

*An Active Organization
of Divers Committed
to the Preservation of the
Marine Environment*

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Take A Dive Vacation That Counts!

Each year, REEF coordinates 10-15 Field Survey trips to various locations throughout our project regions. These week-long eco-vacation adventures are not only lots of fun, but they are educational and environmentally important. And there is no better way to improve your fish identification skills. These trips feature daily fish identification talks and an opportunity to learn more about the marine environment. Experts in fish identification and marine ecology lead each project. Field Survey participants range from the beginning fishwatcher to the most experienced, but all enjoy the camaraderie and appreciate being able to learn and dive with folks who share similar interests. Participants hone their underwater naturalist and fish identification skills during daily dives, and snorkelers and non-diving companions are always welcome.

In addition to our regular Field Surveys, we also offer special trips led by REEF co-founders and marine life authors Paul Humann and Ned DeLoach. The REEF Behavior Tour, led by Ned and Anna DeLoach, focuses on the fascinating marine life behaviors that divers can find underwater, including predation, camouflage and reproduction. This series complements the



Sixteen REEF members joined in the fun during the 2005 Field Survey to Kona, Hawaii.

annual REEF Discovery Tour, led by Paul Humann and features identification seminars and discussions on corals, creatures, and fish.

REEF is excited to announce another great line-up of locations for our 2006 trip schedule. Please see the list on the next page, or check out our website for more details – <http://www.reef.org/fieldsurv>. We hope to see you on a future trip!

“ REEF survey trips are the perfect way for me to take a dive vacation with a great group of people, go places I might not go on my own, improve my fish ID skills and do something good for the planet.”
- B. Brown,
Field Survey Participant



Participants on the 2005 St. Croix Field Survey broke all records by documenting 243 different fish species during their week-long diving adventure.

Check out our 2006 Field Survey Schedule on the next page!

Director's Corner

Hello REEFers!

Education, Outreach and Data – three key components of REEF's marine conservation efforts that we continuously strive to improve. Our work this year has seen new territory on all three fronts and we are excited to report our successes.



Our education programs have been bolstered with new CD-based courses and development of new classroom-based curricular materials. More and more dive operators are working with REEF to implement these programs and engage their divers in helping to gather marine life data.

Our ability to manage the increasing amount of survey data and disseminate the information more rapidly to resource managers has also taken an exponential leap. We have worked with NOAA's Climate Data Modernization Program to digitally archive historical information as well as incoming surveys. Dr. Christy Pattengill-Semmens is also working with an increasing number of researchers that request REEF data to facilitate their work and allow the data to be user friendly.

New data collection successes have included the results from our grouper tagging studies at the reproductive aggregation site in Little Cayman, the documentation of new species in the Gulf of Mexico, and the addition of more than 30 new species records for the Biscayne National Park off Miami, Florida. We have also witnessed our first members pass the 1,000 individual survey mark, with several others on their heels.

Our outreach efforts continue to flourish, and range from our heavily visited website, e-newsletters and public talks and presentations to our REEFNotes Newsletter. In addition, the development of our new Non-Profit/Academic Field Station program and increased support materials for our local partners are providing more contact with the public. Key messages including size of fish, habitat species relationships, reproductive vulnerabilities and more have been included in our outreach messages and are serving to give people the tools they need to make effective personal and political decisions. While REEF does not advocate specific positions, we sure want our members to be able to make informed choices.

We hope you enjoy reading your free copy of REEFNotes, now going on our 12th year of publication. We appreciate your concern for the environment, your interest in conserving it and your support of REEF's efforts.

Best Fishes and see you in the water!



Lad Akins
Executive Director, REEF

2006 Field Survey Schedule

April 22-29, 2006 – Belize • Peter Hughes Sun Dancer II, REEF Behavior Tour, Led by Ned and Anna DeLoach
\$2,090-\$2,290, includes stateroom lodging aboard the Sun Dancer II, all meals and beverages, r/t airport transfers from Belize City airport, five full days plus one half day of diving with up to five dives per day. The week will include several short slide and video fish behavior presentations during the week to teach and discuss the wonderful world of marine life behavior. Topics will include feeding, predation, and reproduction.

May 2-7, 2006 – Monterey Bay NMS, California • Cypress Sea Charters
\$280, includes 3 days of boat diving (2 days of 2 tank diving and 1 day of 3 tank diving) with Cypress Charters and an organized day of shore diving at Pt. Lobos Marine Reserve.

May 20-27, 2006 – Martinique • Tropicsub & Madi Creoles Resort
\$780, includes lodging in one-bedroom condominium, six days of 2-tank AM dives, and round trip airport transfers

June 10-17, 2006 – Long Island, Bahamas • Stella Maris Resort
\$1,981, includes ocean view accommodations, 6 days of 2-tank diving, all meals and 3 drinks per day, and air/ground transportation from Nassau

July 22-29, 2006 – Little Cayman • Southern Cross Club, Led by Paul Humann
\$1,989, includes accommodations in an air conditioned oceanfront beach bungalow at the all-inclusive Southern Cross Club with daily maid service, six days of 2-tank AM boat dives, one dusk boat dive and one afternoon single tank boat dive, all meals in the club house dining room, and airport transfers on Little Cayman.

August 12-19, 2006 – Key Largo • Horizon Divers • REEF Discovery Tour, Led by Paul Humann
\$1,030 (Ramada Inn Key Largo) or \$1,190 (Best Western Suites Key Largo), includes standard room accommodations at the Ramada Inn Key Largo or Best Western Suites Key Largo, continental breakfast, and 5 days of 2-tank AM dives and 3 1-tank dusk dives with Horizon Divers. Discovery Tours are for divers and snorkelers who are interested in learning more about marine life and seeing more in the water, several short slide presentations will be scheduled during the week to teach and discuss reef fish and creature identification and behavior.

August 5-12, 2006 – Kauai, Hawaii
Details pending

September 2-9, 2006 – Tobago • Aquamarine Diving & Blue Waters Inn
\$712, includes accommodations & 5 days of 2-tank AM dives

September 16-23 – Puerto Vallarta, Mexico
Details pending

October 3-8, 2006 – Barkley Sound, British Columbia • Rendezvous Dive Adventures • Fish and Invertebrate Project
\$825 USD, includes 4 nights accommodations at the Rendezvous Lodge (Tues-Fri), meals Wednesday – lunch on Saturday, 4 days of 2 tank (min.) diving, use of kayaks, and round trip boat transfers to/from Port Alberni

October 7-14, 2006 – Bonaire • Captain Don's Habitat
\$880, includes accommodations in a Deluxe Junior Suite at Captain Don's Habitat, 5 days of 1 tank boat dives and unlimited shore dives, tanks and weights.

December 2-9, 2006 – Cozumel • Aqua Safari and Safari Inn
\$430, includes accommodations at Safari Inn and 5 days of 2-tank AM dives, additional 1-tank afternoon dives can be added.

December 2006 – Bequia, Grenadines
Details pending

All prices are double occupancy (non-diver and single occupancy prices available). An additional \$200 tax-deductible REEF fee will be added to each trip to cover the cost of the group leader, seminars, and survey materials (*Fee is lower on short trips). Please visit our webpage at <http://www.reef.org/fieldsurv> to find out more. To inquire about a trip or to sign up, please contact Dive Reservations, Inc. at 888-363-3345 or email reef@diveres.com. Be sure to sign up early, most 2005 trips sold out.

Interested in hearing from us more often? Sign up for our free monthly e-newsletter, REEF-in-Brief. Visit <http://www.reef.org/enews> to find out more.



Rich kelp forests dominate the nearshore underwater landscape of the Olympic Coast. Photo by Steve Fisher, courtesy of the OCNMS.



For more information about the OCNMS, visit olympiccoast.noaa.gov

REEF Volunteers Conduct Fish and Invertebrate Assessments Along Washington's Olympic Peninsula

A team of six expert REEF surveyors from the Pacific Region (California through British Columbia) recently completed the third year of an ongoing assessment of fish and invertebrate assemblages (44 key invertebrate species are included in REEF's survey program in the Pacific Northwest) in the Olympic Coast National Marine Sanctuary (OCNMS). The OCNMS covers over 3,300 square miles of ocean off Washington State's rugged and rocky Olympic Peninsula coastline. Sanctuary waters host abundant marine life and incredible underwater scenery. Although the majority of the Sanctuary provides few opportunities for diving because of ocean conditions and weather, a small but important stretch of coastline along the Strait of Juan de Fuca features some of the best diving in Washington. However, due to its remoteness, few divers visit this area. This project allows REEF to substantially increase the number of surveys from the Sanctuary and help fill an important gap in our data coverage for the Pacific Region. Many thanks to the hardy REEF volunteers who have participated in these assessments (water temperature during the project typically hovers around 48 degrees!), and to the OCNMS for their continued support of this project.

During the 2005 OCNMS project, one of the AAT members, Carl Gwinn, came away with a great "fish" story. A Giant Pacific Octopus surprised him from behind and clung on to his head, leaving him with an interesting tattoo!



How Are REEF Data Used?

If you have taken a look at the REEF website lately, you might have noticed that the number of surveys submitted by REEF volunteers is closing in on 90,000! This amazing data resource for marine fishes has led many resource agencies and scientists to use these data to address a variety of questions, including evaluating the effects of no-take zones, conducting fisheries-independent stock assessments, identifying areas with especially large varieties of fish, and monitoring populations of non-native fish species. REEF data have been used in the development of the stock assessment for Goliath grouper, in the evaluation of trends of fish species in the Florida Keys NMS, as an indicator of population pressure on fisheries resources, in an analysis of the biogeography of fishes and habitat-fish interactions, and to evaluate interactions between species and species-habitat relationships. REEF members have also been instrumental in the identification and removal of exotic species, and in the identification of new species and morphological variants of known species.

Below are a few of the recent uses of the REEF dataset. A full listing of scientific papers and reports that have used REEF data are included on REEF's website (<http://www.reef.org/data/research.htm>).

- Karen Neely, a Ph.D. student at Duke University, recently completed an analysis of fish populations and coral bleaching using REEF data from sites in the Caribbean. She presented her results at the American Society of Limnology and Oceanography conference, "Using a Meta-Analysis of Monitoring Data to Determine the Effects of Bleaching on Reef Inhabitants."
- Dr. Peter Auster, Science Director of the National Undersea Research Center and Professor at the University of Connecticut, and colleagues Kimberly Barber and Brice Semmens, recently completed an analysis of REEF data from Bonaire to evaluate how fish assemblages are organized on coral reefs. Their findings will be published in a forthcoming paper in *Environmental Biology of Fishes*, "Pattern in the co-occurrence of fishes inhabiting the coral reefs of Bonaire, Netherlands Antilles: implications for representation of diversity within marine protected areas."

- Liz Whiteman, a Postdoctoral Fellow at the University of East Anglia in the UK, is currently using REEF data on all Caribbean hamlet species to evaluate the biogeography of hamlets to explore possible range boundaries, center points and extensions.



A mixed species foraging group such as the one shown here could enhance the strength of particular species co-occurrences, as discussed in Auster, et al.'s paper using REEF data from Bonaire. Photo by Peter Auster.



REEF in Review - 2004

At-a-Glance

2004 Operating Budget	\$452,179
2004 Membership	28,927
Members Joined in 2004	2,295
Surveys Submitted in 2004	12,461
Fish Surveys Conducted Since Inception	81,707
Offices: Key Largo, FL and Seattle, WA	

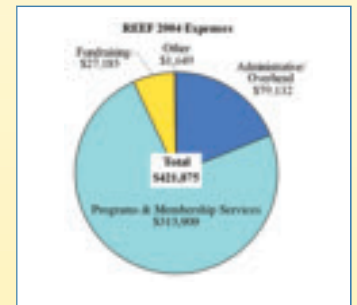
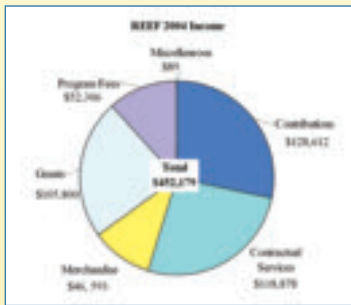
Data

The Fish Survey Project has become one of the most successful marine citizen-science programs in the world. The dedication of REEF members has enabled the creation of a database that is second to none in its usefulness for addressing a variety of research and management questions. By the end of 2004, the database topped out at 81,707 surveys. During 2004, REEF volunteers conducted a total of 12,461 surveys.



Financial Overview

REEF obtains funding primarily through member donations, foundation support, monitoring and reporting contracts and grants. The annual operating budget for 2004 exceeded \$450,000. Despite our no-fee membership, membership contributions continued to serve as the cornerstone of our support, providing 30% of our operating budget. We continually strive to ensure that member contributions are applied directly toward supporting REEF's programs; overhead expenses were less than 20% in 2004.



Education & Outreach

Education and outreach are at the core of REEF's activities. The REEF newsletter and Website serve as our two primary outreach tools. Dive show attendance and REEF Field Stations also help us spread our message to the diving community. In 2004 REEF staff and volunteers conducted dozens of public talks to dive clubs, school groups, nature centers, aquaria, and at dive shows. In addition, the Great Annual Fish Count event (held each July) served as a focused event to introduce the public to REEF's programs.

FIELD STATIONS



- Places that "Speak Fish" 74 Field Stations in 2004
- Launched the New Non-Profit/Academic Category (NAFS)

NEWSLETTER



- 25,000+ Mailed Free of Charge to US and Canadian Homes

WEBSITE



- 3,300 Page Views/Day
- 30,000 Visitors/Month

Science

REEF's Scientific Coordinator, Dr. Christy Pattengill-Semmens, works as a liaison between the volunteer activities and science and management applications of the data collected. In 2004, REEF data were used in eight publications.

- Auster, P.J., B.X. Semmens and K. Barber. 2004. *Pattern in the co-occurrence of fishes inhabiting the coral reefs of Bonaire, Netherlands Antilles: implications for planning networks of marine reserves.* Research Poster. *International Coral Reef Symposium.*
- Burke, L and J. Maidens. 2004. *Reefs at Risk in the Caribbean.* World Resources Institute. 80 pp.
- Jeffrey, C.J. 2004. *Benthic Habitats, Fish Assemblages, and Resource Protection in Caribbean Marine Sanctuaries.* Ph.D. Dissertation. University of Georgia.
- Kingsley, M.C.S., ed. 2004. *The Goliath Grouper in southern Florida: assessment review and advisory report.* Report prepared for the South Atlantic Fishery Management Council, the Gulf of Mexico Fishery Management Council, and the National Marine Fisheries Service. Southeast Data and Assessment Review. vii + 17 pp.
- Pattengill-Semmens, CV and L.Akins. 2004. *Volunteer Fish Monitoring of a Coral Reef Restoration Site in the Florida Keys.* Research Poster. *Coastal & Estuarine Habitat Restoration Conference, Seattle, WA*
- Pattengill-Semmens, C.V. and L.Akins. 2004. *M/V Wellwood Grounding Restoration Fish Assemblage Monitoring Year 1 Report,* submitted to the National Marine Sanctuary Program. http://www.reef.org/data/wellwood_yr1fishl.pdf
- Semmens, B.X., E.R. Buhle, A.K. Salomon, and C.V. Pattengill-Semmens. 2004. *Tankers or fish tanks: what brought non-native marine fishes to Florida waters.* *Marine Ecology Progress Series.* 266: 239-244.
- Whaylen, L., Pattengill-Semmens, C.V., Semmens, B.X., Bush, P.G. and M.R. Boardman. 2004. *Observations of a Nassau Grouper (Epinephelus striatus) Spawning Aggregation Site In Little Cayman, Including Multi-Species Spawning Information.* *Environmental Biology of Fishes.* 70: 305-313.

A complete copy of REEF's 2004 Annual Report can be downloaded at <http://www.reef.org/annual04.pdf>.

Regional Capacity Building Seminars

REEF's work takes place throughout most of the coastal marine waters of the Western Hemisphere - a formidable task given our small staff. The organization is able to carry out this work, due in large part, to the partnerships we have with dive operators and other committed individuals, through our REEF Field Station Program, and with not-for-profit organizations and academic institutions, through our Non-Profit and Academic Field Stations (NAFS).

What also makes the REEF program work regionally, in many instances, are the relationships we have with Marine Protected Areas (MPAs) and related governmental bodies, such as the US National Marine Sanctuary System, the National Park Service, the Cozumel and Veracruz Marine Parks in Mexico, the Cayman Islands Department of the Environment and numerous others throughout our survey regions.

In an effort to facilitate active, locally-based efforts, we have been conducting a series of "REEF Regional Capacity Building Seminars" in various locations. These seminars are designed to bring together as many local stakeholders as possible to learn about REEF the Fish Survey Project, and how to get involved. Participants include local dive and tourism operators, non-profit organization staff, marine biologists, and MPA staff. To date, events have been held in Ocotal and San Jose, Costa Rica, Akumal and Cozumel, Mexico, and Utila, Honduras.

An important component of these seminars is that after a presentation explaining REEF and our relevant programs, considerable time is allowed for open discussion. Each location is different for numerous reasons, including socio-economic factors, diver and snorkeler demographics, and who the data end-users are. Each stakeholder has something to contribute and gain from an effective REEF program; identifying these is a key part of this process. Seminar participants come away with a better understanding of how simple and cost-effective it is to implement the Fish Survey Project and how it can produce meaningful results in the form of citizen science data. These seminars also highlight that a truly successful REEF program works best when all the stakeholders work together.

REEF is very excited by the success of these seminars, and thanks in large part to funding received from the National Fish and Wildlife Foundation for our Field Station Program, we will be coordinating several more Capacity Building Seminars throughout our project regions over the next year.



Cozumel Marine Park staff and volunteers get ready to conduct a fish survey as part of a recent REEF Regional Capacity Building Seminar held in Mexico.

2005 Sustainer's Event



Lad and Candace Akins enjoy themselves with REEF Sustainers Paul and Marta Bonatz at REEF'S 2005 Sustainer Social at the Sustainer's Social hosted by Rosemary Duke.

REEF Staff, Board of Trustees, Advisory Panel Members and Platinum Sustainers were treated to a daylong celebration of the organization's successes and progress this past July in the Florida Keys. The event included a morning dive off Key Largo and an Open House of REEF Headquarters, followed by an evening of food, fun and presentations at the bayside home of long-time REEF supporter, Rosemary Duke. This regular event brings together a core group of REEF supporters to both review REEF's past and plan for the future. In addition to a presentation of REEF's Annual Report by REEF Staff, REEF researcher Brice Semmens presented recent work on the Grouper Moon Project and the 2004 Volunteer of the Year award was presented to Jessie Armacost. Thanks to all who attended, and to Rosemary for hosting the evening festivities!

Educators Advisory Committee Summit

The first meeting of REEF's Educators Advisory Committee (EAC) took place in Key Largo from June 14th to the 16th of this year. The EAC is made up educators and education professionals with a wide array of backgrounds and experience. During the three-day summit, participants had the opportunity to hear presentations about REEF and our outreach and education programs, to review REEF's existing training programs, and they even got out on the reefs to conduct a few surveys. After reviewing REEF's current programs, the EAC and several guests from non-profit organizations and the US National Marine Sanctuary System discussed REEF's future role in the world of marine conservation education. Our future plans include continuing our informal education, most notably through our Fish Survey Project and the teaching of REEF Fish ID, as well as in certain areas of formal education that are targeted at the K-12 classroom. We are also exploring the possibilities of partnership development beyond our work with such groups as the US Coral Reef Task Force and the National Marine Sanctuary System to include other groups such as the US National Park System, non-US based Marine Protected Areas, and aquariums. Participants were all enthused about REEF's tremendous potential as well as being impressed with what has already been accomplished with the resources at hand.

REEF staff are very excited and thankful to have such a distinguished group of educators assisting us with our future education and outreach efforts and we appreciate their participation in making this a successful and fruitful event. The event was made possible by a

grant from NOAA's Coral Reef Conservation Program. Special thanks also goes to Island Dolphin Care for hosting the event at their terrific new interpretive and meeting center, Horizon Divers for taking the participants out on the water, and to REEF Interns for help with logistics and facilitation.



Participants in REEF's 2005 EAC meeting in Key Largo.



REEF EAC member, Marisa Lopez, receives thanks and a certificate of participation from Bryan Dias, REEF's Director of Outreach and Education.



Field Stations & GAFC

Field Stations

Field Stations demonstrate a commitment to supporting marine conservation and REEF through financial contributions, teaching fish identification courses, organizing survey dives, and the distribution and sales of REEF survey materials. Please show your support for REEF and marine conservation by patronizing our Field Stations. (*NAFS Sponsors)

USA and Canada Field Stations

California		
Oceanside - Under Water Schools of America	7607227826	www.usascuba.com
Florida		
Cocoa Beach - Cocoa Beach Scuba Odyssey	3215379751	www.cbscubaodyssey.com
Gainesville - Water World	3523772822	www.h2oworld.com
Gulf Breeze - Gulfcoast Barracuda Dive Club	8509326397	www.barracudadiveclub.org
*Key Largo - Amy Slate's Amoray Dive Center	3054513595	www.amoray.com
Key Largo - Dive In	3058521919	www.diveinflkts.com
Key Largo - Divers Direct Outlet	3054518034	www.diversoutlet.com
Key Largo - Dual Porpoise	3053042951	www.dualporpoise.net
Key Largo - Garden Cove Divers	3053959555	www.gardencovedivers.com
Key Largo - Horizon Divers	3054533535	www.horizondivers.com
Key Largo - It's A Dive	3054539881	www.itsadive.com
Key Largo - Kelly's on the Bay/Aqua-Nuts	3054511622	www.kellysnuts.com
Key West - Florida Keys Community College	3052969081	www.flkcc.edu
Key West - R/V Tiburon, Inc.	3052939183	www.rvtiburon.com
Key West - Subtropic Dive Center	3052969914	www.subtropic.com
Lighthouse Point - Oceanwatch Foundat'n	9544671366	www.oceanwatch.org
Marathon - FL Keys Nat'l Marine Sanctuary	3057432437	www.fknms.nos.noaa.gov
Miami - Aqua Cat Cruises	3058883002	www.aquacatcruises.com
Miami - Blackbeard's Cruises	3058881226	www.blackbeard-cruises.com
Miami Lakes - Peter Hughes Diving	8009326237	www.peterhughes.com
Orlando - Northwest Divers	4076589464	www.nwdivers.com
St Pete - Aquatic Obsessions	7273443483	www.aquaticobsessions.com
Tampa - Depth Perception Dive Center	8136893483	www.depthperception.com
Tavernier - Conch Republic Divers, Inc.	3058521655	www.conchrepublic.com
Winter Garden - Florida Scuba Connection	4076541177	www.floridascubaconnection.com
Georgia		
Lawrenceville - Dive.Dive..Dive...	6784072442	www.diveatlanta.com
Hawaii		
Honolulu - Island Divers Hawaii	8089476583	www.islanddivershawaii.com
Kailua - Kona - Jacks Diving Locker	8083297585	www.jacksdivinglocker.com
Kihikihi - Ao'ao O Na Loko I'a O Maui	8089759059	www.mauifishponds.info
Lahaina - Project S.E.A.-Link	8086699062	www.projectsealink.org
*Waianae - Wild Side Specialty Tours	8083067273	sailhawaii.com
Gulf Coast States (LA, AL, FL)		
New Orleans - REEF Field Station of NGOM		www.reefngom.org
Maine		
Portland - Aqua Diving Academy	2077724200	home.gwi.net/~aquadive/
Maryland		
Baltimore - National Aquarium in Baltimore	4435730165	www.aqua.org
Michigan		
Ann Arbor - Huron Scuba Adventures, Inc.	7349943483	www.huronscuba.com
New Jersey		
Belle Mead - The Scuba Connection	9083591250	www.tsscuba.com
New York		
Rome - Delta Divers	3153372300	www.deltadivers.com
Texas		
Denton - Island Divers	9403833483	www.islanddivers.com
Houston - SCUBA Houston	8007817821	www.scubahouston.com
Houston - Texas Gulf Coast Council	2816511277	www.tghcdiveclubs.org
Humble - W.W. Diving	2815401616	info@wwdive.com
Virginia		
Chantilly - Adventure Scuba Company	7034750779	www.scubava.com
Washington		
Woodinville - Bubbles Below	4254872822	www.bubblesbelow.com
Pacific Northwest Scuba		www.pnwscuba.com
Canada		
Port Alberni, BC - Bamfield Dive Shop	2507233483	www.dive-shed.com
Sointula, BC - Living Oceans Society	2509736580	www.livingoceans.org
Mississauga, ON - ReefNet Inc.	9056089373	www.reefnet.ca

Overseas Field Stations

Aruba		
Oranjestad - Pelican Adventures	2975872302	www.pelicanaruba.com
Paradera - Windies Watersports	2975864026	www.windieswatersport.com
Bahamas		
Cat Island - Dive CAT Island/Hawk's Nest	2423427050	www.hawks-nest.com
Nassau - Custom Aquatics	2423621492	www.divecustomaquatics.com
Belize		
Belize City - Seaports Belize		www.seaportsbelize.com
Second Nature Divers	5015237038	www.belizediversity.com
Bermuda		
Flatts - Bermuda Aquarium, Museum & Zoo	4412932727	www.bamz.org
Cayman Islands		
Little Cayman - Little Cayman Beach Resort	3459481033	www.littlecayman.com
Little Cayman - Pirates Point Resort	3459481010	www.piratespointresort.com
Little Cayman - Southern Cross Club	3459481099	www.southerncrossclub.com
Grand Cayman - Ocean Frontiers LTD	3459477600	www.oceanfrontiers.com
Grand Cayman - Wall to Wall Diving	3459456608	www.walltowalldiving.com
Dominica		
Roseau - Scots Head Soufriere Marine Rsv.	7674480140	www.avirtualdominica/ssmr
Honduras		
Utila - Deep Blue Utila	5044253211	www.deepblueutila.com
Utila - Laguna Beach Resort	3378930013	www.utila.com
Mexico		
*Akumal - Akumal Dive Adventures	5059923333 (US)	www.akumaldiveadventures.com
Cancun - Oceanus/Lascar sa de cv	529988920501	www.oceanus.com.mx
Cozumel - Aqua Safari	5298720101	www.aquasafari.com
Cozumel - "El Gran Azul" Educaci3n Subarina	529878723223	www.isla-cozumel.net
Cozumel - Techs Mex Divers - Las Lunas Inn	529878725235	www.techsmexdivers.com
Jalisco - Boca Divers	523222280713	www.bocadivers.com
Nayarit - Vallarta Adventures	523222971212	www.vallarta-adventures.com
Mahahual - Instituto Del Mar Costa Maya, A.C.	71774313742 (US)	www.institutodelmar.com
Puerto Aventura - Dive Aventuras	5299373512	www.diveaventuras.com
Bonaire		
Kralendyk - Bonaire Dive and Adventure	5997172229	www.bonairediveandadventure.com
Kralendyk - Photo Tours Bonaire	5997173460	www.bonphototours.com
Curacao		
Curacao Sea Aquarium	5994616666	www.curacao-sea-aquarium.com
Puerto Rico		
Guaynabo - Scuba Dogs	7877836377	www.scubadogs.net
Rincon - Oceans Unlimited	7878237436	www.oceans-unlimited.com
St Vincent		
St. Vincent - Dive St. Vincent	7844574928	www.divestvincent.com
Turks and Caicos		
Provo - Flamingo Divers	6499464193	www.flamingodivers.com
Venezuela		
Centro de Actividades Submarinas Squalo	00582418431571	
Virgin Islands		
St. Thomas - Peter Isl.-Paradise Watersports	2844949941	www.bviwatersports.com

Non-Profit/Academic Field Stations

Costa Rica - Mundo Arrecife	mundoarrecife.blogspot.com/
Mexico - Central Ecologico Akumal	www.ceakumal.org
Hawaii - Wild Dolphin Foundation	wilddolphin.org
New England - Underwater Education and Training Center of New England	www.underwatereducation.org



Members of the Pacific Northwest Critter Watchers had fun celebrating the 2005 GAFC during their quarterly REEF survey dive activity. Critterwatchers enjoyed food and good dives during their day at Titlow Beach south of Seattle.

The 14th Great Annual Fish Count

The Great Annual Fish Count (GAFC) is REEF's signature yearly event held each July. Through free public seminars on fish identification and organized survey dive and snorkel activities, the event raises awareness about marine conservation and introduces participants to our citizen science program- the Fish Survey Project. This summer, the GAFC event celebrated its 14th year of educating and engaging the public. Over a thousand divers, snorkelers, and other interested persons participated in over seventy organized activities at national and international locations during the month-long event. The event also serves to introduce the public to the US National Marine Sanctuary System, as many of the events occur near or in one of the thirteen Sanctuaries. For more information, visit <http://www.fishcount.org>.



Survey Numbers and REEF Store



ID Books and CD-Roms

Caribbean & North Atlantic Guides

Reef Fish Identification –

Florida, Caribbean, Bahamas -
3rd Edition - \$39.95

Paul Humann and Ned DeLoach

Caribbean Reef Creature ID -

2nd Edition - \$39.95

Paul Humann and Ned DeLoach

Caribbean Reef Coral ID -

2nd Edition - \$34.95

Paul Humann and Ned DeLoach

The Reef Set - \$125

Paul Humann and Ned DeLoach

Stokes Fishes of the Caribbean - \$12.95

F. Joseph Stokes

Reef Fish Behavior - \$39.95

Ned DeLoach

Marine Life of the North Atlantic - \$30.00

Andrew Martinez

Temperate & Tropical Pacific Guides

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

Paul Humann, with Howard Hall and
Neil McDaniel

Pacific Coast Inshore Fishes, 4th Ed - \$24.95

Daniel Gotshall

Rockfishes of the Northeast Pacific -

\$24.95; Milton Love, Mary Yoklavich, and
Lyman Thorsteinson

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

Rick Harbo

Shore Fishes of Hawai'i - \$19.95

John Randall

Hawai'i's Fishes - \$16.95

John Hoover

**Plus dozens of other marine life guide
books, CD-ROMs, and children's books.**

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. (Remember that you can also enter TWA data online.)

REEF Starter Kit

The basic kit for all fishwatchers. 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.

Available for all of REEF's regions, from \$15-25.

Survey Slates & Waterproof Paper -

Two slates are available, the standard yellow slate and a larger cold water slate that is specifically designed for conducting a survey in high currents and cold water. Both are designed to work with REEF waterproof survey paper. Waterproof survey paper is available for all REEF regions. Slates \$10-15 and waterproof paper \$0.60 each.

Project AWARE Identification Courses - \$105.

Courses include curriculum, slides, CD-ROM of slides (currently available for the TWA, HAW and TEP courses), and sample starter kit. Courses are available for the following regions: Tropical Western Atlantic (also available in Spanish), Mid-Atlantic, Northeast US, Flower Garden Banks NMS, Northern Gulf of Mexico, Gulf of California, Southern California, Northern California, Pacific Northwest Fish, Pacific Northwest Invertebrates, and Hawaii.

Course without slides - \$85.

(still includes CD-ROM of slides, currently available for TWA, TEP and HAW)

**For more details, or
to place an order, visit
REEF's online store at
www.reef.org or call
REEF HQ at 305-852-0030.**

Survey Numbers

TWA Top 25 Surveyors

Linda Baker (1149)
Peter Leahy (1044)
Laddie Akins (1038)
Judie Clee (951)
Linda Schillinger (839)
Leslie Whaylen (795)
Sheryl Shea (772)
Bruce Purdy (660)
Jean Kirkpatrick (582)
Cathy Coughlin (571)
Jessica Armacost (558)
Joe Thomas (556)
Deena Wells (542)
Christy Semmens (479)
Linda Ridley (472)
Dave Grenda (470)
Kris Wilk (465)
Robert Doyle (441)
Monty Doyle (438)
Phyllis Blackburn (437)
Nathan Gates (407)
Rob McCall (405)
Joyce Schulke (400)
Carol Grant (397)
Edwin Steiner (376)

PAC Top 25 Surveyors

Kawika Chetron (355)
Janna Nichols (239)
Mike Delaney (233)
Rachid Ferretti (227)
John Wolfe (211)
Tom Dakin (211)
Kirby Johnson (187)
Georgia Arrow (186)
Claude Nichols (160)
Alan Dower (145)
Wes Nicholson (144)
Matthew Dowell (144)
Carl Gwinn (133)
John Williams (124)
Stanley Kurowski (115)
Doug Biffard (112)
Bryan Nichols (96)
Pamela Wade (92)
Brian Elliott (77)
Paul Weakliem (71)
Brice Semmens (71)
Christy Semmens (68)
Alex Khain (67)
Olga Khainova (67)
Mark Dixon (66)

TEP Top Surveyors

Richard Baker (477)
Kandie Vactor (172)
Beth Bruton (88)
Walter Briney (70)
Sandra Percell (67)
Jeff Holmes (54)
Paul Humann (49)
Brice Semmens (42)
Martin Levy (40)
Alvaro Segura (38)
Neil Ericsson (37)
Karen Florini (36)
Karen Garcia (36)
Warren Hinks III (32)
Janet Earnshaw (29)
Chris Ostrom (28)
Dave Grenda (28)
Robert Reavis (27)
John Wolfe (26)
Clive R. Wood (25)
Christy Semmens (25)
Kevin White (24)
Kenny Tidwell (23)
Leslie Whaylen (22)
Marlene Smith (22)

HAW Top Surveyors

Liz Foote (162)
Nanette Harter (152)
Fred Litt (151)
Robin Newbold (138)
Michele Vaughn (118)
James Vaughn (118)
Patricia Richardson (101)
Lynn Hodgson (99)
Mary J. Farr (99)
Janet Eyre (97)
Neil Rhoads (88)
Karen E. Levy (83)
Donna Brown (69)
Chatten Hayes (64)
Kayla Serotte (48)
Carol Grant (44)
Douglas Harder (43)
Kandie Vactor (39)
Christy Semmens (39)
Kathy Aguilar (38)
Dave Grenda (36)
Brice Semmens (31)
Sandra Percell (28)
Skippy Hau (27)
Wayne Batzer (25)

Golden Hamlet Club

For many REEF surveyors, getting in a few dozen dives (and REEF surveys) each year is about all that their schedule allows. But for those fortunate few, who either live near the water, work on the water, or manage to take multiple dive vacations each year, their REEF survey effort can build up pretty quickly. If you have taken a look at the most active REEF surveyors list lately, you know that dozens of our members have done over 100 surveys in their lifetime and that a pretty big handful of our members have conducted over 500 surveys. This past summer, we were proud and amazed to see the first of our members pass the 1,000-survey mark! It is in honor of those members contributing more than 1,000 surveys that REEF has created the Golden Hamlet Club. Congratulations to Linda Baker, who was the first member of this prestigious club. Since Linda's inauguration, member Peter Leahy, as well as REEF's Executive Director, Lad Akins, have reached this milestone. Members of the Golden Hamlet Club will be awarded a specially designed plaque, as well as listed on a coordinating plaque at REEF Headquarters.



Drawing by Eleanor Pigman



REEF Golden Hamlet Club inaugural member, Linda Baker. Linda has been a member and active surveyor since 2000. She lives in Bonaire and works as a divemaster at the Carib Inn.

Linda avidly conducts REEF surveys on most of her dives and teaches fish identification to many of her visitors. She is a member of REEF's Advanced Assessment Team and she has documented 301 species (all in Bonaire!) Linda's 1,000th survey was conducted on 12/20/2004 at Something Special in Bonaire.

CONTRIBUTIONS

We greatly appreciate the generosity of our core group of REEF contributors (based on donations received between September 1, 2004 and September 1, 2005).

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Our valuable BRONZE SUSTAINERS are listed on <http://www.reef.org/webres/notes/fall05.htm>.

To become a REEF Sustainer, please contact Lad at REEF HQ: (305) 852-0030; Lad@REEF.org.

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- Dual Porpoise Charters and Quiescence Diving Services for their help with REEF's Wellwood, Speigel Grove and Biscayne NP Assessments

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- If you know any organization or corporation (employer, doctor, grocery store, etc.) who may have an interest in supporting REEF or collaborating with REEF in some way, please feel free to contact Lad in the Key Largo office, 305-852-0030.
- You can always give to REEF at: <https://www.reef.org/contrib-form.htm>
- When planning your contributions, ask your employer if they offer a matching gift program.
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