

Founded in 1997, Reef Check is a non-profit organization dedicated to marine conservation, especially tropical coral reefs and California's rocky reef

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In 2006, with your help and the support of thousands of people in over 90 countries and territories, Reef Check has continued to grow and prosper. Reef Check teams surveyed more than 700 reefs around the world using our standard technique. A ten-year report on coral reef health will be published later this year. We are very proud of four key accomplishments:

- 1) The implementation of a Caribbean wide bleaching survey in sixteen countries and production of a scientific report documenting the impacts of global warming on Caribbean reefs.
- 2) The launching of the Reef Check EcoAction program that allows anyone from kids to adults to learn about coral reefs while on vacation and provides a source of selffinancing for local monitoring teams.
- 3) The establishment of six new self-financed marine protected areas in the Philippines covering some 7 square kilometers of coral reef.
- 4) The establishment of the first statewide rocky reef monitoring program in California, training of dozens of volunteers who completed surveys from Los Angeles to Monterey.

Global warming dominated environmental news in 2006, and yet few people are aware that coral reefs are THE most sensitive ecosystem to global warming. More so than Arctic ice or polar bears, coral reefs are the "canary in the coal mine" for global warming. In 1997/98 Reef Check tracked an unprecedented global coral bleaching event caused by a combination of El Niño overlaid on global warming that killed corals in all tropical seas. Corals that were 1000 years old were killed that year. As described in detail in this report, the 2005/6 bleaching event was less damaging, indicating that Caribbean corals may be more resistant to bleaching than their Indo-Pacific cousins. Coral reefs need us to support efforts to reduce global warming.

One of the major problems facing coral reefs is simply ignorance among the general public about the existence, value and threats

Cover Photo: Coral Reef Adventure, MacGillivray Freeman Films Back Cover Photos: Background - Rob Clayton; From Left - Gregor Hodgson, Gregor Hodgson, Coral Reef Adventure, MacGillivray

Graphic Design: Daniele Nance; nancenet.com

# highlights

of 2006



to coral reefs. Tourism is the world's largest business and Reef Check launched a new program in 2006 designed to educate families on holiday about coral reefs. The EcoAction program has five levels from kids to adults. The program is educational, and the revenue generated by the sale of the materials and training is used to support local Reef Check teams. Scuba and skin-divers are encouraged to join a training course and to become certified Reef Check EcoDivers.

One of Reef Check's largest projects is the Marine Aquarium Market Transformation Initiative that focuses on creating a sustainable harvest in areas where marine aquarium collection is active. Using this economic lever, Reef Check has pioneered new methods of carrying out resource assessments and establishing catch limits to ensure sustainability. Most importantly, no-fishing Marine Protected Areas are set up in each location. The six new MPAs set up in the Philippines in 2006 are already beginning to recover and act as seed-beds for the surrounding areas. Also as part of this project, a new rehabilitation technique is being pioneered that holds promise of rapid restoration of a balanced fish population.

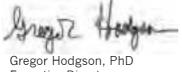
Since establishing our headquarters in California in 2000, Reef Check divers have been asking for a program to monitor the local rocky reef ecosystem. Many problems facing California reefs are the same as

those affecting tropical coral reefs. Led by RC California Director Dr. Craig Shuman, a detailed monitoring program was designed and tested with the help of a host of experts and launched in 2006. The program was specifically set up to provide data to the California management agencies to help them improve their ability to restore and safeguard living marine resources along our 1000 mile long coast. I would encourage all California divers to sign up for a training course and join a team.

In 2006, I submitted a request to the International Coral Reef Initiative (ICRI) to designate 2008 as the International Year of the Reef. This was approved and adopted by both ICRI and the US Coral Reef Task Force. Planning is now under way and 2008 will be filled with activities to raise awareness about coral reefs and to take action to better protect them. Our first activity was to publish a Declaration of Reef Rights which we encourage you to sign and send to your friends (reefcheck.org/petition/petition.php). We will present this to government leaders at the end of 2008 and encourage them to do more to support coral reef conservation.

Reef Check is the thousands of volunteers all over the world who support marine conservation every year. Thank you all for a great year!





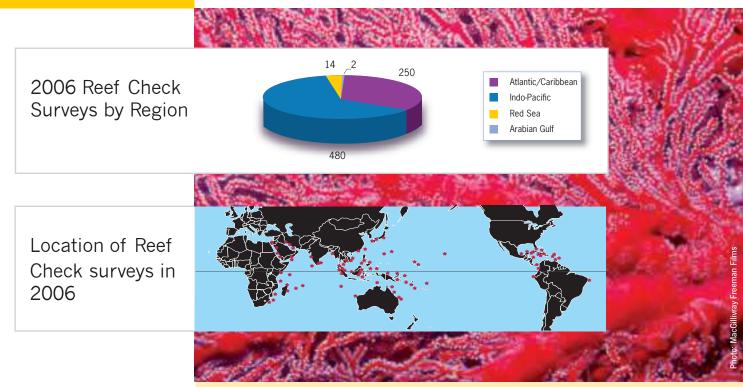
**Executive Director** 



# research

### Global Status of Coral Reefs

In 2006, 746 Reef Check surveys were conducted at 547 sites in 42 countries and territories around the world. This brings our total to 5234 surveys at 2754 sites in 93 countries and territories worldwide.



"The results
of Reef Check
surveys are
an important
contribution to
the scientific
assessment
of the world's
coral reefs and
the search for
solutions to the
crisis threatening
them."

Dr. Terry Done Australian Institute of Marine Science

# Coral Reef Impacts of the 2005 Caribbean Bleaching Event

Hurricanes, El Niño, global warming, pollution, disease outbreaks and other human impacts have increased coral mortality throughout the world in the past 25 years. Although there are many factors responsible for coral mortality, bleaching has been regarded as the major agent responsible for the widespread mortality of corals as well as changes in coral reef community structure. Large-scale bleaching is predominantly triggered by elevations in sea surface temperatures, and in recent years there have been unprecedented increases in many areas of the tropical oceans.

In 2005 a major coral bleaching event occurred in the Caribbean Sea, on par with the largest bleaching event on record. In addition to scheduled surveys, after the initial onset of this bleaching event Reef Check teams were deployed to conduct surveys

and record potential effects. Over 185 Reef Check surveys were conducted from January 2004 to June 2006 in 16 different countries



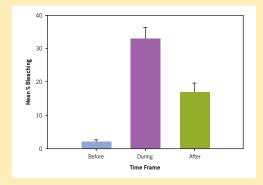


Figure 1:
Mean percent of coral population
bleached per 100 m². Error bars
indicate +/-1 Standard Error.
Significant differences were found
between all three time periods.

and territories within the Caribbean region. As a result, Reef Check has been able to determine the extent of coral bleaching and mortality in the Caribbean Sea by comparing surveys before, during and after this large scale event.

On a Caribbean-wide basis, the effects of the 2005 bleaching event were shocking. The percentage of bleached corals per 100 m² of reef averaged 33% and reached 62% (Figure 1). Bleaching was recorded at all Reef Check survey depths (2·12 meters) indicating that even mid-depth corals were affected by the increased sea surface temperatures. Corals have the ability to survive after becoming bleached, but if the stress that causes bleaching occurs for too long or is too intense, these corals will eventually die.

While bleaching reached high levels in some areas in the 2005 event (Figure 1), mortality was relatively low, ranging from 4-15% (Figure 2). This may be explained by the resiliency of the coral species themselves. As a result, if major bleaching events continue to occur, there could be potential shifts in dominant corals to those that are best able to resist bleaching and subsequent mortality. This can be detected already in different parts of the world. Unlike the Indo-Pacific, Caribbean reefs are dominated by massive corals (which may be more resistant to bleaching than branching corals) and hence have experienced lower mortality rates than those observed in the Indo-Pacific.

The data received from our teams have been provided to groups such as the National Oceanographic and Atmospheric Administration (NOAA) and the Global Coral Reef Monitoring Network (GCRMN) for further analysis and publication. Our results were presented at the 3rd annual International Tropical Marine Ecosystems Management Symposium, in Cozumel in September 2006.

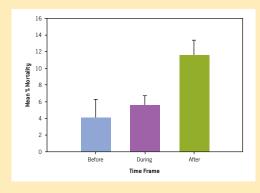


Figure 2: Mean percent coral mortality per 100 m². Error bars indicate +/- 1 Standard Error. After time period significantly different than Before and During periods.

We greatly appreciate the efforts of teams in the following locations for the great work: the Bahamas, Belize, Brazil, the British Virgin Islands, Colombia, Cuba, Dominica, the Dominican Republic, Florida, Honduras, Mexico, Jamaica, the Netherlands Antilles, St. Lucia, St. Vincent and the Grenadines, and the US Virgin Islands.

### Reef Check California 2006 Research Summary

Following a successful start in 2005 developing the survey protocol and training materials, Reef Check California (RCCA) truly got underway in 2006. We conducted a total of 7 trainings in Monterey, San Luis Obispo, Santa Barbara, and Los Angeles certifying 65 recreational divers in the RCCA protocols. The newly trained divers went right to work collecting data on California's nearshore rocky reefs with 54 out of the 65 trained and certified divers participating in at least one RCCA survey during 2006. Led by divers Peter Ottersbach (69 transects in central California) and Brian Meux (66 transects in southern California), RCCA divers exceeded all expectations by completing surveys at 18 sites along California's coast from Gerstle Cove State Marine Reserve in Sonoma County to the Avalon Dive Park on Catalina Island in Los Angeles County (Figure 3). During these surveys RCCA divers surveyed 324 transects recording 5,671 fishes, 8,549 invertebrates and 2,591 individual seaweeds over a total survey area of 19,440 m<sup>2</sup>.

In 2006, we continued to build strong collaborative partnerships with agencies, community members, and academics. A significant step was achieved when we signed a Memorandum of Understanding



with the Department of Fish and Game formalizing the already close working relationship. The MOU symbolizes the high regard management agencies have for the rigorous RCCA training and data collection methods.

As part of our controlled expansion program, five new RCCA instructors were certified in 2006 (Mike Guardino – Carmel High School Dive Safety Officer (DSO), Rich Alvarez – Humboldt State DSO, Gil Falcone, George Peterson, and Brianne Berlin – Monterey Bay Aquarium DSOs, and Derek Smith – Long Beach Aquarium of the Pacific DSO). The Carmel High School and the Aquarium of the Pacific both offered RCCA trainings in 2006 and the Monterey Bay Aquarium will offer a class in early 2007.

Looking ahead, there is much work to be done. We are gearing up for expansion into both northern and southern California. This exciting, yet somewhat daunting, expansion will help us realize our goal of a statewide network and will include the training of many new divers and addition of several new sites. To help manage and disseminate all this new data, we will be developing an online database that will be the portal for all incoming data which will then be available to interested parties through our website in a new user-friendly interface.



Figure 3: Locations of 2006 Reef Check California surveys.

# education

"Reef Check has created a global coral reef monitoring program using a mixture of scientists and recreational divers that is providing coral reef managers in many countries with important and timely data."

Professor Richard Kenchington Chair of the Board of the International Coral Reef Action Network



### **EcoExpeditions**

Reef Check's EcoExpeditions offer divers the chance to visit some of the world's foremost diving destinations and the opportunity to help conserve marine resources in those regions. All EcoExpedition participants become RC certified team members and conduct surveys as part of their holiday experience.

In 2006 Reef Check EcoExpeditions went to a number of exciting destinations. Below are a few samples of the Expeditions run in 2006.

Reef Check, Chicago City Day School and the Shedd Aquarium Bahamas Expedition For the fourth year in a row, Reef Check teamed with the Shedd Aquarium to host an expedition for 16 lucky Chicago City Day School students. Two expeditions are made every summer for middle school students to explore the coral reefs of the Bahamas and learn their importance and dire need for conservation. Students learn the Reef Check protocol and participate in surveys at multiple locations and get to experience first-hand the intricate details of coral reef monitoring and conservation.

### Reef Check and Earthwatch Thailand Expeditions

In 2006, Reef Check and Earthwatch continued a long history of partnership for nine training and survey expeditions in the southern Gulf of Thailand. Reef Check Thailand Co-coordinator Kim Obermeyer and Reef Check Europe Coordinator Georg Heiss hosted divers from all over the world and taught them about coral reefs and the Reef Check protocol. More expeditions have been scheduled for 2007.

### Reef Check and Biosphere Expeditions in Honduras

Biosphere Expeditions launched its first Caribbean coral reef expedition with the aid of Reef Check. Located in the Bay Island Archipelago of Cayos Cochinos, Reef Check and Biosphere teamed up to survey part of the world's second largest coral reef system. More expeditions are scheduled for Honduras in 2007 and another coral reef expedition is slated for Oman.

Reef Check EcoExpeditions also ventured to Indonesia, the Maldives and the Red Sea.



### **EcoAction**

In 2006, Reef Check launched the EcoAction program – a multi-level education system for kids to adults to get involved in coral reef education, monitoring and conservation. The program is marketed and sold by the tourism industry. By adopting a business approach, Reef Check has devised a self-sustaining funding source for national teams around the world.

The four levels of the EcoAction program are as follows:

- Reef Check Adventures a book that exposes children (6 – 12) to coral reef animals and ecological processes on coral reefs through fun activities, photos and illustrations (Spanish and English).
- The Underwater Reef Guide (Caribbean and Pacific versions) — a waterproof book on common reef organisms that can be taken underwater. The Guide provides ID tips, feeding habits, fun facts and conservation status. Includes a slate for checking off fish and invertebrates observed that links to an online data entry system (Caribbean version Spanish/English).
- Discover Reef Check an introductory course with snorkel or dive component on the reef that demonstrates how a Reef Check research survey is done.

 EcoDiver Course – a three-day training course to become a certified Reef Check research diver with cross certification with PADI and NAUI.

By way of the EcoAction program guides and training, individuals can learn the value of coral reefs and take an active role in conservation efforts. The EcoAction program has elements in place for every age and is vigorously trying to engage children in an attempt to foster future conservation-minded generations. Sales of training and materials will help fund local programs as well as provide an incentive to harness the private sector to spread the word about the value of coral reefs and the problems facing them.

Reef Check officially launched its new EcoAction program in late 2006 with instructor training courses. From October through December, four "training of trainers" workshops took place in Mexico, Belize and the Philippines. Over 55 new trainers were certified from more than 28 different resorts and dive shops. Plans include 13 more training sessions for top dive destinations in 2007. By the end of 2007 we expect to have more than 200 certified trainers and to have EcoAction training available in key dive destinations worldwide. Through this program we hope to make coral reef conservation a priority around the globe.

# Reef Check California Joins with Carmel High School

Mike Guardino was the first non-Reef Check Staff to become a certified Reef Check California Instructor. Mike is a teacher at Carmel High School where he has taught a Subtidal Marine Research course since 1998. In his course, students learn to identify an extensive list of local marine algae, invertebrates and fish, as well as basic scientific sampling techniques.

At the completion of the course, Mike's students receive an American Academy of Underwater Sciences dive certification which is required by all University dive programs. Beginning in the fall semester of 2006, Mike began teaching his students the Reef Check California program sampling protocols. Mike and his students have adopted two sites in Carmel Bay. Mike's students monitor these sites on a regular basis, thus strengthening our statewide sampling network.

Getting involved with Reef Check California has helped Mike feel optimistic that the efforts of his classes may eventually help promote more Marine Protected Areas and improve marine management. "Reef Check is a great program for my students to learn about marine ecology and to feel part of a bigger initiative," said Mike. Mike is an invaluable asset and has brought a wealth of knowledge and experience to the Reef Check Team.

With the widespread demand for Reef Check California training sessions, we hope to engage more people like Mike and his high school class to help monitor our local California rocky reefs.



# conservation







# MAMTI (Marine Aquarium Market Transformation Initiative) Using the Marine Ornamental Trade to Create Marine Protected Areas

Home aquaria have come a long way in the past 10 years and hobbyists from Tokyo to Los Angeles can now reliably keep hundreds of fish, corals and other invertebrates for many years. Some 80% of the organisms traded in this \$300 million global industry are caught by poor fishermen in the Philippines and Indonesia and exported to the US, Europe and East Asia. Organisms are also collected in a dozen other countries in the Pacific and Caribbean. Unfortunately, without proper management, this fishery can damage the coral reef ecosystem through overfishing, fishing unsuitable species that will quickly die in captivity and by use of poisons, especially cyanide, that can damage the surrounding reef.

For the past three years, Reef Check has been working with two partners to create and implement a certification program for the trade in aquarium species to make it sustainable. Community Conservation Investment Forum (cciforum.org) is working on making the business more efficient, while the Marine Aquarium Council (aquariumcouncil.org) has designed the certification program to cover the entire supply chain from collection to sale. This work has been supported primarily by grants from the International Finance Corporation through the Global Environment Facility, and by USAID, Packard and MacArthur Foundations.

### The Reef Check 'niche' in a Sustainable Trade

Reef Check has developed a tool kit of scientific and management activities to help transform the marine ornamental industry into a sustainable trade. The four main components are resource assessment, management planning, rehabilitation and establishment of Marine Protected Areas.

#### **Resource Assessment**

The starting point for managing marine resources is to determine the extent of the existing resources - in this case the coral reef and related ecosystems as well as the numbers and sizes of the organisms living there. Reef Check designed the Marine Aquarium Trade Coral Reef Monitoring protocol (MAQTRAC) to carry out baseline surveys and regular monitoring of collection areas. The results of the surveys are analyzed using fisheries stock assessment models to determine what level of catch can be allowed without damaging the populations or the ecosystem as a whole. These numbers are then used to recommend catch limits to the local government council responsible for managing the resources.

The detailed MAQTRAC surveys and stock analyses are carried out by Reef Check marine biologists, and they also train local fishermen to carry out standard Reef Check surveys. By collecting their own data, the fishermen can see for themselves the status of the existing fish and invertebrate stocks and buy into the process of resource management.

#### **Coastal Management Planning**

To successfully manage coastal areas, the process must be formally adopted by the local government and include a cross-section of stakeholders - the people affected by management decisions. Stakeholders include marine ornamental collectors, other coastal users, and staff from environmental groups, academic institutions, government agencies and businesses. Reef Check helps to set up a legally recognized council comprised of local stakeholders with clearly defined functions. Reef Check scientists and coastal planners work with the local stakeholders to identify management problems and possible solutions.



Reef Check helps the stakeholders to draft a resource management plan for the areas. The management plan is a comprehensive document that defines the area to be managed and establishes rules for managing the resources. Reef Check focuses not only on creating the management plan but also in assisting the local stakeholders to implement the plan. For example, if one area is being too heavily fished a recommendation might be made to reallocate fishing effort to other areas. If poachers are fishing in the area, a deterrent system would be recommended.

#### **Marine Protected Areas**

A major goal of the management plan is to identify areas of coral reef and surrounding ecosystem that can be set aside in perpetuity as no-fishing zones i.e. Marine Protected Areas (MPAs). The boundaries of the MPAs need to be selected, recorded and marked. A scheme for managing and enforcing the new MPA is required.

When properly managed and enforced, Marine Protected Areas lead to build up of fish stocks, increased spawning capacity and fish catches, as well as income from activities such as tourism. Unfortunately, only a small percentage of the declared MPAs in Southeast Asia have been successful due to a lack of financial incentives to maintain them. By giving the reef more value, the marine aquarium trade provides leverage to set up and maintain MPAs next to the collection areas.

By the end of 2006, using this system, Reef Check helped to establish sustainable management systems at fourteen collection areas in seven provinces, in ten municipalities and districts encompassing 229 square kilometers of reef area in the Philippines and Indonesia. Seven MPAs with a total area of 2 square kilometers were strengthened in the provinces of Bohol and Palawan and these include sea grass and coral reef ecosystems. Although a small area, this is good evidence that the program can be scaled up to achieve larger conservation gains.

#### **Coral Reef Rehabilitation**

In some cases, coral reefs have been damaged to such an extent that rehabilitation is required. When coral reefs are damaged on a small scale (tens of square meters), it may be possible to stop the cause of their initial demise (e.g. pollution, diver damage) and then physically replant small corals, attaching them to the substrate. This method is expensive and labor intensive and does not address the typical problem of a lack of fish diversity and abundance. Usually, the area of damaged reefs is large, on the order of tens of square kilometers, therefore replanting is not practical. Reef Check has been working with a French

company, Ecocean, to rehabilitate coral reefs by restoring fish populations to their natural equilibria. By restoring the fish populations, the corals will return naturally. This Reefhab® technique involves using special light traps to capture fish postlarvae that arrive on the reefs at night to settle, and then growing them to a larger size. It is inexpensive to grow such small fish (0.5 to 1 cm long) and after 1 to 3 months they can be returned to the reef where they can have a higher chance of survival due to their increased swimming speed. The Reefhab method is being implemented in Bohol and holds promise of large-scale and rapid reef rehabilitation that will last.



Photo: Cori Kane

# **c**onservation





# RC California Begins Baseline Monitoring for MPAs

The 1999 Marine Life Protection Act (MLPA) mandated that the state of California design and manage an improved network of marine protected areas to, among other things, protect marine life and habitats, marine ecosystems, and marine natural heritage. Rather than tackle the entire 1,000 miles of coastline at once, the MLPA Initiative was developed to initially focus on California's central coast from Pt. Conception to Pigeon Pt. In August 2006, following a two year process that included a multitude of stakeholders, a Blue Ribbon Task Force, and a Science Advisory Team, the California Fish and Game Commission selected a preferred alternative for MPAs along the Central California Coast.

The selection of the preferred alternative started the clock for the collection of baseline information specific to the proposed network of MPAs before they are implemented. The importance of baseline information as a benchmark against which to measure success cannot be overemphasized. As noted in the California Ocean Protection Council's 5-year strategic Plan, "increased and improved data acquisition, analysis, and monitoring provide critical baselines for measuring future changes in ocean and coastal ecosystems." The flexibility offered by the Reef Check California Program, coupled with a highly motivated and enthusiastic group of trained divers, resulted in the commencement of baseline monitoring inside and outside many of the newly proposed MPAs within one week of the Fish and Game Commission decision. By the end of the dive season, central coast teams had completed surveys at 12 sites in the MLPA region, six of which were exclusive of current monitoring efforts. The data collected by Reef Check teams were then submitted to the California Department of Fish and Game to help establish baseline conditions needed to assess the success, or failure, of the new MPA network in years to come.

The next steps for the MLPA are to move north to the North Central Coast Study Region with plans for full statewide implementation to be completed by 2011. As the MLPA expands across the entire coast, the data collected by Reef Check California teams will play an increasingly important role. In addition to providing critically needed information to help inform critical management decisions, volunteer divers now have a mechanism to apply their extensive local knowledge to help sustainably manage our shared coastal resources.

For more information about the MLPA, please visit the Department of Fish and Game's web page at www.dfg.ca.gov/Mrd/mlpa/index.html







### Inabanga MAQTRAC Report 2006

Total coral reef area
Total area surveyed
TAC set for fish species
TAC set for invertebrate species
No-take zones
New no-take zones
Coral Cover over the whole survey
Fish Density over whole area
Number of species requiring further close monitoring

90,500 m<sup>2</sup> of reef area 109 19 2 already established 0 45% 170 ornamental fish per 500 m<sup>2</sup> 7 fish species

# Inabanga, Bohol Island (Central Philippines)



The first step in setting up a management plan is to carry out surveys and to map the components of the marine ecosystems. Coral reefs dominate this area, but seagrasses and mangroves are also an important component and act as a nursery for juvenile fish and invertebrates.

### **Map of Fish Density**



One of the key parameters to assess i fish density in the area. More than 100 species were counted in surveys but only 25 are sold in the marine aquarium trade.

#### Map of Living Coral "Cover"



Despite nearby rivers and some sedimentation, several reefs revealed high levels of living coral cover in the 51 to 75% range.

#### **Summary of Results:**

- 1.) The MAQTRAC survey recorded 109 fish species. Based on interviews, however, the collectors only mainly target 25 different ornamental target fish species.
- 2.) Five ornamental targets being collected by fishermen were not recorded during the MAQTRAC surveys. These were the wartskin or frogfish Antennarius spp., the anglerfishes Histrio spp., the yellow wrasse Halichoeres chrysus, and the clownfishes Amphiprion polymnus and Amphiprion perideraion. The frogfishes and the anglerfishes are highly cryptic organisms, thus are difficult to record during MAQTRAC surveys. On the other hand, the yellow wrasse and the mentioned clownfishes are highly visible fishes. It is possible that they were missed because of their low abundance and/or concentration in specific habitats which were missed during the survey.
- 3.) Based on natural mortality rates, the highly abundant ornamentals have the highest catch limits. The damselfishes and the cardinalfishes have natural mortality rates (death due to natural causes) of about 20 to 25% of the population. At the other extreme, the angelfishes have the lowest natural mortality rates (and thus catch limits) at 5% of their population. Other species groups have natural mortality rates that range from 10 to 18% of their population. Fish with higher natural mortality can in theory withstand higher fishing pressure and therefore their total allowable catch can be higher. Corollarilly, those with low natural mortality can only withstand lower fishing pressure and therefore their total allowable catches will be set much lower.
- **4.)** For the highly cryptic species such as the anglerfishes, the wartskin, the banded sharks (both juvenile and egg forms), and the panther grouper *Cromileptis altivelis*, signficiant declines in their intraannual catch-per-unit effort should trigger proportionate decrease in catch. Long-term monitoring in inter-annual catch records and trends in CPUE can indicate annual total allowable catch and a system must be set to monitor these in the coming months prior to MAC certification of the area.
- **5.)** Due to the proximity of Batasan Island, Tubigon and the availability of recent historical data on the area the team has run fisheries models to estimate exploitation levels of the key species in the area which with regular monitoring and annual assessments can be considered reasonable and will not impact heavily on the ornamental fishery and stocks.

# public awareness







"Growing up in Hawai'i, I learned about the value of coral reefs. Reef Check's unique educational efforts are very inspiring and highlight the urgent need to reverse the global coral reef crisis."

Kelly Hu, Actress and Reef Check Spokesperson

Film and television star Kelly Hu made a "Run for the Reefs" during the 34th annual Honolulu Marathon in December. With coaching from legendary track and field Olympian Carl Lewis, Kelly ran the marathon to benefit Reef Check Hawai'i.

Reef Check Hawai'i's Run for the Reefs

After the marathon, Hu and Lewis co-hosted a celebrity luau fundraiser for Reef Check Hawai'i at the Sheraton Waikiki which raised over \$100,000 for conservation of Hawai'i's coral reefs.

#### Reef Inhabitants Premieres in Las Vegas

In September, Chameleon Studios in Las Vegas hosted a packed crowd of dance and ocean enthusiasts to see Reef Inhabitants, a unique multimedia dance show created especially for Reef Check, and featuring dancers from the Celine Dion Show and the Nevada Ballet Theater.

The dancers generously donated their time to rehearse and participate in the one-night only show. Spearheading the effort was Paolo Santos, a multimedia artist and his wife, dancer Caroline Sicard. Paolo worked with internationally renowned musicians

and composers Claude Lemay, Yves Frulla, and Marc Langis to create the score, while also developing all the video components. Caroline, a dancer with the Celine Dion Show, worked with Elijah Brown, Greg Sample, Paco Villalta, Eboni Adams, Bruce Steivel, Sonia Dawkins, Francesca Dumas and Mark Swanheart to develop the choreography.

The show proved to be a huge hit and will now be featured during Reef Check's International Ocean Festival in Malibu in September 2007.

#### Reef Check Philippines Hosts "Visions of the Reef" to Garner Support for Local Reefs

In September, Reef Check Philippines organized "Visions of the Reef", a fundraising photo and film exhibit held at the Rockwell Loft in Manila. The event aimed to increase public awareness of the dazzling beauty of the country's coral reefs and the need to protect them, and to raise funds for Reef Check's activities such as training divers and fishermen to monitor reef health and the establishment of marine protected areas.

The event was hosted by celebrity Paolo Abrera and actress-model Angel Aquino and featured the stunning and award-winning photos of underwater photographer Gutsy Tuason and the beautiful footage from cinematographers Marissa Floirendo and Carina Escudero. Ballet Philippines, Cynthia Alexander and Pinikpikan provided musical performances.

#### Jean-Michel Cousteau, Carol Connors, and Barbi Benton Honored at Reef Rescue 2006 in Beverly Hills

Reef Check once again teamed up with top

celebrities for its 4th annual Reef Rescue 2006 fundraiser in June, at the private estate of actress Suzan Hughes in Beverly Hills.

This year's gala honored the legendary Jean-Michel Cousteau (Founder and President of Ocean Futures Society, son of the late Jacques Yves Cousteau) with the "Poseidon Award" for his lifetime achievements in marine conservation. Sharing the honoree spotlight were two-time Oscar nominated songwriter Carol Connors along with actress and singer Barbi Benton, who both received the "Mermaids of the Reef Award" for their dedicated support and advocacy of reef conservation.

## Reef Check Travels to Hawai'i for the Kelly Slater Celebrity Surf Invitational

Involving celebrities with Reef Check draws attention to the Coral Reef Crisis. In February we joined a host of Hollywood stars and some of the best surfers in the world at the Kelly Slater Celebrity Surf Invitational in Kona, Hawai'i. A surf/lifestyle event filmed for an MTV special, the event focused on surfing, marine conservation, and fun in the sun for a host of celebrities including Incubus, Jack Osbourne, G.Love, Tony Hawk and Ashlee Simpson. In addition to interacting with the guests of the event to raise their awareness about our efforts, we established the Kelly Slater Reef Check Survey Site to honor Kelly Slater for his continued support of our conservation efforts.

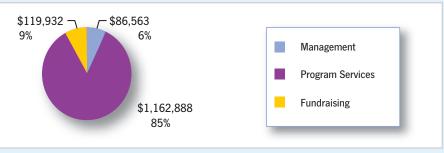
Accompanied by a pod of singing humpback whales, Reef Check staff and volunteer Catherine Landa (RC Hawai'i) performed the first annual survey of this site.

# funding



### Expenses in 2006

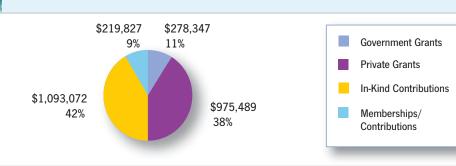
Total Expenses: \$1,369,383



#### Revenue in 2006

Direct Revenue: \$1,473,663 In-Kind Revenue: \$1,093,072

Total Revenue: \$2,566,735







Numbers reported here are pre-audit.

### Reef Check began as a scientific project to survey the world's reefs by volunteers.

The budget in 1997 was zero. As it has grown, support has come primarily from grants. We are now actively trying to increase revenue from memberships and donations. In 2006, memberships and donations increased from \$40,000 the previous year to more than five times that amount. As a percentage of total revenue this category more than doubled from 4 to 9%. In the future we hope to continue this trend as well as expanding our sales of conservation education training programs and materials. In-kind contributions have also increased with growth in the number of supporters and volunteers worldwide. At over \$1 million, this means that for every \$1 cash raised, we match that with \$1 of in kind volunteer contribution.

Total cash revenue increased by 23% and is expected to rise as the California program expands. However this may be partly offset by an increasingly competitive environment for funding overseas programs.

Despite an increase in major programs and staffing, the combined fundraising and management expenses were maintained at the same level as the previous year at 15%. Thus 85% of funds raised are spent directly on programs.



# dedications



This annual report is dedicated to two key members of Reef Check who passed away during 2006, Eddy Medora, Reef Check Board Member and Chris Haugen, the perfect volunteer.

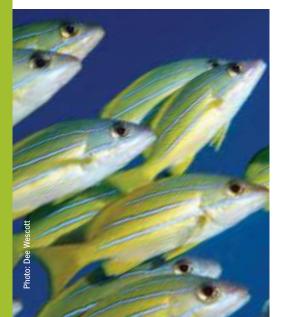
#### Eddy Medora • 1946 - 2006

Reef Check Board Member Eddy Medora passed away on October 26, 2006 following a respiratory illness.

Eddy grew up in Pacific Palisades where he met and recorded songs with the Beach Boys and his own bands including the Sunrays.

From playing warm up band for the Beach Boys in the Hollywood Bowl in 1966, Eddy then went on to become the original guerilla marketer as National Marketing Director of Disney for many years. Eddy's talents as a painter were developed more recently and he was in high demand for his portraits in Beverly Hills. Eddy donated a number of his best paintings to Reef Check for auction at events.

Eddy's lively good humor was a constant source of energy and laughter at Board meetings and events. He was one of the key designers of the 2006 Reef Inhabitants dance show in Las Vegas and was a critical



team member for our annual Reef Rescue event. His advice on marketing and sales was invaluable in the development of the Reef Check EcoAction program.

Eddy was much loved by all and will be sorely missed. To honor him we have established a Memorial Fund that will be used to fund the Reef Check California program so that we can continue to care for the reefs where Eddy used to play. A Malibu reef survey site will be named after Eddy and an annual survey will be completed there in his name.

#### Chris Haugen • 1959 - 2006 Reef Check California

Reef Check volunteer diver Chris Haugen passed away following a boating accident on November 11, 2006. Director of Training Chris Knight takes a few moments to remember this "perfect volunteer."

Working with divers and training them to do survey work is the best part of my job here at Reef Check, and we've done a lot of it in California over the past few years. Divers go through the program and never look at the ocean the same way again. All the trainees have been great to work with. But one standout in particular was Chris Haugen. The first time I met him was at our training in Santa Barbara. Chris was a former urchin diver who had come down with his girlfriend Dida Kutz to learn to monitor the reefs in Monterey where Chris worked and lived. I didn't really know what to make of Chris and the way he never stopped asking questions in the classroom. Seriously, he never stopped asking questions. I'm thinking "there's one in every class" and wondering what the field training would hold with this guy along.

It turned out that Chris was the least of our problems on the trip. To say we had some issues would be a bit of an understatement. The boat was too small for all the people on board, and Craig Shuman and I were a

little unsure of how things would turn out given that this was our first California field training. To make matters worse, we picked the weekend that saw the worst outbreak of kelp flies the Channel Islands had seen in years. Millions of flies were in our faces, hair, and food with no relief anywhere. We did all our briefings with towels around our heads, giving muffled instructions to similarly attired divers. It was tough on everyone. Everyone that is, except for Chris. In this organized chaos, he always seemed to be smiling (albeit with flies in his teeth), helping other folks, and generally keeping everyone's spirits high despite the pests that were torturing us on a continual basis. He had saved Dida's life in a diving accident a year prior, and you could see how much he cared for her. He really won everyone over at the training.

The training must have worked because Chris and Dida became Reef Check monitoring machines, taking their small Boston Whaler out of Monterey Harbor to establish several survey sites, and completing their class' first independent survey. Chris never shied away from helping others out in the program both during surveys and subsequent trainings. Over the course of the summer, I made multiple trips up to Monterey for trainings, and Chris was always first to step up and show our new people how Reef Check divers did things on the Central Coast. He was also the first to offer a cold beer and a "great day huh?" after the diving was done. He was just that kind of guy and what we hope all of our volunteers can be.

Chris bought one of our Reef Check baseball caps at the Santa Barbara trainings, and I don't think I ever saw him without it on his head in all the times we were together. It got pretty banged up and faded and tired looking on his head but he wore it with pride. I guess that's how I'll remember him, his old weather beaten Reef Check hat pulled low over his eyes, smiling, and trying to figure out how to get one more survey done.

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Coordinators, Team Leaders, and Team Scientists highlighted in blue

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