

# CORAL CURRENT

The Newsletter of The Coral Reef Alliance

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*"Working Together  
to Keep Coral Reefs Alive"*

*Summer 2005*



© Dave Canny, Ecospective

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## MEXICO, BELIZE, HONDURAS, GUATEMALA EAGER TO BEGIN PROTECTIONS OF MESOAMERICAN REEF

Along the second largest barrier reef system in the world, giant groupers drift above vibrant hard and soft coral. Neon-hued nudibranchs punctuate the scene as flitting schools of damselfish drift by.

This is the Mesoamerican Reef, stretching from the northern Yucatan peninsula in Mexico, along Belize and Guatemala, and on to the Bay Islands of Honduras. It is a spectacularly beautiful reef and with a flight time of three to five hours from most locations in the U.S., it is a convenient and even favorite destination for many American divers and snorkelers.

Yet even as sites on the Mesoamerican Reef grow in popularity, trouble is looming. The increasing popularity of these coral reef sites—coupled with growing impacts from coastal development,

over fishing, urban and agricultural runoff, and unsustainable tourism—have caused some experienced divers and snorkelers to turn away, citing overcrowding and a changed reef. In response to these threats, the International Coral Reef Action Network's (ICRAN) Mesoamerican Reef Alliance (MAR), of which CORAL is a key implementing partner, is bringing a new, practical focus to the issues of reducing tourism impacts.

Building consensus on sustainable tourism for a reef system stretching 600 miles along four countries is no simple feat. But in May of 2005, CORAL and its partners will begin the process through the first of a series of National Learning Workshops in Mesoamerica. One of the primary goals for this collaboration, to establish a voluntary code of conduct for marine recreation throughout the region, may very well prove to be the key to insuring **ctd. on page 5**

## *Executive Director's Letter*

### LESSONS FROM THE LAND



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Wallace Stegner once said that America's national parks "Were the best idea we ever had." Much of the world seems to agree, as the US National Park System has become the model for similar systems of parks in many other countries. Although protection of the natural heritage of landscapes has become a deep-seated ethic in many societies, it has not come easily. Parks have been laboratories for the politics of conservation and compromise for over 100 years and have shaped our attitudes regarding preservation, sustainable tourism, and traditional use.

The protection of parkland has most often begun in local reactions to threats against valued natural or historic landscapes, and then grown into organized movements for protection. As we work to apply this park ethic to marine conservation, this is a critical point. Though the protection of the marine environment is an international priority, establishing protection must begin with the interests of local communities.

Using scientific research to build the case for protection has led to significant advancements in understanding resource management. For example, park creation has helped build a scientific basis for resource valuation, boundary establishment, and economic development. Entire disciplines have been born in resource management and restoration. But most importantly, parks have been a catalyst for understanding that we need to protect entire ecosystems, rather than individual species.

This science has also led to a better understanding of the complex relationships communities have with the land. With this understanding has come a more flexible approach to preservation – that is, an approach where people are considered part of the ecosystem. This is best exemplified in World Heritage Sites that incorporate traditional use, cultural values, and sustainable economic development along with the preservation of the natural environment.

Creating lasting protection for reefs can and should be informed by these types of lessons. The battles between park advocates and mining interests in the Mojave Desert are no different than those between marine park advocates and commercial fishers. CORAL hopes that by involving local communities, using ecosystem science, and concentrating on sustainable economic development, we can more rapidly create marine parks that protect coral reefs and the populations they support. 🐠

Brian Huse  
Executive Director

## Notes from the Field

### CORAL MICROGRANT HELPS KOH YAO NOI AFTER TSUNAMI

Now that most of the wreckage has been cleared and people continue to rebuild shattered lives, conservationists are looking more closely at the environmental effects of the tsunami that hit parts of Southeast Asia in December 2004. To help in this process, CORAL recently provided a microgrant to assist Koh Yao Noi Island in Thailand with reef assessment and restoration.

After the tsunami, some of the 5,000 residents of Koh Yao Noi began noticing large shards of broken coral washing up on beaches and submerged fragments destroying fishing nets. It is unknown whether this



© Gege Poggi, Conservation International

broken coral is from the two square kilometers of coral reefs around the island, or was transported from greater distances. CORAL awarded a microgrant to Responsible Ecological Social Tours (REST) working with Reef World Foundation so that villagers can complete reef surveys and cleanup and begin necessary restoration. Both groups are based in Thailand.

In 2002, Koh Yao Noi gained worldwide attention after receiving the World Legacy Award for Destination Stewardship from Conservation International and National Geographic Traveler magazine.

### IOWA FIRST GRADERS BECOME PARK BUDDIES



© Regina Celania, Fort Dodge Messenger

*Dear Coral Reef Alliance,*

We are pleased to send you \$125.00 from our Ocean Café fundraiser. The students in our first grade classrooms spent the month of March learning about water, ocean life and the need to take care of our environment. Being landlocked in Iowa it is always a challenge to teach our students about our amazing oceans. Your materials, website and links helped us to bring a little bit of the ocean to the farm fields of Iowa. We had over 200 people attend our Ocean Café "restaurant." The students served shark eyes (deviled eggs), sea urchins (marshmallows with pretzels), octopus (hot dogs), and other treats to their family and friends. We sold buttons that we made that said Save the Coral Reefs. Thank you for working with us to provide educational experiences for our students.

*Terri Parker  
First Grade Teacher, Duncombe Elementary School  
Fort Dodge, Iowa*

***Thank you, Duncombe students!  
Your contribution is helping CORAL's four Park Buddy projects in Belize, Honduras, Papua New Guinea, and Pohnpei to buy patrol and research boats, mooring buoys, and materials needed to build a visitors center. We want these reefs to be forever healthy for you and the people who live there.*** 🐠

## THAILAND'S WORLD CLASS REEFS AFTER THE TSUNAMI

Robert McCaleb

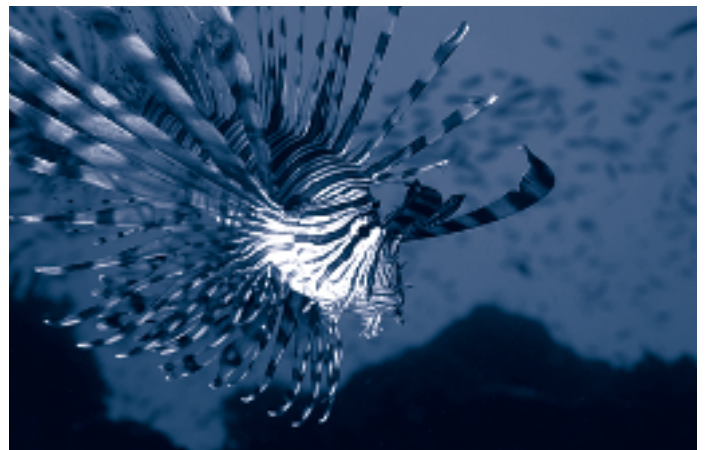
Phuket, the island paradise at the heart of Thailand's tourist industry lies in the Andaman Sea on the west coast of the country's southern isthmus. Phuket was the source of the first pictures that chronicled the devastating tsunami that hit the region Dec. 26, destroying buildings and lives, and crippling the tourist engine of the Thai economy. Ironically, the news coverage seems to have damaged tourism here more than the tsunami itself, with tourism down 70%. In reality, few resorts were hit, and many dive sites received little to no damage.

While the damage to reefs ranged from merely mild to quite severe, many sites are unscathed, lush with life and diversity, with the kind of undersea vistas for which Thailand is rightly famed.

A research mission by Aqua One and the Thai Authority of Tourism found Surin Islands sites heavily impacted, with up to 80% damage. On the other hand, the Similan Islands experienced only 35% damage. Richelieu Rock and its surrounding reef was untouched, as were many of the other sites surveyed.

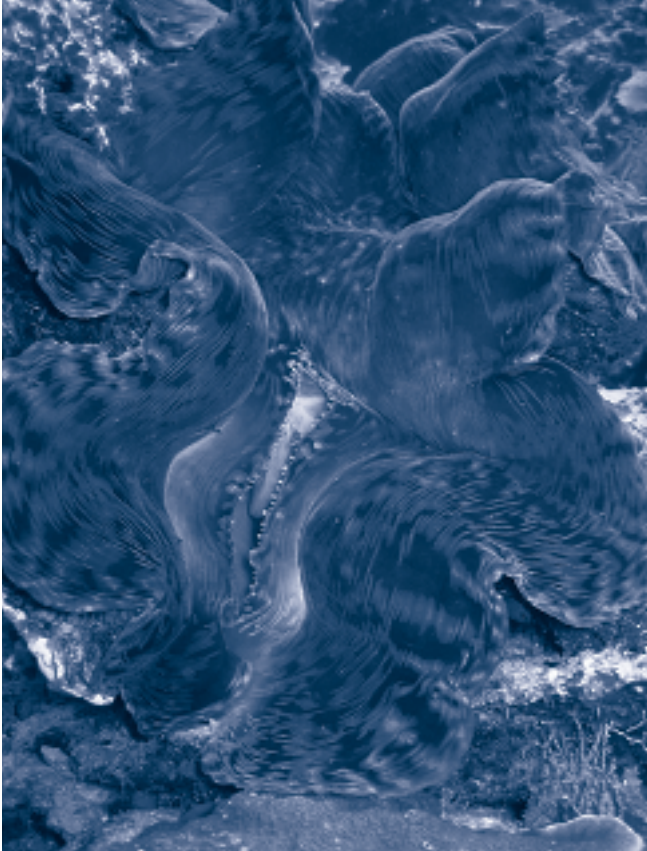
In short, there are enough spectacular dive sites in Thailand left unharmed to provide plenty of five star diving and snorkeling.

Dive boat operators also worked hard to repair damage in the critical time just after the tsunami. In one project,



"Save the Reefs," over 100 divers worked to right overturned coral heads and re-attach sea fans to the seafloor with steel rebar, wood and bamboo.

Two months after the tsunami, we visited **Purple Rock** and **Red Rock** where spectacular leopard sharks dozed on the sand, then made a leisurely curiosity cruise around divers. The **Similan Islands** had some damage, much of it unrelated to the tsunami. Parts of the reefs are subject to storm and wave damage, and enormous piles of coral rubble dominate some exposed areas.



© Robert McCaleb

There is also some old damage from dynamite fishing, which has been banned in Thailand for the last 15 years. **Richelieu Rock** is very famous, and provided the best diving of the trip. The horseshoe shaped rock sports a reef alive with swirling masses of fish, beautiful healthy coral and gorgeous topography. We experienced coral canyons and cliffs with diverse sea life that included large frogfish, blue spotted stingrays, pipefish, lionfish, scorpionfish and much more.

Back on Phuket, we were able to assess the real damage to the Island. The images to which we were glued, the images that inspired many of us to open our hearts and

our wallets to the people of the Indian Ocean—those images linger in the minds of travelers who are now choosing their vacation destinations. The disaster aid provided by so many worldwide helped the locals through a time of devastating loss, and helped them rebuild homes and businesses. To rebuild the economy, though, the Thais need the tourists to return. Empty restaurants and bars and under booked hotels and resorts are the legacy of those vivid images. Yet the Thai people are upbeat and unwaveringly welcoming and friendly.

A year from now few will think of the tsunami when they think of Phuket or of Thailand. Today, we can help the Thai people best by spreading the word that the tropical splendor is still here: the beautiful beaches, flowers and tropical fruits, and the marvelous spirit of the Thai people. And the diving? The diving is spectacular, on fabulous intact reefs with abundant healthy sea life, large and small. 🐠

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## *From page 1: Mexico, Belize, Honduras*

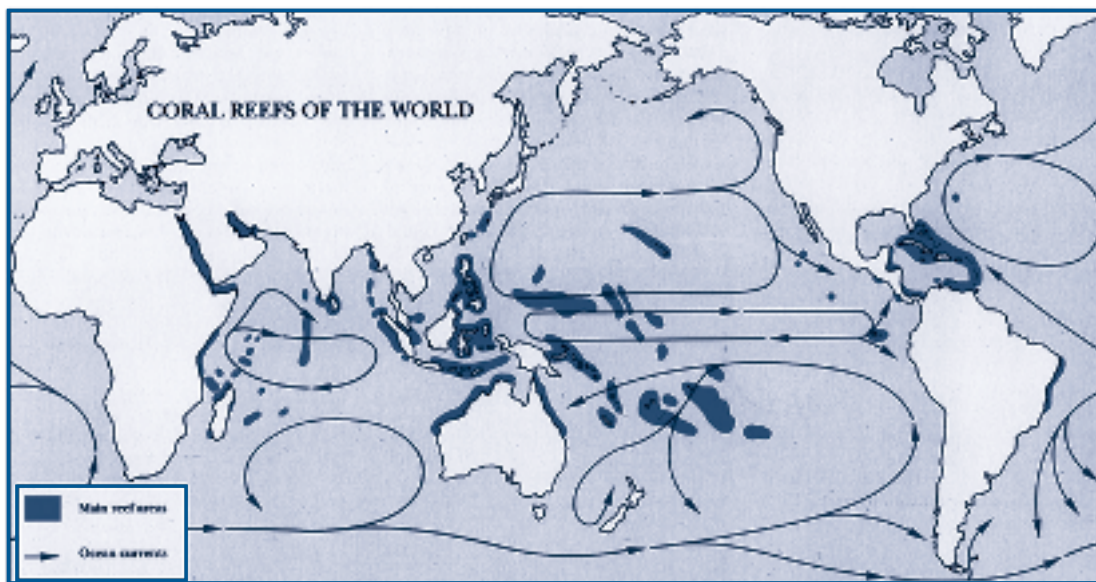
the health and livelihood of the Mesoamerican Reef into the future.

According to a model for predicting coral reef damage from marine recreational activities, 6-10% of the local coral reefs can be saved each year merely by preventing boat anchor damage and providing environmental briefings to their customers (CORAL 2004).

In April 2005, CORAL began recruiting a taskforce of key representatives in the region to develop and review a list of these voluntary codes of conduct. To date, 50 representatives from suppliers, purchasers, local community, and general interest groups have signed on to participate. **If you would like to get in on the action as a concerned consumer, visit [www.coral.org/parks/mar/taskforce.html](http://www.coral.org/parks/mar/taskforce.html) to see how you can participate in creating and reviewing these codes.** 🐠

## *Ask CORAL* *Dr. Alex Brylske*

### WHY DO CORAL REEFS OCCUR MOSTLY OFF EASTERN COASTS OF CONTINENTS?



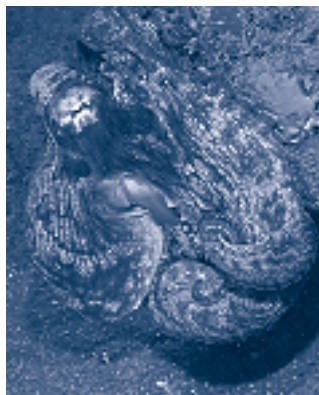
Source: The Greenpeace Book of Coral Reefs

The distribution of coral reefs is determined largely, but not exclusively, by water temperature. But how can water temperature be related to continental boundaries? The answer is a planetary phenomenon known as the Coriolis effect. Like the major wind patterns of Earth, such as the trade winds, major oceanic currents flow in basin-wide circular patterns termed gyres, a Greek word for circle. And like wind patterns, the Coriolis effect makes these gyres flow in a clockwise direction in the Northern Hemisphere and a counterclockwise pattern in the Southern Hemisphere. (Currents in the Indian Ocean are somewhat unusual because of a complicated meteorological phenomenon that causes the annual monsoons).

Now, take a look at the illustration above and note the circulation patterns, depicted by the arrows. The oceanic gyres dictate the relative temperature of the water flowing past the continental coasts. Along eastern continental coasts, such as Australia or southeast North America, currents flow from warmer equatorial regions. Along the western coastlines, such as the west coasts of North and South America, currents flow from cooler polar regions. The result: warmer water is brought to the eastern coasts while cold, coral-inhibiting water is brought to the western coasts. 🌊

# Reefs in the News

## THE AMAZING WALKING OCTOPUS



© Jeff Yonover, www.jeffyanovor.com

*First evidence of underwater "bipedal" locomotion*

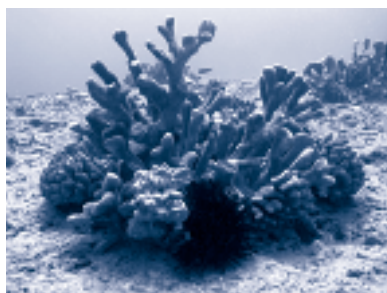
In a recent article in the journal *Science*, University of California Berkeley scientists reported on their recent discovery of walking Octopuses.

Ordinarily, an octopus changes both its color and shape to evade predation. But when they use the familiar "jet propulsion" to move quickly, they cannot maintain their stealth appearance. Scientists postulate that the two-armed behavior allows the octopus to slowly walk away from a predator while preserving its existing camouflage.

Because octopuses lack bones, they do not have fixed hinges like the knees and ankles humans employ for motion. Instead, they control water pressure in their soft appendages in ways that, while unknown, create remarkably complex movements.

SOURCE: National Science Foundation [www.nsf.gov](http://www.nsf.gov)

## CORAL SHOWS LIFE AFTER FIRST AID



© NOAA

On February 2, 2005, the 555-foot bulk carrier *Cape Flattery* went aground in Oahu, Hawaii crushing acres of corals. The area immediately under the ship was, "A field of pulverized

and polished rock. It was just totally scraped clean," said John Naughton, a fisheries biologist with the National Oceanic and Atmospheric Administration.

In a monthlong effort to rehabilitate the reef, federal,

state and contracted divers cemented 600 individual coral heads and colonies of broken coral fragments to the ocean floor following the removal of the vessel.

If the broken coral heads had been left on the bottom, their rolling action would have killed live corals, further damaging other parts of the reef.

The program appears to have been very successful. "We're seeing tissue growing over the tips of broken branches", reports Naughton, "and fish are utilizing them as habitat."

SOURCE: *The Honolulu Advertiser* [www.honoluluadvertiser.com](http://www.honoluluadvertiser.com)

## COOL FISH LABELS

Effective April 4, 2005, grocery stores are now required to label all fish and shellfish with country-of-origin labels (COOL) that identify the where the fish was originally taken and whether they are wild caught or farm raised.

From Chilean sea bass to bluefin tuna, 75 percent of the world's fish stocks are over-fished, according to United Nations studies. Some farmed fish, such as salmon from Norway and Canada, can be harmful to ocean health because of waste, escaped foreign species and the need to feed farmed fish with ocean fish.

A study last year in the journal *Science* found that some farmed salmon have higher levels of PCBs, dioxin and other contaminants than wild salmon, making them possibly harmful to human health.

Studies also show that eco-labeling works. In the 1980's large canned tuna companies began putting "dolphin safe" labels on their products and buying only from fishing crews that used nets that didn't kill dolphins. The number of dolphins killed in the Pacific by fishing crews has fallen from 136,000 in 1986 to 4,000 in the past year. 🐬

SOURCE: *Contra Costa Times* [www.contracostatimes.com](http://www.contracostatimes.com)

# ***Make Your Dive Last For Generations***

## **Legacy Giving to CORAL**

You know those timeless moments underwater when you wish you could capture the beauty and excitement of the deep blue forever? A legacy gift to CORAL can help you do just that. By making a gift to CORAL through your will or other estate plans, you help ensure that the wonders of the coral world you cherish can survive as the crucial ecosystem link they are, and as an inspiration to future generations. And because these gifts save you estate taxes, you can often leave a bigger legacy than you ever imagined. You can't fathom the difference you can make!

*Please talk to your tax or legal advisor, or contact Eileen Weckerle (eweckerle@coral) at CORAL to learn about ways you can make a big impact for the future of coral reefs by including CORAL in your will or retirement plans. 🐠*

## ***Wish List***

- 🐠 **Laptop for Park Manager in Namena, Fiji**
- 🐠 **Underwater digital camera for Waitabu Marine Reserve**
- 🐠 **Desktop computers**

*We would appreciate that any electronics donated be less than two years old. Contact Eileen Weckerle (eweckerle@coral.org)*



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