

Though Sturdy Survivors, Turtles Prove to Be Ill Equipped for Human Threat

By NATALIE ANGIER
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Turtles are an ancient and pan-planetary clan, found in nearly every habitat at hand — including hostile locales like bogs and deserts that few other animals will set foot in. Paradoxically, however, scientists say that the turtle’s broad reach has only increased its vulnerability to human activities, and today at least half of the world’s 250 turtle species are considered endangered or threatened.

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This Aldabra giant tortoise, named Adwaita, was thought to be as old as 250 years when it died of liver failure in March in a Calcutta zoo.

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In crossing oceans and homing in on their birth beaches, for example, sea turtles encounter a bristling ordnance of threats: marine pollution from pesticide runoff; oil spills; the increasing popularity of international waters as free-for-all trash cans; nesting sites lost to Club Meds; artificial lighting that confuses newly hatched turtles, prompting them to run inland to their certain death rather than seaward; and shrimp trawlers and commercial fishing nets in which turtles become fatally entangled.

“There are some bright spots here and there, where nesting populations are increasing in numbers,” said Dr. Karen A. Bjorndal, director of the Archie Carr Center for Sea Turtle Research at the [University of Florida](#) in Gainesville. “But if you catch me on a bad day, I have to say that for many species of turtle the outlook is pretty bleak.”

Nevertheless, she and other turtle conservationists are lobbying for legislation to protect wild turtle populations and their habitats, emphasizing the critical role that turtles play in the health and fecundity of the many ecosystems through which they lumber.

By periodically clipping back beds of sea grass to foster the growth of tasty new grass buds, for example, green sea turtles help keep the beds tidy, lush and productive, a fit neighborhood for fish, sponges, corals and other desirable residents. Without nature’s lawn service, Dr. Bjorndal said, “you end up with marine ecosystems turned into microbial stews.”

While plastic has replaced the flexible shells of species like the hawksbill in the

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manufacture of “tortoiseshell” goods, turtles face other, greater pressures from multiple directions. Turtle meat is a prized delicacy in China and Southeast Asia, among other places, and turtle eggs and turtle organs are likewise valued for their presumed medicinal or aphrodisiacal properties. As a result, say conservationists, turtles everywhere are being harvested to supply the fast-growing Asian market.

Jack Cover of Baltimore’s National Aquarium lamented that in Maryland, where the indigenous diamondback terrapin serves as the state reptile and the mascot for the [University of Maryland](#) teams (their slogan: Fear the Turtle), diamondbacks nonetheless are still being hunted and shipped east. “What kind of state sanctions the eating of its own reptile?” he asked.

People sanction the eating of turtles indirectly as well. Among the biggest threats to many North American turtles are animals like raccoons, crows, skunks and foxes — tireless omnivores that thrive in and around human habitations. “We call them subsidized predators,” said Dr. Joseph Mitchell, an ecologist in Richmond, Va. “People have generated food and shelter and trash cans for them, so they’ve done quite well.”

The increase in predators has hurt turtles particularly hard. “Crows will clean all the newly laid eggs out of a nest cavity even before the turtle has a chance to cover them up,” he said.

And then there is our incidental, super-size predator, the automobile. In a recent study of a two-mile strip of highway built between two lakes in Tallahassee, Fla., researchers determined that 2,000 to 4,000 aquatic turtles were being crushed to death on the road each year, a disproportionate number of them females with eggs.

Conservationists said solutions could be found for many of the threats turtles face. Some propose that the market for turtle meat could be met through turtle farming, combined with stiff penalties for the hunting of wild turtles. The commercial fishing industry could reduce incidental turtle deaths significantly, conservationists said, by installing special trap doors.

Scientists have also shown that roads can be made much safer with the addition of fencing that diverts would-be migrants to drainage culverts — dips in the highway that were designed to facilitate water runoff but that work well as miniature walkways. With that kind of help, the turtle, slow and steady, can still win the race every time.

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