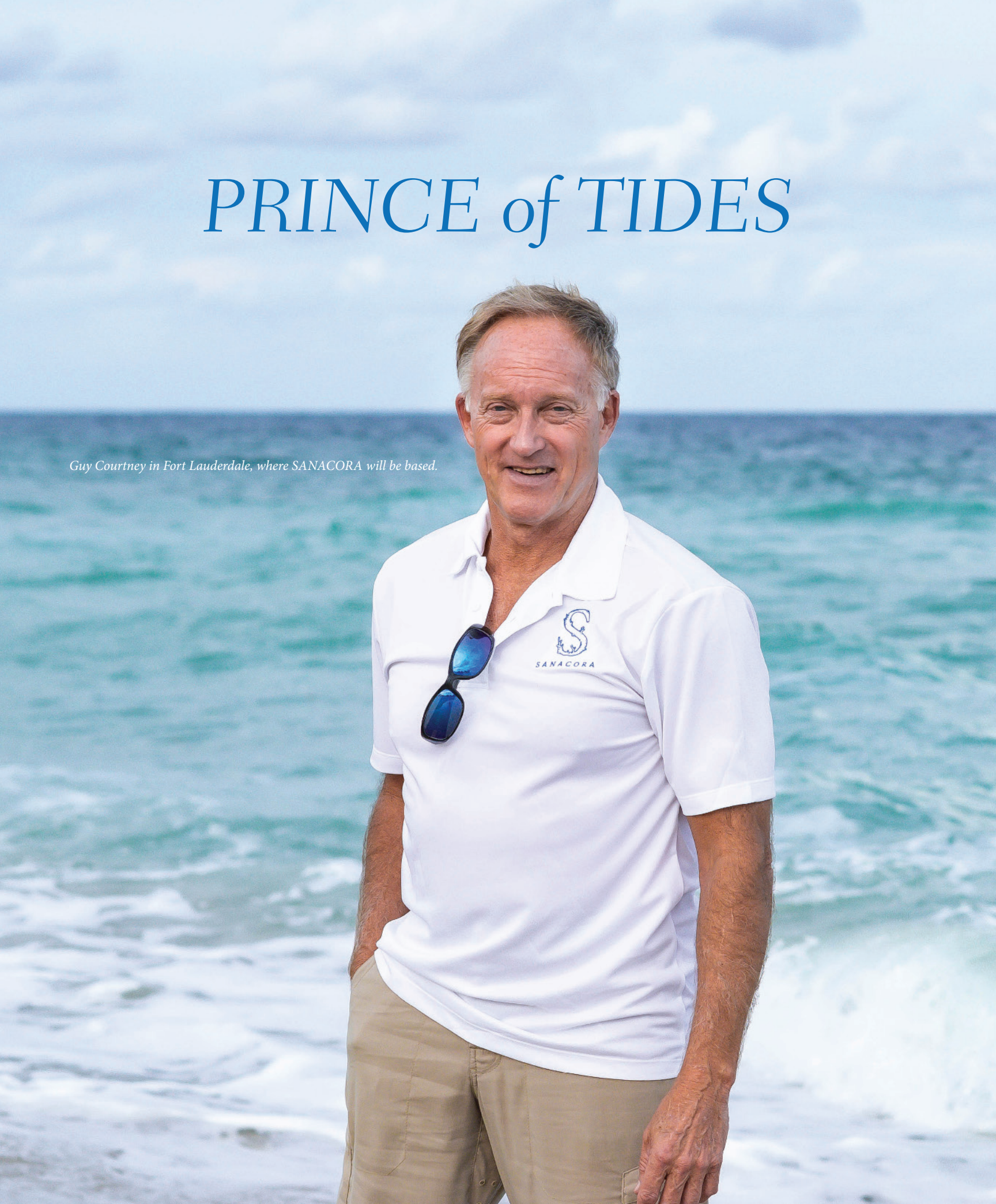
PRINCE of TIDES



Guy Courtney in Fort Lauderdale, where SANACORA will be based.

Long-time Barrington resident Guy Courtney unites luxury yacht excursions with his mission to replant the planet's fast-disappearing coral reefs.

BY LISA STAMOS | PHOTOGRAPHY BY LINDA M. BARRETT

YACHT PHOTOGRAPHY COURTESY OF TED HOOD, WELLINGTON YACHT PARTNERS

Guy Courtney visits Key West, Florida to check on potential SANACORA yacht affiliates.

THE JOURNEY FROM SUCCESS TO SIGNIFICANCE can be long and bumpy. Twists and turns appear randomly. You encounter unexpected stops and have surprises along the way. But when you sense that you are drawing near to the intersection of where your deepest passions will meet up with your greatest abilities, you'll know that you arrived at your unique destination.

Guy Courtney grew up in Mount Prospect, Illinois, and recalls that the world stopped when Jacques-Yves Cousteau's TV show came on during the late 1960s. Cousteau and his crew traveled to exotic locations on the Calypso and explored regions of the underwater world, trying to unlock the secrets and share those discoveries on film. It was "must-see" TV before we called it that. Family dinner on Sunday night could wait. There were no cell phones or iPads to interrupt time with the French adventurer and his latest technological inventions and underwater curiosities.

Courtney's interest in underwater ocean life would fully circle back decades later while at an Aspen Institute event in Colorado.

Ted Hood of Wellington Yacht Partners designed this 75' Palawan for Little Harbor Custom Yachts. This world cruiser has six cabins and can house eight guests.

MOVING TO BARRINGTON

A serious gymnast at Prospect High School, Courtney earned a scholarship to attend Illinois State University where he majored in business administration. He and his family lived in Arlington Heights and they made what he calls the big leap to live in North Barrington.

"At home, we had five acres and lived half a block from Timber Lake," Courtney said of his North Barrington neighborhood. "There were idyllic qualities—it was peaceful and tranquil," he says of 25 years there with his wife and four children. He has been a member of Willow Creek Community Church for 30 years, and his children attended Christian Liberty Academy for school.

A now-retired investment banker, Courtney had his own firm, The Machaira Group, which was a boutique sized broker-dealer in securities and market making located in Palatine. He chaired the Chicago Chapter of T. Boone Pickens' United Shareholders Association, a shareholder rights and management accountability group to keep the free market system alive and well. He testified to Congress on the importance of shareholder rights.

AN ADVENTUROUS LIFE

Courtney has all the makings of a modern-day Indiana Jones—especially now that he's on the ultimate quest with SANACORA, his newly formed business that will attract yachting affiliates, partners, and travelers from across the planet with a singular mission. He's the first to combine luxury yacht cruising with replanting the fast disappearing coral reefs. His nonprofit, Mission: Ocean Reef, is the sister entity that will handle the science and source the coral for the expeditions. He will draw from his array of adventures while starting the most ambitious one of his life.

A pilot while in college, Courtney moved up from Cessna 150s to flying King Airs for his family vacations and for clients. "Flying requires a disciplined approach, you have to pay attention to everything and 'keep your head in front of the airplane,'" he says.

A learn-to-sail ad in Crain's Chicago Business caught Courtney's attention during his business career, and he learned to sail on Lake Michigan. His dream was to one day circumnavigate the Earth by boat, which now seems possible. He scuba dives and completed the Ironman Triathlon in Hawaii years ago.

Racing cars in Elkhart, Wisconsin was added to Courtney's list of sports, and he owned a racecar for several years. He raced in the businessman's class known as Sports 2000. The restricted rules class of two-seat, mid-engine, full body sports cars was ideal for amateur racers.

Upon retirement, Courtney headed south and west to relocate, and landed in Demming, New Mexico. As a young boy, family trips to dude ranches in Colorado and Arizona and a love of horses would reenter his life. For five years he lived as a rancher with 200 head of cattle to care for. "There was such freedom and possibilities there," he said. "I ran a small cattle business and loved the life. New Mexico farmers are the greatest people to know."

His most recent destination before returning to Barrington for the past year was in Aspen, with dog sledding and skiing the local sports.

And there, the seeds of SANACORA were planted.

Above left: The side deck of the 108' Marae Alloy. Above right: Ted Hood designed this 55' long-range cruiser to deliver speed and comfort under power or sail. This yacht comfortably fits two to live aboard or is an elegant cruiser for three or four couples.

A TEST FOR MANKIND

Dr. Joanie Kleypas, a marine biologist and geologist, was speaking about coral reefs at a symposium that Courtney attended in Aspen. "It was the first time I learned of the true importance of the ocean to planet Earth," he said. "You think, sure, there are good things we can do for the environment, but what can I do? And Dr. Kleypas told us what can be done. It was a Hand-of-God moment. People who sail the oceans and see dead coral reefs just pull up anchor and leave. I thought there must be a better way."

Despite her dire warnings about the impact of losing coral reefs, Dr. Kleypas is a visionary who remains optimistic that as a society we are up for the challenge and can curb carbon dioxide emissions enough to avoid the extinction of most reefs. With large scale coral bleaching events happening over several of the past years, the Earth has lost 50% of its coral reefs. (Learn more in "Making Coral", in the pages ahead.)

RESERVATIONS REQUIRED

Travelers who sign-up with a SANACORA affiliate for a sailing vacation will fly to a port destination, be picked up by the boat's captain or other personnel, and head right to the boat. There may be a stop for provisions, and upon arrival, time to decompress and learn some safety rules. A prompt departure is the goal. Most charters will last from seven to 10 days. Captain and crew will offer top-tier hospitality, service, and accommodations.

"Our primary objective is to restore coral reefs around the world," Courtney says. "It's necessary for the planet, and we'll do the coordinating. We're first to market and we are ready to scale the message. We'll be working with students, starting with Barrington High School. College interns will be welcome to work with us."

SANACORA will redefine the current approach to ecology-oriented charter sailing. Rather than take guests to different environments for sightseeing, guests will now have the option of participating in coral reef restoration. Courtney's goal is to create an expansive and inclusive platform via a central, worldwide reservation system. He isn't worried about the potential for competition. There is room for everyone at this inn.

Lisa Stamos is the founder of Quintessential Barrington. *Her work includes writing, editing, photography, and marketing communications consulting. She is a long-time member of the Village of Barrington's Cultural Commission which supports the local arts community. She can be reached at lisa@qbarrington.com.*

SANACORA Advisory Board

Guy Courtney has assembled a group of advisors in support of his goal to restore coral reefs. They are:

FABIEN COUSTEAU

The Fabien Cousteau Ocean Learning Center was founded by world renowned oceanographic explorer, conservationist, and documentary filmmaker Fabien Cousteau to fulfill his dream of creating a vehicle for positive change in the world.

ROBERT SWAN, OBE, BA, FRGS

2041 was founded by polar explorer, environmental leader, and public speaker Robert Swan, OBE, the first person in history to walk to both the North and South Poles. Swan has dedicated his life to the preservation of Antarctica by the promotion of recycling, renewable energy, and sustainability to combat the effects of climate change.

JOANIE KLEYPAS, PhD

Dr. Joanie Kleypas is a marine biologist with the National Center for Atmospheric Research. She has galvanized reef scientists worldwide to address environmental change to protect coral reefs.

DAVID VAUGHAN, PhD

Dr. David Vaughan is the president and founder of Plant A Million Corals and a marine scientist directly responsible for developing "micro-fragmentation" technology and implementation of coral "refusion" techniques. He is working toward his goal to plant one million corals.

TED HOOD

Ted Hood is a yacht designer, inventor, racer, and entrepreneur. He is managing director at Wellington Yacht Partners.

RICHARD VEVERS

Richard Vevers is the founder and CEO of The Ocean Agency, a nonprofit supporting and accelerating ocean science and conservation through creativity, technology, and powerful partnerships.

This yacht's name, Marae, means "a special meeting place for family and friends". Built in New Zealand, this 108.3' yacht has three cabins and room for six guests. There is a master suite with a private access stairway, a mini-gym, office, and all the technology a guest could ever want. The salon pictured here includes TV, Wi-Fi, a bar, and comfortable seating and dining space.

SANACORA is partnering with Plant A Million Corals to restore coral reefs.

Making Coral

Growing Partnerships to Restore the Ocean's Coral Reefs

BEFORE HE RETIRED, AQUACULTURE researcher Dr. David E. Vaughan wanted to plant a million corals. It didn't happen. The story could end here, but for Vaughan, the determination to see his dream become a reality spawned a not-for-profit organization. Based in the Florida's Summerland Key, the Plant A Million Corals Foundation is concentrating its coral reef restoration efforts in the Caribbean while striving to connect with the Pacific and Indian Oceans. The Foundation is also SANACORA's source for the coral used in its yacht-based restoration work.

Vaughan received the Distinguished Service Award from his alma mater this year. He earned a Bachelor of Arts in biology and chemistry from Graceland in 1975. During an independent winter term in Grand Cayman, Vaughan's passion for the world's oceans and the thousands of species that live beneath the surface awoke. He went on to earn a Master of Science in biology and microbiology from Fairleigh Dickinson University, and a PhD in botany and plant physiology from Rutgers University. His quiet, gentle demeanor cannot mask the inherent sense of urgency in his voice and work. Vaughan says that coral reefs are the foundation of ocean life and are the basis for our existence, too.

"Long-term—in 50 to 100 years—all corals will be gone unless we make serious environmental changes," Vaughan says. "The way the oceans go is the way we will go. Our disappearing ocean reefs are the canaries in the coalmine."

WHAT IS CORAL?

It's hard to imagine an inland sea covering much of the Midwest, yet sea corals first appeared here over 500 million years ago during the Paleozoic Era. According to Lawrence Livermore National Laboratory, deep-water

black coral (Leiopathes sp.) may be the "oldest known living skeletal-accreting marine organisms" persisting for over 4,000 years.

Plant-like in structure, sea coral branches and mounds consist of thousands of polyps. Polyps are animals that can range in size from the head of a pin to a foot in diameter. Each polyp uses calcium carbonate from seawater to build a hard, cup-like skeleton around a soft, sac-like body. Inside the polyp, algae live symbiotically to convert sunlight to sugar to provide nourishment. The algae also have bacteria that provides antibiotic benefits to support the coral's immune system. Atop its body, a mouth encircled by stinging tentacles catches zooplankton. The coral, algae, and bacteria have an interdependent existence.

> "We're not just propagating corals, we're propagating hope."
>
> –DR. DAVID E. VAUGHAN

A WORLD OF IMPORTANCE

Coral reefs protect coastlines from storms and erosion, provide jobs for local communities, and offer opportunities for recreation. They are also a source of food and new medicines. Over half a billion people depend on reefs for food, income, and protection. While coral covers less than 1% of the Earth's surface, it is a contributing factor to 70% of the world's oxygen which comes from the ocean. It's the air we breathe.

The National Oceanic and Atmospheric Administration (NOAA) estimates the value of reefs' goods and services to be worth $375 billion per year. Healthy reefs support fishing and tourism, while providing ecological benefits and medicinal resources. Bio-prospectors are exploring coral ecosystems to create pharmaceutical products from chemical compounds produced by species living in their confines, especially slow-moving and stationary species such as nudibranchs and sponges. Nutritional supplements, cosmetics, along with an assortment of medicines derived from coral reef ecosystems are currently being researched.

Providing habitat for one-fourth of all ocean dwelling species (roughly 4,000 species of fish, more than 800 species of hard corals, plus a myriad of species residing within the reefs that have yet to be recorded), coral reefs support a $100 million fishing industry in the U.S. For tourists, coral reefs provide sand for natural beaches that inspire the soul. Coral reefs reduce erosion and property loss by buffering shorelines from waves, currents, and storm surges, especially during hurricanes.

WHAT'S HAPPENING TO CORAL?

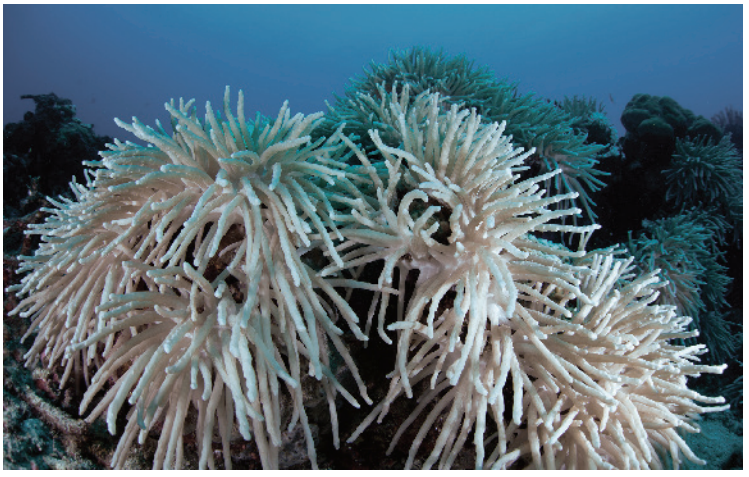
Since the first massive coral bleaching event recorded in 1997, the deadly phenomenon has been occurring with increased frequency as ocean waters have been warming.

Similar to a drought index, Degree Heating Weeks (DHW) record thermal stress in the ocean. When ocean waters are 2° above normal for four weeks, this is an 8 DHW, a point at which coral suffers severe bleaching.

"We used to get bleaching events once every 100 years," Vaughan said. "The coral then had that much time to grow back. Today, with bleaching events every few years, and the increase in water temperatures, we've lost 50% of the planet's coral reefs. It takes about two to four weeks for coral to bleach. Sometimes we see the bleaching six months after an event due to prolonged stressors."

Bleaching causes coral to lose the symbiotic algae which gives it color and sustains its life. Coral is stressed by pollution, sedimentation that blocks sunlight, ocean acidification, overfishing, extremely low tides, and dramatic shifts in temperature. Bleaching causes coral's beneficial algae to leave, reducing coral's ability to access nutrients and it weakens its immune system.

These hard and soft corals show signs of partial or complete bleaching, which is caused by climate change, rising water temperatures, pollution, sedimentation that blocks sunlight, ocean acidification, overfishing, and extremely low tides.



Top: Dr. David Vaughan designed the saltwater pumping system that supplies the coral growing nursery tubs located nearby. Above: Coral is grown in tubs that are covered to keep fresh rainwater out. Tubs like these will be shipped internationally to establish permanent coral growing stations in ocean coastal communities.

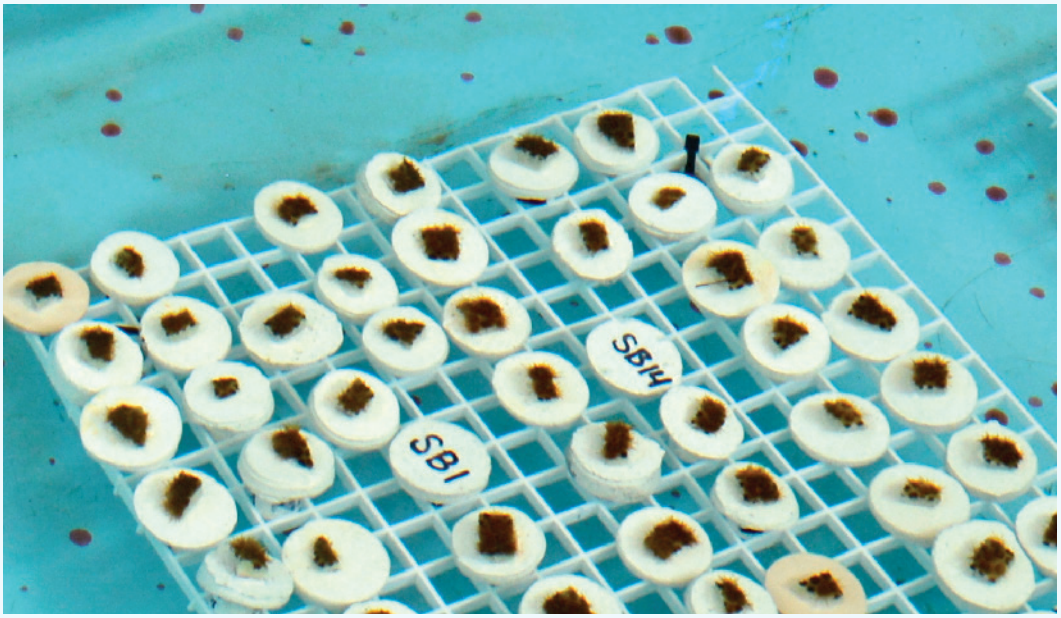
A LOSING BATTLE

During the second massive coral bleaching event in 2005, U.S. territories in the Caribbean lost 50% of their coral reefs. According to NOAA, "Comparison of satellite data from the previous 20 years confirmed that thermal stress from the 2005 event was greater than the previous 20 years combined." Vaughan notes that the third massive coral bleaching event (2014–2017) affected coral reefs all over the world.

"Many reefs—including those in Guam, American Samoa, and Hawaii—experienced their worst bleaching ever documented," concurs NOAA. During this third event, up to 98% of the coral in some reefs along the Northern Line Islands perished. The northern part of Australia's Great Barrier Reef lost nearly one-third of its shallow water corals in 2016, while the reef further south lost another 22% a year later. "We've lost about half of the coral on the planet due mainly to warming of the earth's surface," Vaughan said.

With growth rates of massive corals estimated to be from 0.3–2 centimeters per year and branching corals up to 10 centimeters per year, "barrier reefs and atolls can take from 100,000 to 30 million years to fully form," making restoration seem impossible (Source: NOAA).

Below: Micro-fragmented coral pieces are numbered to group them genetically. Bottom: Dr. David Vaughan shows one of the porous plugs that micro-fragmented corals are placed on to grow. These corals will be trimmed for further micro-fragmenting before being planted on a coral skeleton. This process geometrically accelerates the speed of coral growth and its reproduction maturity, offering hope for restoring reefs around the world. In the tank, some of these genetically related corals have grafted themselves together, demonstrating the desired goal once replanted underwater.



Plant A Million Corals founder Dr. David Vaughan and SANACORA founder Guy Courtney in Summerville Key, Florida.

DR. VAUGHAN'S "EUREKA MISTAKE"

Accidentally breaking a coin-sized coral into small pieces as he was removing it from an aquarium used for research, Vaughan had what he describes as his "Eureka mistake". The three polyps that had gotten stuck to the floor of the aquarium grew tissue in two weeks that would had typically taken a few months.

While cutting corals into pieces—from as small as one polyp up to the size of a pencil eraser—Vaughan discovered micro-fragmentation. This process enabled his team to cultivate corals the size of three-year-old species in a few months. Size is a critical factor because it typically takes coral 25 years to reach a size where they can spawn. With expedient growth, micro-fragmented corals can reproduce sooner.

"We found out that most corals don't become reproductive until anywhere from 15 to 75 years old," Vaughan said. "Some of our coral fragments grew to maturity at 11 months—that would otherwise have taken 18 or more years to become reproductive."

In his first year working with this new technology, Vaughan and his team produced 10,000 corals and planted 3,500. In the next few years, they produced 25,000 corals and planted 10,000 on a reef in the Florida Keys.

Micro-fragmentation has worked with 26 species of coral, including brain corals, boulder corals, mountain corals, and cavernous corals, making it possible to bring the skeleton of a 500-year-old coral back to life in a few years. Corals from the same genetic parents placed a few inches apart can grow together instead of competing, enabling a dead coral head to be "reskinned" much like a skin graft.

FRAGMENTS OF HOPE

Using a process achieved through selective breeding and 1,000 genetic recombinations, Vaughan is assisting corals in adapting to climate change with the introduction of heat-resistant genes, as well as algae from coral that flourishes in higher temperatures. "We've lost strains of coral that cannot take today's temperatures. In a bleaching event, about one third of coral may die, one third won't die, and the other group is bleaching resistant—we work with that resistant group," Vaughan said.

Collaborating with the Mexico Institute of Fisheries and Aquaculture at the coral labs in Puerto Morales, Fragments of Hope in Belize, and The Nature Conservancy at five locations in the Caribbean, Vaughan has facilitated the planting of over 100,000 corals in reefs around Florida and the Caribbean.

Coral reefs were not destroyed overnight and will not return to their glorious beauty in the blink of an eye. But there is hope and a plan.

With the dedication of Vaughan, his team at Plant A Million Corals, his partnership with SANACORA, and people who care about the future of coral reefs worldwide, restoration is possible and truly can make a difference.

April Anderson is a naturalist and freelance writer who can be contacted at team.nature.ed@gmail.com

About Plant A Million Corals

Director of Communications and Development Dee Dee Vaughan spoke with us about the work of the Plant A Million Corals Foundation and how people anywhere in the world can help through corporate sponsorships and donations, as well as cultivating awareness and education about coral reef restoration.

Her father, Dr. Vaughan, travels nearly every week to Caribbean coastal communities whose residents need solutions to restore the coral reefs they rely upon for survival. "Each of our projects is unique, and one of the first steps is outreach to troubleshoot the problem. Then, we determine more specific needs through an initial site visit," Vaughan said.

The Foundation is developing mobile lab units for permanent placement at coral restoration sites. Customized travel containers for growing coral will be built in the Florida Keys and then placed in shipping containers for relocation. "We need planting partners to sponsor the mobile containers that will help scale our projects," Vaughan said. Sponsors and donors can also help defray the costs of site visits, research, operating expenses, and the Foundation's outreach.

To learn more and to donate, visit plantamillioncorals.org. To connect, email: plantamillioncorals@gmail.com, or call 772-216-0391 (EST).

A diver checks a replanted dead coral skeleton that has micro-fragmented corals in place. Each placement requires that a hole be chiseled into the base and then a small amount of cement secures it. Eventually, the coral pieces will grow together and completely cover the base.


SANACORA

Our Blue Planet

EVERY 24 HOURS THE OCEAN TIDES begin at sea and move toward the coasts. It's a phenomenon guaranteed by a long-standing deal between the sun, the moon, and the stars. Tidal waters wash ashore to cleanse and heal coastlines, and then pull back until their next visit, leaving mementos tucked into shimmering tide pools and jagged eddies that brim with life.

Mother Nature's tides serve as powerful reminders of the day before, of what was left behind, and the possibilities ahead. The relentless returns to shore at high tide nudges us to question our lives, hopes, and dreams—offering moments to ponder what truly matters. She inspires us think about who she is, and with each wave that reaches shore, delivers a clarion call to treat the planet's oceans with greater thought and care.

To learn more about SANACORA, visit sanacora.com. Guy Courtney can be reached at guy@sanacora.com or 847-764-7070.