

A passion to clean up the Pacific Ocean's great 'garbage patch'

Avid sailor and educator Mary Crowley is recruiting help to clean up the North Pacific Trash Gyre, a 'garbage patch' of plastic and other trash in the middle of the Pacific Ocean.



Mary Crowley's project wants to enlist fishing vessels to help attack the mass of floating plastic garbage known as the North Pacific Trash Gyre.

Tony Avelar/The Christian Science Monitor

By [Paul Van Slambrouck](#), / Correspondent / May 10, 2010

Rocklin, Calif.

Mary Crowley would rather be at sea. But she's not. Instead, she is in a small conference room at a roadside Marriott in this landlocked town north of Sacramento.

Around her are mainly men, many with beards, and many with baseball caps pulled down low and arms crossed tight. They are listening. Many of them would also rather be at sea.

Can these wishes be joined? We shall see in the next month or so.

Ms. Crowley has long hair, a ruddy outdoor complexion, and a sincere manner. She wants to sail west in the next month or two, out to what is called the [North Pacific Trash](#)

[Gyre](#). Her goal is to start cleaning up the plastic trash that has leaped into social consciousness over the past couple of years.

And she is urging some of the independent fishermen meeting here for the annual gathering of the Western Fishboat Owners Association to join her, using their boats to haul back garbage.

Whether they do or not, and it seems possible some will, Crowley leaves little doubt she will set sail this spring, regardless. That determination is bringing her cleanup effort, called Project Kaisei, attention and resources to combat what strikes many as an overwhelming problem.

"It's audacious because the scale is so intimidating," says Matt Tinning, a spokesman for the Ocean Conservancy in Washington, D.C., a nonprofit group that mounts an annual global volunteer effort to clean the world's beaches. "Project Kaisei has captured the public spotlight by shining a light on the problem."

The exact dimensions of the North Pacific Trash Gyre aren't known. Some say it's the largest concentration of plastic debris in the world, a huge plastic garbage patch estimated to be either the size of Texas or twice that size.

Either way, there is general agreement that there is lots of plastic out there. But it is not a solid or even semisolid mass, as might be suggested by some descriptions. Nor is there any real data on the exact volume.

"Due to the limited sample size, as well as a tendency for observing ships to explore only areas thought to concentrate debris, there is really no accurate estimate on the size or mass of the 'garbage patch' or any other concentrations of marine debris in the open ocean," according to NOAA, the US government's National Ocean and Atmospheric Administration.

But Crowley has all the proof she needs.

Last summer, her Project Kaisei launched a month-long expedition to the North Pacific Gyre. Its tall, majestic sailing ship, the Kaisei, was accompanied by the New Horizon, a vessel from the Scripps Institution of Oceanography in San Diego.

Given the vastness of the ocean, some of the graduate students heading the voyage for Scripps were prepared to find less debris than forecast. But after the voyage the Scripps team reported: "The plastic indeed was there in the gyre. And there was lots and lots of it."

The Kaisei covered 3,000 nautical miles from Aug. 4 to 31. It conducted several surface trawls every day and night. Every trawl came up with plastics of various sizes, shapes, and colors.

The discovery disturbed Crowley, who had been in the area 30 years earlier as a sailor. A native of Illinois, she spent her formative years sailing on Lake Michigan. "I grew up with a vision of doing long-distance sailing," she says, recalling efforts as a youngster to convince her parents to "give up everything and just sail."

After college Crowley became involved in the boat delivery business and eventually boat chartering, which is still what she does from her offices in Sausalito, Calif. She is also an educator, one of the founders in 1979 of the Ocean Voyages Institute, a nonprofit organization dedicated to teaching the maritime arts and sciences.

Three decades ago, Crowley and Peter Sutter, a renowned San Francisco yachtsman and sailmaker, took the 33-foot sailboat Spirit into the North Pacific, not toward some distant shore but out to the equivalent of ocean wilderness. Their destination was the North Pacific Gyre.

Over four or five days in the becalmed mid-ocean, Crowley says, they saw only a handful of pieces of plastic and one small abandoned fishing net.

Fast-forward to 2009, and Crowley's alarm at the concentration of trash she found last summer is understandable.

Yet as she sits in her Sausalito office with the San Francisco Bay visible over her shoulder, Crowley does not come across as an alarmist. "The big challenge for us is to get the word out that we do have the technology to figure out how to solve" this problem, she says.

She is raising money and enlisting support for a two-month expedition this summer, costing about \$1.7 million. She envisions a small flotilla comprising a couple of fishing boats, a tug or marine supply ship, a barge, and the Kaisei.

John Varel, founder and CEO of FusionStorm, which provides back-end technology for businesses, has kicked in \$100,000. Mr. Varel has started the FusionStorm Foundation to address ocean pollution.

He was impressed with Crowley's solution-oriented attitude. "I was looking for someone who wanted to take this from the activist stage to the execution stage," he says.

Crowley wants to recycle the plastic, not just relocate the trash onshore. She knows there are no quick fixes here and that any cleanup needs to be combined with tougher maritime laws, as well as tougher recycling laws on the mainland to curtail the flow of garbage. Some 60 to 80 percent of the plastic in oceans is not released by ships but originates onshore before being swept out to sea via coastal waterways.

Enormous questions remain about the best ways to collect ocean plastics without harming sea life. Large fine-mesh nets might do the job, but would also scoop up marine creatures.

But Crowley doesn't seem overwhelmed.

"We want to make this everyone's problem, and everyone's solution," she tells the fishermen meeting in Rocklin.