



REEF-in-Brief

The e-Newsletter of the
Reef Environmental Education Foundation

May 2007

1. Welcome -

Happy Monday to you!

We're entering busy season here at REEF HQ, which kicked off with several important field activities highlighted in this month's edition of *REEF-in-Brief*. Lad and Joe recently led a successful two-boat team on a lionfish hunt in the Bahamas; I spearheaded the Tortola 2007 Field Survey and then assisted The Ocean Foundation with sustainable tourism development in St. Kitts; and Kim, volunteer Audrey Smith and interns Isla and Jenny did public outreach in the "wilds" of Ft. Lauderdale at the 2007 Ocean Festival Dive and Adventure Sports Expo. We've also been getting ready for The Great Annual Fish Count (GAFC), our big July push to get volunteers surveying *a la* Audubon's Christmas Bird Count. Please stay tuned to next month's e-news for more details. REEF is sorry to bid farewell to Jenny and Isla, our super spring interns, but eager to welcome the summer crew, Paige and Marissa, when they arrive next week.

I'd like to extend heart-felt thanks to our members for their patience while we troubleshoot and improve the REEF database, which has experienced some growing pains in the last few months and caused a delay in your valuable data showing up online. With major support from REEF volunteer Dr. Michael Coyne, the 100,000 survey tune-up is almost complete and we're revved up for the summer season. Keep those surveys coming in . . .

All the best from the REEF family to yours,

Leda A. Cunningham, Executive Director

2.

REEF Takes on Tortola: 13 Volunteers Survey British Virgin Islands

By Leda Cunningham, Executive Director

While the rest of the country dove into tax season, thirteen intrepid REEF volunteers converged on the tropical island paradise of Tortola, British Virgin Islands for the second Field Survey of the 2007 season. Led by REEF Executive Director, Leda Cunningham, veteran fish-watchers and those new to the sport surveyed 14 sites and documented 193 species. Of special note were hole-dwelling and hard-to-spot punk blennies, ubiquitous hamlets, and an unidentified pipefish that volunteer and Board member, Heather George, discovered on the last group dive. A night dive on the infamous wreck of the *HMS Rhone* revealed the shy but locally common pale cardinalfish and a large dog snapper who took advantage of divers' lights to locate unsuspecting prey.

Tortola holds a special place in Caribbean divers' hearts for its predictably beautiful weather and vast array of underwater habitats. No two sites are the same: every place we surveyed displayed distinctive structure that made for interesting dives and diverse species lists. As one participant noted, "the diving just kept getting better each day!" The island itself is a lush, hilly maze of curvy roads and spectacular views peopled by friendly Tortolans who epitomize island hospitality. And make a terrific *roti*, the typical island dish of curried meat and/or veggies wrapped in a soft dough that the group enjoyed on almost a daily basis.

Sail Caribbean Divers lead the team in the field, supplying a roomy dive boat, helpful crew and ample surface interval snacks. The group started and finished the days at the breezy and beautiful Tamarind Club, where the food was superb and the ambiance gave new meaning to "laid back." When hotel check in consists of alerting the bartender of your arrival and enjoying a fruity cocktail on the house, you know you're in for a relaxing week. Nightly fish classes provided an opportunity for fish-watchers to discuss field ID techniques, confirm rare sightings and learn more about coral reef ecology and conservation from like-minded divers. REEF is pleased to welcome six new members to the next level of expertise in the Tropical Western Atlantic region of the Volunteer Fish Survey Project: Gerard Powers, Roger and Sharon Stockholm and Lawren Townsend passed into Level 2; Keith Cunningham and Alison Kruk passed into Level 3. Congratulations!

All in all, Tortola was a treat. We hope to see this group again on a future REEF Field Survey. Special thanks to our on-island expert Sue Thompson for sharing her vast knowledge of the fish denizens in her 'neighborhood' and helping train the group on advanced fish-watching in Tortola; and to Keith Cunningham for logistical support during the trip.

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Team Tortola 2007. From left: David Preston, Heather George (behind), Carol Lorenz, Alison Kruk, Sue Thompson (seated), Keith Cunningham, Leda Cunningham (seated), Roger Stockholm, Sharon Stockholm, Phil Steiner (standing behind), Ed Steiner (standing), Lawren Townsend (seated), Doug Harder and Gerard Powers (seated).



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From left: Phil Steiner, Doug Harder, Sue Thompson and Leda Cunningham discussing morning's findings during a surface interval.
Photo by: Keith Cunningham.

3. Bahamas Lionfish Expedition

By Lad Akins, Special Projects

REEF recently combined efforts with Blackbeard's Cruises to survey and sample areas in Grand Bahama, Nassau, the Berry Islands and the Gingerbread Grounds of the northern Bahamas as part of REEF's ongoing exotic species work. Two boats with 49 divers spent a week documenting and collecting lionfish from those areas in an attempt to better understand the impact that invasive species are having on the area. Over 104 lionfish were documented during the week; among them 93 specimens were collected and shipped to NOAA researchers in NC. Questions on the distribution, age/growth, predation, reproduction, genetics and parasitology are being addressed through an effort coined the "Regional Lionfish Management Team" by Bahamian partners.

In addition to volunteers and REEF staff (Lad Akins and Joseph Cavanaugh), Nicola Smith (Bahamas, ecology), Wilson Freshwater (UNCW, genetics), Holly Bourbon Martel (MA fisheries, collection and husbandry), and Andrew Pulver (Nat'l Aquarium in DC, husbandry) made up the "Science team" during the expedition. Bruce Purdy and Blackbeard's Cruises also donated significant funding from the project to REEF as part of our joint conservation efforts.

Key issues that were addressed during the project included: predation, distribution, site preference and fidelity, reproductive status, genetics and potential impacts. The information is currently being used to plan future studies and potential actions to minimize impacts of the venomous predator.

Since the mid-1990s lionfish have been found in temperate and tropical Atlantic waters and are rapidly becoming a major issue in the wider Caribbean. Recent REEF sponsored research efforts- with Blackbeard's Cruises, the Aquacat and Stuart Cove's Dive South Ocean- have provided valuable data on the invasion. Fish as large as 379mm and as small as 28mm have been found in a variety of habitats with stomach contents that include shrimp, crabs, gobies, wrasses, damselfish, Spanish hogfish, lizardfish and even a jawfish with eggs. REEF is committed to working with both Bahamian and US researchers and dive partners in helping to better understand the impacts and issues related to this recent invasion.

For more information and to participate in future invasive species projects, contact Lad Akins, REEF Director of Special Projects (Lad@REEF.ORG) or Blackbeard's Cruises (sales@blackbeard-cruises.com).



Two Bahamian Lionfish collected in April 2007. Photo by: Sandra Gutierrez



Bruce Purdy with January 07 lionfish from the Exumas



April 2007's Lionfish Expedition Crew on the *Morningstar*



Nicola Smith dissecting Feb 07 lionfish from Nassau

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4. REEF Assists St. Kitts and Nevis with Sustainable Development

By Leda Cunningham, Executive Director

At the invitation of The Ocean Foundation and its partner, the St. Kitts Foundation, REEF recently participated in the first Southeast Peninsula Marine Ecosystem Survey Week on the island of St. Kitts, West Indies.



Executive Director Leda Cunningham lead classroom and in-water training sessions in fish identification and survey methodology to more than 100 island residents including university students and professors, dive operators, tourism officials, representatives from the ministry of fisheries, and others. Florida-based Reef Relief lead similar trainings in coral health assessment and monitoring while Earth Echo International documented the relationship of current land-use on the Southeast Peninsula to coral reef health in nearby waters. In addition to training local volunteers, the team spent four days surveying reefs that may be impacted by upcoming development of the area.

The workshop was designed to provide baseline coral reef ecosystem data to The Peninsula Company - a partnership comprised of Kiawah Island, Auberge Resorts and Firesky Ventures that will soon break ground on the Southeast Peninsula - while training local stakeholders to continue data collection for long-term monitoring efforts. Volunteers conducted 52 surveys, documenting 125 species, increasing the total size of the existing St. Kitts (REEF) data set by 25 percent and adding five new sites to the REEF database. Six sites were surveyed by scuba, two by snorkel. In general, the reefs exhibited high macro-algal and low coral cover; the fish assemblage was dominated by herbivores with few top predators such as grouper and snapper. This is likely due to a combination of overfishing and heavy siltation caused in part by overgrazing of feral goats on the island; lack of harvesting restrictions and unregulated run-off from land may also contribute to poor reef health.

The St. Kitts Week was the first in a series of steps to implement long-term sustainable development and promote community-based conservation and sound management of the island's natural resources. The collaboration forged between The Peninsula Company, The Ocean Foundation and partners like REEF represents a new model for eco-tourism in the Caribbean and seeks to create a lasting community benefit mechanism that generates funds to support the social, ecological and economic pillars of sustainable development. REEF is pleased to have been included in the planning stages of this exciting alliance. For more information on the St. Kitts Foundation or to link up with this pioneering group on your next trip to St. Kitts and Nevis, please visit: www.stkittsfdn.org.

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5. Great Annual Fish Count 2007

By Isla Turner, REEF Intern

The Great Annual Fish Count (GAFC) is REEF's single largest outreach event that introduces divers and snorkelers to the ongoing Volunteer Fish Survey Project, now in its 15th year. For the entire month of July, Field Stations and other volunteers host fish ID seminars and surveys open to the public. If you or your favorite Field Station is interested in hosting a GAFC event or if you would like to participate in an event, please email intern@reef.org or call at (305) 852-0030 for more information. Stay tuned! More details will be forthcoming in next month's *REEF-in-Brief*.

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6. REEF at Ocean Fest 2007

By Jennifer Arakaki, REEF Intern

In late April, REEF had a booth at Ocean Fest 2007, which was held at Fort Lauderdale Beach. Ocean Fest is a dive industry event with various vendors ranging from dive equipment to non-profit organizations. There were live performances and a pool where people could experience diving for the first time.

REEF had a booth for all three days where interns, volunteers, and staff informed the public about REEF. We sold REEF gear and passed out educational information about REEF. On Saturday and Sunday, REEF Intern Isla Turner and volunteer Hilary Harder gave a presentation on the organization, what we do, and how volunteers can make a difference in their diving and join others in becoming marine citizen scientists through the REEF Volunteer Fish Survey Project. We made good connections at the event, met interesting people involved in important ocean work and enjoyed connecting with South Florida area REEF members and friends.

The REEF booth and presentation would not have been functional without the gracious help of our wonderful volunteers. We would like to thank Hilary Harder, Peter, Theresa, and Eric Leahy, Janet and Glen Phipps, Pug Pugliese, Kathleen Antona, and Wayne Manning. We would also like to thank all the interested people who stopped by the REEF booth.

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St. Kitts Foundation program manager Kaya Freeman (second from left) prepares volunteers Coast Guard Captain Canoneer (center) and Nevis diver Joe Shearer (right) for fish and coral surveying.



The southeast peninsula of St. Kitts.
Photo by: Diane Davidson



Volunteer Audrey Smith manning the REEF booth

7. REEF Events

Here's what we're up to in the coming month:

[REEF Field Survey to Monterey Bay](#): 5/22-5/26 in Monterey, CA

[Boy Scouts Order of the Arrow Ocean Adventure](#) staff training: 5/30 at Florida Sea Base, Islamorada, FL

[South Florida Women Divers Club](#) meeting: 6/6 in Deerfield Beach, FL

[REEF Field Survey to St. Vincent](#): 6/9-16 in St. Vincent, West Indies

[Island Sun Splash](#): 6/10-6/17 2007 in the upper Florida Keys, FL

[Citizen Science Toolkit conference at the Cornell Lab of Ornithology](#): 6/20-6/23 in Ithaca, NY



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8. REEF Parts - Things To Know - Here are a few notes and news bits we'd like you to know about:

- **REEF Database Update**

During the last two months, REEF's database management team conducted maintenance and updates to the REEF database and TWA online data entry program. We recently completed and full access has now been restored. Thank you for your patience during this time and apologies for the inconvenience of the system being down. One note about the online data entry unfortunately any surveys that were in progress in the online system as of February 28 were not able to be ported over to the updated system. This does not effect surveys that were completed, only those in progress. Please feel free to contact us if you have any questions.

- **Going on a trip?** Order Scan forms, underwater survey paper, books, and other items at the [REEF online store](#)

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See You Next Month!

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