

Reef expert gives back to Asia

Strangers in Taiwan helped Deborah Brosnan after a plane crash in 2000, and she leaves today to repay the kindness

By MICHAEL MILSTEIN
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The horrific images of tsunami-battered shores in Southeast Asia recalled to Deborah Brosnan her own personal disaster in that part of the world.

She and her husband, Steven Courtney, survived a fiery jet crash in Taipei, Taiwan, that killed 83 passengers in 2000.

Now, Brosnan hopes to return the kindness locals showed her in the chaotic aftermath of the wreck. A Portland

marine biologist, she is orchestrating a worldwide effort to help reclaim and repair fragile coral reefs pounded by the December tsunami.

"I realize I know what it's like to go through a disaster," said Brosnan, president of Sustainable Ecosystems Institute, a nonprofit organization that provides scientific advice on environmental issues. "But secondly, I know what it's like to get up the next day and say, 'What am I going to do now?'"

The tsunami took an immense human toll, and Brosnan could tell from the pictures of debris washed out to sea that the region's coral reefs would also take a beating. She soon began hearing the worst from scientists, dive guides and others in the region.

Clouds of silt have settled on the tiny

organisms that build reefs, threatening to suffocate them. Delicate coral formed over many centuries is battered with each tide by furniture, cars, refrigerators and other debris. Towels and sheets have wrapped around formations.

Her goal is to help remove the debris by lifting it off with air bags where necessary, repair broken coral, train local people to do similar work, and assist communities in restoring their reefs over the long term. She created the Tsunami Reef Action Fund to raise money and support



BROSINAN

Experienced in mending coral reefs

and is enlisting a global network of scientists created as a kind of scientific version of the aid group Doctors Without Borders.

Other scientists will join her in Asia to provide aid before the damage worsens.

"This is a race against the clock, and every 24 hours counts," she said.

Coral reefs in Southeast Asia are the richest in the world, Brosnan said, with more species than almost anywhere else on Earth. The coral formations themselves are the foundation of that diversity, like old-growth trees in a Northwest forest.

About 5 percent of the reefs off the coast of Thailand — and up to 50 percent around some exposed islands — were damaged by the tsunami, accord-

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ing to the U.N. Development Programme, which is helping with the cleanup.

The damage is doubly troubling because the reefs support fisheries that many Asian communities rely on for food and to attract tourists.

"The reefs to these people are what supermarkets are to us," said Brosnan, 47. "They're where they go to get dinner. If the reef's gone, the supermarket's gone."

Brosnan has been working round-the-clock e-mailing other scientists, lining up equipment, seeking donations and planning travel to areas in Thailand and Sri Lanka where reefs were hardest hit. She will leave for the region today.

It will be her first return to Asia since the plane crash more than four years ago. She was there to

ON THE WEB

- ♦ More about the reef recovery project, including ways to donate: <http://sei.org/tsunami/index.htm>
- ♦ Read reports from Deborah Brosnan during her trip: www.deborahbrosnan.com

speak at a coral reef symposium in Bali about the need to monitor coral reefs to help communities.

Her last memory of Indonesia is of diving on a reef with a sea turtle swimming alongside her.

She and Courtney were on their way from Taipei to Portland when their 747-400 disintegrated into flames as the pilot attempted to take off on a closed runway in a typhoon.

Local people she didn't know helped her with money and support in the following days, as Courtney lay in a hospital.

"You're wondering, 'How can anything good come from this?'" she said. "But these are people who cared, who said, 'What can I do to help?' And then it becomes your turn to help."

Relocating living reefs

Brosnan has mended coral reefs before. She studied the effects a volcanic eruption on the Caribbean island of Montserrat had on surrounding reefs. When the island needed a new harbor to replace one ruined in the eruption, she led an effort in 1997 to move coral formations that stood in the way.

Divers chiseled the formations loose and cemented them to rocks in a new location. The relocated reef is now flourishing.

She envisions similarly reattaching sections of reef knocked loose by the tsunami and is stocking up on marine epoxy to help cement them back in place. She has received e-mails seeking help in repairing once-colorful dive sites now reduced to rubble, and has e-mailed directions for securing delicate, living sea fans torn from their perches by waves and debris.

It may also be possible to "reseed" sections of reef with living coral fragments to encourage their regrowth.

Global warming's toll

Although coral reefs have long endured natural calamities such as earthquakes and tsunamis, they may no longer recover as readily.

Reefs worldwide are dying from global warming, and in 1998 the worst reef die-off in history hit Asian corals especially hard, said Mark Hixon, a professor of marine biology at Oregon State University.

"It's a highly stressed ecosystem," said Hixon, who is helping Brosnan. "The problem is that something like (the tsunami) is being added on top of all these other stressors that human activity has already added."

"I don't want to just go and do science for the sake of doing science," Brosnan said. "I want to do something to make a difference for people who have lost everything."

Had she not nearly lost everything herself in the plane crash four years ago, she might not know how big a difference there is to make.

"I think I still would have wanted to help," she said. "Would I be going back? Would I be sacrificing as much? Would I be talking to people who've been through a tsunami and know what to say to them? No. No way."

Michael Milstein: 503-294-7689;
michaelmilstein@news.oregonian.com