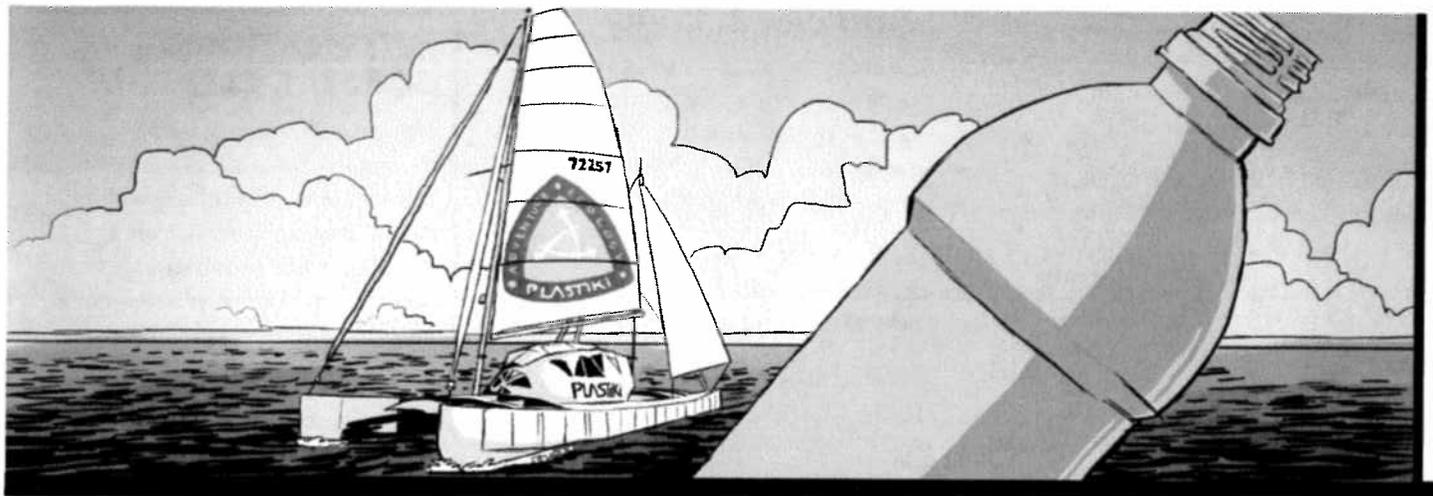




# PLASTIKI: A BOAT WITH A MESSAGE



A **catamaran** made of 12,500 plastic bottles arrived in Australia's Sydney Harbour in late July. The *Plastiki*, held together with sugar cane and cashew glue, had just completed a four-month, 15,000-kilometre sail from San Francisco across the Pacific Ocean.

The boat's successful crossing proved not just that plastic trash can be turned into something useful. It also carried a message, highlighting the threat of plastic pollution in the world's oceans.

## FROM US TO THE OCEAN

Each year, some 6.4 million tonnes of garbage – much of it plastic – makes its way into the ocean. Some of this trash is lost or thrown from boats and ships, but about 80 percent blows or flows from gutters, parking lots and roadsides into sewers, storm drains, rivers and waterways. From there, it is carried out to sea.

Once in the ocean, garbage does not magically disappear. Heavier items sink beneath the surface. Lighter items, usually made of plastic, collect in certain areas, forming massive floating dumps.

## PLASTIC TRASH HEAP

Plastic debris is found in the greatest quantities in the eastern Pacific Garbage Patch, located about halfway between California and Hawaii. In this gyre – or circular, slow-moving, large-scale ocean current – floating plastic trash collects in an area up to the size of Quebec.

"It moves around like a big animal without a leash," said an oceanographer from Seattle. "When it gets close to an island, the garbage patch barfs, and you get a beach covered with this confetti of plastic."

This fluid trash heap has been growing, along with ocean debris worldwide, tenfold every decade since the 1950s. In parts of the eastern Pacific Garbage Patch, there are an estimated six kilograms of plastic for every kilogram of naturally occurring plankton. On average, 13,000 pieces of plastic litter the surface of each square kilometre of ocean.

## THREAT TO SEA LIFE

All that plastic is ugly to look at – but a bigger problem, according to the United Nations Environment

## THE AGE OF PLASTIC

Not so long ago, toys, clothes, diapers and most items we buy were made of natural, biodegradable materials such as wood, cotton, or glass. Packaging was paper or string, and there was less of it. Fishing nets and ropes were made of natural fibres such as hemp and cotton.

Plastics – durable, light, cheap and versatile – started becoming popular in the 1960s. The 1970s saw the introduction of plastic bottles and supermarket plastic bags. In the 1980s, most dairy products such as yoghurt and margarine started appearing in plastic tubs. Ever since, we have been using – and discarding – plastic at an ever increasing rate.

Programme, is plastic's effect on marine life. The organization estimates that plastic litter kills 100,000 marine mammals each year.

Plastic rings that hold together six-packs of drink cans, and plastic fishing nets and lines, entrap sea creatures of all sizes. Other plastic products,

## DEFINITIONS

**CATAMARAN:** a sailboat with two parallel hulls held together by a single deck



especially bags, look like food to many birds and marine species. Whales, sea turtles, dolphins and seals frequently die after eating plastic debris.

“We often find cigarette lighters, bucket handles, toothbrushes, syringes, toy soldiers – anything made out of plastic [inside birds],” said John Klavitter, a biologist studying the albatross population on Midway **atoll**, located halfway between North America and Japan.

### BACK AT YA

Some scientists fear that plastic may even be poisoning the entire marine food chain. That’s because, over time, plastic doesn’t **biodegrade**. Instead, after years of sunlight and wave action, it breaks up into tiny pieces less than five millimetres across – about the width of a pea.

These tiny plastic pieces act like miniature sponges in the ocean, soaking up the many **toxic** chemicals that have found their way into the salt water. Eventually, small creatures eat many of them. Sometimes, these animals die as a result, but often, they are eaten by larger creatures, including fish. In turn, larger animals – humans among them – eat the fish and ingest the poisons.

“Farmers can grow pesticide-free **organic** produce, but can nature still produce a pollutant-free organic fish? After what I have seen firsthand in the Pacific, I have doubts,” commented the captain of a research vessel who spent years on the ocean.

### WHAT CAN BE DONE?

Scientists say we can’t remove all the garbage currently floating in the oceans. There’s simply too much. Instead, the focus must be on keeping the problem from getting worse.

The key is for individuals, companies and governments to change the way they think about plastic.

“Plastic is useful but often not necessary,” said Kai Chan, a professor at the University of British Columbia. “The more disposable a product, the more of a problem it is from this aspect of plastic waste in the ocean.”

### CHANGE IS POSSIBLE

The crew of the *Plastiki* has challenged people to stop using plastic altogether, but there are many ways to make a difference. Pack your lunch using reusable containers. Recycle as much as possible. Look for and buy the products that have the least packaging. And perhaps most important – bring your own reusable bags when you shop. According to **Ocean Conservancy**, over one million bags are used and discarded worldwide, every minute of every day.

“Our reliance on single-use packaging materials just doesn’t make sense. When you think about it, the life of that bag could be ten minutes between the time we leave the store and get home,” observed one environmentalist. ★

### INTERNATIONAL COASTAL CLEAN-UP

On September 25, hundreds of thousands of volunteers from countries all over the world will be spending the day picking up trash from the world’s beaches and waterways as part of Ocean Conservancy’s annual international coastal clean-up.

Workers will record everything they collect – from cigarette butts, 55-gallon oil drums, plastic bags and shopping carts to household appliances – on data cards. Then, they will give the cards to researchers who will analyze the data so they can map out, item-by-item and location-by-location, the marine debris that was collected.

This information can be used to help stop plastic pollution at its source. Knowing that certain items show up more in certain places allows governments to plan better recycling services. It can also show corporations that they need to make changes because their products or packaging are contributing to the garbage problem. And it can inspire individuals to properly throw out their trash and keep it out of the ocean.

In the 2009 cleanup, 10,239,538 pieces of junk were retrieved from shorelines by about half a million volunteers. The top three items found worldwide? Cigarettes/cigarette filters, plastic bags and food wrappers/containers.

### DEFINITIONS

**ATOLL:** island consisting of a circular coral reef surrounding a lagoon

**BIODEGRADE:** decompose by, for example, bacteria

**OCEAN CONSERVANCY:** an environmental nonprofit group formed in 1972 that promotes healthy and diverse ocean ecosystems and opposes practices that threaten ocean life and human life

**ORGANIC:** of or relating to foodstuff grown or raised without synthetic fertilizers, pesticides, or hormones

**TOXIC:** poisonous