M. Yokoyama
Gulf fritillary Heliconiidae Agraulis vanillae at Cay Bay, St. Maarten
Mission Statement
Protecting the Caribbean environment through research, outreach, and community-based action.

Seabird Atlas
The Atlas is available on Amazon, where it can be purchased in hard copy or as a digital book.

“Covering so many islands, so comprehensively over just a two-year period, this ‘snapshot’ baseline is simply unprecedented in the context of Caribbean ornithology...The results are truly astounding.”

David C. Wege
Senior Caribbean Programme Manager
BirdLife International

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Message from the Director

Dear Friends,

Despite the often-dire daily news reports, there is still encouraging, positive work taking place to address environmental issues. Whether it is protecting an endangered species like the Black-capped Petrel, enabling proper sewage disposal, or promoting wetland conservation, EPIC continues to successfully tackle problems thanks to the support of our donors.

As you’ll see, we’ve created a report reflecting the work of both our International (United States-based) and St. Maarten-based EPIC organizations. These are independent groups, each with its own Board to guide it, but they work in partnership towards the same mission. As the saying goes… together we are stronger.

Together with you we are stronger as well. As you read about our work over the past year, I hope you will consider yourself an integral part of this effort. Thank you for being EPIC!

In Gratitude,

NATALIA COLLIER
Executive Director, EPIC U.S.
President, EPIC St. Maarten

EPIC International

Helen Gratil – Chair
Marc Grunberg – Vice-Chair
Dr. William Mackin – Treasurer
Machel Sulton - Secretary
Mary Sikkel

Thank you to Jeremy Baggish for his term of service on the Board. He was instrumental in updating our financial systems and upgrading our website. We are forever grateful.

EPIC St. Maarten

Natalia Collier – President
Adam Brown – Secretary
Rueben Thompson – Treasurer
Alexandra Halley
Fleur Hermanides
The project is guided by the Grenadines Seabird Team:

- Managing Director of the St. Vincent-based organization SCIENCE Lystra Culzac-Wilson
- EPIC Board Member, Dr. Will Mackin
- EPIC Associates Alison DeGraff Olivierre and Juliana Coffey, who are co-authoring a bird guide for the Grenadines that integrates local ecological knowledge.
- EPIC Executive Director Natalia Collier

Back in 2010, EPIC researchers found that the Grenadines island chain harbors some of the largest seabird breeding colonies in the West Indies. Unfortunately, many of these nesting birds, as well as their chicks and eggs, were being harvested to sell or eat. Since local governments lack resources to protect these remote islands, a community-based management strategy was developed.

The Save the Seabirds Campaign continues to raise funds for ongoing training of Grenadines Volunteer Patrol members, a group of fishers, tour guides, and other concerned community members who care for these natural treasures. This year we held a second training workshop for 19 participants.

On the first day of training a classroom session covered seabird identification, including a lively quiz session, data entry, and conservation issues.

There was also a discussion of local traditional knowledge regarding seabirds, such as which species foretell a change in the weather or indicate the presence of a certain type of fish.

The classroom session culminated with participants proudly displaying their signed pledge to protect seabirds as members of the Volunteer Patrol.

The second day was a field lesson within the Tobago Cays Marine Park aboard a beautiful sailing ship. Observing nesting seabirds from the boat, one participant, a veteran fisherman, exclaimed with surprise that he didn’t know birds were nesting there. Each participant received a pair of binoculars and learned how to use them, while applying their new seabird identification skills.

When fishermen or tour operators are at sea, they take time to visit nearby islands and record data. For each data sheet they complete, the volunteers are reimbursed for their fuel costs, an essential component for many who are struggling financially.

All trainees are part of the Facebook and WhatsApp groups for Patrol members, which enables easy communication and a community of support for members, who are dispersed...
Wayne Smart, from Grenada, is completing a fourth field season investigating the potential role of human harvest and predation by rats in seabird colony decline. In partnership with EPIC, Wayne’s research contributes to his Environmental Sciences Master’s thesis, supervised by Dr. Virginie Rolland, at Arkansas State University (A-State). Although he’s recorded an overall increase in nesting attempts, the presence of rats and human harvest, along with storms, may be limiting seabirds’ nesting success. Wayne’s groundbreaking work will serve as the first baseline study of nesting success in this area, providing crucial information to guide conservation management. This project is made possible with funding from the College of Science and Mathematics of A-State, National Geographic Young Explorers, BirdsCaribbean, and generous EPIC donors.

With continued support via the Save the Seabirds Fund, this community of conservationists will keep growing through additional workshops and one-on-one support. Data is already showing increased numbers of nesting birds on certain islands while observations of seabird harvesting are fewer.

We are excited to keep this momentum going, empowering citizens to make a difference in protecting the remarkable diversity and beauty of Caribbean wildlife refuges.
Marine radar is a terrific tool to observe seabirds which only return to land at night, seabirds like the endangered Black-capped Petrel. Over the last six years, EPIC has been the leading organization using radar to monitor this species. Whether in the Dominican Republic, Haiti, Dominica, or Jamaica, radar has proven very effective in documenting the population of this elusive bird.

One of our more ambitious goals with radar is to locate new petrel colonies and help better document the entire breeding range of the species. The Cordillera Central is an immense mountain range in the central part of the Dominican Republic; it includes Pico Duarte, which at 10,178 ft. is the tallest peak in the Caribbean. While no breeding records existed for the Black-capped petrel in the Cordillera Central, it seemed possible that a small breeding colony might exist, tucked away in some remote valley.

In 2013, we set up a research station along the lower slopes of Rio Ocoa in the southern end of the Cordillera Central. We had previously learned that the petrels will use river valleys as flight corridors between their mountainous nest areas and their ocean foraging grounds. As the sun set that first night, we were cautiously optimistic that we might identify petrel flight activity. An hour after sunset, we detected our first petrel-like targets on radar, and for the next hour we watched as 80 likely petrels flew up the valley, past our station and toward the high peaks of the range.

The next night, buoyed with hopefulness, we drove to the headwaters of the Rio Ocoa and set up our research station below the steep and heavily forested peaks of Valle Nuevo National Park in the upper reaches of the Cordillera Central. Like clockwork, about an hour after sunset, we detected the first petrel-like target on radar fly past our station, circle the steep forested slope, then disappear into the forest. Over the course of several hours, we watched 76 petrel-like targets follow this same path. We also observed a number of petrels with our night vision scopes. We were convinced that petrels must nest nearby, but the challenge now was to find their nests. With that goal in mind, our partners Grupo Jaragua and Conservation Metrics deployed a number of song meters in the forest. Song meters, the second step in finding new petrel colonies, record any calls made at night. The calls are then run through a program that identifies the calls to species.

For three years, 2013 - 2015, no petrels were heard calling. It seemed possible that the birds we observed flying inland were not breeding. However, in 2016 the song meters were moved to a new slope. A number of petrels were heard calling in the night, including what was thought to be ‘dueting calls’, or mates calling back and forth to each other. This was an incredibly exciting discovery, just the encouragement needed to carry out the third step in the process: finding the birds’ nests.

On Mother’s Day, 2017, a team from Grupo Jaragua combed the steep pine-forested cliffs where the song-meters detected petrel calls the year before. In the late morning, the team found a potential nest burrow. They peeked inside and found an adult Black-capped Petrel sitting on an egg, the first nest of this endangered species ever found in this mountain range!

This successful model of collaborators using radar, song meters, and nest searching to locate the Black-capped Petrel is being used in locations throughout the Caribbean where EPIC works with petrels. Our goal is to document the entire breeding range of this species and preserve the habitat it needs to thrive. We are well on our way!
Finding a new colony of nesting Black-capped Petrels in the Cordillera Central in the Dominican Republic was a gigantic boost to conservation efforts (see previous story). It’s just one of many promising strategies to bring the Black-capped Petrel back from the brink of extinction.

Recognizing that humans and petrels share a rare and threatened habitat, our conservation team strongly believes that to protect the petrel we must work with petrels and people. Partnering with the organizations Grupo Jaragua and Plant with Purpose, our team has a diverse conservation program:

• We monitor known nest sites in Haiti and the Dominican Republic, as well as discovering new nest colonies.

• We implement a primary school education program in the village of Boukan Chat, Haiti, which uses Black-capped Petrel themes to describe water, soil, and forest conservation. Over the past two years, this curriculum has reached hundreds of youth.

• We form contracts with hundreds of farmers in Haiti who farm just meters away from nesting Black-capped Petrels. The contracts lay out clear goals shared by farmers and conservationists to reduce poverty through sustainable farming while simultaneously conserving petrel habitat. With funds provided by EPIC supporters, we will be using community greenhouses to grow vegetables and fruits for human consumption as well as trees for petrel habitat.

• We use art to bring the petrel to the people by creating murals on water cisterns that show dramatic images of the petrel and its connection to habitat. Dominican Republic artist Jose Luis Castillo’s murals build on our recent success working with Haitian families to repair broken cisterns.

• We create inspiring multi-media content that shares the story of the petrel, the humans who live around the petrel’s habitat, and the conservationists who are working to protect the petrel from extinction. This content is provided for free for the public to use and can be found at www.savethedevil.net.

• We coordinate trainings and work exchanges between the Dominica Division of Forestry staff and Grupo Jaragua. Petrel nests have not been found in Dominica since the 1800s, but just last year EPIC recorded petrels through radar and night vision. Finding nests in Dominica would mean that petrels nest on more than just Hispaniola, a critical concern in protecting the species.

These diverse strategies are having a positive impact on both people and petrels while protecting habitat critical to petrels and many other threatened species.
Did you know that sunscreens can be toxic to coral reefs? St. Maarten’s Yacht Club Isle de Sol has initiated a Save the Reefs educational program to promote reef-friendly sunscreens and alternatives through public events and offering free reef-safe sunscreen and UV-blocking shirts. This is just one of several environmental education activities which took place at the marina and helped it to secure the international Blue Flag award for Marinas.

As the island’s National Operator of the Blue Flag and Green Key eco-label programs, EPIC St. Maarten held the annual Blue Flag award ceremony at Divi Little Bay Beach Resort, which was awarded the Blue Flag for beaches. To receive the Blue Flag, sites must demonstrate their commitment to environmental and safety standards, meeting criteria such as regular water quality testing and availability of trash and recycling disposal. Divi and Isle de Sol have both achieved five consecutive years of earning this prestigious and internationally recognized award!

While we have long partnered with the tourism industry to promote and establish the Green Key and Blue Flag awards, that partnership was formalized with the signing of a Collaborative Agreement with the St. Maarten Hospitality and Trade Association (SHTA).

EPIC was pleased to award the Green Key for hotels to our newest site, Holland House Beach Hotel, which hosted this year’s award ceremony in cooperation with the SHTA. The hotel joins Princess Heights Boutique Condo Hotel, which has now received the Green Key award for three consecutive years.

We took part in the General Assembly of the Foundation for Environmental Education (FEE) in Ahmedabad, India. FEE oversees these eco-labels, which are awarded in 46 countries by National Operators in each country. We also attended the Blue Flag and Green Key National Operator’s Meetings. These international gatherings are an opportunity to share ideas, resolve challenges, and improve the programs.

We continue to actively recruit new sites into the eco-label programs and look forward to awarding additional sites in the coming year, including the newest category of Sustainable Boat Tourism.

What Is a Tree Worth? Wetland Economic Valuation

You may know that mangrove trees contribute many crucial services, such as preventing erosion, absorbing carbon, and sheltering wildlife. But we can help more people understand the importance of these services by calculating their dollar value to our society.

With support from the Prince Bernhard Fund, we have initiated the project *Economic Valuation of St. Maarten’s Wetlands*. By conducting interviews, mapping resources, and collecting historical and current data, we can determine the economic value of natural resources.

For example, what is the cost to local fisheries when we pave over mangrove stands? How much flood damage is avoided when wetlands collect storm water and are not filled in? Demonstrating these types of impacts shows that conservation can mean real cash benefits. Similar research has been used in efforts to establish protected areas on St. Maarten and around the world.

With 15 years of annual wetland bird surveys, EPIC has demonstrated the value of these disappearing habitats to wildlife, including rare freshwater ponds and one of the largest lagoons in the West Indies.

While nature-based tourism is growing on St. Maarten, there are still limited resources and funding available for conservation. It is our goal to stimulate wetland conservation by showing that failure to act has real financial consequences for all sectors of the economy.
In the heat of September, some may be tempted to hide inside with the air conditioning. However, those who joined EPIC St. Maarten’s weekly hikes last September rose early to enjoy the great outdoors while learning about the local flora and fauna. As one participant noted, “Today’s hike to Wilderness [a coastal area] was EPIC... it’s a must-do to see more of what St. Maarten has to offer.”

The weekly hikes were just one part of a larger education program made possible through funding from the Prince Bernhard Culture Funds. Through presentations and field trips, we reached diverse groups, including schools from elementary to university level, summer camps, poets, boaters, and the general public. With support from BirdsCaribbean and the Neotropical Migratory Bird Conservation Act Fund, two teacher training workshops empowered local educators to use the BirdSleuth curriculum. Our work with BirdSleuth was presented at the International Conference on Education for Sustainable Development in India.

In all, our education activities this year included 25 field trips involving hiking and kayaking, 21 presentations, and half a dozen litter clean-ups with a total of nearly 1,500 participants taking part throughout the year. The local adventure outfitter Tri-Sport sponsors all our kayaking events, including those for schools as well as popular Full Moon and World Wetlands Day trips for the public.

With support from the Be the Change foundation, we were able to spread the word about proper sewage disposal and the availability of our sewage pumpout boat Slurpy. We tabled at marinas and marine supply stores and also spoke as part of the Island Water World marina seminar series. A survey of boaters found that about 40% had heard of Slurpy, a number we will continue to build on this year. The study also examined the most effective communication strategies for encouraging use of the service, which will be integrated into future outreach efforts.

We were pleased to partner with the Heineken Regatta to promote Slurpy and best environmental practices among the thousands of participants in this multi-day event, including coordinating the Green Team. Other fun events were the Eco-Scavenger Hunt, sponsored by SXM-DOET, which promotes volunteerism to benefit the community, and the Earth Day party at Buccaneer Beach Bar.

This year we look forward to more educational fun during plant restoration involving citizen scientists. Whether it’s hiking, kayaking, or planting trees, getting people outside to learn about and appreciate nature is a key element of education and, ultimately, building support for environmental conservation.
Publications & Presentations

• Rafael Borroto-Páez, Roberto Alonso Bosch, Boris A. Fabres, and Osmany Alvarez García. Introduced Amphibians and Reptiles in the Cuban Archipelago. Herpetological Conservation and Biology 10(3): 985-1012.


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Our updated website is EPIC!

• Check out our news blog and great videos
• Sign up for our Quarterly Update from the Field
• Read more about our projects
• Learn now you can earn cash back for EPIC when shopping online
• Donating is easier than ever with our new platform. You can now contribute in honor of somebody special or make your donation recurring (no minimum!).

www.epicislands.org
## Financial Statement

### Statement of Financial Position as of May 31, 2017

<table>
<thead>
<tr>
<th>Assets</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Cash</td>
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<td>Property</td>
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<td>Total Liabilities</td>
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<tr>
<td>Total Liabilities and Net Assets</td>
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### Statement of Activities for Year Ended May 31, 2017

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<tr>
<th>Revenue</th>
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<tr>
<td>Individual Contributions</td>
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<td>Grants</td>
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<td>Other Revenue</td>
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<td>Total Revenue</td>
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<td>Expenses</td>
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<tr>
<td>Conservation and Outreach Programs</td>
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<td>Administration</td>
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<td>Assets</td>
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<td>Net Assets Beginning of the Year</td>
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<td>Depreciation Expense</td>
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<td>Net Assets End of Year</td>
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<td>In-Kind Donations</td>
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<td>Total In-Kind Donations</td>
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### Expenses

- Administration (6%)
- Research, conservation and outreach programs (94%)
EPIC Sustaining Members are core to our work.

You can set up an automatic donation each month, quarter, or year for any amount in one simple step...sign up at epicislands.org on the Support EPIC page or fill out this form.

- One time donation
- Reccuring donation
  - Month
  - Quarter
  - Year

- $10
- $25
- $50
- $100
- $300
- $500
- Other____________________________

Name: ____________________________
Address: ____________________________