

# Reef Environmental Education Foundation 2002 Annual Report

# Message from the Director

#### At-A-Glance

54,490

2002 Budget: \$559,000

Fish Surveys Conducted To Date: 55,663

Offices: Seattle, WA

Website: www.reef.org

Incorporated: 1990

2002 was another great year for REEF! While political issues and poor economic conditions troubled much of the world, REEF continued to excel 2002 Membership: in our marine conservation mission. New and expanded programs, increased assessment contracts, and an ever-increasing flow of data from active members marked the highlights of our year.

Financially, 2002 was a tough year for many non-profits, particularly those in the conservation arena. REEF was no exception. While previous years had seen nearly exponential growth in the organization, 2002 was a time for tightening the belt. The 2002 budget grew 5% and while many non-profits closed their doors, REEF continued to push forward with our conservation mission and projects. REEF's strong membership support continued to Key Largo, FL - HQ provide the backbone of our operations.

> As a key component of REEF's mission, data collection continued to expand and grow. The database reached the 50,000 survey mark in 2002, while data management became more efficient through new programming. At the same time, membership continued to grow and the experience of our surveying members increased rapidly. REEF now has more than 145 expert surveyors. These experts provided a valuable resource to the conservation community because of the high quality of data they provide.

> Many new members of the public were introduced to REEF through our outreach efforts including the Great Annual Fish Count. The GAFC, held throughout the month of July, rose to new heights in 2002 and saw dramatically increased participation and publicity. Nearly 100 free seminars reached over 1,000 people. REEF members conducted over 3,000 fish surveys as part of the event. The event also went international, complete with a name change to reflect its new scope (previously the "Great American Fish Count").

REEF staff were invited to participate in programs to South Africa, American Samoa, and British Columbia. Staff also held positions on government and non-profit Advisory Boards and took part in numerous organizational meetings.

Finally, the addition of new board members and improved internal work practices helped REEF maintain organizational focus through difficult times. As we look back on 2002, we see continued growth in trying times and a positive outlook for the future.

Thanks from all of the staff and board and Best Fishes!

MISSION

To educate, enlist, and enable divers and non-divers alike to become active stewards in the conservation of coral reefs and other marine habitats.

Lad Akins

**Executive Director** 

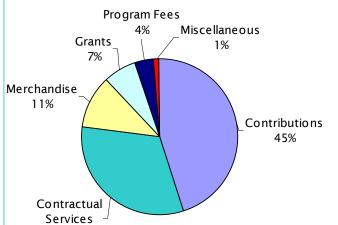


# Financial Review and Special Contributors

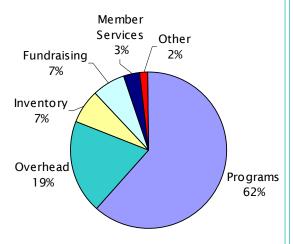
REEF obtains funding primarily through member donations, foundation support and monitoring and reporting contracts. The annual operating budget for 2002 exceeded \$559,000\*. Despite our no-fee membership, membership contributions continued to be the cornerstone of our support and provided 45% of our operating budget. We continued to keep overhead low (19%) and apply membership support directly toward supporting REEF's programs.

<u>Income</u>	
Contributions	\$252,467
<b>Contract Services</b>	\$178,836
Merchandise	\$61,063
Grants	\$39,000
Program Fees	\$22,259
Miscellaneous	\$6,323
Total	\$559,948





32%



# **Foundations**

The Henry Foundation
The Korein Foundation
The Meyer Foundation
The Curtis and Edith Munson Foundation
PADI Project AWARE
The Rohauer Collection Fund

#### **Platinum Sustainers**

REEF members who contributed \$1,000 or more in 2002.

Kathy Aguilar	Kevin Henke	Chris Ostrom
Pat Ayers	Paul Humann	Ole Peloso
Brenda Berliner	Fred Ingham	Feodor U. Pitcairn
Walter Briney	Tom and Susan Isgar	Ken Puglisi
Mindy Cooper-Smith	Mark Kaehler	Dennis Schneider
David DaCosta	Jose Kirchner	William Sheppard
Jim Dalle Pazze	Jean and Bob Kirkpatrick	Michael Stanfield
Ken Deaver	Ann Kugel	Edwin Steiner
Ned and Anna DeLoach	Dennis and Tracy Liberson	Carol Whitaker
Rosemary Duke	Linda Meyer	Clint Whitaker
Neil Ericsson	Joe Meyer IV	Clive R. Wood
Kathleen Gunderson	Jeffrey Nehms	Stuart E. Wunsh
Chatten Hayes	David and Patricia Orr	

<sup>\*</sup>This financial information has been compiled from computer bookkeeping systems and not in a review or audit. Complete and professionally prepared financial statements will be available by August 01, 2003.

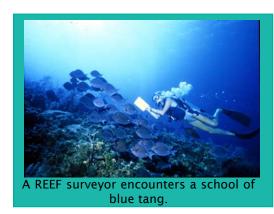
# Education and Outreach

Education and outreach are at the core of our activities. Through public talks and the development of educational materials, we teach others about marine fishes and their habitats. The REEF newsletter and Website serve as our two primary outreach tools. Dive show attendance and REEF Field Stations help us spread our message to the diving community.

In addition to the almost 100 free identification seminars conducted as part of the Great Annual Fish Count, REEF staff and volunteers conducted approximately 35 public talks in 2002, attended by over 1,000 people. Talks were conducted for dive clubs, school groups, nature centers, aquaria, and at dive shows.

# Newsletter, Website, Field Stations and Dive Shows

The quarterly REEFNotes newsletter is mailed free of charge to REEF members. It is published quarterly and features stories on recent REEF projects, science achievements, and fish identification columns. The Nielsen Company in Florence, Kentucky makes this publication possible through an in-kind donation of printing.



REEF's Website, **www.reef.org**, is a key component of our program. In addition to providing summaries of fish survey data for geographic areas, species distribution reports, and personal life lists for REEF members, the Website contains galleries and quizzes, an expanded Member Forum site with articles and mystery fish identification, an online store to purchase survey materials and guidebooks, and a section on the research and monitoring applications of the database. In 2002, the site received an average of 76,349 visits and approximately 302,000 page views each month.

REEF Field Stations are dive shops, aquaria and other institutions that regularly promote and teach fish identification courses, organize survey dives, promote REEF membership and serve as distribution centers for REEF information and survey materials. Field Stations pay an annual fee and are listed in REEF's newsletter and website as places our members can "Speak Fish." At the end of 2002, there were 52 Field Stations from ten US states, Canada, and fifteen Caribbean nations in the program.

REEF attends several dive shows each year, displaying our booth and conducting seminars. In 2002, REEF participated in five shows.



# 2002 Dive Shows

Beneath the Sea, Secaucus, NJ - March Our World Underwater, Chicago, IL - April OceanFest, Ft. Lauderdale, FL - May SeaSpace, Houston, TX - June DEMA, Las Vegas, NV - October

# **Education and Outreach**

#### Great Annual Fish Count 10-Year Anniversary

This year marked the tenth anniversary of the Great American Fish Count (GAFC). REEF used this milestone to recognize the GAFC's successes and expansion over the last decade. To reflect its international growth, the event name was changed to the Great Annual Fish Count. The GAFC's 10<sup>th</sup> year was celebrated throughout the US, British Columbia, Ontario, Cozumel, Gulf of California, Jamaica, Belize, Honduras, Bermuda, Bonaire, Bahamas, Turks and Caicos, and the Cayman Islands.





GAFC seminar participants at the Pt. Defiance Zoo and Aquarium in Tacoma, WA.

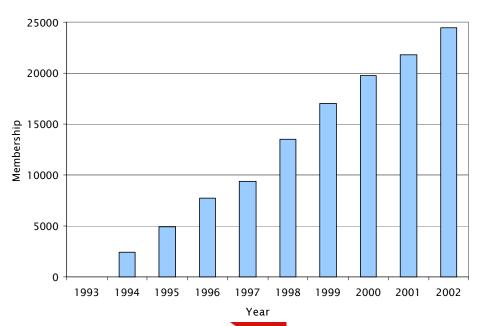
94 free fish identification seminars were held throughout REEF's project regions, attended by approximately 1,000 people. The number of REEF surveys conducted during July dramatically increased from 2001. Volunteers conducted just over 3,000 surveys during July, and approximately half of those were completed during dive events organized specifically for the GAFC.

There were many special events organized to recognize the GAFC ten-year milestone. Highlights

were a digital photo contest with NOAA's National Marine Sanctuaries, a Kick-Off event with the Channel Islands National Marine Sanctuary, a 10<sup>th</sup> Year Anniversary celebration with the Stellwagen Bank National Marine Sanctuary, and a national closing event in Key West, Florida, with the Florida Keys Community College Scuba Club and Artificial Reefs of the Keys. The GAFC Challenge was also held for the second year, which included many great local and national prizes including a grand prize dive vacation donated by Hawk's Nest Resort.

# Membership

Our members are the lifeblood of REEF. They provide the data and support to carry out REEF's mission. Their dedication and passion are contagious and the REEF staff members are constantly inspired by them. REEF is proud to maintain a no-fee membership. In 2002, 2,700 members joined REEF, bringing the total membership to just under 25,000.



#### 50,000 surveys!

During 2002, a milestone was reached in REEF's Fish Survey Project when the 50,000<sup>th</sup> survey was entered into REEF's database. The Fish Survey Project has become one of the most successful marine citizenscience programs in the world. The dedication of REEF members has enabled the creation of a database that is becoming uniquely useful in addressing a variety of research and management questions. Beyond the basic information of species distribution and abundance patterns, applications of the data have included evaluating the effects of harvest restrictions, analyzing trends over time, identifying areas of high diversity for eco-regional planning, providing fisheries-independent

In 2002, REEF volunteers conducted a total of 13,831 surveys.

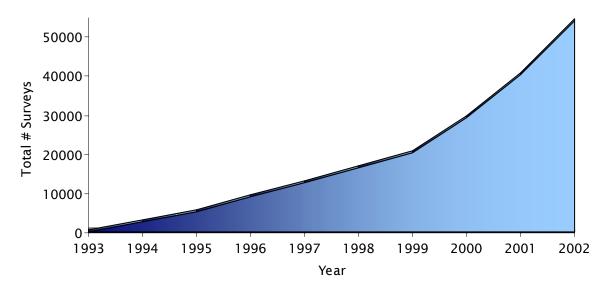


assessments of populations, evaluating the biogeography of fishes and discovering rare, new, and non-native fishes. By the end of the year, the database had 55,663 surveys.

Breakdown of survey numbers by region:

	<u> 2002</u>	<u>l otal</u>
Tropical Western Atlantic	10,926	48,144
US & Canada Pacific	1,575	3,991
Tropical Eastern Pacific	582	2,111
Hawaii	367	906
Northeast US & Canada	381	511

# Cumulative Number of REEF Surveys by Year



REEF's Scientific Coordinator, Dr. Christy Pattengill-Semmens, works as a liaison between the volunteer activities and science and management applications of the data. In addition to the summary information below, a full publication list and PDF reprints are available on REEF's website.

#### **Papers**

- REEF 2002. Volunteer reef fish monitoring in the Florida Keys National Marine Sanctuary: 1994-2001. http://www.reef.org/data/FKNMS\_5yrreport.pdf.
- Schmitt, E. F., T. D. Sluka, and K. M. Sullivan-Sealy. 2002. Evaluating the use of roving diver and transect surveys to assess the coral reef assemblages off southeastern Hispaniola. Coral Reefs. 21: 216-223.
- Semmens, B.X., E.F. Buhle, A.K. Salomon, and C.V. Pattengill-Semmens. submitted. Tankers or fish tanks: what brought non-native marine fishes to Florida's waters. Marine Ecology Progress Series.
- Whaylen, L., Pattengill-Semmens, C.V., Semmens, B.X., Bush, P.G. and M.R. Boardman. 2002. Observations of a Nassau Grouper (*Epinephelus striatus*) Spawning Aggregation Site In Little Cayman, Including Multi-Species Spawning Information. Gulf and Caribbean Fisheries Institute Meting.

#### Symposia

- In 2002, REEF presented talks or posters at the following symposia:
- American Society of Limnology and Oceanography, talk "Benthic Habitat Associations of Reef Fishes: Coupling of Habitats and Fish Distributions"
- Gulf and Caribbean Fisheries Institute, talk "Observations of a Nassau Grouper (Epinephelus striatus) Spawning Aggregation Site In Little Cayman, Including Multi Species Spawning Information"
- Invasive Species in Florida Marine Waters Symposium, poster "A Hotspot of Non-Native Marine Fishes on Southeastern Florida Reefs."
- National Marine Educators Association, talk "One Fish, Two Fish, Blue Fish, Red Fish: Fishes of the National Marine Sanctuaries, celebrating the 10 years of the Great Annual Fish Count, Monterey Bay, Flower Gardens, and Stellwagen Bank"
- North American Practitioners Workshop on Monitoring and Research of Marine Reefs using Volunteer Divers, talk "Using Volunteers as a Tool: Experiences from REEF's Fish Survey Project in the Pacific Northwest"
- Sea Turtle Symposium, poster "Assessment of Sea Turtle Observation Data Collected by Volunteer Divers"
- Southern California Academy of Science, talk "REEF: A Volunteer Fish Monitoring Program in California"



# Advanced Assessment Team Projects

Surveying members who achieve Expert status are extended an invitation to REEF's Advanced Assessment Team (AAT) and are invited to participate in special surveying opportunities. There are currently 145 surveying members in the AAT. In 2002, REEF initiated and continued several monitoring and assessment projects that used AAT members. These included evaluating the effectiveness of no-take zones in the Florida Keys, characterizing the fish assemblage of Gray's Reef National Marine Sanctuary, monitoring the Wellwood restoration site and the Spiegel Grove artificial reef in the Florida Keys and collecting baseline data in San Andres, Columbia and Puerto Rico.



Rock beauty appear to be in decline throughout the Florida Keys.

# Florida Keys National Marine Sanctuary Zone Performance Monitoring

Following the implementation of no-take zones in the Florida Keys in 1997, REEF's AAT has conducted annual assessments at 37 sites in the FKNMS from Key Biscayne to the Dry Tortugas. In 2002, 427 surveys were conducted during this project. In addition, as part of the 5-year performance review of the no-take zones, REEF submitted a report on the status and trends of the fishes at the zone monitoring sites between 1994 and 2001.

Key findings of the report include-

- fish species richness was higher at the no-take site than at the reference site in 12 of the 15 no-take/reference site pairs,
- nine of the sites protected as no-take exhibited significant changes in fish species' abundance,
- species that appeared to be in general decline at a majority of the sites were rock beauty, smooth trunkfish, dusky damselfish, sharpnose pufferfish, ocean surgeonfish, and trumpetfish.

# Gray's Reef NMS Assessment of Fishes

Located 17.5 nautical miles off Sapelo Island, Georgia, Gray's Reef is one of the largest near shore live-bottom reefs off the southeastern United States. It is composed of 17 square nautical miles of intermittent sandstone outcroppings with an attached carpet of sponges, barnacles, sea fans, corals, and sea stars. During a four-day project in 2002, eight AAT members conducted 67 surveys in the Sanctuary and documented 82 species of fish, several of which were new records for the Sanctuary. The primary objective of this project was to develop a comprehensive fish species list to assist Gray's Reef in their overall long-term monitoring project. This assessment will be continued on an annual basis.



The live-bottom habitat of Gray's Reef.

# Advanced Assessment Team Projects

# Spiegel Grove Assessment and Wellwood Restoration Monitoring

Two new projects were initiated in the upper Florida Keys in 2002. In May, the 510-foot long *Spiegel Grove* was sunk as an artificial reef in Key Largo. The vessel is the largest ship ever intentionally scuttled to create an artificial reef. Pursuant to the permit received by the Upper Keys Artificial Reef Foundation to sink the ship, pre- and post-deployment monitoring was implemented and REEF was contracted to conduct the fish portion of the monitoring. The project will involve periodic assessments by members of the AAT on the



wreck itself and 7 nearby reference sites. The *M/V Wellwood* was a 370-foot freighter that ran aground in 1984 on Molasses Reef. The grounding destroyed 1,285 square meters of living coral. In an effort to restore habitat structure and stability to the grounding site, restoration began in 2002. REEF was contracted by the National Marine Sanctuary Program to document recruitment of fishes onto the site as well as the subsequent changes, if any, to surrounding reefs. As part of this project, REEF's AAT is conducting both Roving Diver surveys and belt transect surveys. Both projects will be conducted for 5 years.

#### Fish and Benthic Monitoring Workshops

For the third year in a row, REEF collaborated with The Ocean Conservancy to coordinate fish and benthic monitoring workshops in the Caribbean. The week-long programs were held in the San Andres Archipelago in Columbia and Cabo Rojo, Puerto Rico. The workshops targeted local diving stakeholders and participation was free of charge. The workshops featured classroom and field training in taxonomic identification of local fishes, corals, algae, and key invertebrates and in the survey methodologies of REEF's Fish Survey Project and The Ocean Conservancy's Reef Ecosystem Monitoring Program (RECON). As part of the program, six members of the AAT assisted in the training and collect survey data. These workshops were funded by NOAA's Coastal Zone Management Program and enable local divers to contribute meaningful information about the reef ecosystems that are in their own backyards.

# Collaboration with National Marine Sanctuaries

In addition to the Florida Keys and Gray's Reef projects, REEF conducted our first Field Surveys along the West Coast in 2002. Two of these projects were in California National Marine Sanctuaries – Monterey Bay NMS and Channel Islands NMS. The National Marine Sanctuary Program provided partial funding to enable local experts to participate. In addition to providing a large amount of fish data for the Sanctuaries, these projects allowed REEF to focus survey effort in areas without much data. During the Channel Islands project, 28 surveyors conducted 245 surveys at sites that have since been designated as no-take marine reserves. These surveys will serve as a valuable baseline of information to measure the potential effects of the reserves over time.



In 2002, REEF conducted our first Field Survey to the Channel Islands NMS.

Photo by Kip Evans

# Special Projects and Programs

## **Grouper Moon Project**

Nassau grouper are normally solitary and territorial, but during winter full moons Nassau grouper travel, sometimes over great distances, and "group" together to spawn. About fifty of these spawning aggregation sites have been recorded throughout the Caribbean. However, due to intense harvesting one-third to one-half of the known Caribbean aggregations are now inactive. Historically, the Cayman Islands were home to five spawning sites. Today, four of these sites are dormant or depleted. In 2002, REEF initiated a unique expedition to Little Cayman Island to study the remaining aggregation.



The Little Cayman spawning aggregation of Nassau grouper. Approximately 5,200 fish were seen in one night.



Nassau grouper harvested from the spawning aggregation in Little Cayman.

The Grouper Moon Project objectives are to document the Little Cayman Nassau grouper spawning aggregation and conduct cutting-edge investigations into the ecology and animal behavior displayed at these reproductive events. During January and February 2002, a team of divers that included staff from REEF and the Cayman Islands Department of the Environment (CIDOE) and REEF volunteers visited the aggregation site and nearby reefs. The team visually documented the aggregation, including size and abundance estimates, color phase, courtship and spawning behavior. The CIDOE also recorded landings data.

Approximately 5,200 Nassau grouper were seen during the peak of spawning activity. Crepuscular movement and color phase

composition shifts were documented. In addition to Nassau grouper, sixteen other species of fish were seen using the site to aggregate and/or spawn. The CIDOE reported a total catch of 1,934 Nassau grouper during 10-days in January. The project's findings led to the early enactment of new legislation that restricted catch to 12 fish per boat per day starting in February 2002 and harvest bans every other year beginning in 2003.



Detail of the aggregation showing the different spawning color phases.

#### REEF Visits American Samoa

As part of the Sustainable Seas Expedition, REEF's Executive Director Laddie Akins traveled to American Samoa in March 2002. Located more than 2,000 miles south of Hawaii, the island group is an American territory and is home to the nation's only National Marine Sanctuary in the Southern Hemisphere – Fagatele Bay NMS. During the week, the SSE team documented marine life of the local reef systems with film and video and presented educational seminars for local educators, students and community members. REEF's work in the Samoan islands included setting the stage for future implementation of the Fish Survey Project.

eled eam

Photo by Phil Bush

# Florida Keys Artificial Reef Program

In 2002, REEF initiated a project under contract with the Florida Fish and Wildlife Conservation Commission to assess 16 artificial reef sites in the Florida Keys. The 16 sites are composed of bridge spans, concrete rubble, steel pipes, barge, and steel boats that were deployed in the 1980s, well before accurate positioning was available. The objectives of the project are to locate the sites, obtain accurate GPS coordinates, conduct fish surveys, and evaluate the materials at each site. REEF's work includes monitoring each site three times over the course of two years. Work to date has shown some of the sites are as far as 1 mile from their charted position. REEF will complete this effort in 2003.

## **Exotic Species Sighting Program**

Non-native species can be ecologically and economically devastating. Once established, they are virtually impossible to eradicate. Therefore, identifying invasions early on is crucial. Recreational divers and snorkelers are a valuable resource for identifying the presence of exotic marine fish. REEF divers are especially adept at noticing rarities and unusual occurrences. In response to the growing number of reports of Indo-Pacific reef fish on south Florida reefs, REEF created an Exotic Species Sighting Program. Through the program, REEF acts as a clearinghouse of non-native marine fish species sightings. 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. In 2002, REEF developed an online report form, a non-native reef fish image gallery, and an educational brochure that was produced using grant money by PADI Project AWARE and distributed to Florida aquarium stores and educational



centers. By the end of 2002, divers had reported 16 non-native fish species from 32 sites. Twenty-five of these sites were along the Broward and Palm Beach Counties in Florida. Brice Semmens and colleagues analyzed the sightings data along with data from the shipping and the marine life trade industries to identify the potential vectors of the non-native species. They determined that these non-native species appear to be the result of releases from aquaria.



# Special Projects and Programs

## Instructor Training Workshop Program Continues

Instructor training workshops are a way to increase support and enlist volunteers throughout REEF's regions who then organize and train divers to participate in the Fish Survey Project. After initiating the program in 2001, two workshops were coordinated in 2002. The first was held in cooperation with the Flower Garden Banks National Marine Sanctuary for Sanctuary



Living REEF Project Coordinator Dana Haggarty looking over her survey after a dive.

volunteers and Girl Scout troop leaders and was held at the Moody Gardens Aquarium. The second was coordinated by the Living Oceans Society as part of the Living REEF Program and was held on Gabriola Island in British Columbia. Both workshops featured classroom training on how to teach the REEF curriculum and tips on promoting and maintaining participation in the survey program. Survey opportunities were also included- Texas participants conducted a mock survey at the Aquarium and the Living REEF participants conducted two dives in nearby Gabriola Passage.

# Florida Advisory Board for Artificial Reefs

Due to REEF's experience in monitoring natural as well as artificial reefs, Executive Director Laddie Akins currently holds a seat on Florida's first Artificial Reef Advisory Board. The board was initiated to develop a long-term strategic plan for Florida's artificial reef program. Results from this strategic planning effort will influence management of the state's 1,700+ artificial reefs as well as give direction for the future of the program.

#### **Binational Comission on MPAs**

REEF's Executive Director was one of 8 US delegates sent to South Africa in the summer of 2002 to participate in a Binational Commission on Marine Protected Areas (MPAs). The USAID-funded program was part of an ongoing exchange program between government agencies in the two countries. The commission worked with staff from Kwzulu Natal Province, local community members and national fisheries officials to develop a management plan for the Aliwal Shoals MPA. Aliwal Shoals is heavily visited; over 40,000 scuba dives per year are conducted on this small but diverse reef system. It is hoped that the management plan will reduce user conflict, protect the natural resources and provide opportunities for the local communities.

#### Marine Conservation Internship Program

REEF's Marine Conservation Internship program is designed to introduce college-age individuals to working in the non-profit sector of marine conservation. Three times a year (winter, summer, fall), REEF provides two interns housing, a \$500 stipend and diving opportunities. In 2002, REEF supported 5 interns. In addition, during the summer, we hosted an Our World Underwater Scholar and a Morehead Scholar.



Summer 2002 interns with Leda Cunningham.

REEF Field Surveys are organized trips conducted at various locations throughout the Survey Project regions. We often plan these projects in areas where REEF data are lacking. Each Field Survey includes daily identification review and survey dives and is led by REEF staff. Participants in the Field Surveys range from the beginning fishwatcher to the most experienced, but all enjoy the experience and appreciate being able to learn and dive with people who share similar interests.

In 2002, 118 REEF members participated in ten Field Surveys, conducting a total of 1,761 surveys. The year also marked the first time we conducted Field Surveys in California, the Pacific Northwest, and Hawaii.



Monterey Bay Field Survey 2002

# 2002 Field Survey Locations

Long Island, Bahamas Chinchorro Bank, Yucatan Guanaja, Honduras Little Cavman Key Largo Venezuela Hurst Island, British Colombia Channel Islands NMS Puerto Rico Grenada

"I just love going on REEF Field Surveys, where I can enjoy my "sport" diving, indulge my "hobby" Fish Watching, and all this in the company of so many other like minded people! I have made some wonderful friends on these trips and it is a super way to increase one's fish identification skills." - Judie Clee, Field Survey Participant



Jim Lommell points out their current location during the Guanaja Field Survey.



Ned and Anna DeLoach, trip leaders for the 2002 Baja Mexico Field Survey.

2002 REEF Board of Trustees

Paul Humann, President and REEF Co-Founder

**New World Publications** 

Ned DeLoach, Vice President and REEF Co-Founder

**New World Publications** 

Jim Dalle Pazze, Esq., Tresurer

Herdeg, duPont, and Dalle Pazze, LLP

Gina Green

The Nature Conservancy

Mr. Dennis Liberson

Capitol One Financial Corporation

Dr. Carol Lorenz

Carol Lorenz and Associates

David Taylor

Rodale's Scuba Diving

REEF Liaison to NOAA

Dr. James Bohnsack

National Marine Fisheries Service

2002 REEF Staff Laddie Akins

**Executive Director** 

Christy Pattengill Semmens, Ph.D.

**Scientific Coordinator** 

Leslie Whaylen

**Field Operations Coordinator** 

Alex Score

**Education/Outreach Coordinator** 

Leda Cunningham

Office Manager

2002 Interns

Lauren Bunnell

Jay Gardner

Sarah Goldman

Basia Haiduczek

Julie Fleming

Kari Forrest

Amy Freidank

**Audrey Smith** 

Office Volunteer

REEF Advisory Panel

The members of the REEF Advisory Panel are all distinguished members in their fields and contribute their expertise to the REEF board and staff.

Billy Causey, Florida Keys National Marine Sanctuary

Dr. Ken Deaver, Ethnoscience

Kalli De Meyer, Coral Reef Alliance

Stephen Frink, Rodale's Scuba Diving/Stephen Frink Photography

Professor Robert Ginsburg, University of Miami Rosenstheil School

Dr. Steve Gittings, NOAA Marine Sanctuaries Division

Wolcott Henry, The Henry Foundation and Curtis and Edith Munson Foundation

William Horn, Florida Fish and Wildlife Conservation Commission

Peter Hughes, Peter Hughes Diving

Dr. Tom Isgar, Seluera, Inc.

Jennifer Lash, Living Oceans Society

Ken Marks, Bytes and Pieces Computer Consulting

Chris Ostrom, NOAA Marine Sanctuaries Division

Dr. Emily Schmitt-Lavin, Nova University

Dr. Edwin Steiner, Dow Chemical, retired

Dr. Kathleen Sullivan Sealy, The University of Miami

Anne Walton, NOAA Marine Sanctuaries Division

Deena Wells, Florida Department of Environmental Protection

Reef Environmental Education Foundation P.O. Box 246 Key Largo, FL 33037 305 · 852 · 0030 | 305 · 852 · 0301 (fax) reefhg@reef.org · www.reef.org