Wildlife managers increasingly face this decision: whether to slaughter one species in order to save another

WEEDING THE GARDEN

BY ANDREW NEAL COHEN

FOUR MEN ADVANCED IN A RAGGED LINE ACROSS Green Island, a low, treeless bit of windswept land emerging from the Gulf of Maine. Eyes to the ground, the men called out to a fifth who trailed behind them, taking notes. Gulls floated lazily just overhead, while waves of sibilant chatter rose from a raft of eider ducks sheltered in the lee of the island, waiting for the men to depart. The rocks and grassy hummocks were thick with nests, and the searchers stepped gingerly.

"Eider nest. Eider nest."

"Yup."

"Gull nest."

"Yup."

"Eider nest."

"Gull nest."

"Yup."

"Eider nest. Eider flush."

A female eider leaped into the air and shot low over a tangled ridge to join the waiting raft. Four olive-drab eggs snuggled in a bowl of down that she had plucked from her own breast. Passing these nests, the men plucked at the down themselves in a token gesture at covering the unprotected eggs.

"Two eider nests."

"Gull nest."

"Gull nest."

The gull nests also held eggs—the larger eggs of great black-backed gulls and the slightly smaller eggs of herring gulls, both splotched with brown. Into each gull nest surgical-gloved hands deposited two or three "baits"—or little sandwiches made of margarine spread between cubes of bread.

"One eider nest."

"Gull nest. Wait—make that two gull nests."

Mixed into the margarine was a powdery white substance that Thomas Goettel, the U.S. Fish and Wildlife Service biologist in charge of the operation, had carefully measured out from a canister the day before. The label on the canister read RESTRICTED USE PESTICIDE. 1339 GULL TOXICANT 98% CONCENTRATE. DANGER—POISON. The label went on to describe human-health hazards, proper methods of application, and the toxicant's effect on gulls, causing death from kidney failure within twenty-four to forty-eight hours. It was Goettel's hope that the gulls flying overhead would return to their nests, eat the poisoned bait, and quietly keel over and die.

"You know, I didn't join Fish and Wildlife to kill gulls," Goettel says. He just wanted to save terns.

Striking Back

HERRING GULLS AND GREAT BLACK-BACKED gulls are notorious predators of the eggs and young of terns and other seabirds, and they easily outcompete the smaller and less aggressive terns for island nesting sites. Petit Manan Island, just half a mile south of Green Island and connected to it by a cobble beach at low tide, was historically one of the most important tern colonies in Maine. Petit Manan's flat terrain and low vegetation provided abundant nesting sites for terns, and the island's lighthouse keepers, perennially at war with the pestiferous gulls, killed any that tried to nest there. But when the Coast Guard automated Petit Manan Light, in 1972, and the last lighthouse keeper departed, the gulls took over and chased out the terns. Within a decade the Petit Manan tern colony had been wiped out.

In 1984 the Fish and Wildlife Service struck back. That spring Goettel

and his colleagues poisoned the Petit Manan gulls with Toxicant 1339, and in two weeks several hundred terns were claiming nesting sites on the island. More terns arrived in the following years, and Petit Manan is now once again one of Maine's largest tern colonies, with three species of nesting terns—common terns, arctic terns, and the endangered roseate terns—along with hundreds of nesting guillemots and thirteen nesting pairs of rare Atlantic puffins. It is in order to protect these birds that Tom Goettel routinely poisons the gulls on Green Island.

ED FOXES, HAWKS, AND OTHER PREDATORS HAVE BEEN KILLED TO PROTECT THE EGGS AND CHICKS OF ENDANGERED LEAST TERNS AND CLAPPER RAILS. COYOTES HAVE BEEN GUNNED DOWN FROM HELICOPTERS.

The use of Toxicant 1339 to kill gulls in New England was promoted by the National Audubon Society, which in 1971 asked Fish and Wildlife to clear the gulls off Matinicus Rock, on the coast of Maine, where they had been preying on a colony of Atlantic puffins. Since then gulls have been killed on several other islands in Maine and Massachusetts to allow for the recovery of puffin and tern colonies.

Ironically, in the past wildlife enthusiasts worked to protect gulls. In the late nineteenth century, after egg gatherers and plume hunters had nearly wiped out New England's gulls, local Audubon societies contributed money to hire wardens to guard the few colonies that remained. Despite these efforts, by the turn of the century only about 8,000 nesting pairs of herring gulls were left, confined to the outer islands of Maine. But with the passage of laws that banned seabird hunting and egg collecting, and that established seabird refuges, and with abundant new sources of food from landfills, sewage outfalls, and the discarded wastes of an expanding fishing industry, gull populations exploded. Gulls extended their nesting range down the Maine coast and into New Hampshire and Massachusetts by 1920, to New Jersey and Maryland by 1950, and to North Carolina by 1960. Current estimates place the nesting population at 150,000 pairs, and the total population at more than a million birds.

As their numbers soared, gulls increasingly became a nuisance. Flocks at airports posed a danger to planes on landing and takeoff, at reservoirs they were suspected of contaminating water supplies, and at garbage dumps and sewage ponds they were considered vermin—rats with wings. But most attempts to reduce their numbers have been dismal failures. From 1940 to 1953 the largest attempt ever made to control gulls began in Maine. Teams of workers sprayed nearly a million eggs with a mixture of oil and formaldehyde, which suffocated the developing embryos but preserved the eggs so that the parent gulls continued incubating them rather than laying new ones. At best, however, this effort only delayed the gulls' increase, and some researchers, noting a contemporaneous surge in the Massachusetts gull population, believe that the main effect was to encourage the gulls to spread southward.

Then, in the 1960s, William Drury, the research director for the Massachusetts Audubon Society, began a series of studies on methods of lethal gull control. He and his co-workers tore apart nests, broke eggs, harassed and shot gulls, introduced predators into gull colonies, and administered chemical sterilizers and poisons. Drury showed that although these methods would not reduce the overall gull population, under favorable conditions they could be used to remove some or all of the gulls from specific sites. He concluded that the most efficient and humane approach would be poisoning with Toxicant 1339, which was originally developed to kill starlings. Over the past two decades gull colonies on several islands have been treated with 1339 in order to allow other, rarer seabirds to flourish—an action that Drury (who died last spring) likened to "weeding a garden."

A Plague of Tree Snakes

IN RECENT YEARS WILDLIFE "GARDENERS" HAVE been hacking at an increasing number of weeds. In California red foxes, hawks, and other predators have been killed to protect the eggs and chicks of endangered least terns and clapper rails. Coyotes that kill San Joaquin kit foxes have been gunned down from helicopters. In Alaska the Fish and Wildlife Service has trapped and poisoned arctic foxes that prey on Aleutian Canada geese. Coyotes have been trapped and shot to protect whooping cranes in Idaho and greater sandhill cranes in Oregon. Ravens have been poisoned and shot to protect greater sandhill cranes and California desert tortoises. Cowbirds threaten many songbird populations through nest parasitism—removing songbird eggs from nests and laying their own eggs in place, which the unsuspecting songbirds then raise—and tens of thousands of cowbirds have been exterminated to protect endangered birds in California, Michigan, Oklahoma, Puerto Rico, and Texas. In Washington's Olympic National Park, rangers have proposed shooting hundreds of mountain goats whose disturbance of the soil threatens several rare plants that are unique to the Olympic Peninsula. In other places raccoons, skunks, opossums, ground squirrels, mountain lions, badgers, pigeons, meadowlarks, crows, shrikes, owls, northern harriers, and kestrels have been killed to prevent them from harming rare species.

When wildlife managers discuss these programs, certain themes recur. Often the population of a species was initially reduced by some direct human activity—overhunting or excessive collecting, destruction or degradation of critical habitat—and the current predator merely threatens to deliver the final blow. "This is the kind of mess we get into when we push animals to the brink of extinction," says Ronald Schlorff, an endangered-wildlife specialist with the California Department of Fish and Game. "Predator control is a necessary human intervention in a system that's out of balance. Predation is a normal part of the natural scene, but it's been concentrated, accentuated, and exacerbated by human activities."

Chief among the activities leading to a predatory imbalance are intentional or accidental introductions of predators to regions where they devastate native species that have few defenses against them. In Alaska, for example, eighteenth- and nineteenth-century fur trappers stocked hundreds of islands with arctic foxes and red foxes, which ravaged the many species of ground-nesting and burrow-nesting seabirds that had migrated to the isolated islands in order to breed in safety. Similarly, midwestern red foxes that were introduced to the interior valleys of California by hunters and fur farmers have spread to the coast, where they threaten endangered clapper rails and least terns. In other cases changes that human beings have made in the landscape, such as creating landfills, chopping up extensive forests into smaller wooded areas, and grazing livestock, have enabled a harmful species to expand its population and range dramatically. "What we're seeing is a general phenomenon of what we call 'garbage' animals," says Dave Wilcove, an ecologist with the Environmental Defense Fund, referring to the spread of gulls, ravens, raccoons, foxes, and coyotes. "We've made the world very nice for scavenging omnivores."

Whatever the ultimate causes, wildlife managers charged with protecting certain rare species believe that the imminent risk of extinction from predation is real. Events on the island of Guam provide a chilling example. The brown tree snake, a native of New Guinea and Australia, was accidentally brought to the island by cargo ships in the 1950s. With no natural predators and few competitors, the mildly venomous snake flourished, eating its way through the island's unique avifauna. "The brown tree snake has virtually wiped out the native forest birds of Guam," according to a Fish and Wildlife Service report. "Nine species of birds, some found nowhere else, have disappeared from this island, and several others persist in precariously low numbers close to extinction." Biologists managed to save and successfully breed one of these birds—the Guam rail—in captivity but are reluctant to return it to the snake-infested island, where it would have little chance of survival.

As far as predatory wildlife goes, the Department of Agriculture's Animal Damage Control unit holds the nation's principal license to kill. ADC's 1931 enabling act instructed it "to conduct campaigns for the destruction or control" of a long and nonexclusive list of predators and pests that farmers and ranchers found bothersome. Over the years ADC has pursued this mission with a single-minded zeal that, not surprisingly, has provoked unrelenting hostility from wildlife organizations. Today, however, ADC's savvier "gopher chokers" know that using their skills to protect endangered species is a way of gaining credibility with their environmental adversaries.

Peter Butchko, an ADC district supervisor, estimates that his former southern California ADC division, which just a few years ago concentrated on eradicating sheep-eating coyotes and cleansing the suburbs of skunks and raccoons, now spends at least a third of its time eliminating the predators of endangered prey. In a speech at the Fourteenth Annual Vertebrate Pest Conference, Butchko argued that these efforts have "allowed ADC to expand

THE ZEN OF CRIME

I advise her to shoplift something minor,
panties, perhaps, wad of silky sin in her hip pocket.

Or stroll away with coral earlobes, hands
full of jellies or pistachios in harmless white shells.

A side-by-side refrigerator, she says,
and I'll drag it off singing—so you better be there

to bail me out. I tell her of my friend
who stripped naked and climbed the bars of her cell

making chimp sounds to entertain the other women.
She tells me of her friend's run from the police

into a quarry where she ditched her Mustang
and swam beneath the yellow water to Wisconsin.

Now we begin to admit things: I applied at a topless bar.
I spoke to a madam in Chicago. I stole sirloins

from A&P. Like Bonnie and Clyde. Thelma and Louise. I
was Dillinger in a former life. I worked

on Wall Street. Seriously, I say,
what can you steal today to make yourself happy?

Ray-Bans, she says, for the eyes of blind Justice.
All the tea in America.

—Maureen Seaton