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Plastics Joining Sargasso Seawood

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Eleven days out of the Canary Islands, Columbus and his crew sighted great patches of seaweed in the Atlantic and in the weeds they found live crabs.

The weeds are still there in the Sargasso Sea and so are the crabs. But something has been added—small bits of plastic, mostly white but some green, blue or red.

Two marine biologists from the Woods Hole Oceanographic Institution report in the March 17 issue of Science Magazine that the fine nets they were using to gather samples of fish, snails, crabs and shrimp also picked up the plastic.

Most were in the shape of pellets but they could identify a syringe needle, a cigar holder, jewelry, and a button snap.

The pieces were brittle, apparently because of the weathering out of plasticizers, the substances that gives flexibility to such materials.

The biologists, Edward J. Carpenter and K. L. Smith Jr., raise the possibility that this could be a source of PCB contamination recently found in plant and animal specimens in the Sargasso Sea.

PCBs (polychlorinated biphenyls) are industrial chemicals widely used as plasticizers. Like DDT, they make their way into marine organisms and move up the food chain.

Concentrations have been found in Sargasso seaweed, zooplankton, fish and in the livers of dolphins.

The Sargasso is an irregular, oval-shaped area of two million square miles in the Atlantic between the West Indies and the Azores. Currents, including the Gulf Stream on the western rim, swirl around it. The name comes from sargaco, a Portugese word for seaweed.

The floating patches of weeds are rich in specimens of marine life.

Drs. Carpenter and Smith were cruising in the western area of the Sargasso last September and October when their nets brought up the plastic particles. Most of them were small, about an eighth of an inch in diameter. Hydroids and diatoms—polyps and microscoptic organisms—were attached to them.

The nets also ran into lumps of petroleum, which dissipated but left black smears.

The source of the particles may have been the dumping of wastes from cities or by cargo and passenger ships, their report suggests. Some of the areas they sampled are within major shipping lanes from Europe to Central America and the Panama Canal.

The area closest to land was 149 miles from Bermuda and the one closest to the continent was 558 miles southeast of New York City.

In a telephone interview, Dr. Carpenter said that he could see particles bobbing in the water about every ten yards.

"The thing that gets me the most," he said, "is that man has been on earth only a short period of time and plastics have been produced only for about the last 25 years. Finding those things way out in the ocean—it's scary that man could do something like that."

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