

TRASHING Wildlife





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by Glenda Booth

Flmericans represent around five percent of the world's population but generate 40 percent of the world's waste. That translates to 4.3 pounds per person per day, up from 2.7 pounds in 1960. Only about one-third of that waste is recycled or composted.

Glance down at the pavement at your next stoplight. Chances are you'll see a mat of cigarette butts. Continue driving and you'll likely pass plastic bags flapping in the trees along highways. Meanwhile, bottles bob in rivers and shorelines are scarred by Styrofoam debris.

Trash is not just an eyesore. It can be lethal to wildlife.

CIGARETTE BUTTS

Cigarette butts top the list of items found during "Clean Virginia Waterways" cleanups. They are the most common beach trash, having traveled there from streets, streams, and rivers to the ocean.

Executive Director of Clean Virginia Waterways Kathleen M. Register says that most cigarette filters are made of cellulose acetate, a plastic slow to degrade. Unfortunately, that plastic has been found in the stomachs of birds, whales, and other marine animals that mistake cigarette butts for food. Fibers are thinner than thread, packed tightly, and look like cotton. The tips and filters of cigarette butts contain multiple toxins that can leach out and become a biohazard to organisms like the water flea at concentrations of more than 0.125 butts per liter, or about one butt per two gallons of water. The water flea, found in most freshwater lakes and streams and oceans, is a planktonic animal that occupies a critical position in aquatic ecosystems, says Register.

Del. Joe Morrissey introduced a bill in the 2011 General Assembly to create a fine of \$100 per cigarette butt for littering. "It's one of many peoples' pet peeves," he asserts. "It is disgraceful that somebody has the temerity to discard a single cigarette butt or an entire ashtray of butts at an intersection just so they can keep their car clean, but at the same time completely disregards the environment." The bill failed.



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Sadly, people will toss just about anything down a riverbank for disposal, including large appliances. Cigarette butts mar the landscape and cause problems for a number of species.

PLASTICS

Plastic endures. From yogurt cups to beverage bottles, plastic is everywhere, even on the world's tallest peak: Mount Everest. Many plastic products are designed for a single use and then to be disposed of. Though most plastic bottles are recyclable, 80 percent are thrown away. Officials with the National Oceanic & Atmospheric Administration say that plastic likely makes up a sizeable portion of the marine debris that exists today.

Plastic pollution kills more than 100,000 marine creatures each year, including seabirds, mammals, and turtles, researchers for the television program, 60 Minutes, found. As plastic photodegrades, pieces become smaller and smaller and, eventually, ingestible.



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"Plastics can now be found almost anywhere in the world's oceans," explains Dr. Kirk J. Havens, who directs the Coastal Watersheds Program at the Virginia Institute of Marine Science (VIMS). There are only a couple of polymers that are considered fully biodegradable in the marine environment. Most are plastics like polyethylene and polypropylene which simply break down into smaller fragments. These smaller 'microplastics' can be ingested by zooplankton. Zooplankton are the base of the marine food web, and disruption of the zooplankton population can have serious implications for marine life."

Animals mistake plastic debris for food and birds may think plastic pellets are fish eggs. The ingested debris can make the animal's stomach seem full, or worse, cause death and reproductive failure.

Most of us have viewed photographs of ducks, herons, gulls, fishes, turtles, and other animals ensnared in plastic six-pack rings.

Steve Chaconas, who runs National Bass Guide Service, says, "I have rescued several ospreys that have become entangled in six-pack rings and were near starvation."

Of the 100 billion plastic bags used each year in the U.S., a mere five percent are recycled. Bags get snagged in trees, fences, and bushes and they float on water. Plastic bags take hundreds of years to degrade.

"The pollution from plastic bags in the streams and waterways is the fourth most prevalent form of pollution behind cigarettes, food wrappers, and plastic beverage bottles," Delegate Adam Ebbin said last year in introducing his bill to put a nickel tax on single-use shopping bags.

A plastic bag can suffocate or choke an animal. Turtles mistake plastic bags for jelly fish. Whales may think plastic bags are squid. A bag can block digestion and cause death. Necropsies have found plastic bag remnants in the stomachs of whales, dolphins, bottom fish, manatees, and birds.

FISHING TACKLE

Discarded or abandoned fishing line is particularly lethal to birds. Twined around birds' feet, it cuts off circulation and when snared around legs, beaks, and wings, can prevent birds from flying or eating—even standing. Fishing line has been found entangling both

young and adult osprey, and be may be present in five to ten percent of all osprey nests on the bay and its tributaries, wrote Kathy Reshetiloff in the *Bay Journal* last year.

Migratory game bird biologist Gary Constanzo, with the Department (DGIF), says he bands two to three thousand Canada geese each year and sees two or three geese with fishing line around their legs or feet. Though "the incidence is not that high," his most common sighting of birds caught in fishing line is Canada geese and mallards and occasionally gulls and seabirds.

DGIF fish biologist John Odenkirk sees piles of fishing re-spool lines left on river banks. "Some people don't care," he acknowledges.

Along some Virginia streams, "You can find a 'bird's nest' of monofilament line," says one avid fisherman, "a gob big enough to choke an elephant." And it is very slow to biodegrade.

Fishing hooks get stuck in birds' legs and feet and endanger all of us. Biologists describe "ghost fishing," which means fishing without a fisherman. If a baited hook gets caught on a bank submerged, fish get trapped trying to eat the bait and are snagged there to die.

And DGIF fish biologist Scott Smith has seen fish trapped in old gill nets. If the fish breaks free and survives, its tissue grows around the piece of net, "like barbed wire on a tree," he says. "Some fish get stuck in old nets and die."



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A smoky shrew that crawled into this bottle left on the ground died when it could not escape. Left, dumpsites like this along waterways have become, sadly, all too familiar.



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TRASH AND BEARS

Bears like plastic and rubbery things, like coolers and duct tape, says Jaime Sajecki, DGIF's black bear project leader.

They will chew on anything with foam, like coolers, hot tub covers, and lawn mower seats. "When insulation breaks down, it gives off formic acid, the same smell that ant colonies give off. Bears think they're going to get into an ant colony, which they love," she explains.

"Bears pass a lot of scat full of candy wrappers, plastic bags, and Styrofoam. It all passes through their system, but it may not harm them much," she observes. That's the good news.

A real hazard is large containers. "Anything can get stuck over bears' heads," maintains Sajecki. "They stick their heads in everything to get whatever's inside that smells good and their head can get trapped within." If not rescued, the bear can die of starvation. There have been several incidents of bears getting their heads stuck inside large plastic containers, but thankfully, none reported in Virginia to date.

METAL RINGS AND MORE

On Virginia's Smith River, Odenkirk and Smith have saved many young brown trout encircled by metal rings the size of a half-dollar. As the fish grows with the embedded ring, it can survive up to a year. The ring eventually cuts the fish or it dies from an infection if the ring is not removed. Smith speculates that the rings come from large-mouthed beverage bottles. "We've rescued a lot," he notes.

Discarded beverage containers are ubiquitous. In one 2009 cleanup, volunteers collected over 180,000 beverage containers in the Potomac River watershed. Those cans and bottles can become traps for very small animals that are attracted to food morsels inside. They get their heads caught in jars, cans, and plastic cups, especially containers that are thinner at the top and wider at the bottom. Small creatures like lizards crawl inside for warmth or protection, but cannot get out. There, they suffocate or starve.

The Styrofoam or polystyrene used for coolers, cups, trays, and carryout food "clamshells" are becoming very common in waterways, where they break up quickly into small pieces—some invisible to humans. Birds and other animals mistake the pieces for food. Ingested polystyrene, a suspected carcinogen, can cause fatal internal blockages in animals.

Who hasn't seen a helium-filled balloon escape to the skies? Balloons, pieces of balloons, and their string come down somewhere and get twined around birds' necks and beaks. In the ocean, ingested balloons mistaken for jellyfish can block digestion and cause marine animals to starve to death or be suffocated. Rehabilitators at Baltimore's National Aquarium removed three square feet of mylar balloon from a stranded whale in 1993.

IT'S PREVENTABLE

"The sad thing is all of these pollutants are totally avoidable. Whether from land or sea, trash is trash and should be disposed of properly," advises Chaconas.

Also key to eliminating trash in the environment is not producing it in the first place. Again, DGIF's Smith: "Anything discarded can be a trap or problem, and plastic is worse than other trash because it lasts a lot longer. If you go to the trouble to bring it in, go to the trouble to take it out with you and dispose of it correctly." ❧

Glenda C Booth, a freelance writer, grew up in Southwest Virginia and has lived in Northern Virginia over 30 years, where she is active in conservation efforts.



Courtesy of C. Craig Burns

Even something as innocuous as a broken teacup can be a problem for a wild animal.

RESOURCES

DGIF, Fishing Line Recycling Program
www.dgif.virginia.gov/fishing/fishing-line-recycling

Clean Virginia Waterways
www.longwood.edu/cleanva/

Virginia Institute of Marine Science
www.ccrm.vims.edu/marine_debris_removal/index.html