

# CORAL CURRENT

The Newsletter of The Coral Reef Alliance

The Coral Reef Alliance  
417 Montgomery St. #205  
San Francisco, CA 94104  
Phone: 415-834-0900  
1-888-CORAL-REEF  
Fax: 415-834-0999  
Email: info@coral.org  
Web: www.coral.org



Fall 2005

## "Working Together to Keep Coral Reefs Alive"



## MAUI REFLECTIONS

Rick MacPherson, Program Director

Sitting on Ka'anapali Beach with my journal the morning after our first Hawaii workshop, I have spectacular Maui mountains to my back, Moloka'i-rusty red and deeply valleyed-looms across the bay to my right, and to my left floats Lanai'i. Though cloud cover obscures the volcanic summits of each island, the air is crisp and dry enough for me to make

### Contents

Maui Reflections .....	1
Ask CORAL .....	2
Notes from the Field .....	3
Biodiversity Hotspot, Hawaii .....	4-5
Maui Reflections ctd. ....	6
Reefs in the News .....	7
Member News .....	8

out individual lava flows as darker, reddish-black rivers frozen in time that fan down from the peaks. I'm trying to get adjusted to my "new eyes." Last night, a *Kupuna*—a Hawaiian elder—officially launched our workshop series by delivering a very special and rarely given blessing to all those participating.

Our blessing, delivered in the Hawaiian language and lasting 20 minutes, was a *Kumulipo* creation chant incanting the creation of the Hawaiian Islands. As our *Kupuna*, Kumu Keli'i Tau'a chanted, eyes closed and head bowed, he described the coming of *Po'ele*, the female deity who is the ultimate ancestor of all Hawaiian gods. *Po'ele's* children were responsible for the creation of water, and of the coming of lava and rock, which formed



The scenic beach of Ka'anapali. Your contributions are bringing sustainable business practices to US reefs.

the islands. There was a telling of individual creations of birds and flowers, ferns and sea turtles. But the very first life to be created, we were told, was *Hina*, a coral polyp. And it is from this first coral polyp that all life grew. Our blessing asked the living parts of Maui—trees, flowers, fish, and coral—to welcome us. As Kumu Keli'i Tau'a concluded the *Kumulipo*, visibly drained and short of breath, he instructed us to "go out to the mountains or the beach or reef tomorrow and see Maui with your new eyes." All life on Maui would now welcome us.

Back in CORAL's San Francisco office, no longer with

ctd. on page 6

## Ask CORAL Dr. Alex Brylske

**SOMEONE RECENTLY TOLD ME THAT CORAL REEFS CAN MAKE IT RAIN! THAT SOUNDS RIDICULOUS. CAN IT BE TRUE?**

### **CORAL's Staff:**

Brian Huse,  
*Executive Director*

Janine Kraus,  
*Development Director*

Rick MacPherson,  
*Program Director*

Tom Meshishnek,  
*Finance & Administration  
Director*

Sherry Flumerfelt,  
*Program Manager*

Richard Wilson,  
*Program Manager*

Eileen Weckerle,  
*Membership &  
Communications Manager*

Dr. Alex Brylske,  
*Training Manager*

Florence Depondt,  
*Program Assistant*

Cheryl Chen,  
*Project Coordinator*

### **CORAL's Board of Directors:**

Lyn Ciocca (*Chair*), Jason DeSalvo,  
Mark Epstein, Dane Farnum,  
Rod Fujita, Paula Hayes,  
Randall Kramer, Dennis H. Liberson,  
Charles Seaborn, Rob Townsend,  
Elizabeth Ulmer, Hillary Viders,  
Chris Wachholz, Gil Williamson



**Resilient reefs: Research shows that coral produces chemicals that may stimulate cloud formation.**

I wouldn't reach for my rain jacket quite yet, but there has been some intriguing research published recently that may indicate how coral reefs can influence the weather in ways never before imagined. As recently reported in a February issue of *New Scientist*, coral reefs may be able to cool off the water surrounding them by creating clouds.

Research from the Great Barrier Reef shows that corals contain chemicals called dimethyl sulphide, or DMS, for short. When these are released into the atmosphere in aerosol form, DMS can stimulate cloud formation as the tiny particles enable water vapor to condense and form clouds. Scientists have known for some time that large amounts of DMS are produced by many marine algae, but until recently no one had thought to explore whether coral reefs might do the same.

Researcher Graham Jones of Australia's Southern Cross University measured DMS concentrations around coral reefs and found that the mucus exuded by the coral contained the highest concentrations of DMS so far recorded from any organism. He and his colleagues found that a concentrated layer of DMS formed at the sea surface above the reef and was picked up by the wind.

This phenomenon could have a large affect on the local climate. Quoting from the *New Scientist* article, Jones said that, "Although globally the emission of DMS from the Great Barrier Reef is not huge, on a regional basis it is very significant." But, he adds, "We don't know how the DMS emitted by the coral relates to cloudiness and the radiative climate over the reef."

To what extent, if at all, the corals are responding to the stress of high temperatures isn't known. But lab experiments have demonstrated that corals produce more DMS when the symbiotic algae inside their tissues become stressed by high temperatures or ultraviolet radiation. "We've got a long way to go to conclusively demonstrate this, but we've got a lot of ammunition," says Jones. 🐠

*For more information about the study see the full journal article in *Marine and Freshwater Research* (volume 55, page 849).*

# Notes from the Field

## POSTCARDS FROM DIVE IN TO EARTH DAY

Reports and pictures from CORAL's 2005 Dive In To Earth Day events are flooding our office. For further details about organizing a fun and easy event that will protect our ocean environment please see our website [www.coralreefalliance.org/divein/](http://www.coralreefalliance.org/divein/) or contact Florence Depondt at [divein@coral.org](mailto:divein@coral.org)



April 23, 2005

Today we gathered volunteers and braved the wet weather to clean the shore of Great Bay in Philipsburg. We collected over 60 kg of trash and even rescued a wounded pelican!

Ocean Care

St. Maarten, Netherland Antilles

April 16, 2005

This Dive In To Earth Day, we organized a cleanup of Long Beach because currents here sweep trash off the beach and around to the south and west coast beaches. By cleaning Long Beach, we can positively affect many of Barbados's beautiful beaches and sea turtle nesting areas. The "mess" you see here in this photo weighed an extraordinary 755 pounds!

Barbados American Divers Association

Barbados, Bahamas

April 10, 2005

Yesterday, 50 volunteers got together to clean up some of Curacao's most beautiful beaches and dive sites filling 30 bags with trash, as well as pulling up many tires and metal sheets. Participating divers and beach cleaners expressed a new sense of responsibility for the ocean.

The Dive Bus and Caribbean Sea Sports

Curacao, Netherland Antilles

## BUILDING SUSTAINABLE TOURISM IN CENTRAL AMERICA

*"I have been waiting a long time for such a task force dedicated to preserving our coral reef."*

*Julie Berry, Dive Operations Manager, The Turtle Inn, Belize*

In May and June of 2005, CORAL trained tourism businesses in Mexico, Belize, and Honduras on coral ecology, reef threats, and possible solutions to those threats. Ninety percent of the participants agreed that a voluntary set of regional environmentally-conscious business standards for marine recreation was a proactive solution to the threat of tourism impacts on the reef and crucial to the health of the Mesoamerican Barrier Reef as a whole.

Nearly 150 diverse interest groups, including suppliers, concerned tourists, local community groups, non-profit organizations, and academic interests have committed to participating on a task force that will create the standards. Underwriter's Laboratories Inc. is sponsoring this project by providing software that will facilitate standards development and feedback via the internet.

This summer, CORAL and its partners selected Playa del Carmen, Mexico; Placencia, Belize; and Roatan, Honduras as pilot test sites to begin training and revision of these standards over the next two years. 🐠

## BIODIVERSITY HOTSPOT HAWAII

*The Hawaiian Archipelago, the world's most isolated island system, stretches for more than 2,500 km and consists of eight large volcanic islands to the southeast (the Main Hawaiian Islands) and 124 uninhabited small islands, reefs, and shoals to the northwest (the Northwestern Hawaiian Islands). Due to its isolation, some of the world's most unique coral reefs are found in Hawaii.*



### FAST FACTS



#### SIZE

Hawaii has 410,000 acres of coral reef accounting for 85% of the total coral reef area in the United States.



#### BIODIVERSITY

Almost 700 species of identified fish. Over 400 can be found in shallow waters, such as the reef triggerfish otherwise known as the *Humuhumunukunuuapua'a*.

More than 5,000 known species of marine plants and animals.

62-65 species of stony corals dominated by finger and lobe corals.



#### ENDEMIC SPECIES

25% of reef fish and corals are endemic, meaning that they are only found in Hawaii—such as the Hawaiian lionfish and the bandit angelfish.



#### ECONOMIC VALUE

The coral reefs of the Main Hawaiian Islands are valued at US\$10 billion per year from tourism and recreation, fisheries, and environmental services such as coastal protection, biodiversity, and property value.



#### CORAL PARTNERS IN HAWAII

Hawaii Division of Aquatic Resources, Hawaii Ecotourism Association, Hawaiian Islands Recreational Scuba Association, Hawaii Wildlife Fund, Malama Kai Foundation, Maui Land & Pineapple, Maui Reef Fund, Project S.E.A.-Link, and University of Hawaii Sea Grant.



#### FUN FACTS AND CULTURE

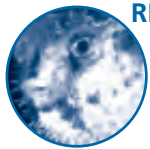
The city of Honolulu is built upon the skeletal remains of a Finger Coral reef.

According to the *Kumulipo*, the Hawaiian Hymn of Creation, the coral polyp was the first creature to emerge during creation.

*"Thank you for your strong support of our effort to install the Maui moorings. The financial support of CORAL was a huge help and we all appreciate the partnership that has been developed."*

*Terry O'Halloran,  
Malama Kai Foundation*

## CONSERVATION PROFILE



### REEF THREATS

*Hawaii's coral reefs are under pressure from population growth, agricultural runoff, pollution, sedimentation, overfishing, ship groundings, alien species, tourism, and recreational over-use and mis-use.*



### STRATEGIES

*Hawaii's Marine Life Conservation Districts (MLCDs) are marine protected areas set aside to conserve and replenish marine resources by limiting or restricting fishing. MLCD's have been shown to increase the size and diversity of fish within their boundaries. 🐠*

## CORAL RESULTS

### **2 Year Commitment**

CORAL recently launched a two-year program in Maui to help protect coral reefs through sustainable tourism, tourist education, and community partnerships for conservation.

### **59 Business Operators**

In May 2005, we facilitated a four-night workshop focusing on Honolua Bay, a Marine Life Conservation District in northwest Maui. Fifty-nine people participated in the workshop, representing local dive shops, kayak companies, sailing charters, rafting companies, snorkel companies, and several environmental organizations, governmental agencies, and land developers.

### **92% of Participants Re-evalaute Practices**

Participants said that the workshop motivated them to re-evaluate their business practices and behavior after discussing threats and solutions. They further committed to work together in educating tour operators and tourists on reducing reef threats to Honolua Bay and other sites in Maui. CORAL is responding to this need by developing a long-term education and awareness program in partnership with our Hawaiian partners.

### **\$2,000 Microgrant**

In May 2005, CORAL partnered with Malama Kai Foundation (MKF), Maui Reef Fund, and Maui's ocean tourism operators to provide a \$2,000 grant to help fund a mooring buoy installation and training.

### **7 New Mooring Technicians**

Project volunteers spent three days installing five moorings on Maui and training seven islanders who are now equipped to install future moorings that will reduce anchor damage on Maui's fragile coral reefs.

From page 1: *Maui Reflections*

Hawaiian sun on my back, I'm reflecting once again on this blessing and gift. Our work takes us to some of the world's most familiar and threatened coral reef destinations: Hawaii, Palau, Belize, and Honduras to name a few. As popular tourism destinations, it's not surprising that CORAL's unique approach to reef conservation is needed there. After all, if popular coral reef destinations are to remain intact, it makes sense that businesses and local communities should invest in education, protection, and sustainable practice.



US reefs face the same threats as developing countries.

In developing our programs and approach, it seemed obvious that a small conservation organization can get the most "bang from its buck" by working in developing countries where the need is greatest and the resources most scarce. As we have become more sophisticated and successful in our work, we couldn't help but notice that here in the United States, coral reef destinations are facing the same issues and threats as we are observing in developing nations.

CORAL has wanted to work in Hawaii for as long as most staff can remember. The trends in coral decline and damage we are documenting across coral reef destinations in developing countries is mirrored in Hawaii. And Hawaii is not showing any signs of diminishing tourism—the main islands receive 11 million visitors annually most of whom engage in some form of marine recreation. Through the right combination of opportunity, approach, and the generosity of the Tiffany & Co. Foundation and the National Fish and Wildlife Foundation we can finally begin our work. We

identified the coral destination of Honolua Bay, Maui as our initial work site. And it wasn't long before we teamed with partner conservation groups, both local and statewide, as well as garnered the interest and support of Maui businesses and community members.



The Hawaiian Coastline. From reefs to ridges these ecosystems are interdependent.

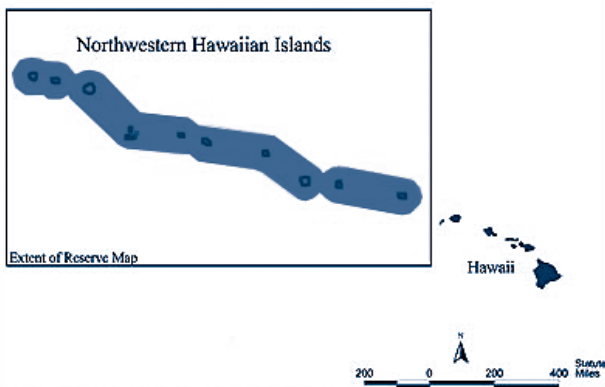
Above and beyond CORAL finally having an impact domestically, Hawaii is exciting because what we are hoping to achieve is in alignment with deeply embraced Hawaiian traditions. A hallmark of the CORAL approach is to see coral reefs not as mere discrete habitats, but rather part of a larger, integrated and interdependent tapestry of watershed, intercoastal, and marine communities. Impacts to one have consequences throughout all. This integrated approach to coastal zone management may sound novel, but it's at the heart of the Hawaiian concept of *Ahupua'a*, a centuries old notion of resource management that literally considers everything from the top of the mountain to the sea. Healthy systems depend on healthy parts. Certainly not a radical concept. It just requires seeing the world with new eyes. 🌊



CORAL Hawaiian workshop participants. Business operators, marine resource managers, and the local community find common ground in learning about sustainable tourism.

## Reefs in the News

### HAWAII CONGRESSMAN PROPOSES WORLD'S LARGEST MARINE REFUGE



On May 16, 2005, Congressman Ed Case (D—Hawaii) introduced legislation that would create “the largest marine protected area in our world” in the waters around the Northwestern Hawaiian Islands. The area Case wishes to protect stretches across 1,200 miles of the Pacific Ocean from Nihoa Island to Kure Atoll, an area larger than Australia’s Great Barrier Reef—currently the world’s largest protected area. In addition, the state of Hawaii’s Department of Land and Natural Resources (DLNR) has proposed full protection for all state waters within the area.

*SOURCE: May 17, 2005 Environmental News Service  
[www.ens-newswire.com/](http://www.ens-newswire.com/)*

### PEW MARINE EXPERTS OUTLINE PLAN TO PROTECT OCEANS— INTERNATIONAL SUPPORT OF MPA’S NECESSARY

Thirty-eight of the world’s foremost ocean experts recently issued a joint statement urging “the nations of the world to fulfill their commitment to the future of the oceans” through active support of Marine Protected Areas. Dr. Ellen Pikitch, Executive Director of the Pew Institute for Ocean Science, said that the statement calls for local involvement in planning, managing, and implementing Marine Protected Areas (MPAs); linking MPAs into networks; evaluating those networks; and taking global action to restore and maintain marine populations, habitats, and fisheries.

Experts from all areas of marine science and policy agree that the world’s oceans are in crisis, as study after study shows extreme depletion of fish and marine life. Scientific support for the value of MPA’s and their power to preserve the ocean environment further underscores the importance of the Pew plan.

*To view the complete statement please visit:  
<http://161.58.251.199/index.php>*

*SOURCE: June 2005 Pew Institute for Marine Science*

### NEW EDUCATIONAL CORAL REEF VIDEO—CORAL AND EARTHWISE MEDIA RELEASE “RAINBOWS OF THE SEA”



Aimed at ages 12 through adult, this colorful underwater journey, from the Indo-Pacific to the Caribbean, explains reef dynamics while getting viewers up close and personal with the reefs’ dazzling residents. Find out what is damaging coral reefs and what CORAL is doing to protect reefs for future generations.

Nancy Sefton of Earthwise Media hopes that “...CORAL members will want to own this product so that they can be reminded, whenever they view it, of the valiant efforts being made worldwide to preserve our precious coral reefs.”

*To order your copy on DVD or VHS please visit:  
<http://www.coralreefalliance.org/store/>*

*For weekly updates on ocean-related news bits visit our  
website [www.coralreefalliance.org/news](http://www.coralreefalliance.org/news)*



## ***It's Renewal Time—The Fastest Way to Get Your Calendar***

CORAL wants to get your calendar to you as fast as possible – BUT WE NEED YOUR HELP! **Renew as soon as you receive your reminder.** Renewing early also allows us to process your donation faster so **you won't receive additional renewal notices.** *Questions? Call the membership department at 415-834-0900 x314.*

## ***Travelers' Opinions Wanted***

Have you been to Milne Bay, Papua New Guinea or Namena, Fiji in 2005? If so, we need your opinion for a survey to gauge visitors' support for marine protected area funding strategies. *If you are interested and able, please contact [sflumerfelt@coral.org](mailto:sflumerfelt@coral.org).*

## ***Special Thanks***



To Air Pacific for the donation of flights to Fiji. Their support has allowed CORAL to bring services to communities in Fiji and has resulted in a more cohesive management plan for the areas of Taveuni and Namena.

## ***Call of the Wild***

CORAL is honored to have been selected by **Working Assets Long Distance** to be one of the nonprofits to receive a percentage of their yearly donation. Working Assets' customers determine the percentages by voting. If you are one of the converted, make sure to **cast your vote 100% for CORAL.** If you don't already have a Working Assets credit card or long distance service, please sign up so you can vote, too. They have great rates and give free Ben and Jerry's ice cream for a year! 🍦

<http://www.workingassets.com/recipients.cfm>



The Coral Reef Alliance (CORAL)  
417 Montgomery Street, Suite 205  
San Francisco, CA 94104

Nonprofit Org.  
U.S. Postage Paid  
Tucson, AZ  
Permit No. 271

Proud partner of:



Layout and design:  
*Sophia Antipas/stellarv 415.970.8835 [sophia@stellarv.com](mailto:sophia@stellarv.com)*