

# REEF NOTES



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Protecting Marine Life Through Education, Service and Research

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## IN THIS ISSUE

### *Director's Corner*

### *Recent REEF Happenings:*

*SPAG Update, Sustainers Event, American Samoa Visit,  
Cousteau Dive, Damselfish Tumors*

### *REEF Science News and MPA News*

*Member Article, Education Corner, Board Member Additions, and Intern Report  
The Numbers and Details:*

*Field Surveys, REEF Field Stations, Survey Numbers, Contributions*

## Great Annual Fish Count 10 Years of Counting



Make a Dive that Counts! Join REEF this July and celebrate the 10 Year Anniversary of the Great Annual Fish Count (GAFC)! Seminars and dives are planned throughout all REEF project regions, making this year's GAFC truly an international event. Since its inception in California in 1992, the GAFC has grown to incorporate areas throughout the Caribbean, Gulf of California, Florida, Mid-Atlantic, North Atlantic, Hawaii and British Columbia. Reflecting the world-wide need for fish data and in recognition of its expansion, this year, the Great American Fish Count officially changed its name to the Great Annual Fish Count.

With continued focus in our National Marine Sanctuaries, two special 10 Year Anniversary events are planned for the Channel Islands National Marine Sanctuary (CINMS) and Stellwagen Bank National Marine Sanctuary (SBNMS). For this milestone anniversary, GAFC is kicking off in its original location in the Channel Islands.

On June 29th, CINMS and REEF are planning a special anniversary event in Chase Palm Park, at 323 East Cabrillo Boulevard, Santa Barbara, CA. With Dr. Sylvia Earle, National Geographic Society Explorer in Residence and Dr. Gary Davis, founder of the GAFC and Science Advisor to Channel Islands National Park there to celebrate the beginnings and the future of the GAFC, we are looking forward to a great time for all! Festivities are from 10 am - 7 pm and include: fish identification seminars; a benefit concert featuring local surf band "The Tradesmen;" a silent auction with oppor-

tunities to win a Peter Hughes Diving, Inc. dive trip to Belize; educational exhibits including an ROV (remotely operated vehicle) demonstration and much, much more. A kick off dive is planned for June 30th to the Channel Islands.

Festivities continue on July 20th at the Stellwagen Bank National Marine Sanctuary where REEF will celebrate the 10th anniversaries of the designation of the sanctuary and the launch of REEF's Great Annual Fish Count event. This northeast celebration will be at Stage Fort Park in Gloucester, Massachusetts. GAFC dives are scheduled at four shore locations around Cape Ann, along with dives in the sanctuary. A picnic, free raffles and door prizes including a dive in the New England Aquarium Giant Ocean Tank are also in the making.

For updates on events, seminars and dives check out the Fishcount website. Don't forget to register your GAFC activities so you can be eligible to enter in the GAFC Challenge. Each fish survey you conduct on a registered dive or snorkel is one entry into the GAFC Challenge. The GAFC 2002 Challenge Grand Prize drawing includes a week's dive package for two with "Dive Cat Island" including accommodations at the Hawk's Nest Resort and Marina. Regional prizes include ReefNet CD's, dive gear, and Fish ID books. With so MANY CHANCES TO WIN, make a dive that counts and participate in the Great Annual Fish Count's 10th Year of successful fun. For more information see the Fishcount web page at [www.fishcount.org](http://www.fishcount.org), e-mail [GAFC@reef.org](mailto:GAFC@reef.org), or call Alex at 305-852-0030.

# Director's Corner

## REEF in Brief - What's New

Great American Fish Count has a new name - Great Annual Fish Count – and invites all of REEF's regions to participate in the 10th year anniversary. Two special events are planned for the Channel Islands National Marine Sanctuary (CINMS) and Stellwagen Bank National Marine Sanctuary (SBNMS).

The annual Sustainers Event was held at Mango Manor on March 2, 2002. Several guest speakers gave presentations during the afternoon. REEF's Volunteer of the Year award was presented to Brice Semmens.

In late April, REEF's Leslie Whaylen traveled to Halfmoon Caye, Belize to attend a conference on Reef Fish Spawning Aggregation Monitoring Training.

REEF has created a new Exotic Species Sighting Program that includes an online report form, an exotic species gallery of images, and an educational brochure.

REEF's Laddie Akins traveled to American Samoa to help lead a week of education and reconnaissance. The week was hosted by Fagatele Bay National Marine Sanctuary, the only US marine sanctuary in the southern hemisphere. REEF's work in the Samoan islands included setting the stage for implementation of a REEF survey program for the islands of Oceania.

In order to increase support and volunteers during GAFC and throughout the year, REEF has started organizing instructor-training courses throughout its regions. Two courses have been held, one in Texas and one in British Columbia.

REEF members are asked to report sightings of bicolor damselfish tumors to researchers at University of Miami. The disease is thought to be viral and is termed damselfish neurofibromatosis or DNF.

I've just returned from two separate projects on different sides of the globe with a renewed sense of perspective and respect for REEF's activities. My work in both of these areas focused on Marine Protected Areas (MPAs). I presented numerous talks about the REEF program and the role of volunteers, and came away realizing that Gary Davis, Paul Humann and Ned DeLoach had it right. With the 10th year anniversary of the GAFC coming up this July and the 12th year of REEF underway, I am impressed by their vision and forethought as pioneers in the volunteer movement. Involve the people, educate the public and bring them into the stewardship process by giving them opportunities to contribute.



Witness my two recent experiences.

American Samoa is a small MPA. It is relatively inaccessible and has little visitation compared to other MPA sites. Due to the low usage and few impacts on the site, the need for data is not as critical here as in other areas. However, the MPA serves as a role model for the rest of the territory and, as such, can provide examples of how and why to protect marine resources. Development of educational materials and volunteer programs like REEF that involve the local community are critical here. The local community will use lessons learned at one site in all of the other areas around the territory.

South Africa is a country imprinted in most of our minds with visions of apartheid. It is also one of the most progressive, though restrictive, in protecting its environment. What it has not been is participatory. Local communities have had little encouragement to become involved and there are few education efforts directed at the numerous MPAs along the coast. Subsequently local support and voluntary enforcement is not up to par in many locations. My talks describing REEF's more than 20,000 members and 40,000 surveys brought wide eyes and open mouths from audiences accustomed to top down resource governance. Visions of an involved and educated community sprung up from every talk and plans are now underway to begin implementation of more volunteer programs in South African marine parks.

REEF members have gathered a tremendous number of surveys since our inception. Each survey is an opportunity to contribute, to become involved and increase the sense of stewardship that comes with participation. The education programs we organize reach even more of an audience. REEF's marine life courses, web presence and newsletters increase awareness of the strongest constituents the oceans have – you.

The Great Annual Fish Count will take place this July at locations throughout the US, Canada, Caribbean, Mexico and Hawaii. Free seminars and numerous opportunities to join survey dives will be posted on the Fishcount website. I invite you to join this unique, educational, fun and hands-on celebration. Take part and help to do more to protect our marine resources.

See you in the water!

A handwritten signature in dark ink, appearing to read 'L. Akins'.

Lad Akins  
Executive Director



# HAPPENINGS & UPDATES

## American Samoa – REEF Visits South of the Equator

As part of the Sustainable Seas Expeditions, REEF Executive Director Laddie Akins recently traveled to the nation's only marine sanctuary in the southern hemisphere to help lead a week of education and reconnaissance in American Samoa. Located more than 2,000 miles to the south of Hawaii, the island group is an American territory and home to a luxurious reef and marine life ecosystem. Fagatele Bay National Marine Sanctuary on the island of Tutuila hosted the week of seminars and research aimed at increasing awareness and understanding of the uniqueness of the American Samoan marine environment.

Leading the 8-person team was Dr Sylvia Earle, former Chief Scientist for the National Oceanic and Atmospheric Administration and currently explorer in residence at the National Geographic Society. Other team members included REEF's Laddie Akins, Kip Evans and Gale Mead of National Geographic, Francesca Cava of the Sustainable



REEF's Laddie Akins during a dive in American Samoa.

Seas Expeditions, and geographers Dr. Dawn Wright, Dr. David Nahr and Brian Donohue. During the week, team members dived on local reef systems, documenting marine species and capturing images on film and video. Talks with local educators, students, and community members brought to light the uniqueness of the surrounding reefs and the fragility of ocean resources.

American Samoa has extensive coral cover and at least twice the number of fish species found in the Caribbean. While the most significant current impact is that of poaching by dynamite and spear fishers, the crown of thorns sea star continues to threaten healthy coral populations. Despite a high diversity of fish on all reef sites, there was an obvious lack of any large predators. A recent ban on night spear fishing and spear fishing on SCUBA is anticipated to reduce this effect.

REEF's work in the Samoan islands included setting the stage for implementation of a REEF survey program for the islands of Oceania over the next few years. Working with local college professor Jennifer Aicher and Fijian dive expert Helen Sykes, REEF is helping to develop training and surveying materials for fish surveying and identification to the region. Initial reconnaissance dives were conducted at 8 sites around Tutuila, documenting more than 150 species of fish. During the week, a benthic survey was also undertaken in coordination with the NOAA ship *Roger Revelle* that helped to map the ocean floor around the island of Tutuila, discovering six new seamounts and an underwater volcano. For more information on the Fagatele Bay National Marine Sanctuary, visit [www.sanctuaries.nos.noaa.gov](http://www.sanctuaries.nos.noaa.gov) and follow the links to Fagatele Bay NMS.

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## Jean Michel Cousteau

### Dives with REEF and Florida Keys National Marine Sanctuary Staff and Volunteers



Jean-Michel Cousteau takes time to talk to REEF divers. Photo courtesy of Larry Benvenuti.

REEF staff and volunteers were fortunate to join world-renowned ocean explorer, environmentalist, educator, and film producer Jean-Michel Cousteau during his recent visit to the Florida Keys to celebrate Seagrass Awareness Month with the Florida Keys National Marine Sanctuary and the National Marine Sanctuary Foundation. REEF joined Jean-Michel Cousteau, the Florida Keys National Marine Sanctuary, National Marine Sanctuary Foundation, and John Pennekamp Coral Reef State Park for a dive on March 3, 2002, to promote participation in the upcoming Great Annual Fish Count event, and to raise awareness on the importance of year-round marine resource monitoring. An eight foot hammerhead shark, an abundance of grunts and snappers, and a green sea turtle were the highlights of two great dives on Molasses Reef.



Jean-Michel Cousteau. Photo courtesy of Larry Benvenuti.





# SCIENCE UPDATE

## Exotic Species Sighting Program



With support from PADI, REEF has developed this educational brochure about the threat of non-native species.

### What is an Exotic Species?

Non-native, exotic, non-indigenous, introduced, invasive – these are all terms used to describe an organism living in areas beyond their natural range whose introduction was caused directly or indirectly by humans. There are many pathways or vectors of introduction, both intentional and unintentional.

The threat of non-native species to aquatic environments has gained media attention through cases such as the zebra mussel and lamprey in the Great Lakes and *Caulerpa taxifolia* algae (AKA the killer algae) in California. Until recently, incidences of exotic marine fish species have not been widely reported. In response to the growing number of sightings of Indo-Pacific and Red Sea reef fish on south Florida reefs, REEF has created a new Exotic Species Sighting Program.

Recreational divers and snorkelers are a valuable source of information for tracking exotic fish species, often noticing rarities and reporting unusual occurrences. Through the new program, REEF will act as an information clearinghouse about non-native species in Florida and beyond. To kick-off the program, REEF has developed an online report form, an exotic species gallery of images, and an educational brochure that was funded by PADI Project AWARE and will be distributed to Florida aquarium stores and educational centers.

Over time, the sighting data will be used to track exotic species introductions, document populations that appear to be spreading, and serve as an early warning system to prevent harmful impacts to the native ecosystem.

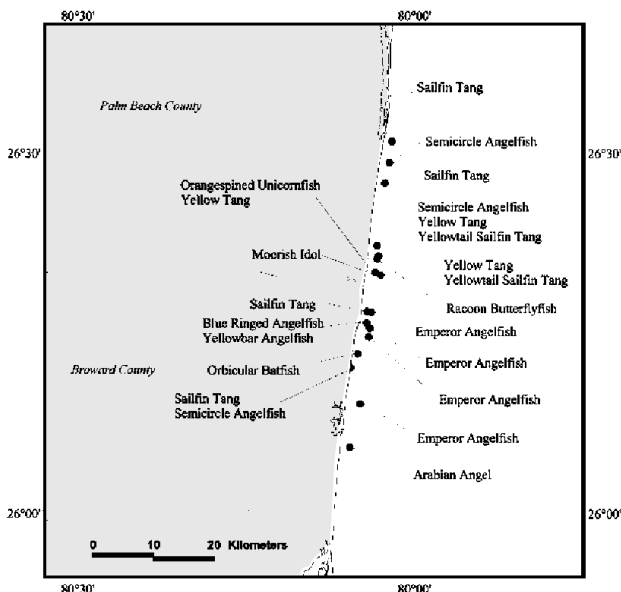


This sailfin tang is one of several Indo-Pacific fishes that have been found off of south Florida. REEF member Ray Clark caught this one on film at Mike's Wreck in Key Largo.

### AMERICA'S LEAST WANTED:

**Workshops Teach Divers to Recognize and Report Aquatic Nuisance Species in the Pacific Northwest**

This summer, the Washington Sea Grant Program is training divers to recognize and report aquatic nuisance species-- non-native plants and animals that compete with, prey on or disrupt the lives of native marine life. A series of workshops will be held at dive shops and meeting places in Seattle, Tacoma, Port Townsend and other Puget Sound locales. Participants will receive free training and tools, including species identification cards and data-reporting forms. The workshops are co-sponsored by the U.S. Environmental Protection Agency, Puget Sound Water Quality Action Team, Washington Scuba Alliance and Northwest Dive News magazine. For more information, contact W. Lauren Mark at 206-685-8302 (wmark@u.washington.edu) or visit the Washington Sea Grant Program Web site, [www.wsg.washington.edu](http://www.wsg.washington.edu) and click on "New."



Distribution of exotic species reported by REEF members along Broward and Palm Beach Counties. Twelve species of non-native fishes have been sighted at 17 sites along this stretch of southeast Florida coastline. Map from Semmens, et al.

Recently, Brice Semmens and colleagues from the University of Washington completed a paper describing baseline information on south Florida non-native marine fish species collected in the spring of 2002 by REEF members. The paper reported sightings of 12 different non-native fish species at 17 sites along Broward and Palm Beach Counties. Fishes such as the emperor angelfish and the sailfin tang have been sighted at several different locations. While these fish seem beautiful, their short and long term effects on the Florida reef ecosystem are unknown and potentially harmful.

### How can you help?

- If you are conducting a REEF survey and encounter an exotic species, please report the species as a write in species on the back of the scansheet. Whenever possible, please include an extra sheet of paper with extended details about habitat, behaviors, other species present and approximate size. Also indicate if you have photo/video of the fish.
- If you see an exotic fish species when you are not surveying, please use our online sightings form to submit your information – [www.reef.org/exotic](http://www.reef.org/exotic)
- Don't release aquarium animals back into the wild, this includes fresh and saltwater plants and animals. Instead, try returning the unwanted critter or plant to an aquarium store or trade with another aquarist.

# HAPPENINGS & UPDATES

## Diver Group in British Columbia Working To Create Reserve Boundaries Around Buoys

Marine Protected Areas are designed and created for many different reasons. The level of restrictions on harvest and other activities and the size of the area will vary depending on the goals of the MPA. The Underwater Council of British Columbia (UCBC) is working to establish fishing closures around mooring buoys in the Strait of Georgia that divers use to access dive sites. Approximately 30 buoys are included in the proposed program, including buoys placed by UCBC, the Artificial Reef Society, the Underwater Archeological Society, and Dive BC. The diving community installed these buoys primarily for diver safety and to minimize mechanical damage caused by anchors. The sites represent a large portion of the popular dive sites in the area. However, since the installation of the buoys, harvest pressure has dramatically increased at these sites because of the easy access. Therefore, the UCBC is proposing that the Canadian Department of Fisheries and Oceans prohibit all harvest within approximately 10 hectares around each of the selected buoys. While these areas are probably not large enough to provide any of the fishery-related benefits such as a "spillover" in recruits to other areas, the many resident fish and invertebrate species that make BC diving so great will be protected. As part of the program, the UCBC will work with REEF and other volunteer programs to implement monitoring, enabling divers to be involved in the long-term success of these reserves. For more information on UCBC and this effort, visit [www.ucbc.bc.ca](http://www.ucbc.bc.ca).

### MPA News

REEF believes that Marine Protected Areas (MPAs) are an important tool for the protection of marine ecosystems, and we urge our members to stay informed of MPA initiatives and funding issues. In each issue of REEFNotes, the MPA News feature brings you recent and noteworthy happenings.



Living REEF Project Instructor Course participants - Kim DeCrane, Christy Semmens, Mandy Hengeveld, Kurt Steinbach, Dana Haggarty, Jennifer Hoar, Barb Beasley, Wes Nicholson, James Mortimor, and Erika Boulter.

## EDUCATION CORNER

### Instructor Training Workshops

REEF has started organizing several instructor-training courses throughout its regions to increase support and volunteers during the Great Annual Fish Count and throughout the year. The first official REEF Instructor Workshop this year was coordinated by the Flower Garden Banks National Marine Sanctuary. The workshop was held for sanctuary volunteers and Girl Scout troop leaders in Houston the weekend of January 11-12, 2002. The project was a lot of fun and included a mock fish survey in the Moody Garden's Aquarium in Galveston.

The second Instructor Training workshop was held April 26-28 in British Columbia with the Living Oceans Society on Gabriola Island, just outside of Nanaimo on Vancouver Island. The Friends of the Environment Fund of the Toronto Dominion Bank funded the Living REEF Project training to instruct local volunteers on the Living REEF Project invertebrate and fish monitoring for the Pacific Northeast.

The Project grew from a partnership between REEF and the Living Oceans, a non-profit organization based in British Columbia that is committed to the preservation of marine biological diversity and creation of sustainable fisheries through the establishment of a network of marine protected areas and ecosystem management. Both Fish and Invertebrate Instructors courses were taught for a group of 8 people. The group also enjoyed two survey dives off Gabriola Island.

The purposes of these courses are to increase the number of qualified REEF instructors to teach local seminars and to encourage more participation during the Great Annual Fish Count event. The increased availability of seminars and volunteers will provide more fish surveys and raise awareness throughout REEF's project regions.



Living REEF Project Instructor Course participant James Mortimor filling out his scanform.



# HAPPENINGS & UPDATES

## SPAG Update

From March 25-April 4, REEF's Leslie Whaylen attended the Belize Reef Fish Spawning Aggregation Monitoring Training at Halfmoon Caye, Lighthouse Reef Atoll, Belize. The workshop was sponsored by The Nature Conservancy, Belize Fisheries Department, Belize Audubon Society, Friends of Nature, Toledo Institute for Development and Environment, Green Reef, University of Belize, University of South Carolina, and Coastal Zone Management Authority. The main objective was to share new understanding of the biological, physical, and ecological aspects of multi-species reef fish spawning aggregations and to create a consistency in data collection techniques and standards.

After a 60 mile boat ride from Belize City to Halfmoon Caye the quiet, small island with white sand beaches and swaying coconut trees welcomed 80 participants from 8 countries. The course served as a unique collaboration opportunity between scientists and fishermen. Local fishermen taught celestial navigation, fishing, and fish cleaning to scientists, students, and other participants. In return, scientists taught skills in GPS navigation, biology of fish, and SCUBA diving to the fishermen. During the week, fishermen, students, and scientists alike gathered under the coconut trees to play several games of "Fish Jeopardy" to learn the common, Latin, Spanish, Creole, and Garifuna names of snappers, grunts, jacks and seabass (groupers).



**Fishermen from Hopkins Village, Belize and REEF's Leslie Whaylen at Halfmoon Caye.**

In addition to land-based training and seminars, participants were able to dive at the aggregation site off Halfmoon Caye to practice field techniques. Divers observed and recorded aggregations of cubera snapper, dog snapper, white margate, permit, horse eye jack, and tiger grouper.

During REEF's Field Survey to Long Island, Bahamas April 28-May 5, surveyors conducted REEF surveys around the island but were fortunate one afternoon to observe and record a mutton snapper aggregation off the north end of Long Island.

Special thanks to Dr. Will Heyman, Tim Boucher, Kevin Rhodes, Nic Requena, Dr. Brian Luckhurst, Eloy Cuevas, Dennis Garbutt, Clarence Cabral, Agapito Requena, and Sonny Garbutt in Belize. Special thanks to Omar Daley and Stella Maris Resort in Long Island, Bahamas.



**Halfmoon Caye 'Resort'.**  
Photo courtesy of Tim Boucher.

## **Bicolor Damselish Tumors**

*Have you seen damselfish with tumors outside of South Florida or Bimini? Researchers at the University of Miami would like to know!*

Bicolor damselfish (*Stegastes partitus*) on reefs in South Florida are often afflicted with a cancerous disease termed damselfish neurofibromatosis or DNF. These tumors involve the pigment cells (chromatophores) and peripheral nerves of this species. The pigment cell tumors



**Bicolor damselfish with numerous pigmented tumors on the scales and fins.**

are visible as spots on the scales and streaks on the fins of the fish (spots of variable size and color; see photo 1 & 2). Peripheral nerve tumors can sometimes be seen as lumps or small nodules on the surface of these fish (see photo 2 & 3). Professor Michael Schmale and collaborators at the Rosenstiel School of Marine and Atmospheric Science of the University of Miami have been studying this disease since the early 1980s. They have learned that DNF is transmissible from fish to fish, probably via fish biting each other during aggressive, territorial encounters. They believe the disease is caused by an unusual type of virus and are now trying to determine the geographic range of this fish disease. Because it is not practical for



**Bicolor damselfish with a smaller number of pigmented tumors on the fins and scales and a nodular tumor on the nose.**

the researchers to survey the many areas of the Caribbean and Bahamas for affected fish, they could greatly benefit from observations conducted by REEF members during fish surveys. With plenty of information from south Florida and the Bimini, Bahamas region, the researchers are especially

interested in sightings outside of these geographic areas. Fish with only one or two faint spots should NOT be reported as these are often due to old injuries or parasites and not DNF.

Occasionally, other species of damselfish are affected. Reports, including species and any photos of affected fish, from outside South Florida and Bimini will be greatly appreciated. For information or reports, please contact Dr. Michael Schmale at mschmale@rsmas.miami.edu.



**Bicolor damselfish with a smaller number of pigmented tumors on the fins and scales and a large nodular tumor on the side of the fish.**



# MEMBER ARTICLE

## REEF a Big Hit with High School Students!

By Liz Foote, Executive Director, Project S.E.A.-Link (REEF Hawaii local partner)



Tabor Academy students survey fish during a snorkel.

A Massachusetts high school classroom in November: an unlikely location for students watching a REEF presentation on Caribbean fishes. However, these students from Tabor Academy were preparing for an innovative marine science program, and two months later, they found themselves conducting REEF surveys in the clear waters of the Virgin Islands.

Every three years, Tabor Academy sails its 94' schooner *SSV Tabor Boy* to the Caribbean for a coral reef ecology program. I was fortunate enough to serve as the Education Director aboard the vessel, and was responsible for planning much of the onboard marine science curriculum. After helping establish REEF in Hawaii, I was excited about the opportunity to introduce students to the REEF protocol in a different geographic area.

Beginning in January 2002, a series of student groups joined the *Tabor Boy* and served as its crew for 10 days while learning about the coral reef ecosystem throughout the US and British Virgin Islands. The goals of the program were to expose students to current coral reef research methods, and actively involve them in reef studies. Through onboard lessons and interaction with local marine scientists, students learned several research protocols and collected data for the US National Park Service

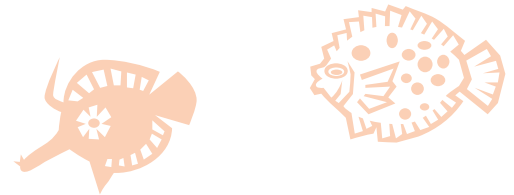
and the British Virgin Islands' Department of Conservation and Fisheries.

Throughout all their projects, students conducted REEF surveys. They reviewed the Caribbean fishes onboard the *Tabor Boy* with the use of a laptop computer and Powerpoint, and were in the water soon after to record their observations. By the end of each 10-day session, REEF was easily the students' favorite activity. They were able to consistently identify from 20 to 45 species of Caribbean reef fish, and the group collectively returned nearly 300 surveys to REEF by the end of the program.

Students responded so well to REEF for a number of reasons: they reported that REEF is fun and easy to do, and that it allowed them to experience the entire habitat while collecting data. They also recognized the significance of the data they collected, and appreciated that resource managers were actually using it. Thus the students were able to connect their own actions as REEF surveyors to current marine conservation efforts. As a science educator I recognize the value of this outcome, and consider this experience to be a model for future efforts involving high school students.



The *SSV Tabor Boy* and Tabor Academy students with Buck Island, USVI in the background.



Students reviewing fish and filling out REEF scanforms.

### Dedication

PHOTO  
MISSING

This issue of REEFnotes is dedicated in memory of Ralph Dickerson. Ralph joined REEF in September 1998 and became an active member by participating in several REEF Field Surveys and advancing his fishwatching skills to join REEF's Advanced Assessment Team. He and his wife, Gaylynn, conducted numerous REEF surveys, volunteered at REEF's booth at Seaspaces 2001, and contributed financially to REEF's projects. Ralph passed away in January. He will be missed and remembered by us here at REEF. His passion for diving and REEF always made his presence on a project special.

# HAPPENINGS & UPDATES

## Sustainers Event and Volunteer of the Year

On Saturday, March 2, REEF staff, advisory and executive board members, sustainers, and friends convened at Mango Manor (Chairman of the Board Paul Humann's home) in Fort Lauderdale, Florida for the annual gathering to celebrate REEF's achievements and discuss future plans. Hosted by REEF founders Paul Humann and Ned DeLoach, the event welcomed 50 guests, many of whom flew in from chilly and far-off places to be greeted by the warm Florida sun. The day began with a summary of activities from REEF staff. Executive Director Lad Akins filled the group in on fiscal matters and discussed future sources of funding for specific projects including the Grouper Moon project and local monitoring projects. Office Manager Leda Cunningham presented this year's membership statistics (REEF currently boasts a membership of 22,000) and discussed improvements to the Marine Conservation Internship program. Education and Outreach Coordinator Alex Score discussed plans for this year's 10th anniversary of the GAFC, whose name recently changed from the Great AMERICAN to the Great ANNUAL Fish Count. Scientific Coordinator Dr. Christy Semmens presented recent projects and publications and introduced the addition of an exotic species sighting program. Though always there in spirit, Field Operations Coordinator Leslie Whaylen was in Little Cayman to conduct a follow-up mission to the Grouper Moon project begun in January.

In the afternoon, special guest Dr. Robert Ginsburg of the University of Miami Rosenstiel School of Atmospheric and Marine Sciences gave an enlightening multi-media presentation on "Sherwood Forest and the Dry Tortugas Ecological Reserve". Ginsburg was followed by guest presenters Bill Horn of the Florida Fish and Wildlife Conservation Commission, who spoke on "The Division of Marine Fisheries Initiatives" and Ken Banks and Pamela Fletcher of the Broward County Department of Planning and Environmental Protection, who presented data from "Laser Airborne Depth Sounder Surveys of Broward County". Frank Schmidt from Vone Research shared a "LADS" survey video to demonstrate how volunteer videography is used in Fort Lauderdale to help protect local coral reefs.



From left: Clint Whitaker and Lauren Penner receive 'Golden Wrench' awards for their help with the new REEF HQ building from REEF staff Alex Score and Lad Akins. Photo courtesy of Chatten Hayes.



From left: Long-time members Kitty Phillips, Tom Isgar, and Linda Schillinger enjoying themselves. Photo courtesy of Chatten Hayes.



Scientific Coordinator Christy Semmens (left) and REEF Volunteer of the Year Brice Semmens (right) ham it up with Dr. Steve Gittings. Photo courtesy of Chatten Hayes.



Formal activities culminated in a 'mini-film fest' featuring footage from the Sea of Cortez, the Sustainable Seas mission, and the much-anticipated grouper spawning aggregation off Little Cayman. Weary from the excitement and inspired by REEF's progress, event-goers adjourned to the terrace and gardens for an afternoon cocktail hour followed by a delicious BBQ dinner. The day's food and drink were artfully coordinated by Anna DeLoach, her family, and Ken and Tammy Marks. A much anticipated slide presentation by Paul on tropical eastern Pacific species closed the evening's celebration.

REEF staff were proud to present Brice Semmens with the Volunteer of the Year award for his long time involvement and support of REEF. Brice started his fish counting career in 1993 as an intern with The Nature Conservancy and assisted in the development of the Fish Survey Project. Since then, he has stayed very active as an expert surveyor, a fish identification instructor, and REEF and GAFC webmaster. In 1997, Brice led the West Coast REEF expansion while living in Santa Barbara, California. He has authored and co-authored several scientific publications using REEF data and has developed several analysis tools for REEF's unique dataset. Brice has conducted surveys in all of REEF's project regions and is looking forward to many more years as a REEF volunteer.

Three awards for special help moving into the new REEF HQ building went to Lauren Penner, Clint Whitaker, and Ken Smith. A great big "thank you" to all who attended and helped organize another successful Sustainer's Event. Stay tuned for information on next year's REEF Week, an event like no other to celebrate a decade of REEF activities.



# REEF NOTES

## Board Member Additions



**Dr. Carol Lorenz**

REEF is excited to announce the addition of two new members to REEF's Board of Trustees, Dr. Carol Lorenz and Mr. Dennis Liberson. Both were voted onto the Board by unanimous decision earlier this year. At the same time, founding Board member Dr. Jim Bohnsack changed his official title with REEF to National Oceanic and Atmospheric Administration (NOAA) Liaison.

Carol and her husband David joined REEF in 1994. They are both enthusiastic and active surveyors and members of REEF's Advanced Assessment Team, participating in nearly 20 Field Surveys. Carol has served on REEF's Advisory Board since 1999, chaired the Working Committees group, and acts as the primary liaison between the Advisory Board, the REEF Staff and the Board of Trustees. As principal of the consulting firm Carol Lorenz and Associates, Carol brings a wide range of business and employee relations, knowledge and talent to the Board of Trustees.

Dennis is new to the REEF family. He is the Senior Vice President of Human Resources for Capitol One Financial Corporation. As an avid diver and underwater photographer, he has sought ways to make a meaningful contribution to the conservation of the marine environment. We are pleased he has chosen REEF to be the focus of this effort. His recent focus with REEF has been in helping to define a corporate sponsorship and fundraising program and helping PR efforts surrounding the 10th year anniversary of the Great American Fish Count. His knowledge of the corporate world, business, government and finance will be a tremendous asset to REEF as we grow and develop into a larger organization. Dennis is looking forward to participating in many upcoming REEF projects.



**Dennis Liberson**

Jim's long-time association with REEF as a founding board member is still going strong, though you may now see his name listed under a different heading. Following organizational discussions and increased contracts with numerous divisions under NOAA, Jim was named as official liaison to facilitate coordination between REEF and the National Oceanic and Atmospheric Administration. Jim's duties at NOAA include his work as senior fisheries biologist and lead of the Plan Development Team in support of Marine Protected Areas. Jim is a world-renowned expert and lecturer on the benefits of MPAs and we are extremely pleased that he is retaining a fully functional association with REEF.

## REEF Internship

The Spring 2002 intern, Amy Freidank, came to REEF from Huntington, NY. She holds a B.S. in marine science with a concentration in biology from Long Island University, Southampton Campus. During her time with REEF, she assisted with the Elderhostel seminars, including identification of fish and coral, and other creatures. Part of the seminars included taking the participants on a local snorkel trip where they could see first hand what they had learned about. Amy also attended two sea turtle seminars - one on the local management between residents and the government, and the other on the history of capture and new rescue and rehabilitation techniques. She efficiently ran the online store single handedly and managed the member database. After her internship she took an instructor position for the Nature Study Program at Cold Spring Harbor Laboratory in Cold Spring Harbor, NY.



**Amy Friedank at REEF HQ.**



## **REEF Donates ID Books to Caribbean Islands**

In the summer of 2001, REEF donated twenty Humann and DeLoach fish, coral and creature identification book sets to support a new summer sea camp geared toward local kids of the Cayman Islands. The camp, coordinated by the Central Caribbean Marine Institute and sponsored by Texaco, included Junior Ranger SCUBA certification and a week of classroom and field work on coral reef science and research techniques. REEF fish surveying was included in the program, along with sea turtle nest monitoring and benthic coral reef monitoring. REEF is proud to support the youth of the Cayman Islands through this donation and believes that participation in the Texaco Sea Camp will encourage positive action and stewardship for the local environment of the Cayman Islands. For more information about the Texaco Sea Camp, contact [info@reefsearch.org](mailto:info@reefsearch.org).



# FIELD SURVEYS

Visit the online Field Survey Log to read past trip reports:  
[www.reef.org/member/forum/lslog.htm](http://www.reef.org/member/forum/lslog.htm)

## REEF 2002 Trip Schedule

REEF Field Surveys are your opportunity to take a vacation that counts! These week-long diving adventures are not only fun, but educational and environmentally important. Informative, interactive discussions and presentations will be led by knowledgeable fish experts and include identification, habitat and behavior information on local species. Spend a week with REEF and get excited about diving!

An additional \$200 REEF fee will be added to each trip to cover the cost of the trip leader(s), seminars, and survey materials needed throughout the week. The \$200 REEF fee is tax-deductible since REEF is a nonprofit organization. (\*Fee is lower on short trips).

To find out more or to sign up for a trip, please contact REEF's travel agent affiliate, Dive Reservations, Inc at 888-363-3345 (tollfree) or email [reef@diveres.com](mailto:reef@diveres.com). Prices do not include airfare. All prices are per person based on double occupancy unless otherwise noted.



2002 Monterey Bay Field Survey Participants - Christy Semmens, Ann Brambl, Captain Phil, Jesse Meyer, Pam Wade, Julia Gee, Dana Haggarty, Pat Bridges, Ann Marshall, Janna Nichols, Alex Score, and Captain Scott.

## REEF 2003 Trip Schedule

### REEF Field Surveys 2003

March 22-29, 2003 - Ambergris Caye, Belize

April 15-20 - Monterey Bay National Marine Sanctuary at Monterey Plaza Hotel and Cypress Charters

May - Cayos Cochinos, Honduras at Plantation Beach Resort

June 7-14, 2003 - Cat Island, Bahamas at Hawk's Nest Resort

June 21-28, 2003 - Kona Coast, Hawaii with Eco-Adventures

July 11-19, 2003 - Panama (Pacific coast aboard the M/V Coral Star in Coiba National Park)

August 2-9 - Virgin Gorda, BVI

August 16-23, 2003 - Puerto Morelos, Yucatan Mexico

September 17-20 - Channel Islands National Marine Sanctuary aboard the M/V Conception

September - Anguilla, Lesser Antilles

October - Gulf of California aboard the M/V Don Jose

October - Quadra Island, British Columbia

November 8-15, 2003 - Barbados

### REEF Discovery Tour 2003

November 1-8, 2003 - Provo, Turks & Caicos - led by Paul Humann

More 2003 details are posted on REEF's website.



2002 Curacao Field Survey Participants- Christy Semmens, Christine Ferris, Carol Lorenz, Hilary Harder, Dougl Harder, Bart German, Lauren Penner, Navid Ahmadian, Susan Siegel, David Siegel, Ari Bobrow, Leda Cunningham, and David Preston.

### Little Cayman • Southern Cross Club • July 13 -20

Limit 11 participants

Package: 8 days/7 nights - \$1,860, includes lodging in beachfront cabanas, food, 3 boat dives per day, and airport transfers.

### Flower Garden Banks NMS Research Trip • M/V Spree • July 28 - Aug. 2

Limit 13 divers

Package: 6 days/5 nights - \$600, includes all meals, diving and lodging on liveaboard; trip will be shared with Sanctuary researchers.

### Key Largo Coral Spawning Project • August 27-September 2

Limit 19 participants

Package: 6 nights/7 days - \$685, includes lodging at Amy Slate's Amoram Dive Resort, 5 days of 2 tank dives, 3 one tank night dives to witness the coral spawning, and continental breakfasts.

### Venezuela (led by Paul Humann) • Mare-Mares Resort • Aug. 31 - Sep. 7

Limit 18 divers

Package: 8 days/7 nights - \$808, includes lodging, diving with Hori-Sub (13 dives), lunch on diving days, r/t airport transfers from Puerto La Cruz; optional 3 day extension to Isla Cubagua and Los Frailes is available departing Sept 10. Total price w/ extension \$1253.

### British Columbia • God's Pocket Resort • Fish & Invertebrates • Sep. 8 -14

Limit 14 divers

Package: 7 days/6 nights - \$821.50, includes lodging, food and diving (2 boat dives per day, unlimited shore diving), and r/t transportation from Port Hardy. This project will also include invertebrate identification seminars and surveying.

### Channel Islands National Marine Sanctuary • M/V Conception •

September 17-21 - FULL

### Gulf of California/Sea of Cortez (led by Ned DeLoach) • Don Jose •

October 6 - 13 - FULL

### Grenada • November

Limit 15 divers

8 days/7 nights - \$715, includes lodging and 5 days of 2 tank diving, (\$371 non diver price)

### Puerto Rico REEF Discovery Tour (led by Paul Humann) • November 2 - 9

FULL



2001 St. Vincent Field Survey Participants- Back row: Barbara Kirchner, Jose Kirchner, Keith Don Batalla, Captain Bill Tewes, Divemaster DJ, and Sam Rankin. Front row: Nicky Pallot, Leslie Whaylen, Will Ruggles, Douglass Rankin, Alex Score, and Laurence Kaye.

# FIELD STATIONS

Field Stations are instrumental as centers for dissemination of REEF information and materials. Field Stations regularly promote and teach Fish Identification Courses, organize dives built around fish watching and taking surveys, promote REEF membership, and serve as distribution centers for REEF materials and survey forms.

Visit the REEF website for direct links and more information on REEF's Field Stations.

## USA and Canada Field Stations

### California

Oceanside - Under Water Schools of America 760-722-7826 usascuba.com  
Riverside - Scuba Schools of America 909-689-2422 www.ssa-riverside.com

### Connecticut

New England Ski & Scuba LLC 860-872-0013 www.newenglandskiandscuba.com

### Florida

Bonita Springs - Eagle Ray Dive Center 941-992-2237 divenfinfo.com  
Gainesville - Water World 352-377-2822 www.H2Oworld.com  
Islamorada - Lady Cyana Divers 800-221-8717 www.ladycyana.com  
Key Largo - Diver's Direct Outlet 305-451-8034 www.diversoutlet.com  
Key Largo - Kelly's On the Bay/ Aquanut Divers 305-451-1622 www.aqua-nuts.com  
Key Largo - Amy Slate's Amoray Dive Resort 305-451-3595 www.amoray.com  
Key Largo - Horizon Divers 305-453-3535 www.horizondivers.com  
Key Largo - It's A Dive 305-453-9881 www.itsadive.com  
Marathon - FL Keys Nat'l Marine Sanctuary 305-743-2437 www.fknms.nos.noaa.gov  
Riviera Beach - Jim Abernethy Adventures 561-691-5808 www.scuba-adventures.com  
Tavernier - Conch Republic Diver, Inc. 305-852-1655 conchrepublicdivers.com

### Gulf Coast States (LA, AL, FL)

New Orleans - REEF Field Station of Northern Gulf of Mexico 504-276-4887 www.reefngom.org

### Hawaii

Honolulu - Island Divers Hawaii 808 947 6583 www.islanddivershawaii.com  
Kona - Eco Adventures 808-329-7116 www.ecodive.com  
Maui - Project S.E.A.-LINK www.projectsealink.org  
Midway - Midway Island Station 808-599-5400 www.midwayisland.com

### Maryland

Baltimore - National Aquarium 734-994-3483 www.aqua.org

### Michigan

Ann Arbor - Huron Scuba Adventures 734-994-3483 www.huronscuba.com

### Minnesota

Rochester - MDC Sports 507-288-8802 www.mdcsports.com

### New Jersey

Belle Mead - The Scuba Connection 908-359-1250 www.tscscuba.com

### New York

Rome - Delta Divers 315-337-2300 www.deltadivers.com

### Texas

Houston - Texas Gulf Coast Council 713-726-9737 www.tgccdiveclubs.org  
Humble - WW Diving 281-540-1616 www.wwdive.com

### Washington

San Juan and Orcas - Island Dive and Sports 800-303-8386 www.divesanjuan.com  
Vancouver - Odyssey Ocean Scuba Center 360-883-2621 www.diveodyssey.com

### Canada, British Columbia

Victoria - Living Oceans Society 250-920-0733 www.livingoceans.org

## Overseas Field Stations

### Bahama

Cat Island - Dive Cat Island 800-688-4752 www.hawks-nest.com  
Nassau - Custom Aquatics 242-362-1492 www.bahamasvg.com/aquatic.html

### Belize

Seasports Belize 501-2-35505 www.seasportsbelize.com

### Bermuda

Flats - Bermuda Aquarium, Museum & Zoo 441-293-2727 www.bamz.org

### Bonaire

Kralendijk - Buddy Dive Resort 599-717-5080 www.buddydive.com  
Kralendijk - Green Submarine 599-717-2929 www.greensubmarine.com  
Kralendijk - Plaza Resort Bonaire 599-717-2500 www.plazaresortbonaire.com

### British Virgin Islands

Tortola - Baskin in the Sun 284-494-2858 www.baskinthesun.com

### Cayman Islands

Little Cayman - Southern Cross Club 345-948-1099 www.southerncrossclub.com  
Grand Cayman - Wall to Wall Diving 345-942-6608 www.walltowalldiving.com

### Cuba

Salty Dog Adventures 636-677-7504 www.sdadive.com

### Honduras

Utila - Utila Lodge Resort 504-425-3143 www.utila.com

### Mexico

Chinchorro - Maya Ha Resort 512-891-9812 (US) www.mayaharesort.com  
Cozumel - Aqua Safari 011-52-987-872-0661 www.aquasafari.com  
Puerto Aventuras - Dive Aventuras 011-52-987-35129 www.diveaventuras.com  
Yucatan Peninsula - Akumal Dive Adventures 505-992-3333 www.akumaldiveadventures.com

### Netherlands Antilles

Curacao - Curacao Sea Aquarium 0599-9-461-6666 www.curacao-sea-aquarium.com

### Puerto Rico

Culebra - Reeflink Divers 787-742-0581 www.diveguide.com  
Rincon - Oceans Unlimited 787-823-7436 www.oceans-unlimited.com

### Turks and Caicos

M/V Wind Dancer (Peter Hughes Diving) 800-9DANCER www.worlddive.com  
M/V Sea Dancer (Peter Hughes Diving) 800-9DANCER www.worlddive.com  
Providenciales - Big Blue Unlimited 649-946-5034 www.worlddive.com

### US Virgin Islands

St Croix - Ultimate Blue Water Adventures 340-773-5994 www.stcroixscuba.com  
St Thomas - Aqua Action Dive Center 340-775-6285 www.AADivers.com  
St Thomas - St. Thomas Diving Club 340-776-2381 www.st-thomasdivingclub.com

### Venezuela

Puerto La Cruz - Horisub 58-81-814878 www.horisub.com  
Los Roques - M/V Antares (Peter Hughes) 800-9DANCER www.worlddive.com

### West Indies

St. Vincent - Dive St. Vincent 784-457-4928 www.divestvincent.com

Contact alex@reef.org to become a Field Station.

## REEF Field Station of Rome, New York

Delta Divers of Rome, New York, one of REEF's newest Field Stations, is proud to be associated with other like-minded individuals who have a sincere interest in the survey, protection and enjoyment of fish life throughout the world. Presently, dive shop owner, Dave Hinman, and Field Station coordinator, Zane Cofield, are expanding the Delta Divers Continuing Education Program to include all phases of marine environment protection, including REEF Fish ID and Coral Reef ID Specialty courses, and the PADI Project AWARE curriculum. Delta Divers offers the REEF Fish ID course in conjunction with its travel itineraries, as an added incentive to travel with their "crew."

Based in upstate New York, the "Delta Divers Crew" leads Dive and Adventure Travel trips to the Caribbean and Western Atlantic yearly, including an upcoming survey in November, where they'll join the REEF staff to dive the Florida Keys National Marine Sanctuary from Amy Slate's Amoray Dive Resort. Dave and his wife, Jan, are staunch supporters of REEF and other environmentally based organizations dedicated to the protection of the living sea. Recently, Zane, John and Trish Novak, and Chuck Skinner, members of the Delta Divers Crew, helped REEF Staff Alex Score and Leda Cunningham at the REEF booth at Beneath The Sea in Secaucus, New Jersey. As volunteers, they talked with the public about fish and reef concerns throughout the world, and a blast was had by all involved.

The Delta Divers Crew invites everyone to join them in Gloucester, Massachusetts during GAFC week in July. Stop by Cape Ann Marina and meet Zane, his wife,



Delta Divers crew survey fish in Cozumel. From left to right: Shaoun Brothers, Tom Hoyte, Zane Cofield (instructor), Brenda Brothers, John Baranoski, Al White, Jan Hinman.

Jennifer, Shaoun and Brenda Brothers, and the Delta Divers Crew and "speak Fish."

Delta Divers REEF Field Station can be reached at (315) 337-2300 or on the web at [www.deltadivers.com](http://www.deltadivers.com).



# SURVEY NUMBERS

## TWA (Tropical Western Atlantic)

### Over 100

Laddie Akins (777)  
Linda Schillinger (646)  
Leslie Whaylen (560)  
Deena Wells (505)  
Joe Thomas (481)  
Christy Semmens (443)  
Jean Kirkpatrick (411)  
Cathy Coughlin (410)  
Judie Clee (403)  
Sheryl Shea (401)  
Peter Leahy (307)  
Emily Schmitt Lavin (302)  
John Pitcairn (302)  
Monty Doyle (301)  
Ken Deaver (288)  
Edwin Steiner (280)  
Jessica Armacost (269)  
Brice Semmens (264)  
Elaine Morden (261)  
Joyce Schulke (253)  
Linda Baker (240)  
Clive Petrovic (234)  
Ken Marks (224)  
Bruce Purdy (220)  
Patricia Ayers (217)  
Will Ruggles (204)  
Douglass Rankin (203)  
Doug Rorex (201)  
Tom Isgar (198)  
Ann Knollenberg (198)  
Darlene Gehringer (194)  
David Preston (194)  
Carol Lorenz (193)  
Jerry Ligon (185)  
Kris Wilk (173)  
Clint Whitaker (159)  
Douglas Harder (156)  
Bob Bishop (151)  
Julie Overing (149)  
Barbara Modafari (144)  
Scott Fowler (138)  
James Brooke (136)  
Randy Keil (135)  
Betsy Saunders (132)  
Robert Doyle (130)  
Margaret Cowin (127)  
Kathie Comerford (126)  
Hilary Harder (119)  
Dave Grenda (118)  
Mark Kaehler (118)  
Patricia Chandler (117)  
Carol Whitaker (114)  
Rhian Lewis (112)  
Chris Koepfer (110)  
Kitty Philips (109)  
Denise Mizell (109)  
Pamela Bezuidenhout (107)  
Tracy Hamilton (105)  
Cindy Snell (105)  
Jim Morabito (104)  
Tracy Siani (104)  
Any Wilk (104)  
Don Buck (100)

### Over 50

Currier Randall (98)  
Carol Reichert (98)  
Greg Bunch (96)  
Cheri Arnold (92)  
Connie Bishop (90)  
Andy Dehart (90)  
Brenda Hitt (89)  
Lorraine Sommer (88)  
Kathleen Scott (88)  
Neil Ericsson (88)  
Steve Gittings (88)  
Paul Humann (87)  
Shelley Tyre (85)

Gail Tomei (85)  
Jim Modafari (84)  
Matt Hoelscher (83)  
Tony Sebastian (81)  
Kirsten Bassion (80)  
Karen Garcia (80)  
Tim Gurney (80)  
Pamela Cefaratti (80)  
Kevin Henke (79)  
Karen Florini (79)  
Lauren Penner (79)  
Kern Spencer (79)  
Cassandra Weith (78)  
James Vaughn (78)  
Michele Vaughn (78)  
Jean Gasen (77)  
Robyn Osborn (77)  
Rick Halpern (74)  
Denny Howley (74)  
Wes Nicholson (73)  
Walter Briney (73)  
Ralph Dickerson (71)  
Pug Pugliese (71)  
Susan Thompson (69)  
Michael Phelan (69)  
Ann Outlaw (69)  
Corinne Halberg (68)  
Richard Hitt (68)  
Melody Hamilton (67)  
Wayne Manning (67)  
Connie Dolan (66)  
Clive R. Wood (66)  
Audrey Smith (65)  
Dave Downs (64)  
Rob McCall (64)  
Jane Rorex (63)  
Dennis Schneider (63)  
Monica Vega (63)  
Janet Earnshaw (62)  
Jacquie Tinker (61)  
Ditte Preker (60)  
Edgar Tomei (60)  
Robert Antonelli (59)  
Marjorie Nelson (59)  
Charles Hersey (58)  
Nathan Gates (56)  
Craig Scott (56)  
Anthony Kajfez (56)  
Kathy Aguilar (56)  
Andrea Valerioti (55)  
Anna Deloach (55)  
Julie Dutcher (55)  
Gibran Tuxpan (55)  
Gustavo Vazquez (54)  
Gijs Van Hoorn (54)  
Woody Brooks (53)  
Brenda Berliner (53)  
Lillian Kenney (53)  
David Mulvey (53)  
Chuck Jirka (52)  
Noreen Downs (52)  
Annie Glasspool (52)  
Glen Thiel (51)  
Jonathon Tromm (51)  
Bobbii Cartwright (51)  
Jose Kirchner (50)

### Over 25

Robert Winters (49)  
Leda Cunningham (49)  
Jonathan Edwards (48)  
Sara Thomas (48)  
Sandra Percell (47)  
Donella Wilson (47)  
Todd Aikins (46)  
Jo Ann Nucifora (46)  
Chris Ostrom (46)  
Barbara Kirchner (45)  
Joseph Froelich (44)  
Sanford Robbins MD (44)  
Sharon Hawk (44)  
Cristi Korbeck (44)

Peter Rennemann (43)  
Alex Score (43)  
Eric Riesch (42)  
Pat Lommel (42)  
Rosalinda Garcia (42)  
Kandie Vactor (42)  
Janet Phipps (42)  
Steve Ganon (41)  
Emma Hickerson (41)  
Tony Ramirez (41)  
Chris Jeffrey (40)  
Robert Grist (39)  
Mike Chambers (39)  
Robert Burnett (39)  
Shawn Edwards (38)  
Joe Meyer Iv (38)  
William Horn (38)  
Lisa Canty (37)  
Denny Lutz (37)  
Susan Siegel (37)  
James Lommel (37)  
Gail Klepper (37)  
Carolyn Kennedy (37)  
Donna Gerrard (37)  
Linda Meyer (37)  
John Kelly (37)  
Wade Bevier (36)  
Mark Springer (36)  
Jennifer Stuart (36)  
Robert Draper (36)  
Ed Gerrard (36)  
Randy Holley (35)  
Kathleen Gunderson (35)  
Mark Messersmith (35)  
Jeana Hodges (34)  
Gaylynn Dickerson (34)  
Lynn Hubert (34)  
Muns Farestad (34)  
Lin Creel (34)  
Kevin Buch (34)  
Art Hulse (33)  
David Colvard (33)  
Brett Sussman (33)  
Steve Boutelle (33)  
David Siegel (32)  
Susan Cable (32)  
Eddie Gerrard (32)  
Norris Boone (32)  
John Stuart (32)  
Patrick Gaughran (32)  
Jill A. Mashburn (32)  
Melissa Keyes (32)  
Lynn Carey (32)  
Joseph Thomas (32)  
Robert Schauer (31)  
Karel Cantelar Ramos (31)  
Arnold Walker (31)  
Amy Fowler (30)  
Mark Bailey (30)  
Katia Pronzati (30)  
Beth Bruton (30)  
Jesse Meyer (30)  
Mary Evans (29)  
Michaela Dethlefsen (29)  
Ronald Moss (29)  
Jennifer Adams (29)  
Edward Sullivan (29)  
Ken Smith (29)  
Gary Lenning (29)  
Shannon Lyday (29)  
Van Duncan (29)  
Phyllis Robinson (29)  
John Lane (29)  
Cathy Springer (28)  
Luis Betancourt (28)  
Bob Bonanno (28)  
Sascha Steiner (28)  
Seymour Halberg (28)  
Stephen J Vinitzky (28)  
Patricia Pachuta (28)  
Bryan Nichols (28)  
Gail Rose (28)

Cheva Heck (28)  
Roxanne Chavanne (27)  
John Summey (27)  
Judy Keller (27)  
Kathy Bonanno (27)  
Christy Sims (27)  
Sarah Henke (27)  
Les Wilk (27)  
Cassandra Warn (27)  
Keith Phillips (27)  
Lana Smithson (26)  
Pete Wyman (26)  
Edith Summey (26)  
Belal Hansrod (26)  
George Owens (26)  
Claudia Campos (26)  
Rebekah Moore (26)  
Alyssa Klepper (26)  
Thomas Jenkins (26)  
Mark Mcalpin (26)  
Jeffrey Nehms (26)  
Blair Bertaccini (26)  
Matthew S. Kendall (26)  
Dillon Harder (25)  
Sharon Stockholm (25)  
Roger Stockholm (25)  
Dolora Wetherington (25)  
Roger Wiandt (25)  
Jessica Lorek (25)  
Kristi Klomp (25)  
Kathleen Wean (25)  
David Wienecke (25)  
Franklin Neal (25)

## PAC (Pacific)

**Over 100**  
Rachid Feretti (166)

**Over 50**  
John Williams (94)  
Kirby Johnson (86)  
Wes Nicholson (64)

**Over 25**  
Alan Dower (47)  
Bruce Higgins (46)  
John Wolfe (44)  
Janna Nichols (41)  
Christy Semmens (38)  
Matthew Dowell (36)  
Kurt Steinbach (32)  
Sarah Tamblin (29)  
Bryan Nichols (28)

## TEP (Tropical Eastern Pacific)

**Over 50**  
Richard Baker (93)  
Kandie Vactor (65)

**Over 25**  
Beth Bruton (37)

## HAW (Hawaii)

**Over 25**  
James Vaughn (44)  
Michele Vaughn (44)  
Fred Litt (34)  
Liz Foote (30)  
Wayne Batzer (25)



# THANK YOU

## BRONZE (\$100 or more)

STEVEN THOMAS AARDWEG  
NANCY ABEL  
BARBARA ABELES  
SUSIE ABRIGHT  
DANA AFRICA  
MONICA AMBROSI  
STEVE AMOS  
SCOTT ANDERSON  
ROBERT ARLEN  
CHERYL ARSCOTT  
LISA J. BAKER  
ROBERT BALZANO  
MARJIE BARROWS  
BARBARA BAUCOM  
CHRIS BEAMER  
IRA BELL  
TRACEY BENNETT  
BRENDA BERLINER  
DENNIS BERNIER  
PAUL BLECHA  
MARK BOARDMAN  
MARK BOEHM  
ALLEN BOORSTEIN  
LARRY BOSCO  
JO ANNE BOUMA  
CHRISTIN BOYD  
SHARON BOYD  
EDWIN BOYNTON  
PHILLIP BRADLEY  
DAVID BRANSTEN  
CORY BRAYTON  
ANN BROOKE  
WOODY BROOKS  
MAURY BROWN  
BETH BRUTON  
JOHN BURDAKIN  
ARTIE BURKE  
W.D. BURROWS  
ANGUS CAMPBELL  
JOHN CASSON  
BEV CHADWELL  
MIKE CHAMBERS  
DON BUSWELL-CHARKOW  
KATHRYN CHATT  
ANDREW CHESSON  
RICHARD CHINN  
CHRIS CLARK  
WILLIAM S. CLINE  
ROBERT COAKLEY  
SHEILA COLLIER  
KATHIE COMERFORD  
JEFFREY CONE  
MARGARET COWIN  
M.H. CROWE  
CHRISTOPHER CROWLEY  
MICHAEL DALEIDEN  
KAREN DAMARI  
RICHARD DAMIAN  
BRENT & DAWN DAVIS  
EDITH M. DAVIS  
K.C. DENDOOVEN  
SCOTT DENNISON  
BRUCE DICKSON  
FRED DION  
ROBERT DIXON  
ROBERT DONALDSON  
BARBARA EATON  
ROBERT EICHHOLTZ  
DONN ELLERBROCK  
IAIN ELLIS  
PATRICIA ERICKSON  
JILL ERICSSON  
DOUG ESCRIBANO  
JANET EYRE  
KEVIN FAGER  
WYDELL FEAZELL  
NICK FEHRENBACH  
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REEF wishes to recognize generous donations given in memory of:

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**Wish List:** nitrox computers for REEF staff, photocopy machine

Above contributions are from 5-1-2001 to 5-15-2002. Please let us know if you find our records in error.

# I.D. Books and CD Roms

## Caribbean & North Atlantic Guides

**Reef Fish Identification – Florida, Caribbean, Bahamas - 3rd Edition - \$39.95**  
*Paul Humann and Ned DeLoach*  
This comprehensive fish ID book was designed for divers. The new 3rd edition is packed with 857 classic marine life photographs of 594 species.

**Caribbean Reef Creature ID - 2nd Edition - \$37.95**

*Paul Humann and Ned DeLoach*  
There is more to see underwater than just fish. Learn to identify crabs, lobsters, jellies, worms, shrimp, sponges, mollusks and more. The new 2nd edition has 698 color photographs.

**Caribbean Reef Coral ID - 2nd Edition - \$32.95**

*Paul Humann and Ned DeLoach*  
This guide contains 530 color photographs that display stony corals, gorgonians, fire coral and black corals. There are also sections on coral disease, coral reproduction, and marine algae.

**The Reef Set - \$115**

*Paul Humann and Ned DeLoach*  
The complete ID set for coral, fish, and creatures- all three Caribbean marine life identification books come packaged together in a handy shelf case.

**Stokes Fishes of the Caribbean - \$12.95**

*F. Joseph Stokes*  
This is a must have for avid fishwatchers. It features color sketches of 460 species and many species are illustrated in several phases.

**Reef Fish Behavior - \$39.95**

*Ned DeLoach*  
The groundbreaking text offers underwater naturalists a detailed overview of what is presently known about the behavior and ecology of reef fishes that inhabit the waters of Florida, the Caribbean and Bahamas. The guide contains 475 color photos.

**Marine Life of the North Atlantic - \$30.00**

*Andrew Martinez*  
An informative guide for marine life of the coastal northeast Atlantic. Fishes, invertebrates and marine plants are included in this single volume. 360 species are illustrated with 378 underwater photographs.

## Temperate & Tropical Pacific Guides

**Coastal Fish ID (California - Alaska) - \$32.95**

*Paul Human, with Howard Hall and Neil McDaniel*  
This comprehensive guide of the US West Coast features 270 images and information about 250 fishes.

**Whelks to Whales: Coastal Marine Life of the Pacific Northwest - \$19.95**

*Rick Harbo*  
An easy to use, and all in one guide that features over 500 color photos, including all the invertebrates included in the Living REEF Project Pacific Northwest invertebrate monitoring program.

**Galapagos Fish ID - \$34.95**

*Paul Humann and Ned DeLoach*  
A comprehensive guide for the Galapagos, it also includes many fishes seen throughout the tropical eastern Pacific including the Gulf of California. The book includes 260 color images and 192 species accounts.

**Shore Fishes of Hawai'i - \$19.95**

*John Randall*  
A comprehensive informative ID reference, written by one of the world's most renowned ichthyologists. The book includes concise species accounts for 342 fishes found in Hawaii.

## Other Guides

**Anemone Fishes and their Host Sea**

**Anemones - \$29.95**  
*Daphne Fautin and Gerald Allen*  
The only comprehensive field guide to the fascinating world of the anemonefish and their host anemones.

**A Guide to Angelfish and Butterflyfish - \$39.95**

*Gerald Allen, Roger Steene, Mark Allen*  
This book is the definitive guide to all known marine angelfish and butterflyfish.

**Coral Reef Animals of the Indo-Pacific - \$44.95**

*Terrence M. Gosliner, David W. Behrens, Gary C. Williams*  
This comprehensive reference covers more than 100 marine animals from all major invertebrate groups. Includes: Africa to Hawaii with a special emphasis on the western Pacific.

**Nudibranchs and Sea Snails: Indo-Pacific Field Guide - \$44.95**

*Helmut Debelius*  
This guide features more than 1,000 photos of shelled and shellless snails from the tropical Pacific.

**Snorkeling Guide to Marine Life – Florida, Caribbean, Bahamas - \$12.95**

*Paul Humann and Ned DeLoach*  
Includes 280 photos of fish, corals, plants, and creatures that you will see in less than 15 feet of water.

**In-a-Pocket Waterproof Identification Booklets - \$10**

These handy guides fit right in your BCD pocket. Please specify which booklet when ordering-- Caribbean Fish-in-a-Pocket, Caribbean Creature-In-A-Pocket, Indo-Pacific Fish-In-A-Pocket.

**Traveler's Book Case (empty) - \$25**

This handy, custom-made and weather-resistant Cordura case is perfect for the traveling diver. It will hold up to three of the New World Publication ID books, and features an additional zippered pouch for a slate, pencils, pens and notes.

## Identification CD-ROMs

**ReefNet Fish ID CD-ROM (2nd Edition) - \$64.95**

This updated version, 2 CD set contains over 1,400 pictures and 200 video clips for 500 Caribbean reef fishes. Features include learning games, a mystery fish query interface and a customizable slide show.

**Reef Fish ID CD-ROM - \$39.95**

A companion to the Humann and DeLoach Caribbean Reef Fish Identification book, it features over 1,600 images, fish ID games, a fish finder, and log book.

**Reef Creature/Coral ID CD-ROM - \$39.95**

A combination of the Humann and DeLoach Caribbean creature and coral books, this CD features over 2,300 images and learning games.



The sea raven can be seen by surveyors in the Northeast US and Canada. Its body color is variable (red, yellow, or brown) and it uses its large mouth to swallow its prey (usually smaller fish).

*Photo by Andrew Martinez.*

**REEF has an online store where you can order supplies !**

**Visit [www.reef.org](http://www.reef.org).**



# Survey Materials

## Survey Forms (Scanforms) - free

The basis of the REEF monitoring program, you can get these by either calling REEF HQ, sending an email, or using the online store. Please specify which region.

## REEF Starter Kit

The basic kit for all fish watchers. Contains REEF underwater slate, underwater survey paper, 2 REEF scanforms, and a REEF BC tag. A waterproof color ID card is also included in all regions except the tropical western Atlantic Kit, which contains the waterproof Fish-in-a-Pocket.

- **Tropical Western Atlantic** (Caribbean, Florida, Bahamas, Gulf of Mexico, Mid-Atlantic States) - \$25.00 (includes Fish in a Pocket)
- **Northeast US & Canada** (Virginia - Newfoundland) w/ cold water slate- \$20.00
- **California** - \$15.00
- **California w/cold water slate**- \$20.00
- **Pacific Northwest** (Oregon, Washington, and British Columbia)- \$15.00
- **Pacific Northwest w/cold water slate** - \$20.00
- **Tropical Eastern Pacific** (Gulf of California to the Galapagos Islands) - \$15.00
- **Hawaii** - \$15.00



## Survey Slates

### REEF Yellow Fish ID Slate - \$9.95

Slate has 60 spaces to list fish sightings and blank profiles to sketch "mystery fish". Includes attachable pencil and is designed to work with REEF waterproof survey paper.

### Cold Water Survey Slate - \$15

Specifically designed for conducting a survey in high currents and cold water, this slate is slightly larger than our regular yellow slate and features a lanyard, an attached pencil and bolts to secure the waterproof paper and color id card.

## Waterproof Survey Paper - \$0.60

One sheet of double sided waterproof paper, good for 2 surveys. Please specify region.

## Project AWARE Identification Courses - \$105

Courses include curriculum, slides, sample starter kit, and introductory video. Courses are available for the following regions: Tropical Western Atlantic, Mid-Atlantic, Northeast US, Flower Garden Banks NMS, Gulf of California, Southern California, Northern California, Pacific Northwest Fish, Pacific Northwest Invertebrates, and Hawaii.

# REEF GEAR



## REEF T Shirt - \$15

100% cotton T-shirt displaying the REEF logo on the back, underscored by "We Speak Fish." Sizes: M, L, XL



## REEF Golf Shirt - \$35

100% heavy weight cotton pique short sleeved with REEF logo embroidered on front. Sizes: M, L, XL. Please specify color: light blue or turquoise.



## REEF Cap - \$15

Six panel, 100% cotton pigment-dyed cap with embroidered REEF logo on front and "We Speak Fish" over back opening. One size, please specify color combination: forest crown with sand visor, khaki crown with forest visor, khaki crown with navy visor.

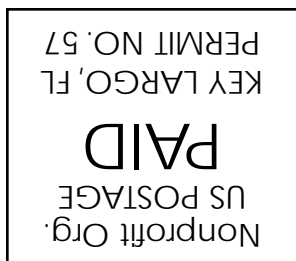
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