

**Subject:** Global Scourge of Plastics in Oceans Concerns Pawleys Island Resident

**Georgetown Times Editor Bob:** As we discussed, here is the article. Thanks, *Lloyd Mackall, Public Relations and Digital Imagery Based in Wachesaw East Plantation, 9 Palmetto Place, Murrells Inlet, SC 29576 651-4610*



**Bonnie Monteleone, center, discusses the oceanic plastic pollution studies of the speaker, Captain Charles Moore, with Pawleys Island residents, Goffinet McLaren and Ian McLaren, Thursday, Jan. 14, at the University of North Carolina--Wilmington Chemistry Department. Event organizers were Monteleone of the UNC--W Chemistry Department and Jennifer O'Keefe of Keep America Beautiful of New Hanover County. McLaren says when she first read about Capt. Moore and the work he is doing, it changed her view of the ocean.**



**Bonnie Monteleone introduces the speaker, Captain Charles Moore, founder of the Algalita Marine Research Foundation. Thursday, Jan. 14 event organizers were Monteleone of the University of North Carolina--Wilmington Chemistry Department and Jennifer O'Keefe of Keep America Beautiful of New Hanover County. Monteleone spent 30 days on Capt. Moore's vessel during a Pacific Ocean research cruise, including studies in the "Great Pacific Garbage Patch" a dynamic ocean--caused swirling plastic concentration, also known as the North Pacific Gyre.**

**Global Scourge of Plastics in Oceans  
Concerns Pawleys Island Resident**

The throwaway society has gone global and cannot be contained. The world cannot store, maintain or recycle plastic and all such accumulated stuff in its oceans. It's the message of a world-renown explorer of the seas, now also being voiced by a concerned by a Pawleys Island resident.

The ocean researcher is Captain Charles Moore, founder of the Algalita Marine Research Foundation, who spoke Thursday, Jan. 14 at University of North Carolina--Wilmington. From the front row of the university student center theater, Goffinet McLaren said she intends to bring Capt. Moore's message back home to Pawleys Island in Georgetown County and South Carolina, about how plastic causes the loss of sea birds and ocean creatures. McLaren, who helped organize a coastal beach clean-up last year, said oceans are polluted with this man-made material and it will take a community-wide effort in addition to a world-wide emphasis to reduce the use of non-degradable, plastic for bags and bottles.

Capt. Moore was introduced by Bonnie Monteleone of the UNC-W Chemistry Department, who spent 30 days on his vessel during a Pacific Ocean research mission. The speaker said Monteleone did not want to come from North Carolina to see widespread evidence of plastic pollution in the ocean. "She was hoping in her heart of hearts there'd be no plastic in our trawling nets, but I'm afraid she was disappointed," he said. "The market--including recycling and deposit fees--can do a lot, but it can't fix the natural system in the ocean we've broken," he said. "These throwaway plastics take a lot of space and don't biodegrade. Only we humans make waste that nature can't digest." An audience of 400 witnessed the multi-media presentation, according to event organizers Monteleone and Jennifer O'Keefe of Keep America Beautiful of New Hanover County.

Capt. Moore's research on plastic pollution in the North Pacific Ocean has focused worldwide attention on the area often referred to as the "Great Pacific Garbage Patch" a vortex-like concentration of plastic pollution, also known as the North Pacific Gyre. Moore first observed this dynamic ocean-caused swirling plastic mass, while sailing from Hawaii to California 12 years ago. "There were shampoo caps and soap bottles and plastic bags and fishing floats as far as I could see. Here I was in the middle of the ocean, and there was nowhere I could go to avoid the plastic," Moore said.

The Algalita Marine Research presentation included an ABC Television 8-minute Dateline segment on Capt. Moore, along with colorful slides, including ocean views of the specially designed aluminum multi-hulled catamaran. The California marine researcher's talk, "Research and Discovery in Our Synthetic Sea," focused on the amount of plastics in the Pacific and the consequences this has for the oceans and the planet and its inhabitants. "Plastics also are hard to recycle," Capt. Moore said. "A teacher told me how to express the under-five-percent of plastics recovered in our waste stream. It's diddly point squat. That's the percentage we recycle."

"Now melting point has a lot to do with this," he explained. "Plastic is not purified by the re-melting process like glass and metal. It begins to melt below the boiling point of water and does not drive off oily contaminants for which it is a sponge. Half of each year's 100 billion points of thermal plastic pellets will be made into fast-track trash. A large, unruly fraction of our trash will flow down rivers to the sea."

"Much of trash leading out to the sea will be plastic beverage bottles," Capt. Moore said. "We use two million of them in the United States every five minutes. There is a remote island repository for bottles off the coast of Baja California. Bottles made of polyethylene terephthalate (PET), will sink in seawater and not make it this far from civilization. Also, the caps are produced in separate factories from a different plastic, polypropylene. They will float in seawater, but unfortunately do not get recycled under the bottle bills."

Capt. Moore traced the journey of the millions of caps that make it to the sea. "After a year the ones from Japan are heading straight across the Pacific, while ours get caught off California coast and first head down to the latitude of Cabo San Lucas," he said. "After ten years, a lot of the Japanese caps are in what we call the Eastern Garbage Patch, while ours litter the Philippines. After 20 years, we see emerging the debris accumulation zone of the North Pacific Gyre."

Moore told how Monteleone helped his organization analyzes samples that contain more plastic than plankton during her 30 days at sea. "We sort the plastic fragments into different size classes from five millimeters to one-third of a millimeter," he said. "Small bits of plastic concentrate persistent organic pollutants up to a million times their levels in the surrounding seawater."

"We wanted to see if the most common fish in the deep ocean---at the base of the food chain---was ingesting these poison pills. We did hundreds of necropsies, and over a third had polluted plastic fragments in their stomachs. The record-holder, only two-and-a-half inches long, had 84 pieces in its tiny stomach."

McLaren said when she first read about Capt. Moore and the work he is doing, it changed her view of the ocean and how humans are helping to destroy the very thing on which man is dependent on for oxygen. She said that in her research she discovered plastic also is responsible for the loss of approximately 1,000,000 sea birds per year and more than 100,000 ocean creatures, because marine life mistake plastic for jellyfish and ingest it with disastrous results.

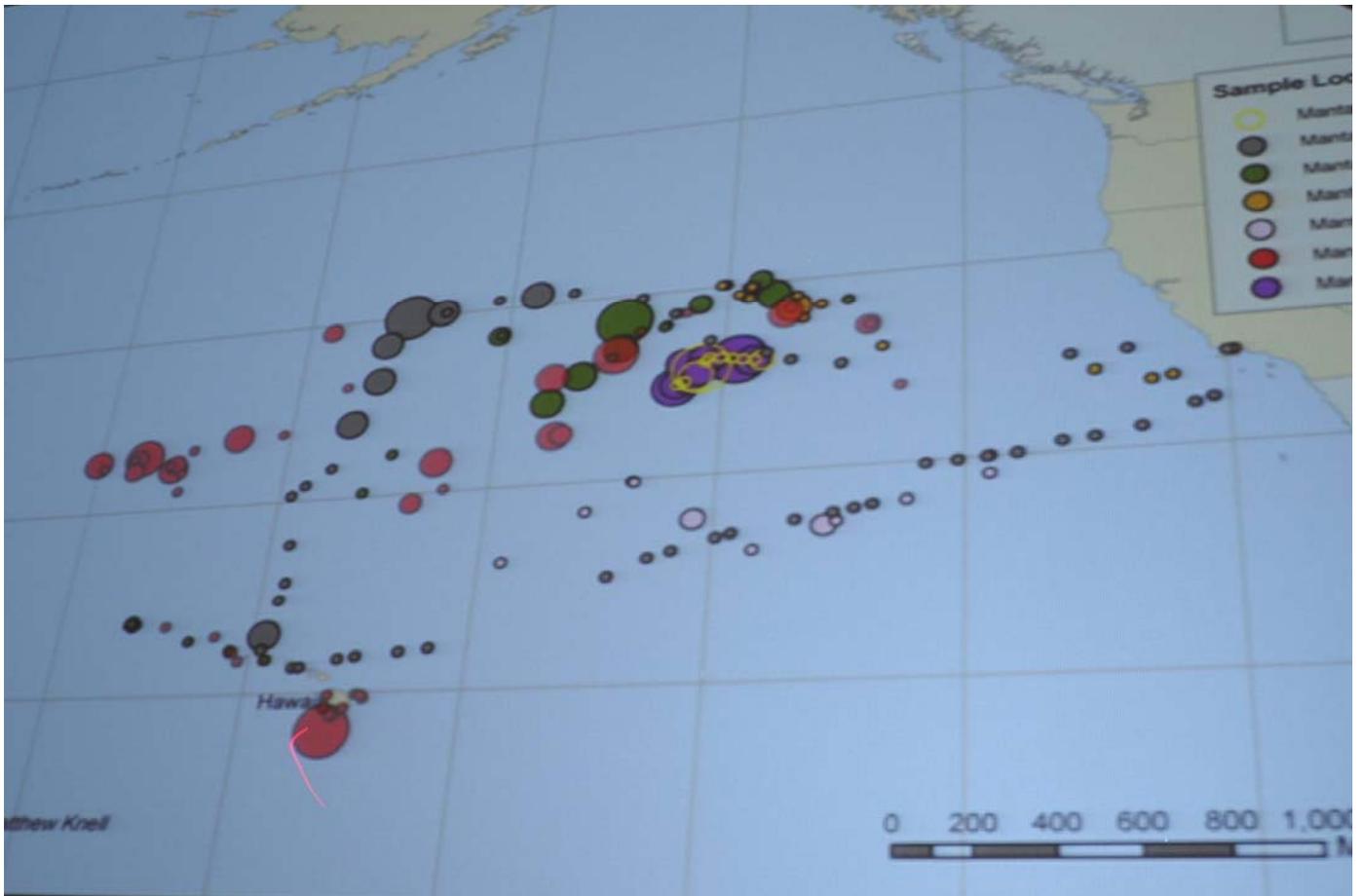
McLaren said a global drive is needed on the scale of the civil rights movement or possibly a great movie is required to bring public awareness to this plight. She said she adopted her own motto based on the words of a famous senator, "For a plastic-free planet, The work must go on; The cause must endure; The hope must live; And the dream must never die," McLaren said. For more information on Capt. Moore or the Algalita Foundation, visit [www.algalita.org](http://www.algalita.org) --By Lloyd Mackall, Public Relations and Digital Imagery Based in Wachesaw East Plantation, 9 Palmetto Place, Murrells Inlet, SC 29576 843-651-4610 Jan. 16, 2010



**Goffinet McLaren is with Captain Charles Moore, who is known worldwide for his ocean research in plastic pollution. She says she intends to bring his message back home to Pawleys Island in Georgetown County, SC, about how plastic causes the loss of sea birds and ocean creatures. McLaren, who helped organize a coastal beach clean-up last September, says oceans are polluted with this man-made material and feels it will take a community-wide effort in addition to a world-wide emphasis to reduce the use of non-degradable, plastic for bags and bottles.**



**Plastic pollution in the North Pacific Gyre. Speaker Captain Charles Moore first observed this dynamic ocean--caused swirling plastic mass, while sailing from Hawaii to California 12 years ago.**



Map showing concentration and flow patterns of plastic pollution around Hawaii, left, and the Pacific Ocean. Speaker Captain Charles Moore first observed a dynamic ocean--caused swirling plastic mass, while sailing from Hawaii to California 12 years ago.