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# SWIMMER

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## SISTER MADONNA BUDER

The Iron Nun

## LOWER BODY MOBILITY

Stretches for  
Swimmers

## OPEN WATER BLUES

Degradation  
of the Marine  
Environment

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BRUCKNER CHASE

718 BAY AVE

OCEAN CITY NJ 08226-3735

in

By Jim W. Harper and Steven Munatones

# Blue Movement Needed to Cure the

# Ocean's Blues

**T**he Ocean Network is proud to present its newest reality show: *Man Versus 400-Pound Jellyfish!*

It sounds absurd, but in fact, fishermen in Japan have been hauled overboard when sumo-sized jellies, called *Nomura*, have clogged their nets. Although most swimmers in the ocean will never face a *Nomura*, other jellyfish pose a real and growing threat. Lately, unusually large blooms of jellyfish have been observed, and they may be the newest sign that the world's largest ecosystem is on the edge.

The ocean is changing. Not just the daily changes of tides, waves and animal migrations, but the very composition and chemistry of the entire ocean is degrading. Some people cannot wrap their heads around this dilemma, because they can't imagine that something so large and seemingly so stable could be affected by humans. But it is. Pockets of

hope remain in shorelines and marine sanctuaries that are being protected and restored to a healthier state, but the big picture for the ocean is not good.

The ailing ocean needs an Olympic-sized advocate, and that's where Aaron Peirsol comes in. "I'm a person that just likes the water, and that encompasses the ocean probably more than anything else," says the best backstroker of all time. "I learned how to swim in the ocean. That's why I swam. The thing that really makes me happy is swimming out in the middle of the ocean where it's a little bit more raw and you have to know a little bit more about the elements. You can't just float. There're a few more variables."

A few years ago, the Southern California native became a spokesperson for the conservation organization Oceana, and together they created an event called Race for the Oceans. It was a natural fit for the natural swimmer and surfer.

"The simplest thing for me was an open water swim. It was what I grew up doing and why I love swimming to begin with. It's as simple a bridge as I can think of between two worlds that I know and that I'm very much involved with emotionally," says Peirsol, who holds the backstroke world records for both the 100- and 200-meter distances.

The Olympic champion is devoting more time to Oceana and its causes since retiring from competitive swimming earlier this year.

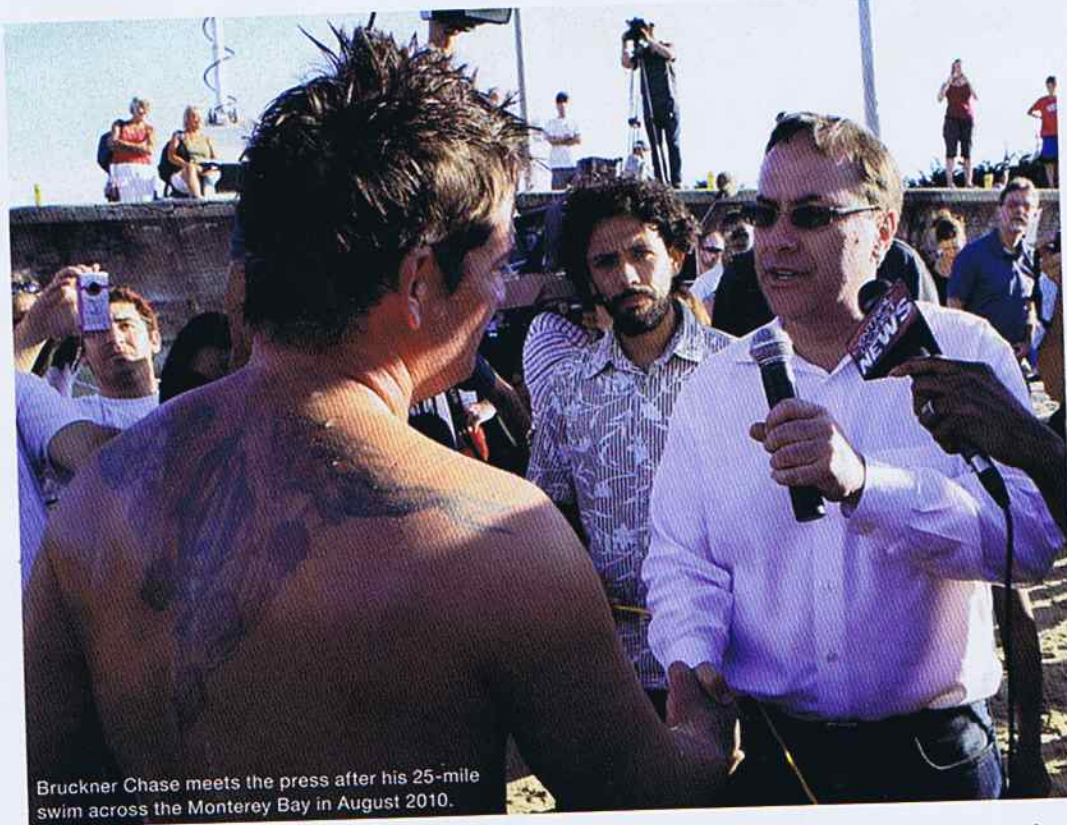
Despite the inherent risk of open water swimming without adequate supervision, and the declining health of the world's waterways, many may question why the sport is becoming so popular. Tropical locations, temperate lakes and slow-moving rivers are locations where the sport is attracting swimmers of all ages, abilities and backgrounds.

Triathletes are swelling the ranks and creating aficionados out of people who used to dread the water. Pool swimmers are breaking away from the black line to discover the freedom of the wild blue yonder. The cherry on top came in 2008 at the Beijing Olympics, where the 10-kilometer race debuted as an Olympic event. For most swimmers, most of the time, it's safe to go into the water.

Average ocean temperatures are gradually increasing, but this is only one of many anomalies that are transforming the ocean into a stranger, more polluted and less inviting place to be. Are we destroying it? Are we losing the race to save the whales, save the ocean and save the planet?

## Swimming Through Jelly

One guy swimming for the ocean by swimming through it is extreme athlete Bruckner Chase. A USMS coach and founder of the Ocean City Swim Club Masters in New Jersey, Chase, 44, does long-



Bruckner Chase meets the press after his 25-mile swim across the Monterey Bay in August 2010.

distance, expedition-type swims to raise awareness of the 14 U.S. National Marine Sanctuaries. Last August he swam 25 miles across the Monterey Bay sanctuary, and this year he'll be tackling a 9-mile swim to connect two islands within a sanctuary in American Samoa.

"That human connection, moving across the water, moving in the water, is what we want to experience and then convey to others," he says.

Chase attempted crossing Monterey Bay in 2009 without a wetsuit, but he was assaulted by jellyfish.

"I refused to put on a wetsuit and swam through a school of jellyfish like I'd never seen for the better part of four or five hours," Chase says.

He was pulled out, and later that year he memorialized the experience with a tattoo of colorful jellyfish arising from his suit line. In 2010, he saw that the jellyfish were even worse. He tried to swim without protection, but his wife gave him an ultimatum and threw him a wetsuit.

Over the course of 14 hours, Chase and his team were thrilled by wildlife such as dolphins and blue whales. But he felt jellyfish on every stroke.

"They were unbelievably dense. The last mile we swam through jellyfish so thick that it was like swimming through gumbo," he says.

Even marine sanctuary staff members were shocked, Chase says. Conditions in the bay were much different 32 years ago when pioneering swimmer Cindy Cleveland made her crossing. "What she saw was very different from what I saw. She saw a lot of sunfish, and sunfish eat jellyfish," he says. "We saw one [sunfish]."

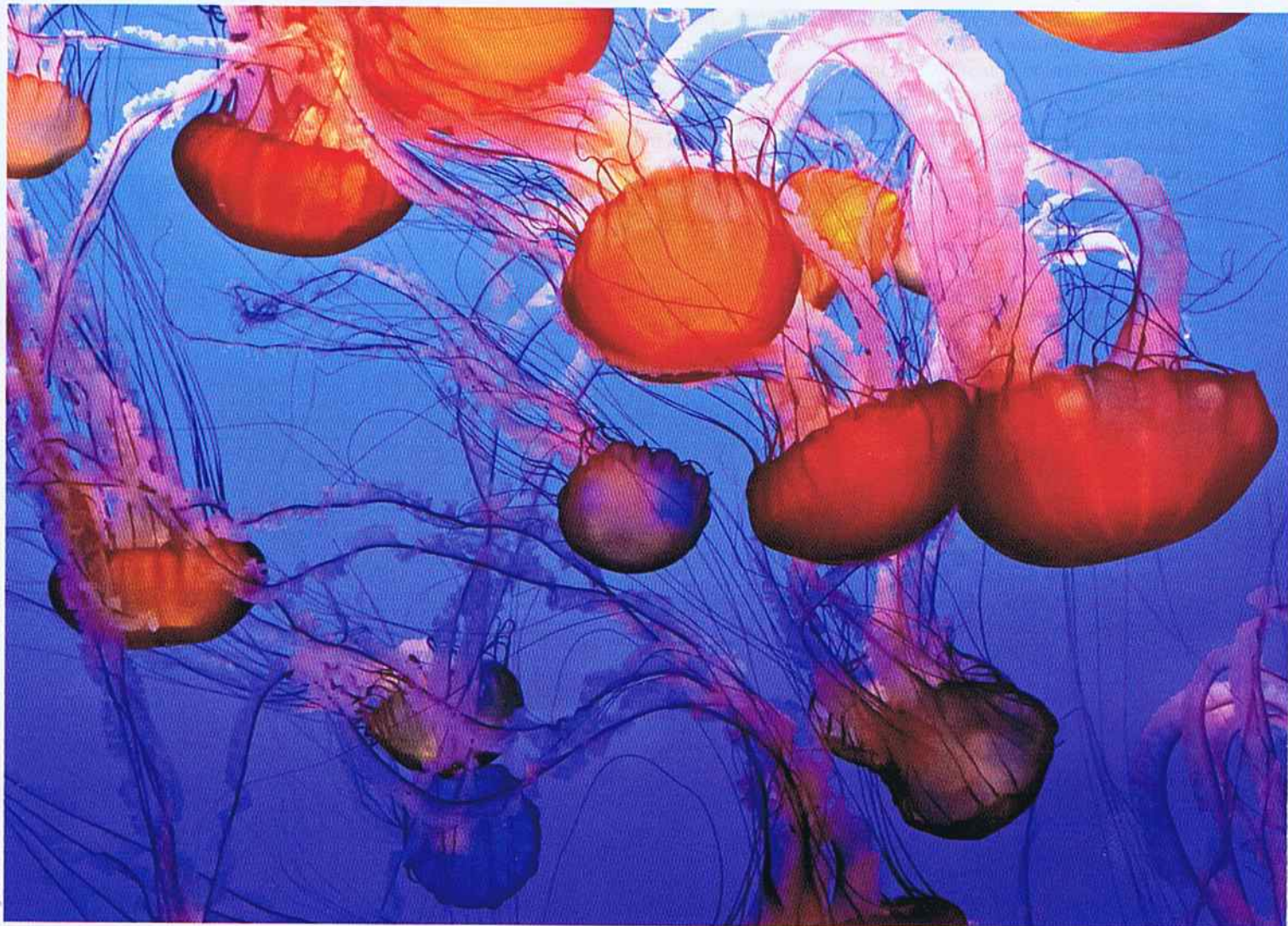
With no sunfish or other large predators around to cull the jellyfish population, they can bloom into unbelievably large numbers. One theory about the future of the ocean foresees jellyfish ruling the seas as they did millions of years ago during the Cambrian period. This idea also follows from the concept of fishing down the food web: As large fish such as sharks and tuna are overfished,

commercial fishermen go after ever smaller and smaller fish. This imbalance could increase jellyfish blooms, noxious algae blooms and other dangerous cascades that would make the ocean not only unswimmable but also unreliable as a major food source.

Anecdotal evidence suggests that more swimmers are suffering from jellyfish and Portuguese man-o-war stings in the ocean and affected by algae in lakes, but it may simply be a function of more people swimming in more places, and then talking, blogging, writing and tweeting about it.

Jellyfish researcher and former curator of the jellyfish exhibit at the Monterey Bay Aquarium, Chad Widmer, says that no scientist has conclusive, long-term evidence that jellyfish populations are increasing—yet. But conditions that favor them are well known.

"A perfect jellyfish storm would be a polluted bay, with warmed up water that has been overfished. The jellyfish would probably want to shake your hand and say thank you



## OPEN UP TO OPEN WATER

Despite imbalances in the oceans and increasingly polluted rivers and lakes, there are plenty of indicators of the global growth of open water swimming:

- An average of one new race created every day in 2010
- Nearly 1,000 competitive races throughout Europe
- At least 1,600 open water competitions throughout the Americas
- Increased TV and online coverage of signature events, including a number of documentaries and theatrical releases around the world
- Launch of *H<sub>2</sub>Open Magazine*, an open water swimming magazine
- Addition of a 10K marathon swim at the World University Games
- Addition of a 1.5K ocean swim at the Special Olympics World Summer Games
- Increasing number of Masters relay teams attempting and setting world records
- Addition of a 5K team pursuit race at the World Swimming Championships
- Nearly as many English Channel attempts in 2010 as the number of successful swims over the first 100 years of English Channel history
- Increasing number of events that reach their maximum limit of participants
- Establishment of new governing bodies such as the Farallon Island Swimming Association, International Ice Swimming Association, Lake Tahoe Swimming Association and Great Lakes Zone Open Water Swim (GLOWS) Series
- A number of swims, from the Damme-Brugge Swim in Belgium to the La Jolla Rough Water Swim in California, that are entering their second century of existence
- International Marathon Swimming Hall of Fame induction ceremonies held in the United Nations



(if they had hands, that is),” wrote Widmer in an email. He advises swimmers to learn about jellyfish seasons in order to avoid them.

Blooming jellies barely register as a problem when placed in the context of the major threats to the health of the ocean. Plastic debris is ubiquitous worldwide and has created several enormous vortexes of trash in the ocean, including the Great Pacific Garbage Patch. Everyone saw the *Deepwater Horizon* oil spill last year, the largest accidental spill ever, but we don’t see the lesser spills and accidents happening all the time. Bruckner Chase points specifically to the millions of motor craft worldwide as major polluters.

Similarly, eutrophication, or run-off, pollutes the oceans constantly, and agricultural fertilizers tend to be the worst culprits, although plenty of sewage makes its way into the sea too. A basic rule of thumb for open water swimmers is to avoid closed bodies of water,

such as lakes, after a heavy rain, because you really don’t know what’s in the water (you probably don’t want to know). The EPA sent these guidelines in an email: “In areas that

are not monitored regularly, choose swimming sites in less developed areas with good water circulation, such as beaches at the ocean. Avoid swimming at beaches where you can see

discharge pipes or at urban beaches after a heavy rainfall.”

### Big Blue Target

Many scientists agree that the two biggest current



Plastic trash netted from the North Pacific Gyre, also known as the Great Pacific Garbage Patch.

Courtesy of Algalita, Marine Research Foundation



The U.S. Coast Guard fighting the fire after the initial explosion of the *Deepwater Horizon* oil rig.

Courtesy of U.S. Coast Guard



threats to the ocean are acidification and climate change, and these threats are related because they both derive mainly from excessive carbon dioxide. Because the rate at which carbon dioxide is increasing is unnatural, current increases can be traced directly to the burning of fossil

fuels—primarily gas and coal. Hence, 2010 was the hottest and wettest year on record, capping the hottest decade.

The ocean absorbs the largest amounts of carbon dioxide on earth, and its rapid increase has caused the pH of the ocean to drop by 30 percent since the Industrial

Revolution, as noted in a 2010 report by Oceana. On the pH scale, the difference seems small—from 8.2 to 8.1—but on an oceanic scale, acidification is huge. In a more acidic ocean, animals with shells and external skeletons, such as corals, could lose the ability to build protective armor. If this

trend continues, as the Oceana report predicts, coral reefs could go extinct this century.

Shark researcher and former collegiate swimmer Mike Heithaus sees the threats this way: "Probably climate change ends up being one of the biggest because you have so many issues going on at once," also nam-

## THREE THREATS TO THE OCEAN

"I have visited every ocean—and everywhere I see the impact of man—even in places far away from man such as the Arctic Ocean. I now undertake swims in these ecosystems to draw attention to their vulnerability and call for their protection."—*Lewis Pugh, North Pole swimmer and environmental campaigner.*

Pugh names the top three threats to the oceans as:

1. **Climate change:** Rising temperatures lead to a host of problems, and rising sea levels spell trouble for humans, the majority of whom live near a coastline.
2. **Overfishing:** The industrial scale of modern fishing has caused fisheries and ecosystems on the seafloor to degrade, upsetting nature's balance.
3. **Environmental disasters:** BP oil spill in 2010; the Fukushima nuclear plant in 2011. What's next?

## FIVE THINGS YOU CAN DO

1. World Oceans Day is June 8. Celebrate it.
2. Eat sustainable seafood. Download regional guides from Seafood Watch, a website sponsored by the Monterey Bay Aquarium.
3. Reduce and reuse plastic products. Fill your own water bottle and carry cloth grocery bags.
4. Use less fertilizer. Rain washes it into waterways, creating dead zones.
5. Pick up litter near beaches. Set the example for others to follow.



The USMS Swimming Saves Lives Foundation focuses its resources on the vital lifesaving and lifetime benefits of swimming. To learn more, please visit [usms.org/giving](http://usms.org/giving).

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“Mommy... it’s the Creature from the Black Lagoon!”  
 “No Billy, it’s just Daddy coming in from his open water swim.”

ing overfishing and pollution as primary destructive forces. “Destruction of coastal habitats—that’s a huge problem. Ripping up seagrass beds and removing mangroves—that’s a problem for oceans and people because you’ve got those habitats that protect us from things like storm surge, but they’re also really important for producing the species that we rely on for food and recreation,” he says.

Director of the School of Environment, Arts and Society at Florida International University, Heithaus says that sharks are not an issue as long as you use common sense: Avoid swimming in chum, around fishing piers and where seals gather, because these things attract sharks. “They’re not mindless killing machines biting everything they see. For the most

part, they’re going to avoid people if they possibly can,” he says. After years of swimming with sharks, he says he has never been attacked.

He does worry about jellyfish, and he advises all ocean swimmers to cover up. “A nice Lycra dive skin is a good idea no matter where you are. It doesn’t slow you down too much. Something like that will protect you from a lot of stinging organisms,” he says. He also urges swimmers to pay attention to advisories. “If you’re going for a swim off most of the coast of the U.S., as long as you follow your typical safety precautions, you’re going to be OK. People need to be thinking the most about things like rip currents and rough weather,” Heithaus says.

As for advisories besides those for weather, every state is required to monitor its

beaches and to notify the public when fecal bacteria counts, an indicator of polluted water, are high. In 2009, 43 percent of beaches had a closure, and the number of days closed equaled 5 percent of available beach days, according to the EPA. The EPA website has links to state beach programs.

On the positive side, thousands of U.S. waterways have become cleaner since the Clean Water Act of 1972, the Ocean Dumping Ban Act of 1989, and the BEACH Act of 2000. On a global scale, though, only a tiny fraction of the world’s waterways and oceans are monitored and protected.

Chase thinks that swimmers need to overcome their fear factor and embrace the ocean in the same way that mountain bikers and cross-country runners love their trails.

“I keep preaching that if we can create a group of water athletes that feel the same way about that ocean venue or that lake venue that they [bikers] feel about their favorite bike course or their favorite trail, then our problems will move much closer to being solved. When that ocean stops being something they dread and they’re afraid of, and they start to love it, and they can hardly wait to get back out there, they’re going to pay attention to what’s going on out there,” he says.

Aaron Peirsol has been paying close attention for years.

“I grew up surfing, body surfing, paddle boarding, diving and all of those things, and I was privy to changing conditions over the years,” Peirsol says. “I would go to the beach after the first rain of the season and the beach would be closed because of red tides and whatnot.”

He remembers turning the tables on plastic pollution.

“I’d find McDonald’s dinner trays on the beach. It was completely disheartening. But at the same time, the waves were good so I’d pick up the dinner tray and go body surfing on it,” he says. “All we wanted to do was enjoy what we had. Every year we’d see a little bit more decrepit conditions, at least where I grew up in Southern California. It is very personal for me.”

The ocean is a wilderness, and cannot be considered as safe as a pool, but this unpredictability and wildness appeals to the adventurous athlete. Caution needs to be practiced; yet it may be the ocean itself that is in grave danger as opposed to the swimmers who visit it.

>>> **Jim Harper**, a contributing writer for *SWIMMER*, leads a free ocean swim on Sundays in Miami Beach. **Steven Munatones**, from Huntington Beach, Calif. founded *OpenWaterSource.com* and *The Daily News of Open Water Swimming*