Dive Fitness—Sea Legs: Ecology—Beyond the Muck: UWPhotography—Mirrorless Macro

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Wide-Macro Fisheye for Critters

Portfolio Sharon Brill

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Profile Mike Fletcher

Sport Rebreathers Opening Up Closed Circuit

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Tubbataha Reef

—The Crown Jewel of Philippines Diving

Text by Duane Silverstein and Ferdie Marcelo. Photos by Randy Wright and David Reubush

The word tubbataha is a combination of two Samal words. tubba and taha, which together mean "a long reef exposed at low tide." But today the name Tubbataha is synonymous with a different definition—the best dive location in the Philippines. About 180 kilometers (110 miles) south of Palawan Island, Tubbataha is a coral reef in the Sulu Sea, Philippines, consisting of three distinct parts: the huge North and South Atolls and the smaller Jessie Beazley Reef. In 1981, it became the first national marine park in the Philippines under the leadership of then President Corazon Aguino, and in 1993, Tubbataha was declared a UNESCO World Heritage Site. Just last year, CNNgo.com named this 130,000 hectare site one of the world's top ten dive spots.

I recently visited Tubbataha through my work as director of Seacology, a nongovernmental organization (NGO) whose sole purpose is preserving the marine and terrestrial ecosystems of islands throughout the world. Seacology has 240 projects in 51 countries throughout the globe where deals are made to provide an island village something tangible it needs such as a school or fresh water delivery system in return for establishing a marine or forest reserve.

One such project is on the small island of Manamoc in the Philippines where we provided the requested solar energy system in return for support of a 267 acre marine protected area. This past April, I led a group of Seacology donors to the Philippines to see our project on

> Manamoc and spend a week diving the reefs of Tubbataha. I have visited the

Philippines on many occasions and dived some of her magnificent reefs. But every time I mentioned where I had been I would get the same response: "The diving there is quite good but if you want

ing was supposed to be so good is its remoteness from human activity. There are no villages within 150 kilometers of Tubbataha, which means little pollution and little pressure from divers. The only way to dive Tubbataha is on a liveaboard dive boat, and due to potential rough seas caused by seasonal climate changes, Tubbataha can only be dived between early March and early June of

One of the reasons Tubbataha div-

Hippocampus denise seahorse

to see worldclass diving you should go to Tubbataha."

Ship groundings

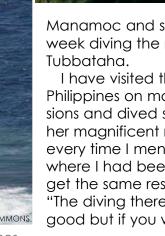
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As the time of our trip rapidly approached I could hardly contain my excitement about diving this isolated reef. However, just two months before our trip I received terrible news. The U.S. minesweeper USS Guardian ran aground on Tubbataha's south atoll—2,345 square meters of the reef were damaged by this grounding, which the U.S. Navy's own report attributed to a "lack of leadership".

Everyone breathed a huge sigh of relief when on March 30 shortly before our trip to Tubbataha the last section of the USS Guardian was lifted off the South Reef by a crane. There was great sadness over the damage done to the reef, but this was ameliorated to a small extent







USS Guardian aground on Tubbataha Reef in the Philippines X-RAY MAG: 56: 2013 TRAVFI

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by knowing that finally the boat was gone and could not do any more harm. Now we can once again think of our impending trip and perhaps even see for ourselves the extent of the damage done by this horrible accident.

Then the near impossible happened. Just one day before our flight from Manila to Puerto Princesa (the departure point for most liveaboards), another

ship went aground on Tubbataha. How could this happen twice in such a short period of time particularly at a UNESCO World Heritage Site that is nowhere near a major shipping lane?

My first reaction upon reading this news was the same as that attributed to Philippine President Benino Aquino III: "This must be some mistake. This can't be happening again!" Or in the oft-quoted words of famed U.S. baseball player Yogi Berra, "It's déjà vu all over again!"

This time the culprit was a Chinese fishing vessel, the F/V Min Long Yu (whose cargo, as I'll explain, was anything but fish). And this time, the damage was a lot worse. Nearly 4,000 square meters were destroyed, including some massive corals over 500 years old. As one official stated, "It bulldozed through vibrant coral reefs

leaving a highway of destruction in its and crew were extremely apologetic

wake."

Our trip, however, was still a go so later that same day we boarded the scuba liveaboard, the Atlantis Azores, which is a former Aggressor fleet ship that was recently renovated. The boat was in excellent shape, the hard-working crew was spectacular and the food was very good. The rooms below deck were on the small side and did not have windows or portholes, but the friendliness of the crew more than made up for these minor shortcom-

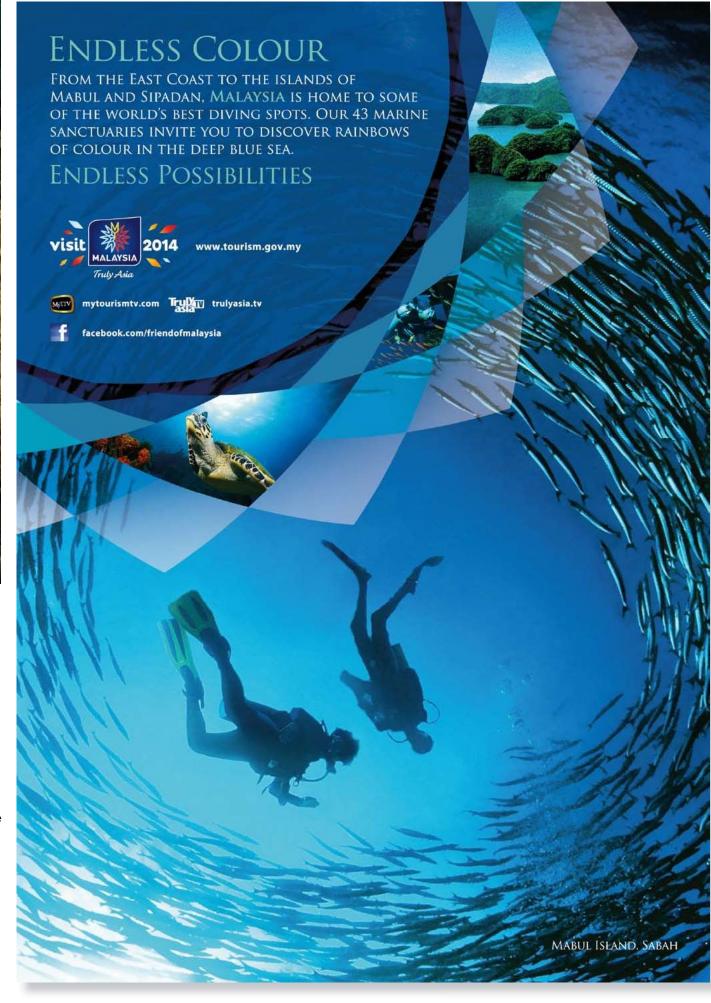
During the course of the week a tank was accidentally dropped on my gear, and consequently, my regulator and flashlight were damaged. Though I was not pleased with this, I have dived enough to know that accidents will happen. The captain

and took immediate responsibility. They lent me replacement gear at no cost and told me to take my damaged equipment to my favorite dive shop back in the States, and they paid the bill by credit card, no questions asked. I was impressed with the way they handled this mishap.

Diving Tubbataha

But how was the diving in Tubbataha? In a word, excellent. During the course of the week, I saw more sharks than I have in years, particularly in Jessie Beazley Reef. I also have not dived with this many turtles in a long while, and for the first time ever, saw a pair of mating turtles. The occasional napoleon wrasse, large tuna and large schools of jacks added to the enjoyment of the dives.

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the two recent groundings, the

been removed.

Reef shark resting in its hiding place

Pair of sea turtles mating



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Children welcome the delegation visiting the Seacology solar energy system in the village of Manamoc in the Philippines; Diver hovers over lush soft corals on reef (far right)



Community action

One of the major problems besetting island communities like Manamoc is the lack of reliable electricity. Its generators depend on fossil fuel, which has to be imported to the island and is very susceptible to price increases. The very high cost of power makes it difficult for villages to provide efficient and effective services to the community. Moreover, the community's generators are usually turned on only at dusk and turned off at midnight. In

the local high school, for instance, students and teachers had to shell out personal money to purchase gasoline for the sole generator within the school to power at least two of the six working computer units in their classroom.

In 2008, Seacology funded several solar power supply systems for the community health center, village hall, community training cum multi-purpose center, public high school, public elementary school and the pre-school center—all in exchange for their commitment

to protect a nearby 108-hectare marine protected area (MPA). Our local partner, the Andres Soriano Foundation (ASF), has been reporting that the solar power systems are serving the community well, and that the MPA is being strictly enforced

as a notake zone. Shortly after our visit to Tubbataha, a Seacology delegation visited

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Manamoc to see for ourselves what is actually happening on the ground.

munity's generators are usually turned on On our arrival we were met by danconly at dusk and turned off at midnight. In ing children, ASF staff and village officials

who briefed us on the status of the MPA. Fish counts have tripled between 2008 and 2012. In 2008, there was only 25 percent hard coral cover, whereas now hard coral covers 50 percent of the reserve.

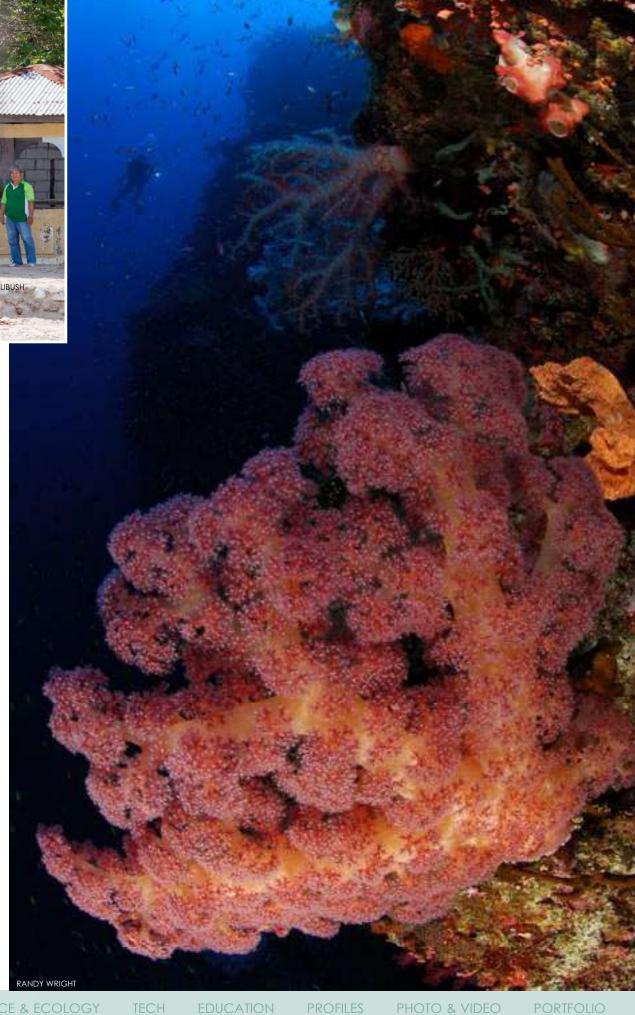
The villagers have organized their own fish warden group, which continuously patrols the MPA. Poachers, invariably other fisher folk originating from neighboring islands, are apprehended and fined. Through the fines collected, the villagers were eventually able to purchase a patrol boat exclusively for this purpose.

After the brief presentation at the beach, we

were taken around the village where we saw the solar power systems at work, most notably at the health center where temperature sensitive medicine such as vaccines are now refrigerated, and the high school where students can now learn and practice computer skills regardless of their families' ability to pay for fuel. This project is a good example of what can happen when a highly motivated village such as Manamoc works with a terrific local NGO such as ASF with the support of Seacology.

Our Seacology expedition to Tubbataha and Manamoc Island offers critical lessons in the management of the Earth's remaining wildlife resources. No spot on this planet is sufficiently isolated from potential damage done by humankind. A single ship grounding can instantly obliterate wide areas of coral for decades if not centuries to come. Wanton poaching for whatever purpose can drive a species to extinction. And a small island community taking responsibility for the protection of its marine resources can cause these areas to flourish, translating to increased bounty within nearby designated fishing areas.

Duane Silverstein is the executive director and Ferdie Marcelo is the Philippines Field Representative for Seacology an NGO whose sole purpose is preserving the marine and terrestrial ecosystems of islands throughout the world. For more information about Seacology, which has protected almost two million acres of island marine and terrestrial habitat, or to find out more about and Seacology's expeditions, visit Seacology.org



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