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# Return of the Once-Rare Beaver? Not in My Yard.

**By CORNELIA DEAN**

CONCORD, Mass. — The dozens of public works officials, municipal engineers, conservation agents and others who crowded into a meeting room here one recent morning needed help. Property in their towns was flooding, they said. Culverts were clogged. Septic tanks were being overwhelmed.

“We have a huge problem,” said David Pavlik, an engineer for the town of Lexington, where dams built by beavers have sent water flooding into the town’s sanitary sewers. “We trapped them,” he said. “We breached their dam. Nothing works. We are looking for long-term solutions.”

Mary Hansen, a conservation agent from Maynard, said it starkly: “There are beavers everywhere.”

Laura Hajduk, a biologist with the state’s Division of Fisheries and Wildlife, had little to offer them. When beavers are trapped, others move in to replace them. And, she said, you can breach a beaver dam, but “I guarantee you that within 24 hours if the beavers are still there it will be repaired. Beavers are the ultimate ecosystem engineers.”

That was not what Mr. Pavlik was hoping to hear.

He is not alone in his dismay, and it is not just beavers. Around the nation, decades of environmental regulation, conservation efforts and changing land use have brought many species, like beavers, so far back from the brink that they are viewed as nuisances. As Stuart Pimm, a conservation ecologist at Duke University, put it, “We are finding they are inconvenient.”

In Florida, alligators were once nearly wiped out by hunters; today the state maintains a roster of trappers who remove thousands of nuisance gators each year. The pesticide DDT once left the Pelican State, Louisiana, bereft of the birds; today wildlife organizations say fishermen must guard their bait and catches from the birds. In California, warnings about marauding mountain lions are posted on hiking trails.

There were tens and maybe hundreds of millions of beavers in North America before it was settled by Europeans, whose craze for beaver hats is often cited as motivating much of the exploration of the continent. But by 1900 their numbers had been reduced to about 100,000, almost all of them in Canada. As farming faded and the forests reclaimed much of their lost ground, Castor canadensis made a spectacular comeback. Today there are believed to be 10 million to 15 million of the animals in North America, and they are regarded as pests in much of their range.

In 1999, for example, a colony moved into the Tidal Basin in Washington, where they cut down a number of cherry trees before being trapped and removed. According to the Department of Agriculture, states like

Mississippi, North Carolina and Wisconsin lose tens of millions of dollars each year from beaver damage to buildings, roads, timber, crops and trout streams.

In Massachusetts, beavers had vanished by the early 19th century, killed by trappers and dispossessed by farmers who turned woods into pastures. But they have had a particularly strong comeback here as farmland has returned to woodland. The change has also brought an unwelcome abundance of coyotes, black bears, moose and other species. Wild turkeys, once extirpated, now go one-on-one with suburban pedestrians in what biologists call misguided efforts to establish their dominance in a pecking order.

The advice from the experts on beavers is to find a way to live with them and reduce the damage. As Ms. Hajduk said during the Concord meeting, chicken-wire fencing can keep beavers out of culverts or away from prized trees. Companies market water flow devices called “beaver deceivers” or “beaver bafflers” that can be installed in dams to lower the water level of beaver ponds. Some people even coat prized trees with paint and sand in the hope that the grit will discourage gnawing beavers. If people want to live in a more natural environment, they must adjust to animals, even inconvenient animals, Dr. Pimm said in a telephone interview. “You have to accept Mother Nature as she is,” he said.

John Livsey, Mr. Pavlik’s boss and the town engineer in Lexington, has firsthand experience with the beaver problem. The animals are building dams in wooded areas traversed by the town’s sewer lines, he said, and as water rises, it seeps through manholes into the sewer pipes.

The town must pay for the treatment of this extra “inflow.” Though Mr. Livsey said he could not put a dollar figure on it, “it’s a lot of money.”

The town periodically obtains permits to breach dams and trap and kill the animals, but destroying a beaver dam can have unintended consequences downstream, from flooding a neighbor’s property to destroying habitat crucial for rare amphibians or silting up streams where endangered Atlantic salmon spawn. Some people date the beaver’s return to Massachusetts to 1928, when beavers were observed in West Stockbridge and “greeted with enthusiasm,” according to the Web site of the Division of Fisheries and Wildlife. By 1946, there were an estimated 300 beavers, all west of the Connecticut River.

Today, Ms. Hajduk said, there are at least 30,000 beavers, all over the state.

In her presentation in Concord, Ms. Hajduk said that beavers, which can reach 60 pounds and are the largest rodents in North America, are monogamous animals that mate for life and like to eat plants that grow underwater. They look for places to build a dam and create a pond. Their webbed feet are adapted for life in the water, and their front teeth, four giant incisors, are useful for cutting the trees they use as raw materials for their dams and lodges. (They also eat the bark, particularly in the winter.)

Typically, she said, they work at night, building a stick-and-mud lodge in the pond or at its edge, with its entrance underwater for safety. A pair of beavers typically live 10 years, producing a litter of two or more kits each spring. The kits stay with their parents until they are 2 years old, then disperse in search of their own territories.

Though the people at the meeting found it hard to believe — or irrelevant — the beavers have produced many benefits for the state’s environment, Ms. Hajduk said. She pointed to some of them after the meeting, when

she and Mary B. Griffin, the state's commissioner of fish and game, met at the Boxborough Station Wildlife Management Area, a state reserve northwest of here.

At first glance it hardly seemed like an ideal spot for beavers. Route 2, a major east-west highway, runs along one edge; a much-used rail line runs along another. "You are really surrounded by a lot of suburbia and roadways," Ms. Hajduk said.

But trees had reclaimed the land between the ancient stone walls. Beavers have taken full advantage of the site, damming a small stream with mud and branches to impound a 45-acre pond perhaps five or six feet deep, with a lodge in the middle.

As she and Dr. Griffin neared the pond, a group of wood ducks, alarmed by their approach, went squawking into the air. It was good to see them, Dr. Griffin said — they are among the species favored by hunters that the state is trying to encourage. She pointed to an osprey sitting on a dead tree. Ospreys were almost wiped out by DDT but are now back in Massachusetts, and this one was taking advantage of beaver-created habitat. Just then, a great blue heron glided to a landing in the pond, another guest of the beavers.

Impoundments like this one absorb water, especially in the spring, when streams swell with rain and snow runoff, Dr. Griffin said. And when the impoundment eventually silts up and the beavers move on, their dam will decay and the pond will drain, leaving unusually rich soil behind.

"These beaver meadows stand out like rich little oases," Ms. Hajduk said.

Dr. Griffin said she and her colleagues emphasized these advantages in urging people to adopt "tolerance and coexistence as a first line of defense."

Mr. Livsey can embrace this concept, up to a point, perhaps because he admires the animals' engineering ability.

"They're amazingly skilled creatures, actually," he said. "They seem to be able to put things where they want them. I wish they worked for us."