoken in much of the Philippines. Pawikan is also the official name of the turtle featured in the Pacsafe logo that was selected five years ago in a competition.

Pacsafe hopes to engage its staff, distributors, retailers and customers all over the world with the excitement of the TdT race and its mission. McGlashan said that Pacsafe is very excited about being a part of the program and following its sponsored turtle throughout her adventures.

"We can't wait to see where she wanders!" McGlashan said.

STC would like to thank Pacsafe for helping our cause. Good luck, Pawikan! 🐢

By Lexie Beach
Communications Coordinator



New Community Outreach Program

Since 2003, STC has worked to protect sea turtles at several critical nesting sites in the archipelago of Bocas del Toro and the Comarca Ngäbe Bugle—a remote protected area inhabited by the indigenous Ngäbe people of Panama. Located on the Caribbean coast of Panama, Bocas del Toro (Bocas) is a tropical paradise made up of beautiful, white sand beaches crystal clear waters. Tourists love the view and the laid back lifestyle, surfers enjoy the waves, and the beaches host globally important nesting colonies of endangered leatherback and hawksbill turtles.



Working with plastic bags and marine ecosystems with 2nd and 3rd graders in Betel School, Bocas del Toro.



Talking about “responsible consumption” with 4th and 5th graders at Betel School, Isla Colón.

Who has seen a sea turtle at the beach?

But beyond the picturesque landscapes is a community struggling to maintain its diverse ecosystems due to a long history of unsustainable use of resources and neglect of the environment by both residents and tourists alike. If habits are not changed soon, much of what makes Bocas so special could be lost. Poorly managed tourism activities, inadequate waste management, poor sewage treatment, increasing boat traffic, and overconsumption of plastic are just some of the factors affecting this incredible place.





Talking about the importance of vegetation with Bluff Beach students

STC refuses to ignore these issues and is working to ensure that Bocas retains its natural beauty and continues to host healthy sea turtle populations. STC's efforts include an Environmental Education and Outreach Program in which we connect local residents and visitors with the region's natural resources to try and build a greater sense of environmental stewardship and pride.

Within this program, STC discusses not only sea turtles, but also other issues that affect and damage the surrounding environment. The goal is to provoke a change in people's everyday attitudes, thus generating basic values such as respect and love for nature.

To accomplish this, STC carries out projects that will empower children in the different communities and lead to a real and sustained change in the region. STC's work plan for this year will focus on sea turtle conservation issues, waste reduction and responsible consumption habits, among other topics.

STC's long-term goal is to further educate and involve local communities in sea turtle monitoring, research and tourism ventures, investing in sustainable livelihoods.



By Georgina Zamora Quilez
Panama Education & Outreach Coordinator



Students watch as a hawksbill is released with a satellite transmitter from Chiriquí Beach.

We're a strong forest in Bluff Beach; please don't cut my tree down.



Talking about jellyfish and plastic bags with Bocas 3rd graders.



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Tortuguero Update



Repairs Needed!

\$40,000

Sea Turtle Conservancy needs your help! Last year we launched a campaign to raise funds in order to replace a crumbling building at our research station in Tortuguero, Costa Rica. Thanks to our loyal and generous supporters, we were able to raise about 75% of the \$40,000 needed. In order to break ground on this urgent capital project, STC is calling on all its members and supporters to help us achieve our fundraising goal.



Since 1959, STC has been monitoring and protecting the most important green turtle nesting population in the world at Tortuguero. To continue this renowned and successful program, STC needs to raise an additional \$9,000, which will enable us to replace the now uninhabitable staff house—lovingly referred to as the “Contiki.” The humid, salty air has brought the old concrete and rebar building to its knees. Despite a patchwork of repairs, engineers have determined the building is now too unstable to occupy. We need your help to provide a safe, dry place for STC’s biologists and station staff to live and work during the turtle nesting season.



All donations up to \$4,500 will be matched by STC’s Board of Directors, which means you can double the impact of your donation! **Please mail us a check or donate online and reference the “Contiki” with your gift.** STC will continue the campaign through World Sea Turtle Day, June 16th, which also happens to be the birthday of STC founder Dr. Archie Carr. 