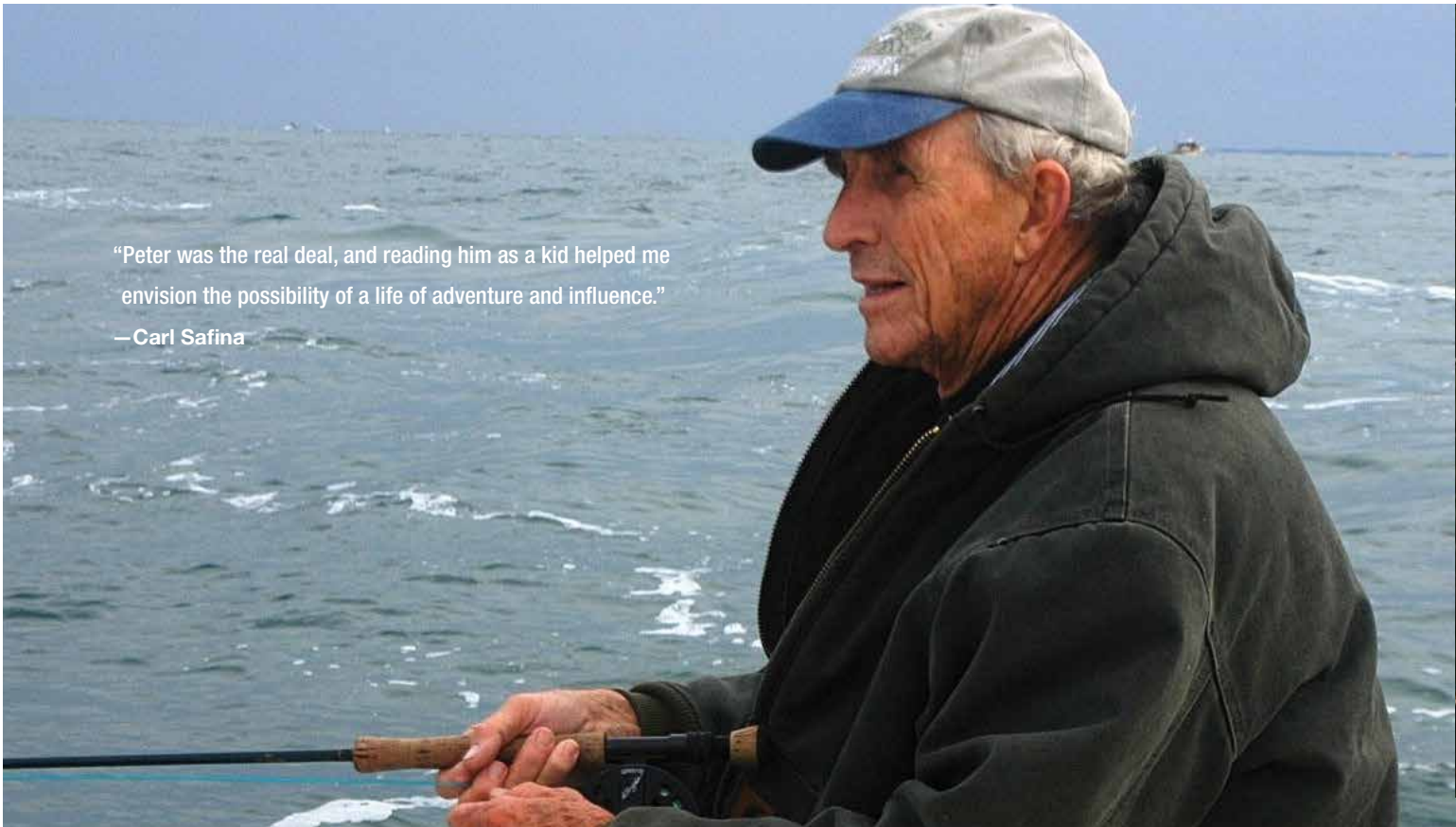


2014 ANNUAL REPORT

THE SAFINA CENTER

formerly BLUE OCEAN INSTITUTE





“Peter was the real deal, and reading him as a kid helped me envision the possibility of a life of adventure and influence.”

—Carl Safina

Peter Matthiessen on Carl Safina’s boat, *First Light* during a 2004 fishing trip off Montauk, Long Island, NY. Photo by Carl Safina.

PROFILE

PETER MATTHIESSEN 1927-2014

Friend, Hero, Honorary Board Member

Peter Matthiessen lived and died by the sea. In between his birth on the island of Manhattan and his death at Sagaponack, Long Island, he lived a life of adventure in all corners of the globe.

Matthiessen was the author of more than 30 books and the only writer ever to win the National Book Award in both fiction and nonfiction. He co-founded the influential *Paris Review* and was part of a literary salon with other superstars of publishing who lived on the East End of Long Island, including E. L. Doctorow, William Gaddis, John Irving, William Styron and Kurt Vonnegut, among others.

Matthiessen was a beloved author, world traveler, naturalist, commercial fisherman, political activist, soldier, undercover agent for the Central Intelligence Agency and Buddhist priest. He was a child of privilege who took to heart the suffering he saw in his travels. His

acclaimed writing explored spiritual quests, social injustice and served as witness to diminishing ecosystems and species. He was a son, brother, husband, father, grandfather and friend.

When Carl Safina met Matthiessen in 1998, the publishing newbie felt shy in the presence of the literary icon who was one of his idols. When Matthiessen asked, “So, Carl, when are we going fishing?” all discomfort was swept away and a friendship began. That friendship spanned the personal and the professional.

Matthiessen was also a friend to Blue Ocean Institute/The Safina Center and served as an Honorary Board Member beginning in 2004. And Matthiessen provided early praise for Safina’s book “The View from Lazy Point.”

(See Carl Safina’s tribute to Matthiessen, originally published in *Audubon* magazine, on page 25 of this report.)

“And the miraculous comes so close to the ruined, dirty houses — something not known to anyone at all. But wild in our breast for centuries.”

— from Anna Akhmatnova’s “Plundered, Betrayed, Sold,” epigraph to Peter Matthiessen’s final book, *In Paradise* ■

THE SAFINA CENTER STAFF AND BOARD CELEBRATE THE LIFE OF PETER MATTHIESSEN AND MOURN HIS PASSING.



FRONT COVER
Manta Birostris, Raja Amat, Indonesia.
Photo by John Weller

THIS PAGE
Left: Adie penguin on striped
iceberg, Antarctica.
Right: Seastars and
anchor ice, Antarctica.
Photos by John Weller.

BACK COVER
Top: Mother and baby elephants in
Amboseli National Park, Kenya.
Photo by Carl Safina.
Below: Mother and baby humpback
whales near Tonga.
Photo by John Weller.

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MISSION

The Safina Center creates
an original blend of science, art and
literature that inspires a deeper
connection with nature,
especially the sea.
Our mission is to motivate people
to actively engage as constituents
for conservation.

FOUNDER'S MESSAGE



Carl Safina and leatherback sea turtle on Matura beach, Trinidad. Photo by David Huntley.

So, we've changed our name. Main reason: identity. Since our founding there's been a recent proliferation of organizations using "Blue Ocean" in their name. There is a Blue Ocean management strategy, scuba-divers' conservation project, film festival, and even a new evangelical Christian group named Blue Ocean Faith. In our Web-based world, the proliferation of such infringement can confuse people and diminish our signal. Also, people who know me for my books didn't always connect me with the name Blue Ocean Institute. And I'm now active at Stony Brook University's marine and journalism schools. So it's just clearer to consolidate our group identity, founder identity, and institutional home. One other thing: our work now explores some topics that aren't strictly ocean-focused—from climate change to the ivory trade—because humanity's broader relationship with the natural world on land and sea suffers from many of the same ills. While we explore these root causes and their solutions, our work does, however, remain largely ocean-oriented.

In the last couple of years we've focused our programmatic work on bringing in hand-picked Fellows. Fellows are people whose work has already been internationally recognized before they come aboard with us. Their work creates products that inspire and advance conservation, such as books and films. Our two newest fellows are John Weller and Ellen Prager. John's already been recognized with a Pew Fellowship—that's how I met him. His work is mainly visual, very unusual, and uniquely tailored to propelling local conservation issues where he is working in Indonesia. Dr. Prager has been

chief scientist in the National Oceanic and Atmospheric Administration's Aquarius undersea station, where scientists live and work for weeks at a time. She's a noted go-to ocean spokesperson and a multiple-book author who is now writing novels about the sea for young adults.

I particularly love our Fellows program because no other conservation group aids and advances the work of such a creative clutch of talent. They are a joy to work with.

So overall, The Safina Center now focuses on creating books and films, doing invited television and radio appearances on NPR, MSNBC and elsewhere (to talk about everything from seafood to disappearing ice and starving walruses); articles for *Audubon Magazine*, the *New York Times*, and other publications; Web-posted opinion pieces at National Geographic, Huffington Post, and The Safina Center's websites; and our sustainable seafood partnership with Whole Foods Market and Monterey Bay Aquarium (you can see our name displayed at the seafood counters of 370 Whole Foods Markets throughout North America.) And we've doubled our social media following in the last year.

I've just finished a book about animal consciousness and emotion that makes a new kind of case for conservation. It's called *Beyond Words* and it will be out next June.

That's good, but there's plenty more to do.

ACHIEVEMENTS OF 2014

During 2014 we changed our name, streamlined our programs, expanded key partnerships, celebrated new books released and a manuscript completed. On Earth Day we played a key role in Stony Brook University's first ever "Tweet Up." And we increased our reach and influence by creating and promoting a unique body of work — books, essays, workshops and films — with the power to inspire real-world change. Our solutions-oriented message continued to reach audiences from Main Street to Wall Street via mainstream outlets such as PBS, *The New York Times*, Huffington Post, NationalGeographic.com, CNN.com and many others. Our followers include leading conservationists, research scientists, chefs, faith leaders, students, ocean enthusiasts and seafood lovers. Read more about our achievements this year in Milestones and Firsts on page 27.

Why the name change — and why now? Carl covers this best in his Founder's Message on the facing page.

FELLOWS PROGRAM

Safina Center Fellows are boosting our ability to be a thought-leading group, small in size and big in influence. Working independently but inter-dependently as well, our Fellows are creating articles, books, opinion pieces, films, workshops and tutorials that greatly expand our reach. Our distinguished colleagues are award-winning authors, filmmakers and conservation scientists who amplify the global conservation discussion bringing a wide range of skills and expertise to bear on pressing environmental issues. During this past year we added two new Fellows. Filmmaker, author and photographer, John Weller came aboard in January and author and ocean scientist, Ellen Prager joined us in May of this year. Continuing Fellows are *New York Times* bestselling author, Paul Greenberg and shark geneticists/conservationists Demian Chapman and Debra Abercrombie. In the past year, Greenberg, Weller and Prager released new books and Chapman and Greenberg were named Pew Fellows in Marine Conservation. (Weller and Safina are also Pew Fellows.) For more about our Fellows, see page 12 and their essays throughout this report.

CARL SAFINA'S WORK

The main focus of Carl's work this past year has been his new book, due out in June, 2015: *Beyond Words*. He has appeared on NPR, MSNBC and contributed articles for *Audubon Magazine* and *The New York Times*, among others, and has posted opinion pieces on National Geographic, Huffington Post and The Safina Center's websites. All ten episodes of Carl's PBS series *Saving the Ocean* are available at any time on PBS.org. For a more personal account of Carl's work in 2014, see page 10. >



SUSTAINABLE SEAFOOD PROGRAM

We created the first consumer guide to seafood sustainability in 1998. Now efforts to build awareness and create market-based solutions abound and we are proud to have inspired a movement.

During 2014, we helped a wide range of people discover the connection between human health, a healthy ocean, fishing, and sustainable seafood.

Our *Sustainable Seafood Program* translates seafood science for consumers, chefs, retailers, and health care professionals and consists of many interconnected components:

- Online seafood guide based on scientific ratings of 160+ wild-caught fish and shellfish: Green, yellow, and red ratings plus advisories for contaminants including mercury and PCBs
- Chef-recommended alternatives for popular yet unsustainable seafood
- Green Chefs/Blue Ocean: an interactive, online sustainable seafood course for chefs and culinary professionals
- Web-based tutorials, videos, links and blogs on issues such as bycatch, mercury in seafood, overfishing etc.
- Information on seafood nutrition and related health issues
- Information for consumers, chefs, and retailers who want to switch to eating/selling more sustainable seafood
- Partnership with Whole Foods Market® to promote sustainable seafood from boat to counter top
- Blogs and social media promotion for seafood/fisheries issues and our new seafood ratings



SEAFOOD RATINGS AND PARTNERSHIPS

Our peer-reviewed seafood species reports are transparent, authoritative, easy to understand and use. All ratings and full species reports are available on our website under *Seafood Choices*. In 2014 we added 21 new seafood ratings and reports.

During 2014, we expanded our partnership with Whole Foods Market and Monterey Bay Aquarium (MBA) Seafood Watch® to provide consumers with even more sustainable seafood recommendations. The Safina Center and Monterey Bay Aquarium Seafood Watch are now using the same science-based criteria and methodology to rate seafood species. Our online seafood guide features seafood ratings by both The Safina Center and MBA. For more about this expanded partnership see the Sustainable Seafood feature on page 22.

MERCURY IN SEAFOOD

We have greatly enhanced our web-based Mercury in Seafood information. Our web section now includes many blogs, articles, videos, links and reports to help untangle an issue that concerns many consumers. We've continued our partnership with Stony Brook University's Gelfond Fund for Mercury Research and Outreach to make the most up-to-date and easy-to-understand information about mercury in seafood just a click away. By year's end we'll feature a new, downloadable brochure for consumers and health care professionals on our website. >

POLICY CAMPAIGNS

We are often asked to support wider coalitions on a range of ocean issues. Here's a sample of some of the policy efforts we were involved in during 2014.



- Protection of U.S. Northeast Essential Fish Habitats from destructive fishing methods; letters to National Marine Fisheries Service, NOAA and blogs.
- Support for complete tracking and transparency of all seafood sold in the U.S.; letter to Presidential Task Force on Combating Illegal, Unreported and Unregulated Fishing and Seafood Fraud.
- Support for the National Marine Fisheries Service final rule to implement Amendment 7 to the Consolidated Highly Migratory Species Fishery Management Plan. New measures will protect Atlantic bluefin tuna spawning and feeding habitats, reduce and account for Atlantic bluefin tuna discards, and enhance monitoring and reporting.
- Support for various measures to protect important forage fish species through our work with the Herring Alliance.
- Support for the FDA and EPA to provide clear and accurate advice to consumers on mercury risks from seafood.
- Support for creation of a nation-wide marine sanctuary in Palau. Carl Safina met with their leaders and we promoted Palau's efforts through blogs and social media.
- Comments against development of a U.S. government-run seafood certification program; letter to National Marine Fisheries Service, NOAA.
- Support for reduction in fishing mortality on striped bass to a sustainable level; letter to Atlantic States Marine Fisheries Commission.

SCIENTIFIC COLLABORATIONS

We continue to work with our colleague of many years, Dr. Eric Gilman, based at Hawaii Pacific University. Gilman studies the problem of derelict and abandoned fishing gear that kills many fish and marine mammals. His valuable work informs fisheries management in an effort to minimize this wasteful bycatch. ■

2014 HIGHLIGHTS



The dramatic, unusual migration of snowy owls was a sensational show on Long Island, NY. Photo taken on Jones Beach in early January by Carl Safina.

On Earth Day, Carl Safina and Pat Wright were given a proclamation by New York state Congressman Tim Bishop during Stony Brook University's first ever "Tweet Up." This historic, interactive event gave SBU students, and the entire twitter-verse, the chance to meet and ask questions of the three SBU professors who were also finalists for the 2014 Indianapolis Prize.

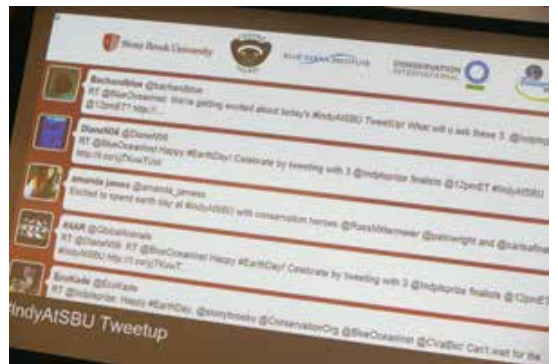
Photo by John Griffin, Stony Brook University.



Tweets sent during the "Tweet Up" were displayed on a giant "tweet deck" in real time.

Yes, we were trending on Twitter that day!

Photo by John Griffin, Stony Brook University.



Carl Safina and Her Deepness, Sylvia Earle aboard the Charles W. Morgan — the last remaining wooden whaling ship in the world. This summer, the ship made its final voyage, sailing between Mystic Seaport and Boston to raise awareness of ocean issues. Safina and Earle are pictured here during the ship's visit to the Stellwagen Bank National Marine Sanctuary, MA. Photo by Patricia Paladines.

YEAR IN PICTURES



Patricia Paladines photographs a female leatherback sea turtle returning home. Carl Safina and Patricia were married in Hawaii in January, 2014. In June they traveled to Trinidad for their honeymoon and turtle research. Photo by Carl Safina.



Also from the Trinidad trip, Carl Safina with a leatherback sea turtle as she digs her nest. Photo by Scott Eckert.



During the super moon of August, we joined the CRESLI whale watching trip to the Great South Channel, 40 miles off Nantucket.

Passengers on the 2-day journey witnessed a grand display of hundreds of dolphins, many finback and minke whales and close to 100 humpbacks. The trip was aptly nicknamed “Breach-fest.”

Pictured (above, right) are Safina Center’s Mayra Mariño, Jesse Bruschini and Megan Smith (left to right) and a humpback breaching nearby. Photos by Carl Safina.



PROGRAM



2014 Indianapolis Prize Finalists, from left to right: Russ Mittermeier, Gerardo Ceballos, Carl Safina, Patricia Wright (winner), Carl Jones, Joel Berger. Photo by Steven C. Mitchell.

CARL SAFINA'S WORK

October 5, 2014: I am writing this while on my way to Rockefeller Studios in Manhattan to be on the MSNBC show, *Weekends with Alex Witt*. We'll be discussing the 35,000 walrus who came ashore in Alaska because there's no ice for them to rest on and forage from. Basically, they're starving. This is my life, the honor of speaking for other animals and the sadness of what I must often speak about.

That brings us to the title of my upcoming book: *Beyond Words*. In my book I portray real free-living animals such as elephants, wolves and killer whales, some of whom are individuals who have been known by researchers for decades. Conservation is usually discussed as a numbers game. We say things like: 60 percent of the habitat gone, 15 percent of the population remaining, 3,000 animals left. A tragic shortcoming of human psychology is that the disappearance of the world clocks in as a mere series of numerals. By showing not just what is at stake but who, and by focusing on what life and family are like for the animals portrayed, my book makes a different kind of case for conservation. I try to simply show the conscious and emotional experiences of real animals trying to live their lives and keep their children alive.

During the past year I also wrote a series of articles, from a memoir about my friend and hero Peter Matthiessen to a survey of how

climate change will affect seabirds in the coming century. In between, I wrote about passenger pigeons, swans, deer, mercury in seafood, whaling and dolphin-killing, sea-level rise and the nation of Palau's plan to create the world's first nationwide no-commercial-fishing zone. And I've done various lectures from Hawaii to my home port, Stony Brook University, Long Island, New York.

This year I was again a finalist for the Indianapolis Prize, the world's highest honor in wildlife conservation. (The winner was my wife's boss, Patricia Wright, whose work in preventing extinction of Madagascar's lemurs is spectacular and crucial.) I hope to win next time!

One of the most enjoyable things my wife and I got to do this year—in addition to getting married—was to sail with Sylvia Earle and others on the oldest surviving wooden whale-hunting ship, the *Charles W. Morgan*, newly refitted with a mission of peace. (Patricia and I wrote about it on National Geographic's website.) We sailed from Provincetown, Massachusetts and soon found ourselves among the whales of Stellwagen Bank National Marine Sanctuary. Human peacefulness among whales is rather new and imperfect. The whales, of course, were as peaceful and non-threatening as they've always been. Just doing their thing. As they did for millions of years. As of course they should be able to do. ■

THE PASSENGER PIGEON, A REQUIEM

by Carl Safina

September 1, 2014, marked the 100th anniversary of the extinction of what had been the most abundant bird in the Americas, and likely the world.

By 1850, the Passenger Pigeon was still the most abundant bird in the Americas. Around that same time, a long-distance migrant bird called the Eskimo Curlew was shot by the wagonload on the Plains. The prairies and their herds of Buffalo are essentially gone, both birds are extinct, and even the very remembrance of the Eskimo Curlew is vanishing; almost no one I ask has ever heard of it. I feel a loss, but, honestly, does it matter? How many people miss Passenger Pigeons?

Into the 1800s, Passenger Pigeons ranged from Newfoundland through the whole forested East to Florida and west to the Plains, occasionally spilling to Mexico, the Pacific coast, even straying at times to Bermuda and the British Isles. The pioneering ornithologist Alexander Wilson described one Passenger Pigeon breeding colony in Kentucky around 1806 as occupying an area 40 miles long and several miles wide, with densities of over 100 nests per tree, containing many millions. In 1810, Wilson described one “almost inconceivable multitude,” of pigeons that rolled overhead all during an afternoon while he was traveling, estimating the flock at 240 miles long, containing 2.2 *billion* birds. He estimated that flock’s fuel needs at 17.5 million bushels of acorns daily. Others described flocks taking days to pass, darkening the sun “as by an eclipse,” as “abundant as the fish” on the coast, and elsewhere “beyond number or imagination,” “in innumerable hordes,” and, often simply, “incredible.” Audubon painted this description in 1827:

... [F]ew pigeons were to be seen before sunset; but a great number of persons, with horses and wagons, guns and ammunition, had already established encampments... Suddenly, there burst forth a general cry of ‘Here they come!’ The noise which they [the pigeons] made, though yet distant, reminded me of a hard gale at sea... as the birds arrived, and passed over me, I felt a current of air that surprised me. Thousands were soon knocked down by polemen. The current of birds, however, still kept increasing... the pigeons, coming in by thousands, alighted everywhere, one above another, until solid masses... were formed on every tree, in all directions... Here and there the perches gave way with a crash, and, falling to the ground, destroyed hundreds of the birds beneath, forcing down the dense groups with which every stick was loaded. It was a scene of uproar and confusion. I found it quite useless to speak, or even to shout, to those persons who were nearest to me. The uproar continued... the whole night... Toward the approach of day, the noise rather subsided... the howlings of the wolves now reached our ears; and the foxes, lynxes, cougars, bears, raccoons, opossums, and pole-cats were seen sneaking off from the spot. Whilst eagles and hawks, of different species, accompanied by a crowd of vultures, came to supplant them, and enjoy their share of the spoil. It was then that the authors of all this devastation began their entry amongst the dead, the dying, and the mangled. The pigeons were picked up and piled in heaps, until each [hunter] had as many as he could possibly dispose of, when the hogs were let loose to feed on the remainder.

As early as 1672, one New England observer wrote of vast numbers of the pigeons but noted, “of late they are much diminished, the English taking them with nets.” Yet as late as 1878 one last great nesting, settled in on an area 40 miles long, 3 to 10 miles wide in Michigan, “where a tremendous slaughter took place.” But the slaughter, and settlers felling the forests that fed and bred the birds, took their toll. (Yet, true to our uniquely human capacity for denial, people wondered how they “disappeared;” some writers speculated that they all drowned in the ocean or Great Lakes — or migrated to Australia.) The last Passenger Pigeon, named Martha, died in the Cincinnati Zoo on September 1, 1914. She was the last of her species, but the phenomenon that her species was, had already vanished from Earth.

The conservationist and writer Aldo Leopold lamented in 1948:

Trees still live who, in their youth, were shaken by a living wind... We grieve because no living man will see again the onrushing phalanx of victorious birds, sweeping a path for spring across the March skies, chasing the defeated winter from all the woods and prairies.

We grieve for a marvel squandered.

Many regions have their stories, from the shattered turtles and extinguished monk seals of the Caribbean, to swarms of salmon that formerly streamed into the Northwest’s former forests and up the once-mighty Columbia, to the vast sea-thundering herds of giant tunas I saw, to—

But OK; let’s not get over-wound. We can live well without them, so the reasonable question often arises: Does losing them “matter?” It *matters*.

Don’t let anyone suggest it doesn’t *matter* because people can live without them. People can — and most do — live perfectly well without computers, refrigerators, the Winter Olympics, plumbing, libraries, concert halls, baseballs, museums, and ibuprofen. Whether things are worthwhile for survival, or whether they help make survival worthwhile, are two quite different things. Whether we “need” them, is an uninteresting question. We never needed to *lose* them. People back then were too ignorant and too reckless to keep what they had.

In the 1970s people did decide to keep what we had left. The United States congress passed the Endangered Species Act. When we decide to care, caring works.

And as I think of what we are doing to elephants, coral reefs, Bluefin tuna, the great apes and the great cats, today on this sad centennial I wonder whether humanity ever really learned the lesson of the passenger pigeon. I wonder — with two billion more of us expected by mid-century — whether we ever really can. ■

Adapted from *The View From Lazy Point; A Natural Year in an Unnatural World*, by Carl Safina, published by Holt. Also posted on *Huffington Post Green* on September 2, 2014.

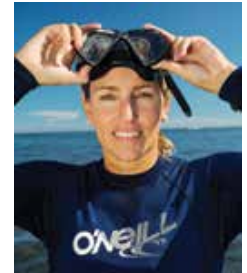
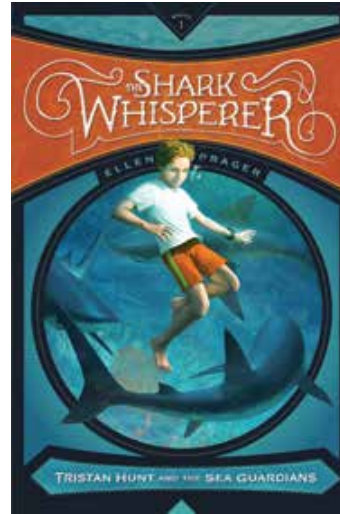
2014 FELLOWS HIGHLIGHTS

Ocean scientist and author, Ellen Prager came aboard as our newest Fellow in May of 2014. Her new book for middle school children, *The Shark Whisperer* was released the same month. It is the first in a series of fiction novels that interweave science with adventure. (See Ellen's essay on page 18.)

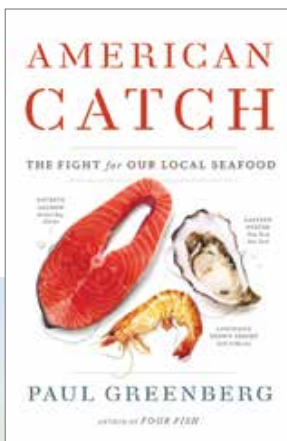
Photo by Rodrigo Varela.



Filmmaker, author and photographer John Weller joined The Safina Center as a Fellow in January, 2014. He and his partner Shawn Heinrichs have made several trips this year to Raja Ampat, Indonesia to create an innovative film and outreach campaign, "Guardians of Raja Ampat." John is seen here surrounded by children in Fafanlap village. (See John's essay on page 13.) Photo by Cassandra Brooks.



Shark geneticist Demian Chapman (far right) leads a shark fin identification/CITES implementation workshop for Latin American delegates in Recife, Brazil. During 2014, he and Debra Abercrombie, also a Safina Center Fellow, led workshops from Fiji to South Africa training scientists and customs and wildlife officials how to visually identify a species of shark by its fin. This essential skill will help officials implement new CITES regulations that protect key shark species threatened by the global fin trade. Photo by Debra Abercrombie.



New York Times bestselling author Paul Greenberg released his third book in June, 2014 to rave reviews. Paul's given many talks and workshops this year based on his new book *American Catch: The Fight for Our Local Seafood*. He is pictured above at a "Savor Bristol Bay" dinner aboard the Grand Banks in NYC. Photo by Emma Frisch.



Sunrise over Wayag Bay. Photo by John Weller.

THE GUARDIANS OF RAJA AMPAT: COMMUNITY-DRIVEN CONSERVATION IN THE HEART OF INDONESIA

by John Weller — Author, Filmmaker, Photographer and Safina Center Fellow

Lush vegetation clung to all but the steepest slopes of the towering islands. Their near-vertical walls hung over the sea, which had undercut the razor-sharp honeycombs of eroding rock. It was as if the spectacular bullet-shaped islands had erupted out of the bay and were frozen in time, hovering just above the surface. The landscape eluded words.

Shafts of light cut through the calm chalky-blue water beneath the islands. We strained to see a shape. Out of the featureless blue materialized one of the smallest baby mantas we had ever seen — less than 2 meters (6.5 feet) across. It arched its back into an effortless loop through the daggers of light, just brushing the surface. We followed the young manta for an hour as it looped and rolled until it eventually disappeared to feed alone in the secretive waters of the nursery bay.

Later that day, we followed our local guide straight up one of the walls of honeycomb rock on a hidden trail, and watched the sunset from what seemed to be the very top of the world. We looked at each other with the exact same thought: This place was sacred.

Dropping onto one of Raja Ampat's reefs is a one-of-a-kind experience. Bodies of all shapes and sizes shimmer in the filtered light: trevallies, batfish, silversides, yellow fusiliers, and massive schools of barracudas hang in place above the reef, swimming into the current. The reef itself bursts with life from every square centimeter.

These waters harbor more types of fish and coral than anywhere else on the planet — more than 1,720 fishes and more than 600 hard corals, 75% of the world's described coral species.

But the unearthly beauty of Wayag Bay and the riches beneath the surface were only a backdrop to the stories we had come to hear. Many communities in Raja Ampat are reclaiming their marine treasures and protecting them. The mission of our project — “The Guardians of Raja Ampat” — was to record these stories and use them to drive even more conservation.

All the waters in view from our high perch were part of the Kawe Marine Protected Area (MPA), one of six large marine protected areas in Raja Ampat. **These MPAs shelter the very heart of the Coral Triangle**, the center of global marine biodiversity. And it is not just the existence of these critical protected areas, but the process by which they came into being that makes this story so poignant and important.

To understand it in full, we must recognize that Raja Ampat's remarkable biodiversity has remained intact for a reason: **The people of Raja Ampat have practiced conservation for centuries, if not millennia.** >

ESSAY

Informed by their intimate knowledge of the environment, their ancient practices of "sasi laut" (the taboos of the sea) were precursors for nearly all modern-day forms of conservation, from gear restrictions to closed seasons and off-limits areas. Under Indonesian law that recognizes their traditional marine tenure system, referred to as Hak Adat, [the 132 villages of Raja Ampat still maintain exclusive rights to — and responsibility for — the seas surrounding their island communities.](#)

But neither the Hak Adat tenure system nor the practices of "sasi laut" were enough to ward off the methodical assault of modern fisheries. Since the early 1990s, this area has been beset by tides of dynamite fishing, shark finning, cyanide fishing, turtle hunting and other destructive industries. Locals were largely unaware of the extent of damage, and unable to respond even when the situation became evident.

Even more insidious, large fishing companies would often hire local labor to do their dirty work, offering what seemed to locals to be a king's ransom, but was actually a pittance compared to the value of the natural resources lost to their communities.

The health of many important areas of the Raja Ampat marine system was in fast decline. The people of Raja Ampat needed support.

Responding to these threats, Conservation International (CI) led the way to modern conservation in Raja Ampat, working closely with villages and catalyzing several major exclusive rights declarations by communities in northern Raja Ampat in 2006. Similar declarations in southern Raja Ampat and adjacent areas to the east followed.

In mid-2007, regional law ratified the Hak Adat claims, officially creating the MPAs and enabling the work that followed. CI went on to help establish community patrols, guide communities toward best practices, and do extensive community outreach, leaving a legacy of rich environmental education. Those efforts continue to this day.

CI, The Nature Conservancy and other NGOs have helped communities reassert their traditional rights and reinforce their traditions of conservation, but the community members themselves must drive the effort forward every day. With additional support from The Safina Center, we



Blacktip reef shark at Wayag Ranger Station. Photo by John Weller.



John Weller Filming Guardians of Raja Ampat. Photo by Shawn Heinrichs.

had come to hear these stories of collaboration and conservation from the local people who are making it happen; they are the guardians of Raja Ampat.

One of these people was Hanky, our guide in Wayag, who heads the community rangers for the Wayag MPA. He explained that every man in the villages of Salio and Selpepe serves as a ranger in the MPA patrol for two weeks each year. Sitting at the base of a tree at the Wayag ranger station, Hanky articulated the reason behind this incredible community commitment: to conserve these riches for future generations.

This sentiment was echoed again and again as we traveled from Wayag on to villages in the Dampier Strait and Mayalibit MPAs.

We watched as delighted children played conservation games on the steps of a local church, and followed one of their teachers, dressed in a manta costume, through the village. We talked to women weaving manta-shaped hats on the beach, local leaders, mothers, fathers, and priests. We heard how fishermen have benefited from the closed areas, reaping the rewards of spillover and sasi openings. We learned how conservation had opened new economic opportunities through tourism.

The voices of these people carried the wisdom of the past and the weight of the future. Some cried, sharing their fear that the pressures of modern industry would overwhelm and undermine the bold steps that have already been taken — unless people take the cause further. They shared their vision that all the people of Raja Ampat join together in a singular effort to conserve.



Ronald Mambrasar and the Children of Arborek. Photo by John Weller.



Manta Birostris, Raja Ampat, Indonesia. Photo by John Weller.

Looking into the eyes and hearing the voices of these passionate community ambassadors, we realized that the people of Raja Ampat are at yet another critical moment in their history. Conservation will either charge forward, or slip backwards.

The gravity of these voices rested heavily on both of us. Our trip cemented in us the conviction that the “Guardians of Raja Ampat” film and community outreach tour is a necessity. We must bring these important voices to each and every person in Raja Ampat, Indonesia, and the rest of the world.

Working in partnership with Conservation International and Vulcan Philanthropy — and with valuable support from Wolcott Henry and the Henry Foundation, the Walton Family Foundation, the David and Lucile Packard Foundation, The Safina Center, the Blue Sphere Foundation, Misool Basefin Foundation and others — we have begun just that. We will first broadcast these voices to the other communities of Raja Ampat on a grand-scale outdoor theater, touring from village to village. Our first screening is set for late November, 2014.

The people of Raja Ampat have always been its guardians. May their wisdom inspire Raja Ampat to become a leader in global marine conservation. Please stay tuned!

John Weller is a critically-acclaimed photographer, author and filmmaker. He has devoted his career to promoting conservation of endangered habitats. He is a Pew Fellow in Marine Conservation, and is currently working as a Fellow of The Safina Center.

Shawn Heinrichs is an Emmy Award-winning cinematographer, photographer and marine conservationist. An independent filmmaker, he is the founder of Blue Sphere Media, a production company specializing in underwater, adventure and conservation media. ■

This essay was originally published on Conservation International’s blog, Human Nature and then on NationalGeographic.com’s News Watch.

PANCAKE SHARKS - THE COUSINS ARE IN TROUBLE

An interview with shark experts (and Safina Center Fellows) Demian Chapman and Debra Abercrombie

What do you mean by “pancake sharks?”

DEMIAN: It's just a term I use to help people realize that sharks, rays and skates are all related. When you talk about rays and skates, many people are just not that interested. If you say they are “flat sharks” or “pancake sharks,” people are automatically more interested because people tend to like sharks (or at least feel strongly about them). There are actually more rays and skates than there are sharks, in terms of species, and they are by themselves interesting, ecologically important and commercially valuable animals.

So there are more species of rays and skates than there are of sharks?

DEMIAN: Let's talk about batoids - that's rays, skates, guitarfish and sawfish. We know there are about 500 species of sharks and over 600 species of batoids. And even though there are more batoid species, we know so much less about many of them than we do about many of the shark species. Even the number of species is changing because researchers are finding that some batoids that were described as belonging to only one species are, in fact, actually a complex of different species. The manta ray, for example, was thought to be one globally distributed species, but has been recently recognized to actually comprise at least two – one that lives over coral reefs and one that likes open water. And the manta ray is an iconic animal in the public eye and the subject of a lot of research. Imagine then what we have left to learn about some of the other batoids that are considered more mundane.

People do seem to be very attracted to mantas.

DEBRA: Yes, they are definitely among the best-known and most charismatic of the batoids. Even so, manta rays and their close relatives the devil rays (mobula rays) are fished for their meat and gills. As they feed, they filter plankton out of the water column and have special structures called gill rakers that they use to separate the plankton from the water. Those gills are used in Traditional Chinese Medicine. The idea is that if you crush up gill rakers and take the powder in a tonic, it will detoxify your blood. There's no real basis for this claim but people believe it will help, and the demand has been created, so the gill rakers are traded.

I understand why in the past, when wild animal populations were much more robust and the human population was much smaller, wild animal parts used for medicinal ingredients could be somewhat sustainable. But now, with wild populations plummeting and the human population boom in China, that really spells disaster.

DEMIAN: I think what may be happening is that people who grew up with Traditional Chinese Medicine as the norm, and who are now part of the booming, more affluent middle class, have more disposable income and are also getting older. They are starting to struggle to maintain their health and turn to Traditional Chinese Medicine when modern medicine begins to fail. With any luck, if the animals can weather the current storm, the younger generation in China might not buy into these traditional medicines as much. If this happens, then the demand for Traditional Chinese Medicine that relies on wild animal parts will diminish considerably.

Does our lack of interest or ignorance about the other batoids cause problems?

DEMIAN: People see mantas kind of like whales—they seem harmless, graceful, awe-inspiring... But in some ways many of the rest of the batoids are like the “red-headed step child.” People just don't seem to be that interested in them unless there's a sensational headline, like someone getting stung by one at the beach. As a result, research money and conservation efforts go more toward protecting the more charismatic sharks or species that are commercially important in first world countries. While these species definitely need research and management attention, a recent paper produced by the International Union for the Conservation of Nature (IUCN) highlighted that batoids were ranked as even more threatened than sharks. Sawfish and guitarfish, for example, are some of the most endangered and vulnerable marine fish on Earth, and there is a very real possibility that some of them could become extinct within our generation.

Tell us more about sawfish and guitarfish — most people have never heard of them.

DEBRA: Sawfish are all endangered or critically endangered. They used to be very common in tropical or subtropical waters, but now they are almost extinct. Most countries that used to have sawfish haven't seen them in decades. They've gone locally extinct. Sawfish get caught in coastal gillnets and in trawls. They aren't the target of the fishery but get tangled in nets and wind up as bycatch. Back when they were abundant, sawfish were killed as a nuisance to the fisheries. Locals would sell the saw (rostrum) as a curiosity. But nowadays sawfish fins are quite valuable in the fin trade in China, mostly for the traditional delicacy, shark fin soup. Sawfish have become one of the highest value fins in the world, especially now that they are so rare. It's a strange history — no one ever really targeted sawfish. Now, even though it is illegal to catch and kill them, they are so rare and valuable that sawfish are rarely released alive even when they are accidentally caught in a net.

How sad to watch such unusual, magnificent creatures like sawfish go extinct — for soup!

DEBRA: Yes, indeed. They are a true ocean giant, with the largest species growing to lengths similar to the longest white sharks (20 feet). There are five species of sawfish and they are all in big trouble. The only places where we know that we have viable and well-protected populations of sawfish are in and around the Everglades (Florida) and also off Northern Australia. There may still be some in the Bahamas and in Brazil, but more research efforts are needed in these areas. Sawfish need a big stretch of protected habitat — they live near the coast and need mangroves and seagrass. And places where net fishing is not that common.

What about guitarfish? Are they also killed for the fin trade?

DEMIAN: Guitarfish look like a cross between a shark and a ray. Unfortunately, they are also highly valued in the fin trade. We recently conducted genetic testing on some high value fins in Hong Kong that were traded under the name “Qun.” These fins sell for close to \$1,000 a kilogram. We found they were all guitarfish. For the most part, the trade in guitarfish fins is completely off the radar of conservation organizations and management agencies. If this doesn’t change they will most likely wind up as endangered as the sawfishes.

There are a lot of claims in the media these days that the demand for shark fins has greatly diminished in China and that this will “save the sharks.” Is that true and will it save the batoids as well?

DEMIAN: Well, it’s more complicated than that. Even as demand for fins diminishes, there is still a huge, global trade in fins of sharks and some batoids. And lets not forget that we also capture skates and rays in huge numbers for their meat, as well as manta and devil rays for their meat and gill rakers. We have to address these issues as well.

So from your point of view, what do you recommend?

DEMIAN: I think that it isn’t rocket science. We just need to make some investments into researching batoids and in batoid conservation. With the limited resources we have at present, research money tends to go to the charismatic ray species such as mantas, which is okay if they are the ones who truly need it most. But sometimes less iconic species need it much more.

DEBRA: Readers probably know a bit about shark conservation and have even signed petitions for shark conservation efforts. These days there’s a lot of investment in shark conservation and high profile media attention. But if you pause, take a broader perspective and consider these lesser-known relatives of well-known sharks, you’ll see that batoids are in bad shape too! There are all kinds of “pancake sharks” out there and many of them need our help. ▀

This interview was originally published on NationalGeographic.com’s News Watch on October 23, 2014.



Most people are aware that sharks are heavily fished. But their cousins, the batoids (rays and skates) are often found right alongside them in fish markets. Photo by Demian Chapman.



Guitarfish on sale in a Dubai fishmarket are used for their meat but their fins are prized in Asia for a traditional dish— shark fin soup. Photo by Demian Chapman.

WHY I DECIDED TO WRITE FICTION NOVELS FOR 10-YEAR OLDS

by Ellen Prager, Ph.D - Ocean Scientist, Author and Safina Center Fellow

Boredom is the enemy of education. Bored students are uninspired to learn and less likely to retain what is being taught. Yet we desperately need students to be both inspired and well educated, especially when it comes to the ocean. Youth are the seeds of an upcoming generation. They blossom into our world's great leaders in innovation, policy, science, philanthropy, diplomacy, and conservation. The youth of today become voters and citizens of tomorrow, who will have to make important choices in terms of what seafood they eat, how they use energy, and what they do with their trash. **Our future on planet earth is inherently linked to the sea and it looks a whole lot brighter with generations of children educated and excited about the ocean.**

But it's not just about the future; it's also about the right here and now. Kids have tremendous influence on those around them. When kids become passionate about something in their life, their parents get involved, as do their peers. As consumers, kids have remarkable power — look at the phenomenal economic force that is Harry Potter. We need their influence and power to combat such issues as climate change, overfishing, marine pollution, invasive species, and the loss of critical ocean habitat.

It is with these thoughts in mind and a request from both parents and educators, that I recently undertook the at-times daunting task of writing a new fiction series for kids of middle school age (8 to 12 years old). The books combine fast-paced adventure and humor with learning about the ocean, marine life, and real-world ocean issues.

I've written numerous popular science and illustrated children's books, but I've never done anything specifically targeting middle graders. **This, however, is a very influential time in a child's life.** Many are naturally curious and interested in science and the ocean; okay, especially sharks and dolphins. The pressures of high school have yet to be realized and experiences can spur life-long interests and maybe even a career path.

First thing I did was — my homework. I now have an excellent collection of popular (and less popular) middle grade fiction books. For inspiration, I looked for books that were not only popular, but also where I felt connected to the style of writing. I'm now an ardent fan of Rick Riordan's witty and Greek mythology-based Percy Jackson series. In addition, while giving talks with middle graders in the audience, I paid particular attention to what made their eyes light up, giggling ensue, or hands go up for a question.

Here are a few things I learned. **Keep it simple yet interesting and fast-paced, make it fun, and don't be afraid to use age-appropriate humor and some wicked sarcasm.**

Simple is often referred to as dumbing-down. The last thing kids (or most people) want is to be talked or written down to. That's not to say I'm explaining bioluminescence with an equation for the biochemical reaction that can produce it. But it does mean getting rid of technical jargon and integrating science in a way that is easily understood.

Fun. While giving talks about my popular science book, *Sex, Drugs, and Sea Slime: The Oceans' Oddest Creatures and Why They Matter*, kids loved hearing about how marine organisms use mucus to defend against predators, capture food, travel or clean themselves. The laughter and screaming were so inspiring, I recently published an illustrated children's book entitled, *Sea Slime: It's Eewwy, Gooney, and Under the Sea*. And let's just say mucus plays a key role in my new fiction series.

One of my favorite aspects of this five-book project is the age-appropriate humor and sarcasm. Can't do that with a technical scientific publication! In the first book, *The Shark Whisperer*, a shark gets dentures, a pudgy moray eel is on a diet and undersea fitness program, there is a lock-picking escape artist octopus, and a barrage of bird poop bombs that rain down on the bad guy at an opportune time. Later in the series there is also a mantis shrimp with anger management issues, a vegan blacktip shark, and yes, jokes having to do with a sea otter and a little gas problem. In addition, I've integrated into the story fun facts about numerous marine organisms, descriptions of real ocean habitats and phenomenon, and events based on my own experiences as a marine scientist. The bad guy in the first book is shark finning and blowing up coral reefs. **Other real-world issues included in the series are overfishing, marine pollution, illegal fishing, invasive species, and climate change.** I've also created a website where kids, parents, and educators can go to learn more (www.tristan-hunt.com) and the publisher (Scarletta) has produced an accompanying educational activity guide (www.scarlettapress.com).

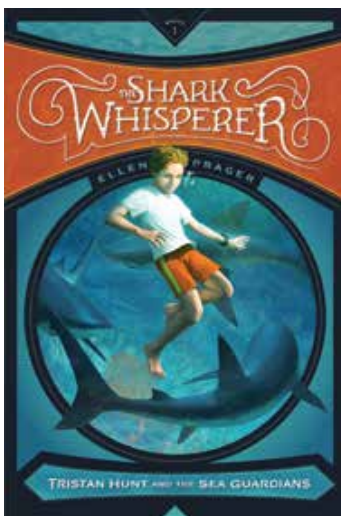
Bottom line. I hope the combination of exciting adventure and humor with fun ocean learning will get more kids excited about the sea and inspire a life-long interest and connection. **I'm also hoping to promote science and reading, especially for struggling or reluctant students.**

So far, the reader response has been terrific. Parents are already getting in touch looking for book number two for their kids, which is due out Spring 2015 (*The Shark Rider*). And the notes I'm getting from educators, parents, and kids are especially rewarding. One 7-year old who was reading *The Shark Whisperer* with his mother recently informed me it is his favorite book along with Harry Potter, he would like to play Tristan in the movie, and that he has a pet fish to play a fish. A reading teacher emailed me to say that her struggling readers finished the book and cannot wait for the sequel. And 11-year-old Jay says not only did his dad like it too, but now Jay also wants to explore the ocean more.

Thanks to my Safina Center fellowship, I'll be able to visit schools, aquariums, and other venues to interact with readers directly and do the research and writing for the next book in the series! ■



Dr. Ellen Prager with Tilly and Willy after a talk about *The Shark Whisperer* — getting their own copy and ready to dive in! Photo by E. Prager.



WHY ARE WE IMPORTING OUR OWN FISH?

by Paul Greenberg — Author and Safina Center Fellow

In 1982 a Chinese aquaculture scientist named Fusui Zhang journeyed to Martha's Vineyard in search of scallops. The New England bay scallop had recently been domesticated, and Dr. Zhang thought the Vineyard-grown shellfish might do well in China. After a visit to Lagoon Pond in Tisbury, he boxed up 120 scallops and spirited them away to his lab in Qingdao. During the journey 94 died. But 26 thrived. Thanks to them, today China now grows millions of dollars of New England bay scallops, a significant portion of which are exported back to the United States.

As go scallops, so goes the nation. According to the National Marine Fisheries Service, **even though the United States controls more ocean than any other country, 86 percent of the seafood we consume is imported.**

But it's much fishier than that: While a majority of the seafood Americans eat is foreign, a third of what Americans catch is sold to foreigners.

The seafood industry, it turns out, is a great example of the swaps, delete-and-replace maneuvers and other mechanisms that define so much of the outsourced American economy; you can find similar, seemingly inefficient phenomena in everything from textiles to technology. The difference with seafood, though, is that we're talking about the destruction and outsourcing of the very ecological infrastructure that underpins the health of our coasts. Let's walk through these illogical arrangements, course by course.

APPETIZERS: HALF SHELLS FOR COCKTAILS

Our most blatant seafood swap has been the abandonment of local American oysters for imported Asian shrimp. Once upon a time, most American Atlantic estuaries (including the estuary we now call the New York Bight) had vast reefs of wild oysters. Many of these we destroyed by the 1800s through overharvesting. But because oysters are so easy to cultivate (they live off wild microalgae that they filter from the water), a primitive form of oyster aquaculture arose up and down our Atlantic coast.

Until the 1920s the United States produced two billion pounds of oysters a year. The power of the oyster industry, however, was no match for the urban sewage and industrial dumps of various chemical stews that pummeled the coast at midcentury. Atlantic oyster culture fell to just 1 percent of its historical capacity by 1970.

Just as the half-shell appetizer was fading into obscurity, the shrimp cocktail rose to replace it, thanks to a Japanese scientist named Motosaku Fujinaga and the kuruma prawn. Kurumas were favored in a preparation known as "dancing shrimp," a dish that involved the consumption of a wiggling wild shrimp dipped in sake. Dr. Fujinaga figured out how to domesticate this pricey animal. His graduate students then fanned out across Asia and tamed other varieties of shrimp.

Today shrimp, mostly farmed in Asia, is the most consumed seafood in the United States: Americans eat nearly as much of it as the next two most popular seafoods (canned tuna and salmon) combined. **Notably, the amount of shrimp we now eat is equivalent to our per capita oyster consumption a century ago.**

And the Asian aquaculture juggernaut didn't stop with shrimp. In fact, shrimp was a doorway into another seafood swap, which leads to the next course.

FISH STICKS: ATLANTIC FOR PACIFIC

Most seafood eaters know the sad story of the Atlantic cod. The ill effects of the postwar buildup of industrialized American fishing are epitomized by that fish's overexploitation: **Gorton's fish sticks and McDonald's Filets-o-Fish all once rode on the backs of billions of cod.** The codfish populations of North America plummeted and have yet to return.

Just as the North Atlantic was falling as a fish-stick producer, the Pacific rose. Beginning in the 1990s two new white fish started coming to us from Asia: tilapia, which grows incredibly fast, and the Vietnamese Pangasius catfish, which grows even faster (and can breathe air if its ponds grow too crowded). These two are now America's fourth- and sixth-most-consumed seafoods, respectively, according to the National Fisheries Institute.

Alongside them, a fishery arose for an indigenous wild American Pacific fish called the Alaskan, or walleye, pollock. In just a few decades, pollock harvests went from negligible to billions of pounds a year. Pollock is now the fish in McDonald's Filet-o-Fish and the crab in the "fake crab" that Larry David discussed mid-coitus on "Curb Your Enthusiasm." In fact, there is so much pollock that we can't seem to use it all: Every year more than 600 million pounds is frozen into giant blocks and sent to the churning fish processing plants of Asia, Germany and the Netherlands.

Sending all this wild fish abroad and then importing farmed fish to replace it is enough to make you want to take a stiff drink and go to bed. But when you wake up and reach for your bagel, surprise! The fish swap will get you again.

LOX: WILD FOR FARMED

There was a time when “nova lox” was exactly that: wild Atlantic salmon (laks in Norwegian) caught off Nova Scotia or elsewhere in the North Atlantic. But most wild Atlantic salmon populations have been fished to commercial extinction, and today a majority of our lox comes from selectively bred farmed salmon, with Chile our largest supplier.

This is curious, given that salmon are not native to the Southern Hemisphere. But after Norwegian aquaculture companies took them there in the '80s, they became so numerous as to be considered an invasive species.

The prevalence of imported farmed salmon on our bagels is doubly curious because the United States possesses all the wild salmon it could possibly need. Five species of Pacific salmon return to Alaskan rivers every year, generating several hundred million pounds of fish flesh every year. Where does it all go?

Again, abroad. Increasingly to Asia. Alaska, by far our biggest fish-producing state, exports around three-quarters of its salmon.

To make things triply strange, a portion of that salmon, after heading across the Pacific, returns to us: **Because foreign labor is so cheap, many Alaskan salmon are caught in American waters, frozen, defrosted in Asia, filleted and boned, refrozen and sent back to us.** Pollock also make this Asian round trip, as do squid — and who knows what else?

When you dig into the fish-trade data, things get murkier. In its 2012 summary of the international fish trade, the National Oceanic and Atmospheric Administration noted, somewhat bizarrely, that its definition of exports “may include merchandise of both domestic and foreign origin.”

So, for example, when fish sticks are cut from blocks of imported “white fish” in an American facility and exported to a foreign country, they are classified as American domestic production. Meanwhile some of our imports, as with an unknowable portion of our salmon, are taken from American waters, reprocessed elsewhere and brought back home. Do these percentages cancel themselves out? We don't know.

And that's my point. Globalization, that unseen force that supposedly eliminates inefficiencies through the magic of trade, has radically disconnected us from our seafood supply.

Of course, there is a place for the farming of shrimp, just as there is a place for the farming of oysters. There is a need for efficient aquacultured species like tilapia and Pangasius, just as there is a need to curb the overfishing of Atlantic cod. There is even a place for farmed Atlantic salmon, particularly if it can be raised so it doesn't affect wild salmon.

But when trade so completely severs us from our coastal ecosystems, what motivation have we to preserve them? I'd argue that with so much farmed salmon coming into the country, we turn a blind eye to projects like the proposed Pebble Mine in Alaska, which would process 10 billion tons of ore from a site next to the spawning grounds of the largest wild sockeye salmon run on earth.

I'd maintain that farmed shrimp inure us to the fact that the principal rearing ground of Gulf shrimp, the Mississippi River Delta, is slipping into the sea at a rate of a football field an hour. I'd venture that if we didn't import so much farmed seafood we might develop a viable, sustainable aquaculture sector of our own. Currently the United States languishes in 15th place in aquaculture, behind microscopic economies like Egypt and Myanmar. And I'd suggest that all this fish swapping contributes to an often fraudulent seafood marketplace, where nearly half of the oceanic products sold may be mislabeled.

We can have no more intimate relationship with our environment than to eat from it. During the last century that intimacy has been lost, and with it our pathway to one of the most healthful American foods. It is our obligation to reclaim this intimacy. This requires us not just to eat local seafood; it requires the establishment of a working relationship with our marine environment. It means, in short, making seafood not only central to personal health, but critical to the larger health of the nation. ■

This essay appeared in the *New York Times Sunday Review* on June 20, 2014 and was adapted from Paul Greenberg's book *American Catch: The Fight for Our Local Seafood*. Data analysis was provided by Carolyn Hall, a historical marine ecologist.

SUSTAINABLE SEAFOOD PROGRAM

Expanded Partnership Combines Scientific Ratings with Retailer's Buying Power

Streamlining our research with Monterey Bay Aquarium helps us know the sustainability status of more species of fish. Whole Foods Market turns that knowledge into buying power and market influence. There's a real impact on the water when retailers like Whole Foods Market source responsibly caught seafood, creating an economic reward for fisheries to improve their ratings.

CARL SAFINA



In 1998 The Safina Center's founders developed the first authoritative guide to sustainable seafood showing the environmental cost of eating fished and farmed seafood. The scientific analysis of different species examined key aspects of the fishing or farming process, condensing vast amounts of scientific information into an easy-to-understand seafood report and a corresponding color-coded rating system. This concept was quickly adopted by other marine organizations.

In 2010, The Safina Center shifted its focus to wild-caught seafood as a way to highlight the connection between healthy fish populations and healthy oceans. That year we also began a partnership with Whole Foods Market® (WFM), a leading retailer with stores throughout the United States, in Canada and the United Kingdom.

For the next three years, Whole Foods Market partnered with The Safina Center and with Monterey Bay Aquarium (MBA) Seafood Watch® individually. Each conservation group conducted separate research and used slightly different criteria for ranking fisheries. While this approach was successful, we all felt it could be even more effective. >



Whole Foods Market announced combined ratings at its Columbus Circle store in New York City on June 2, 2014 at a press roundtable. Photo by WFM.

Collaborating to Simplify Seafood Ratings, Assess More Species and Increase Research

In 2013, Whole Foods Market, MBA and The Safina Center (TSC) started sharing the seafood research load and began rating fisheries using one set of criteria and one rating method. This new way of working together eliminated any conflicts in seafood ratings due to differences in methodology. It also allowed both The Safina Center and MBA to assess more fisheries than ever before.

For shoppers, this new collaboration creates more consistency at the seafood counter. And more ratings mean that it's easier than ever for consumers to make choices that help protect our oceans. By helping Whole Foods Market offer responsibly sourced wild-caught seafood, we know we are supporting the people and fishing practices that help keep fish plentiful for the future.

Combining the scientific expertise of MBA and TSC with the consumer insight of Whole Foods Market also helps both conservation organizations prioritize their research on the most impactful seafood issues. This leads to a greater number of choices for consumers and drives demand for seafood that comes from responsible fisheries.

Increasing the availability of "Green" or "Yellow" options in the seafood case has a positive effect on our oceans

and fishing communities. Fishermen from fisheries that earn these ratings through responsible practices have an avenue into the sustainable seafood marketplace. Through the seafood ratings program, The Safina Center, Monterey Bay Aquarium, and Whole Foods Market are providing an economic incentive to fish responsibly and helping to shift the seafood industry toward greater sustainability. ■

Whole Foods Market has excelled as a leader in seafood sustainability because partners like MBA and The Safina Center provide us with the latest science on the most abundant species and the best managed fisheries. They share our commitment to the highest standards and continual improvement, so this collaboration will streamline all our efforts to keep driving change in the industry.

DAVID PILAT

Global Seafood Buyer for
Whole Foods Market.

SUSTAINABLE SEAFOOD PARTNERSHIP

The expanded partnership with Whole Foods Market and Monterey Bay Aquarium Seafood Watch was led by our Research Scientist, Elizabeth Brown. She has taught our seafood analysts how to use the new seafood rating system and methodology, and worked closely with Seafood Watch to improve this new system in significant ways. All of our seafood reports are now generated using the web-based Seafood Watch Assessment Tool, which allows for easy compilation of data and expert input, all in one place.



Elizabeth Brown, Safina Center
Research Scientist.
Photo by Jesse Bruschini.

A significant boost in exposure is an added benefit of our new level of partnership. The Safina Center's logo is featured along with MBA's on signs in the seafood counters of all 370 U.S. Whole Foods Markets.

The Safina Center's web-based seafood guide now contains ratings by both The Safina Center and Monterey Bay Aquarium Seafood Watch, which means many additional species have been added to our online guide featuring scientific ratings for over 160 wild-caught species.

As this report goes to press, The Safina Center has completed and published 18 new seafood ratings using the new methodology. Some examples include Louisiana crawfish, several Hawaii deep-water snappers, Pacific rock crabs, Mediterranean anchovy and sardine, and Norway lobster. Many other seafood ratings are also in progress. ■

PROGRAM



Seafood counter signs in all 370 U.S. Whole Foods Markets feature both logos — The Safina Center and MBA's Seafood Watch. Photo by WFM.

Whole Foods Market (WFM) is an innovator and leader in sustainable seafood. In fact, WFM was ranked #1 by Greenpeace in 2014 for their seafood industry leadership. Whole Foods Market only sells seafood rated “Green” and “Yellow” by The Safina Center and MBA's Seafood Watch, as well as seafood certified sustainable by the Marine Stewardship Council. Whole Foods Market does not sell “Red” rated seafood. Red ratings indicate that the species is overfished, poorly managed or caught in ways that cause harm to habitats or other wildlife. WFM has strict traceability requirements, which ensure that all items in the seafood case can be traced through the supply chain. ■

PETER MATTHIESSEN TRIBUTE

by Carl Safina

The literary giant and naturalist wrote more than 30 books as well as numerous magazine articles, including for *Audubon*. A friend and writer shares his memories of the author's later years.

If Miles Davis suddenly walked into a small cocktail party, what could a young trumpet player possibly say to him? What could I, a greenhorn writer, say to Peter Matthiessen? It was 1998. I was in my early forties, and had just published my first book. Peter was past 70; the first of his novels, *Race Rock*, was published in 1954. Anything I could think of saying seemed lame. Then Peter took two steps toward me and ended my dilemma: "So, Carl, when are we going fishing?"

Peter had fishing friends and birding friends and writing friends (and political enemies). His strong opinions often incited debates. We disagreed a bit about fishing policies—he'd fished commercially, and I'd advocated sharp catch limits for men he'd worked with. But I never found him unreasonable, or grudging in conceding a point. Anyway, on the broader unraveling of both civilization and the natural world, we saw eye to eye, both in anger and in hope.

Our biggest disagreement was on the value of his nonfiction work. He wrote more than 20 nonfiction books; many of them were inspirations in my youth. But Peter was clear that he was foremost a novelist, that for him *fiction* was both a venerable challenge and a sublime task. While working to combine his Watson trilogy into a single book—it would become *Shadow Country*—he declined my repeated invitations to fly-fish, which he loved for its Zen-like form, explaining that when the fiction was coming, staying in the flow was paramount. I'd stop at his house to drop off a fish, and even in a quick hello I could see his mind pacing like a caged leopard. When *Shadow Country* went on to win the National Book Award, Peter, already 80, was elated and told me the award was "tremendously vindicating." If I ever allowed myself the temerity of feeling proud of Peter Matthiessen, it was at that moment.

Though born to privilege, Peter held great affection for the grace of working and native people of all kinds, whether they inhabited local fishing boats, Indian reservations, the shadows of Amazon rainforests, or the highlands of New Guinea. Like a multivalent electron of some strange element, Peter could exist in numerous orbits in quick succession, one week being feted among the brightest literary lights and the next hanging out with fishermen or teachers or conservationists or birders. Or appearing in *The New York Times* or on Charlie Rose, and then in our kitchen making tamales with my girlfriend of 10 years, Patricia, whom he alone called Patty.

One day some mutual friends and their kids were visiting our home on Lazy Point, the peninsula that juts into Long Island's Napeague Bay. Peter joined in as we pulled a beach seine and showed the kids crabs and little fishes and the delightful defense of baby puffers, which swallow water until they're swollen like balloons. He decided to take some silversides home for the frying pan. Virtually no one eats these finger-long fish anymore; they were food in harder times. Seeing Peter, at 84, with his little bag of silversides seemed a round-trip contraction in a life that had included wide horizons and ocean battles with great swordfish and tuna. He then mentioned that he would soon leave for Mongolia to spend time with hawkers who train Golden Eagles for hunting foxes and hares. One moment Peter was in our humble circle, picking little fish out of a net on his hands and knees. The next he was out of sight, up in the widening gyre of his singular lofty life.

During that trip to Mongolia he became quite weak; upon his return he was diagnosed with leukemia. It was serious. He began that dance while continuing work on a novel set in the Nazi death camps, which—he said with certain relish—was sure to upset a lot of people.

For years Peter had never failed to end a phone call by telling me to say hi to Patty, and he and his wife, Maria, frequently opined that I "should marry this woman already." This past January, when Patricia accompanied me to Hawaii, I did just that. Returning home, I proudly called Peter and Maria to tell them I'd finally taken their advice. "Great," he said enthusiastically. "I'm having a chemo treatment on Tuesday, and right after that we can come to your house and take you out to dinner to celebrate."

Peter had grumbled good-naturedly that because of his compromised immune system, his doctor had forbidden him alcohol. So when he and Maria arrived at our house for that celebratory dinner I said to him, "I'd offer you a glass of wine but..."

"I can have a *little*," he replied with a wink. At the restaurant he ordered another glass. As Peter and I discussed animal communication and Yellowstone wolves, out of the corner of my eye I noticed Maria engaging Patricia in low tones.

ESSAY

After dinner we went back to the house briefly and said our goodbyes. Once they'd left, Patricia closed the door and said, "While you and Peter were talking, Maria told me that the chemo isn't working anymore. That's why Peter had a glass of wine."

A few days later our mutual friend Andrew Sabin returned from a successful quest to see free-living snow leopards—the creatures that had so famously eluded Peter decades earlier when he wrote *The Snow Leopard*. It was a splendid excuse for me to phone. "That son of a gun!" Peter said, "and they saw *three!*" Peter and George Schaller had trekked to 18,000 feet, he recalled, and in that cold, thin air, they were unable to get warm, day or night. "That son of a gun!" Peter said again, still attending to the world yet still inhabiting his own unique relationship with it.

Soon, after a new drug failed, Peter landed in the hospital. Several days later he returned to his beloved home, and his family gathered. When he died on April 5, a flock of blackbirds gathered noisily outside his bedroom window.

And Maria said, "A mighty tree has fallen."

Matthiessen's final novel, In Paradise, about the Auschwitz death camp, was published three days after his death in April, 2014. ■

This article appeared in the July/August 2014 issue of *Audubon* magazine. Reprinted by permission.

MILESTONES AND FIRSTS

2014 marked the beginning of our second decade. During this past year we streamlined our programs and sharpened our focus. Using the power of traditional and social media and through workshops, essays, films and books, we brought today's key ocean issues to a broad and diverse audience. Here's a list of awards, publications, honors and "firsts," since our founding in 2003.

2014

Carl Safina completes his new book, *Beyond Words*, due out in summer, 2015, published by Holt.

Blue Ocean Institute changes its name to The Safina Center.

Carl Safina announced as a finalist for the 2014 Indianapolis Prize, a biennial prize in global wildlife conservation.

Safina Center Fellow, Paul Greenberg publishes his third book *American Catch: The Fight For Our Local Seafood*, to critical acclaim.

The Safina Center and Monterey Bay Aquarium expand their partnership and collaborate on sustainable seafood ratings creating consistency for Whole Foods Markets nationwide.

The Safina Center logo is now included in seafood counter signage in 370 Whole Foods Market stores in the U.S.

Safina Center Fellows, Paul Greenberg and Demian Chapman are both named Pew Fellows in Marine Conservation.

The Safina Center welcomes two new Fellows: writer, photographer and filmmaker John Weller, and marine scientist and author Dr. Ellen Prager.

Safina Center Fellow, Dr. Ellen Prager publishes *The Shark Whisperer*, her first book in a new fiction series for middle grades, *Tristan Hunt and the Sea Guardians*.

The Safina Center doubles its followers on Twitter.

Safina Center Fellows, Demian Chapman and Debra Abercrombie completed Shark Fin ID Workshops in many countries around the world including Vanuatu, South Africa and Hong Kong.

The Safina Center helps orchestrate Stony Brook University's first ever Earth Day "Tweet-Up" honoring three Indianapolis Prize finalists (and SBU professors) Carl Safina, Russ Mittermeier and Patricia Wright.

Safina Center Fellow, John Weller and his partner Shawn Heinrichs complete their film "Guardians of Raja Ampat," to inspire community-driven conservation in Indonesia.

2013

First full series of *Saving the Ocean with Carl Safina* broadcast on PBS to 90 million households in the U.S. and Canada. Episodes available free 24/7 on PBS.org.

Carl Safina nominated for the 2014 Indianapolis Prize, a biennial prize in global wildlife conservation.

Carl Safina is lead scientist on the GYRE expedition to the southwest coast of Alaska and Aleutian Islands.

National Geographic premieres documentary video of GYRE expedition.

Over a quarter of a million visits to Blue Ocean Institute's new website this year.

Stony Brook University establishes the Carl Safina Endowed Research Professorship for Nature and Humanity, Long Island, NY.

Carl Safina interviewed by Alan Alda at Stony Brook Southampton. (Safina is co-chair of the Alan Alda Center for Communicating Science.)

Carl Safina receives an Honorary Doctorate from Drexel University.

Carl Safina is named Inaugural Andrew W. Mellon Distinguished Fellow in Environmental Studies by Colby College.

Rutgers University presents Carl Safina with a Distinguished Alumni Award in Biology.

Safina wrote the foreword for "The Last Ocean, Antarctica's Ross Sea Project" by John Weller, published by Rizzoli.

Blue Ocean Fellows, Dr. Demian Chapman & Debra Abercrombie hold Shark Fin Identification Workshops in Honduras, Belize, Costa Rica, Senegal, Sri Lanka, Hong Kong, USA, Thailand, United Arab Emirates, Yemen, Egypt, Oman, Brazil and Fiji.

Blue Ocean Institute is recognized by Intelligent Philanthropy for our commitment to transparency.

2012

Blue Ocean Fellows Program launched in November. First Fellows: author Paul Greenberg and shark experts, Dr. Demian Chapman and Debra Abercrombie.

The View from Lazy Point, A Natural Year in an Unnatural World wins 2012 Orion Magazine Book Award.

Six new episodes of *Saving the Ocean with Carl Safina* filmed to complete first year of the PBS series. Episodes premiere in October, 2012.

"The Sacred Island" episode of *Saving the Ocean with Carl Safina* PBS series named finalist at the BLUE Ocean Film Festival, "Innovations and Solutions" category.

Carl Safina blogs for *The Huffington Post*; begins blogging for *National Geographic*.

Blue Ocean Institute more than doubles its Facebook and Twitter audiences.

Blue Ocean Institute moves to Stony Brook University's School of Marine and Atmospheric Sciences.

MILESTONES AND FIRSTS

Blue Ocean Institute releases comprehensive overview, "MERCURY: Sources in the Environment, Health Effects and Politics," written by Sharon Guynup; intro and summary by Carl Safina.

A Sea in Flames: The Deepwater Horizon Oil Blowout named to Top Ten List by the Project on Government Oversight.

Carl Safina receives Ocean Hero Award from *Diver* magazine.

Research scientists Alan Duckworth and J.I. Peterson's "Effects of seawater temperature and pH on the boring rates of the sponge *Cliona celata* in scallop shells" published in September issue of *Marine Biology*.

Carl Safina selected as "Long Island's Man of the Year in Science" by the *Times Beacon Record*.

2011

Carl Safina's fifth book, *The View from Lazy Point, A Natural Year in an Unnatural World*, published in January to rave reviews.

Carl Safina profiled in *The New York Times*.

Carl Safina's sixth book, *A Sea in Flames, The Deepwater Horizon Oil Blowout*, published in April to excellent reviews.

Both books selected as *The New York Times* Book Review, "Editor's Choice."

Carl Safina is interviewed on PBS, NPR, and in magazines from TIME to Rolling Stone, and on dozens of other stations.

FishPhone text messaging app reaches its 100,000th query.

Carl Safina wins James Beard Award for Journalism – Environment, Food Politics and Policy.

Carl Safina and Alan Duckworth invited to write "Fish Conservation" chapter in the Encyclopedia of Biodiversity, 2nd edition.

Carl Safina nominated for the 2012 Indianapolis Prize.

Carl Safina named among "Twenty-Five Visionaries Who Are Changing the World" by Utne Reader.

Carl Safina writes "The 2010 Gulf of Mexico Oil Well Blowout: a Little Hindsight" published in *PLoS Biology*.

First two episodes of *Saving the Ocean with Carl Safina* air on more than 100 PBS television stations across the U.S.

The View From Lazy Point named PopTech's list of 8 Great Holiday Reads.

The View from Lazy Point included in *Newsday's* Top 11 Books of 2011.

2010

Carl Safina's first children's book *Nina Delmar: The Great Whale Rescue* is published.

Carl Safina testifies before Congress regarding the Gulf oil blowout.

Carl Safina interviewed on The Colbert Report, MSNBC, CBS TV, PBS' "Need to Know," "The Leonard Lopate Show" (NPR), Globo News-Brazil, News 12 Long Island, Democracy Now, CNN, BBC Radio, and many others.

Carl Safina invited to give a talk at the TEDx Oil Spill Conference; talk quickly moves to main TED.com homepage.

FishPhone launches a new app; receives stellar media coverage.

Blue Ocean establishes partnership with Whole Foods Market to provide seafood rankings in stores.

Mercury in Fish Project launched in collaboration with The Gelfond Fund for Mercury Related Research & Outreach at Stony Brook University.

Carl Safina becomes co-chair of steering committee for the Center for Communicating Science at Stony Brook University.

Carl Safina wins Sylvia Earle Award presented at the Blue Ocean Film Festival.

Carl Safina wins Guggenheim Fellowship in Natural Sciences Science Writing.

Safina wins Lifetime Achievement Award from the International Wildlife Film Festival.

Blue Ocean Institute establishes partnership with Google Ocean.

Carl Safina writes "The Moral Climate" chapter in Moore and Nelson's *Moral Ground, Ethical Action for a Planet in Peril*.

2009

Carl Safina's "Darwinism Must Die So That Darwin May Live" published in *The New York Times*.

Hardt and Safina's "Threatening Ocean Life from the Inside Out" published in *Scientific American*.

Next Wave's Ocean Science Literacy Workshops raise awareness about the ocean and Google Earth technology for English Language Learning students.

Safina's "A Future for U.S. Fisheries" published in *Issues in Science and Technology*.

FishPhone App receives a "Best in Green" award by Ideal Bite, a green-living website.

FishPhone App receives major media coverage from *The Wall Street Journal* and *The New York Times* to *Bon Appetit*, *Gourmet*, *Condé Nast Traveler* and *Parade* magazine (resulting in 4,000 queries in a single day).

Green Chefs/Blue Ocean launched: online sustainable seafood course for chefs and culinary students.

2008

Carl Safina and DH Klinger's "Collapse of Bluefin Tuna in the Western Atlantic" published in *Conservation Biology*.

Carl Safina's first book, *Song for the Blue Ocean, Encounters Along the World's Coasts and Beneath the Seas* named "One of 12 Most Influential Environmental Books of All Time" by Environmental Defense Fund.

Blue Ocean Institute invited to establish science office at the School of Marine & Atmospheric Sciences at Stony Brook University.

Blue Ocean distributes its 2.5 millionth ocean-friendly seafood guide.

Carl Safina's "Toward a Sea Ethic" published in *The American Prospect's* "Ocean & Coasts" special report.

Marah Hardt and Carl Safina's "Carbon's Burden on the World's Oceans" published online at *Yale Environment 360*.

2007

Blue Ocean forms the Friendship Collaborative with Ken Wilson, Senior Pastor of Vineyard Churches of Ann Arbor, MI, to further dialogue between scientists and evangelical Christian leaders.

Blue Ocean launches FishPhone, the nation's first sustainable seafood text-messaging service, plus a downloadable seafood guide for cell phone users.

Carl Safina's article, "On the Wings of the Albatross," with photographs by Frans Lanting, featured in *National Geographic* magazine.

New television series, *Saving the Ocean with Carl Safina*, developed for PBS by Safina and producer John Angier. Pilot segments filmed in Belize and Zanzibar.

Blue Ocean partners with Stony Brook University's School of Marine and Atmospheric Sciences to collaborate on climate change research and science communication.

2006

Carl Safina's third book, *Voyage of the Turtle, In Pursuit of the Earth's Last Dinosaur*, is published to critical acclaim.

Voyage of the Turtle, In Pursuit of the Earth's Last Dinosaur selected as a New York Times Book Review "Editors' Choice."

Carl Safina gives invited talk at the World Economic Forum in Davos, Switzerland on the status and future of fisheries and the oceans.

U.S. poet-laureate Billy Collins helps launch Blue Ocean's Sea Stories literary project with his poem "Coastline."

Carl Safina awarded George B. Rabb Medal from Chicago Zoological Society, Brookfield Zoo.

Carl Safina addresses a conference convened by the Center for Health and the Global Environment at Harvard and the National Association of Evangelicals to help create a conservation-oriented "Urgent Call to Action."

Carl Safina awarded Bianimale Foundation Fellowship.

2005

Blue Ocean's Hawaii-based Marine Ecology and Fishery Specialist, Dr. Eric Gilman, produces "Catch Fish, Not Turtles," a booklet in several languages created to help fishermen avoid catching sea turtles while fishing.

Carl Safina receives an Honorary Doctorate from State University of New York.

Carl Safina and four co-authors' "U.S. Ocean Fish Recovery; Staying the Course" published in *Science* magazine.

2004

Mercédès Lee gives an invited talk at the World Bank, bringing global attention to ocean conservation and the importance of seafood sustainability as a food security concern.

Carl Safina and Sarah Chasis' "Saving the Oceans" published in *Issues in Science and Technology*.

2003

Blue Ocean Institute launched by MacArthur fellow Dr. Carl Safina and Mercédès Lee.

Carrie Brownstein, Mercédès Lee and Carl Safina's first fully transparent methodology for sustainable seafood ranking, "Harnessing Consumer Power for Ocean Conservation" published in *Conservation* magazine.

Mercédès Lee wins Renewable Natural Resources Foundation Outstanding Achievement Award for her book *Seafood Lovers Almanac*.

Partnership established between Blue Ocean and Atlantis Marine World Aquarium in Riverhead, Long Island, NY as the basis for a new education program.

Carl Safina's book *Eye of the Albatross, Visions of Hope and Survival* awarded John Burroughs Writer's Medal.

Carl Safina's *Eye of the Albatross, Visions of Hope and Survival* named "Year's Best Book for Communicating Science" by National Academies of Science, Medicine and Technology.

Carl Safina writes the foreword for a new edition of *The Sea Around Us* by Rachel Carson.

Carrie Brownstein, Mercédès Lee and Safina's "Harnessing Consumer Power for Ocean Conservation" published in *Conservation in Practice*.

Carl Safina receives Rutgers University George H. Cook Distinguished Alumnus Award as Most Distinguished Alumnus in 50-year history of the Ecology and Evolution Graduate Program.

RAINER JUDD

Cultivating #LongFormMagicMaking
in a World Where Patience is
in Short Supply

“Rainer brings such a unique perspective to
our group. She is a gentle guide, always
asking insightful questions.”

— Carl Safina



Rainer Judd near her home in Marfa, Texas. Photo by Vajra O. Kingsley.

As the daughter of an artist and a dancer, it's perhaps no surprise that Rainer Judd developed her own way of seeing and moving through the natural world very early. Her childhood was spent between the Chihuahuan high desert of Marfa, Texas, and the urban art world of New York City's SoHo. Both locations played a role in inspiring her views of the world and helping her find her place in it.

“The high desert has a stark beauty that also offers expanses of golden prairie grass, gentle hills and craggy volcanic rock,” says Judd. “The massive sky is both empowering and humbling. My dad used to say that in the absence of trees you could see the shape of the land and I think that's true. There's also no place that feels bigger to me...It's a bit like the ocean. New York City, too, has its own massive scale, great skies and remarkable light and shadows.”

Judd is co-president of the Judd Foundation with her brother Flavin, which preserves their father Donald Judd's artistic legacy. In 2013, the Foundation completed a \$23 million renovation of their father's “101 Spring Street,” an 8,500 square-foot, late-19th-century former factory in SoHo that became his studio, and home for him and his two children. The building now functions as a public programming space open for tours featuring programs on

art, design and the rich cultural history of SoHo.

Judd is also an actor, writer and filmmaker. Although she has made many short features, she's currently in the middle of her first full-length feature. “Working on my first feature narrative is very exciting. This is a special time to be making a long piece because our culture is too often impatient and distracted. I love the idea of people putting a lot of thought into work—whether it's film, music, art or literature—that leads both audience and artist someplace new,” Judd says.

“I almost feel as if I'm at the end of a generation that still has the patience for creating and viewing long works,” she says. “Just as a great stew needs to marinate, it takes time to access that creative vision. You gotta nurture it, cajole it, ask it to come out and play. We laugh about this fact and in response create new hashtags: #LongFormMagicMaking and #ArtTakesTime. I feel honored to be working with incredible people on this film.”

Asked if she believes there's an intersection between her love of art and her love of the natural world, she says, “It almost seems impossible to have one without the other, but we don't like to think about that. I feel strongly that both art and nature are avenues

for people to be in solitude and in conversation with themselves, to have spiritual evolution and even healing. When I go out and look up at the night sky, there's a great feeling of ‘Ah, there you are.’ And a dialogue begins and it's not necessarily in words.”

Flavin has also been an influence helping her make connections to the natural world. In fact, he introduced her to the work of Carl Safina. “Flavin, who had been handing me books for as long as I could remember, handed me a copy of *Song for the Blue Ocean* and said, ‘Here read this.’ We were in Texas and seated near Patrick Lannan who had just given Carl the Lannan Literary Award. I read the book and cried for the fish. I thought it was an amazing feat that a scientist, a marine biologist, could write so movingly.”

Judd was so impressed she wrote a fan letter to Safina, who says it was his very first fan letter. Judd knew longtime Blue Ocean Institute supporter and board member Jack Macrae who passed Judd's letter along to Safina. That fan letter helped launch a friendship, and since 2004, Judd has served on the Blue Ocean Institute/Safina Center board of directors. She currently lives and works in New York and Texas. ■

MAKING WAVES

In 2014 we expanded our reach through television, radio, print, web outlets and social media. At The Safina Center we are always looking for new ways to reach a diverse, global audience — from Main Street to Wall Street and from conservatives to conservationists.

CARL SAFINA – Articles, Web Essays and Commentary

- “How Climate Change is Sinking Seabirds,” *Audubon* magazine, September 9, 2014.
- “The Passenger Pigeon, A Requiem,” *The Huffington Post*, September 2, 2014.
- “A Tortoise Isn’t a Billboard, Except in Aspen,” *The Huffington Post*, August 20, 2014.
- “Enjoy the Show: Learn More After ‘Sharknado 2’,” (Safina and Prager) *The Huffington Post*, July 27, 2014.
- “Return of a Native: Reflections on the 38th Voyage of the whaling ship Charles W. Morgan, July 11, 2014,” (Safina and Paladines) *National Geographic News Watch*, July 21, 2014.
- “Palau Plans to Ban Commercial Fishing, Create Enormous Marine Reserve,” (Safina and Brown) *National Geographic News Watch*, July 2, 2014.
- “A Tribute to Peter Matthiessen,” *Audubon* magazine, July/August 2014.
- “Government Says Eat Fish, Not Too Much, Mostly Low in Mercury,” (Safina and Brown) *The Huffington Post*, June 18, 2014.
- “New Catch Limit for Menhaden Leaves Millions of Fish in the Sea,” (Safina and Brown) *National Geographic News Watch*, June 12, 2014.
- “Rising Oceans Will Be Unstoppable,” *CNN Opinion*, May 15, 2014.
- “This Planet Comes with Limits,” *CNN Opinion*, May 8, 2014.
- “Caught by Accident: Global Hotspots of Unintended Catches,” (Safina and Lewison) *National Geographic News Watch*, April 3, 2014.
- “Whales win one: Will Japan abide by ban?” *CNN Opinion*, April 1, 2014.
- “Mercury in Seafood: A Little Clarity,” *The Huffington Post*, March 27, 2014.
- “Killing Swans is a Bad Idea,” *CNN Opinion*, February 21, 2014.
- “Eating Seafood: Health Boon or Health Threat?” (Safina and Brown) *The Huffington Post*, February 13, 2014.

“Killing deer to make our lives easier?” *CNN Opinion*, February 13, 2014.

“Cruelty, Not Culture, in Japan’s Dolphin Hunt,” *The Huffington Post*, January 28, 2014.

“How hunters slaughter dolphins in Japan,” *CNN Opinion*, January 28, 2014.

Lectures, Keynotes, Workshops and Public Talks

Blue Ocean Business Summit - Online industry event

The Academy of Natural Sciences, Drexel University, Philadelphia, PA

Boston University, Boston, MA

Indianapolis Prize Tweet-Up, Stony Brook University, Stony Brook, NY

University of Hawai’i at Manoa

North Shore Library, Princeville, HI

Safina Center Blogs

“Finally a Big Step Forward for Atlantic Bluefin Tuna,” by Elizabeth Brown.

“Shark Ashore! What’s Next?” by Jesse Bruschini.

“Can We (Will We) Save Gulf of Maine Cod?” by Elizabeth Brown.

“More Whales Means More Productive Oceans,” by Elizabeth Brown.

“U.S. Fishery Law Under Revision- Will We Strengthen or Weaken the Law?” by Elizabeth Brown.

“Shark Tagging, Bahamas – Part 3,” by guest blogger, Christine O’Connell.

“Shark Tagging, Bahamas – Part 2,” by guest blogger, Christine O’Connell.

“Shark Tagging, Bahamas – Part 1,” by guest blogger, Christine O’Connell.

“Should the U.S. Government Tell Us What Seafood Is Sustainable; A Good or Bad Idea?” by Elizabeth Brown.

“Shifting Climates Cause Species to Relocate,” by Elizabeth Brown.

“Mercury Contamination of Lobsters in a Maine River Leads to Fishing Closure,” by Elizabeth Brown.

“Groups Sue FDA for Flawed Seafood Health Information,” by Elizabeth Brown.

“Deeper-Living Fish Have More Mercury,” by Elizabeth Brown.

MAKING WAVES

The Safina Center – Science Publications

Lewinson, R., L. Crowder, P. Wallace, C. Safina, et al. 2014. Global patterns of marine mammal, seabird, and sea turtle bycatch reveal taxa-specific and cumulative megafauna hotspots. *PNAS*, 111 (14) 5271-5276.

Media Coverage - Carl Safina and The Safina Center

MSNBC Interview with Carl Safina, *Weekends with Alex Witt* segment, October 5, 2014.

"Are the Oceans Failed States?" *Foreign Policy*, July 8, 2014.

"The Safina Center Welcomes New Fellow - Dr. Ellen Prager Author and Marine Scientist brings Earth and Ocean Science to all Ages," *Environmental News Network*, June 17, 2014.

"Whole Foods Market® and leading scientific organizations simplify seafood sustainability ratings, increase opportunities for research," *Yahoo Finance*, June 2, 2014.

"Blue Ocean Institute Has Changed Its Name to The Safina Center at Stony Brook University," *Environmental News Network*, May 29, 2014.

"Indianapolis Prize Finalist Carl Safina: Awe is Awesome," *The Indy Star*, May 2, 2014.

"Indianapolis Prize Finalist Carl Safina," *WTHR.com*, April 29, 2014.

"SBU Indy Prize Finalists Tweet Inspiration," Published on *Storify*, April 23, 2014.

"Leading Environmentalists Reflect on Senator Gaylord Nelson's Eloquent Launch of Earth Day," Pace University *EarthDesk Blog*, April 22, 2014.

"FDA to Adjust Pregnancy Fish Consumption Advisory," *The Wall Street Journal*, March 27, 2014.

"Blue Ocean Institute and Dr. Carl Safina Encourage People to Establish a Deeper Connection with Nature and Care About Our Oceans." Interview on *Ocean Health Blog*. March 26, 2014.

"Recognizing Russell A. Mittermeier, Carl Safina, And Patricia C. Wright," *CapitolWords.org*, March 14, 2014.

"Three Stony Brook professors named as finalists for Indianapolis Prize," *The Statesman*, March 4, 2014.

"3 Stony Brook faculty are prize finalists," *Newsday*, February 28, 2014.

"Sustainable Seafood: One Fish, Two Fish, Red Fish, Green Fish," *SustainableBrands.com*, February 21, 2014.

"'Gyre: The Plastic Ocean' opens at Anchorage Museum," *Capital City Weekly*, February 5, 2014.

"'Gyre: The Plastic Ocean' opens Feb. 7 at the Anchorage Museum," *Juneau Empire*, January 30, 2014.

"Mittermeier, Safina, Wright, Named Finalists For 2014 Indianapolis Prize." *Stony Brook Newsroom*, January 30, 2014.

"Indianapolis Prize Hopefuls Dedicated to Saving Animals," *USA Today*, January 30, 2014.

"Meet the Six Indianapolis Prize Finalists," *Indy Star*, January 30, 2014.

"Finalists Announced for 2014 Indianapolis Prize," *Environmental News Network*, January 30, 2014.

"Gyre Expedition: What Goes Around, Comes Around," *Origin Magazine*, January 2014.

PAUL GREENBERG – Publications and Interviews

"Go Fish!" *Food Forward*, PBS, September 2014.

"Shrimp in America," *All Things Considered*, August 2, 2014.

"The War on New York's Waterfront," (Greenberg, Lewis and Davidson) *The New York Times, Opinion*, July 31, 2014.

"In Search of a Fishier America," *The New Yorker*, July 31, 2014.

"Why Don't We Eat Our Own Fish?" *Here & Now*, July 24, 2014.

"The American Caviar Renaissance," *Food & Wine Magazine*, July 14, 2014.

"California Squid's 12,000 Mile Journey To California Plates," *The Los Angeles Times*, July 12, 2014.

"Bring Back Local Seafood," *The Seattle Times*, July 9, 2014.

"Bearded Filter Feeders Are the Future of the Seafood Industry," *Vice*, July 9, 2014.

"10 Things You Should Know About the American Seafood Supply," *CivilEats.com*, July 8, 2014.

"A New Seafood Pyramid," *Business Insider*, July 8, 2014.

"'The Great Fish Swap': How America Is Downgrading Its Seafood Supply," *Fresh Air, National Public Radio*, July 1, 2014.

"Why Are We Importing Our Own Fish?" *The New York Times Sunday Review*, June 22, 2014.

"One fish, three meals: Paul Greenberg makes the case for Americans to get hip to seafood," *The Washington Post*, June 20, 2014.

American Catch: The Fight For Our Local Seafood, The Penguin Press, June 26, 2014.

"Nations Have Carved Up the Ocean. Now What?" *Conservation Magazine*, March 14, 2014.

Lectures, Keynotes, Workshops and Public Talks

Bunch of Grapes Bookstore, Vineyard Haven, MA
 Canio's Books, Sag Harbor, NY
 Lumiere, West Newton, MA
 Kinmont Restaurant, Chicago, IL
 R.J. Julia Bookseller, Madison, CT
 Center for American Progress, Washington, DC
 Politics & Prose, Washington, DC
 Town Hall, Seattle, WA 98101
 Powell's Books on Hawthorne, Portland, OR
 Book Passage, Corte Madera, CA
 Chez Panisse Café, Berkeley, CA
 Free Library of Philadelphia, Philadelphia, PA
American Catch Walton Family Foundation Events
 Provincetown, MA
 New York, NY
 Montauk, NY
 Boston, MA
 University of New Hampshire, Durham, NH
 New Haven, CT
 Minneapolis, MN

ELLEN PRAGER - Publications and Interviews

"Enjoy the Show: Learn More After 'Sharknado 2'," (Prager and Safina) *The Huffington Post*, July 27, 2014.
Growing up Galapagos. Manta Publications and Earth2Ocean, June 2014.
 "Sharks, Galapagos and a Peaceful Coexistence," *The Huffington Post*, June 27, 2014.
 "It's Beach Season. What About Sharks?" *The Huffington Post*, May 23, 2014.
The Shark Whisperer (Tristan Hunt and the Sea Guardians), Scarletta Junior Readers, April 21, 2014.
Sea Slime: It's Eeuwy, Gooy, and Under the Sea, Sylvan Dell (now Arbordale), February 10, 2014.

Reviews for *The Shark Whisperer* via *Kid Lit Reviews*, *Washington Post*, and *The Today Show*.

CNN and NBC News (The Today Show, NBC News, and MSNBC): Numerous interviews on search for missing Malaysian plane MH370, sharks, rip currents, summer solstice, and ships striking whales.

Lectures, Keynotes, Workshops and Public Talks

Miami-Dade school visits, Miami, FL
 Florida Institute of Technology, Melbourne, FL
 Baltimore Book Festival, Baltimore, MD
 National Marine Educators Association, Annual Conference, Annapolis, MD
 Smithsonian Museum of Natural History, Washington, DC
 Challenger Science Center, Tallahassee, FL
 Coral Reef Yacht Club, Miami, FL
 Shark-Con, Tampa Convention Center, Tampa, FL
 Georgia Aquarium, Atlanta, GA
 Rookery Bay Preserve, Marco Island, FL
 University of Connecticut
 Wesleyan University, Middletown, CT
 AAUW Girls in Math and Science, Washington, DC

JOHN WELLER – Publications

Film completed: "The Guardians of Raja Ampat."
 "The Guardians of Raja Ampat: Community-Driven Conservation in the Heart of Indonesia," (Weller and Heinrichs) Conservation International's *Human Nature* blog, June 5, 2014 and NationalGeographic.com *News Watch*, July 8, 2014.
The Last Ocean: Antarctica's Ross Sea Project: Saving the Most Pristine Ecosystem on Earth by John Weller, published by Rizzoli.

DEMIAN CHAPMAN & DEBRA ABERCROMBIE – Publications

Feldheim, K.A., Gruber, S.H., DiBattista, J.D., Babcock, E.A., Kessel, S.A., Hendry, A.P., Pkitch, E.K., Ashley, M.V., Chapman, D. D. 2014. Two decades of genetic profiling yields first evidence of natal philopatry and long-term fidelity to parturition sites in sharks. *Molecular Ecology* 23 (1), 110-117.

MAKING WAVES

Reyier, E.A., Franks, B.R., Chapman, D.D., Scheidt, D.M., Stolen, E.D., Gruber, S.H. 2014. Regional-scale migrations and habitat use of juvenile lemon sharks (*Negaprion brevirostris*) in the US South Atlantic. PLoS ONE 9 (2), e88470.

O'Leary, S.J., Dunton, K.J., King, T.L., Frisk, M.G., Chapman, D.D. 2014. Genetic diversity and effective number of breeders of Atlantic sturgeon, *Acipenser oxyrinchus oxyrinchus*. Conservation Genetics. DOI: 10.1007/s10592-014-0609-9

Nalluria D., Baumann Z., Abercrombie D.L., Chapman, D.D., Hammerschmidt, C.R., Fisher, N. 2014. Methylmercury in dried shark fins and shark fin soup from American restaurants. Science of the Total Environment 496, 644–648

Kessel, S.T., Chapman, D. D., Franks, B. R., Gedamke, T., Gruber, S. H., Newman, M.J., White, E. R., Perkins, R. G. (In Press). Predictable temperature regulated residency, movement and migration in a large, highly-mobile marine predator. Marine Ecology Progress Series.

Chapman, D.D., Feldheim, K.A., Papastamatiou, Y., Hueter, R.H. (2014). There and Back Again: A review of residency and return migrations in sharks, with implications for population structure and management. Annual Reviews in Marine Science (Available online in advance of publication).

"Pancake Sharks - The Cousins are in Trouble," NationalGeographic.com, News Watch. October 23, 2014.

Shark Fin ID Workshops

Brazil - CITES implementation meeting with delegates from Latin America.

Peru

Costa Rica

Fiji - with delegates from throughout Oceania.

South Africa - workshop for scientists who will serve as expert witnesses in their respective countries.

Hong Kong

Sri Lanka - with delegates from throughout Southeast Asia

Vanuatu

The Safina Center Summary Statement of Financial Position

May 31, 2014

Assets

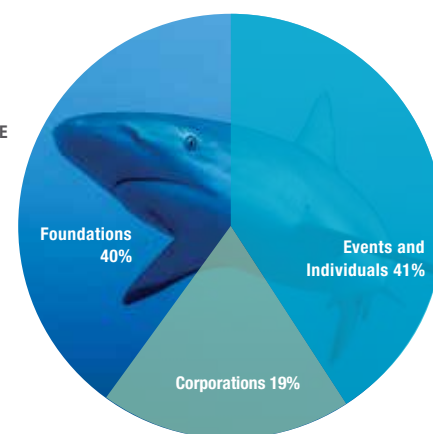
Cash And Interest Bearing Deposits	\$346,393
Investments	\$175,975
Contributions And Pledges Receivable	\$50,739
Other Assets	\$19,127
TOTAL ASSETS	\$592,234

Liabilities

Accrued Expenses	\$28,963
Fiscal Sponsorship	\$52,598
TOTAL LIABILITIES	\$81,561

Net Assets

Unrestricted	\$ 430,673
Temporarily Restricted	-
Permanently Restricted	\$80,000
Total Net Assets	\$510,673
TOTAL LIABILITIES AND NET ASSETS	\$592,234



The Safina Center Summary Statement of Activities

Year Ended May 31, 2014

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
PUBLIC SUPPORT AND REVENUE:				
Public support:				
Contributions	358,655	167,800	-	526,455
Revenue	64,978	-	2,015	66,993
Net assets released from restrictions	201,754	(199,739)	(2,015)	-
TOTAL PUBLIC SUPPORT AND REVENUE	625,387	(31,939)	-	593,448
EXPENSES:				
Program services	464,129	-	-	464,129
Supporting services:				
Management and general	122,262	-	-	122,262
Fund-raising	32,765	-	-	32,765
Total Supporting Services	155,027	-	-	155,027
TOTAL EXPENSES	619,156	-	-	619,156
Increase (Decrease) In Net Assets Before Other Increases	6,231	(31,939)	-	(25,708)
Other Increases:				
Unrealized gain on investments	14,387	-	-	14,387
Increase (Decrease) In Net Assets	20,618	(31,939)	-	(11,321)
Net Assets, beginning of year	410,055	31,939	80,000	521,994
Net Assets, end of year	\$430,673	-	\$80,000	\$510,673

The Safina Center's complete audited financial statement may be obtained by writing to:
 Mayra Mariño, Business Manager
 The Safina Center
 #111 Nassau Hall,
 School of Marine and Atmospheric Sciences,
 Stony Brook University
 Stony Brook, NY 11794-5000

SUPPORTERS

Please accept our profound gratitude.

Your support and partnership in 2014 fueled our work and helped us reach a global, diverse audience with unique narratives from the front lines of ocean conservation. Our books, essays, workshops, videos and PBS series describe Earth's changing ocean, its challenges, practical solutions, the intertwined fate of nature and humanity — and reasons for hope. WE SALUTE YOU!

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Paul Winter graced our annual gala with a special performance. Photo by Mike Misner.



Chef Bun Lai and Fellow Paul Greenberg at our annual benefit. Photo by Linda Shockley.

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Humpback whale breaches at sunset. Photo by Carl Safina.



4 WAYS TO GIVE TO THE SAFINA CENTER

“Direct compassion and heart-filled work toward the living creatures of this planet.” —DR. ERIC GILCHRIST

In 2011, we established an endowment fund to honor the memory of our dear friend and board member, Dr. Eric Gilchrist. His steady support for The Safina Center has continued beyond his passing through a bequest that now serves as the seed for our endowment.

His generosity continues to inspire us.

There are four easy ways to contribute to The Safina Center.

1 ONLINE

Visit <http://safinacenter.org/donate>

2 TELEPHONE

631-632-3763

3 MAIL

Please send your tax-deductible donation to:

The Safina Center
 Suite 111, Nassau Hall,
 School of Marine and
 Atmospheric Sciences
 Stony Brook University
 Stony Brook, NY 11794-5000

Please make your check payable to
 "The Safina Center".

4 TO CONTRIBUTE TO THE SAFINA CENTER ENDOWMENT FUND:

Please contact Jesse Bruschini,
 Vice President: 631-632-3763
 or jbruschini@safinacenter.org.

*The Safina Center is a 501(c) 3 non-
 profit organization based on
 Long Island, NY.*



THE SAFINA CENTER CREW

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Jesse Chapman-Bruschini, Vice President
Mayra N. Mariño, Business Manager
Elizabeth Brown, Research Scientist
Megan Smith, Project Manager

SAFINA CENTER FELLOWS

Debra Abercrombie
Dr. Demian Chapman
Paul Greenberg
Dr. Ellen Prager
John Weller

SUSTAINABLE SEAFOOD ANALYSTS

Cassandra Bauer
Stacy Knight
Kerstin Kalchmayr
Alexia Morgan
Caitlin Craig

ASSOCIATES

Dr. Eric Gilman, Marine Ecology and Fisheries
Consultant

COMMUNICATIONS CONSULTANTS

Linda Shockley
Mike Misner

GRAPHIC DESIGNERS & ILLUSTRATOR

John Blanchard - illustrator: Mercury Project
Troy Cavaliere - graphic designer: TSC logo, Mercury
Project & Annual Benefit designs
iThree Graphic Design - Kimi Mischke, Margaret Mathers
& Sharon Newsom: Annual Report

WEB DEVELOPER & PRINTER

Justin Sainton – website developer
Jeff Wayne - Wayne Printing, Inc.

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Richard Reagan



Left to right: standing, Elizabeth Brown and Mayra Mariño.
Seated, Jesse Bruschini and Megan Smith.
Photo by J. Bruschini.

Author and scientist Dr. Carl Safina founded The Safina Center (formerly Blue Ocean Institute) in 2003. The Safina Center is based in the School of Marine and Atmospheric Sciences at Stony Brook University on Long Island, NY and is a 501(c)3 nonprofit organization. We are also affiliated with the University's Alan Alda Center for Communicating Science.

“Eric is a diligent leader for our group; probing, progressive, supportive, stimulating.”

—Carl Safina



PROFILE

Eric Graham, chairman of the board. Photo by Jen Graham.

ERIC GRAHAM

From Tuna Trader to Sustainable Energy Entrepreneur

Entrepreneur Eric Graham first met Carl Safina in the early '90s when Safina was researching tuna for his first book, *Song for the Blue Ocean*. At the time, Graham was working with a Japanese company, trading tuna. “We talked on the phone a few times and I shared what I knew about the global tuna market. I later saw his book at my mother’s house and learned that she and Carl were neighbors and friends,” says Graham.

Professionally, Graham has been ahead of the curve on issues of energy efficiency, renewable energy systems and sustainability. Even as a tuna trader, he developed a way to use liquefied carbon dioxide to refrigerate tuna, using recycled CO₂ gas as a refrigerant (which replaced burning fossil fuel to generate cooling). From that technology emerged an alternative refrigeration-transport technology for the sushi industry — all before “alternative energy” became part of the global conversation.

Graham’s evolution from tuna trader to entrepreneur with a clean-energy focus continued after he went to Wall Street. “My effort there,” says Graham, “focused on how to create markets for carbon to reduce the amounts of greenhouse gas going into the environment.”

Since then, Graham’s passion for developing and bringing transformative sustainable energy technologies to market has led him to start and manage businesses that have touched on every continent. He has engaged in cross-border trade in more than 30 countries, founding and/or growing several innovative businesses.

Today Graham is Co-Founder and CEO of CrowdComfort, a new company that is crowd-sourcing building maintenance and comfort information by empowering people to report site-specific comfort and maintenance issues using their smart phones.

Previously, Graham led energy efficiency financing efforts at Next Step Living. He started the TechBridge program at the Fraunhofer Center for Sustainable Energy Systems (CSE) and served as Principal Investigator for the Department of Energy’s Innovation Ecosystem Grant Program at Fraunhofer.

Graham understands that capitalism drives business *and* energy consumption. He explains, “There’s no new model yet that works better than capitalism, but there are excellent examples of fantastic companies bringing new products to market that are also good for the planet.”

Graham adds, “I’m profoundly concerned and amazed that what we do on land, from an energy perspective, can impact the oceans. When you look at the ocean from the shore, it seems there’s simply no way we could have such an impact on this giant blue surface: the warming of the planet, wiping out species and living environments. But we can.”

His love for the natural environment developed as a child in New Jersey and Connecticut. “My father loved the woods and mountains and my mother loves the ocean. They both taught me about natural systems and the environment at a very young age,” Graham says. Carl Safina became another influence. Graham crossed paths with him again when he attended the World Economic Forum in Davos in 2006, where Safina was speaking. It was then that Graham asked how he could help, and became a member of the board that year. In 2012, Eric assumed the role of Chairman of the board.

“Carl is such an inspiring communicator and one of the original creators of this awareness of ocean conservation,” Graham says. “He articulates solutions in a way that inspires me and others to take action.” ■



“The greatest story is that all life is one life. All differences are minor, compared to our intimate similarities. We are the same in different ways.”

—Carl Safina



The Safina Center (formerly Blue Ocean Institute) | Nassau Hall, Suite 111 | School of Marine and Atmospheric Sciences | Stony Brook University | Stony Brook NY 11794-5000
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