MINNESOTA'S GROWING GAME

IN THE SPRING OF 1971, MINNESOTA'S newly appointed wildlife chief did the unthinkable. The state's deer herd was tottering on the point of collapse. Ravaged by severe winters in the late 1960s, an overharvest of does, and continual habitat loss, the depleted white-tailed deer population could no longer sustain a regular hunting season. The Department of Conservation, as the Department of Natural Resources was then known, had authority to adjust hunting seasons and limits, but it couldn't require hunters to shoot only bucks or limit the number of hunters who could take does. Roger Holmes, the agency's 33-year-old wildlife chief, realized he had only one option to protect the struggling deer herd: He recommended that the commissioner—Robert

Game wildlife populations are booming today thanks to hunter-funded management programs.

By TOM DICKSON

GLEN McCUNE, *EARLY MORNING BLACK BEAR*, COURTESY McCUNE AND CO., BOYNE CITY, MICH.

Herbst—close the season statewide. Herbst agreed.

"We agonized over the decision," recalls Holmes, today director of the DNR Division of Fish and Wildlife. "But back then, closing the season was the only option we had to protect the deer herd."

New options were forthcoming. Encouraged by deer hunting constituents determined to never witness another statewide closure, legislators granted the DNR authority to limit the harvest of does in specific areas throughout the state. During the next 20 years, this management flexibility, along with improvements in deer habitat from a logging boom, drove deer numbers skyward. The state's whitetail herd tripled in size from the 1970s to the 1990s, reaching a fall population of an estimated 1 million animals today. During this same time, the deer harvest also climbed, breaking records six out of the past 10 years.

Funded primarily with hunting license dollars and a federal tax on hunting equipment, wildlife biologists have helped boost populations of many other game species too. The locally breeding giant Canada goose, a subspecies considered extinct 40 years ago, now numbers 100,000 in Minnesota. Wild turkeys have spread from Minnesota's southeasternmost tip to 33 counties. The pine marten and the fisher have recovered from near extirpation to where trappers now can harvest a small number each fall. Black bear numbers are up 400 percent from the 1960s.

Even duck populations, which plummeted in the 1980s, have rebounded to meet and in some cases beat ambitious goals set by the state and federal conservation agencies and hunting organizations that established the North American Waterfowl Management Plan in 1986.

"I've always been an optimist, but 30 years ago if someone would have told me that our major wildlife populations would be as healthy as they are today, I would not have believed it," says Holmes. "The growth of wildlife numbers in this state is nothing short of remarkable."

What follows is a look at six game species that have grown substantially over the past 25 years, due in large part to hunter-funded wildlife management programs.

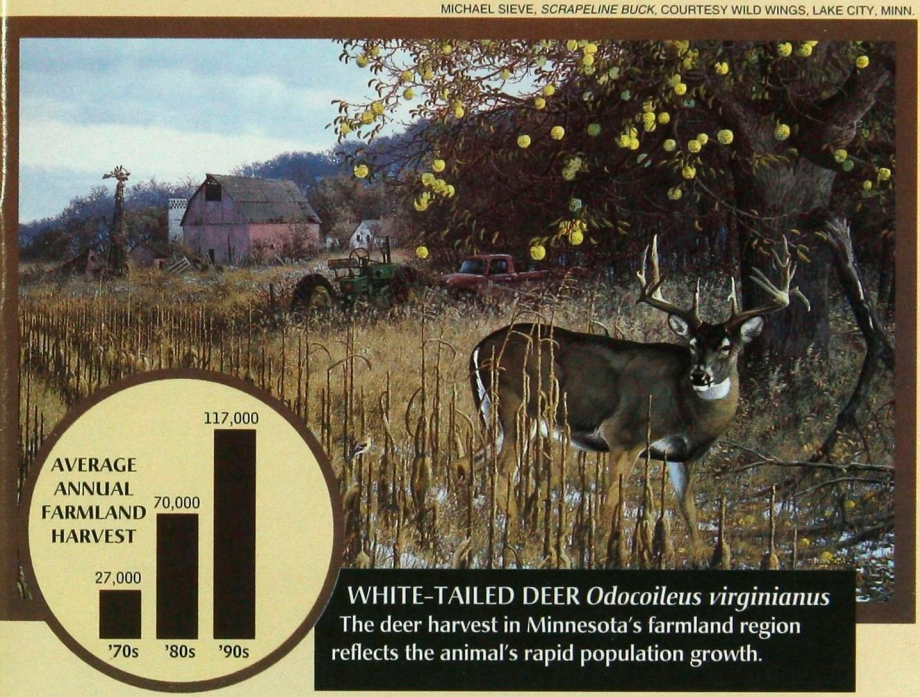
FARMLAND DEER

In the early 1960s, it was relatively uncommon to see whitetails in southwestern Minnesota. People would actually call to report sightings of deer.

Though the deer herd in the state's forest region has grown little over the past 30 years, the farmland region's deer population has increased remarkably. In the 1960s only 25 percent of the state's deer harvest came from the farmland

***Tom Dickson** is staff writer for the DNR Division of Fish and Wildlife.*

MICHAEL SIEVE, *SCRAPELINE BUCK*, COURTESY WILD WINGS, LAKE CITY, MINN.



WHITE-TAILED DEER *Odocoileus virginianus*
The deer harvest in Minnesota's farmland region reflects the animal's rapid population growth.

region. By the 1990s that share had grown to more than 60 percent. "In the 1960s, if you would have said the farmland deer harvest would eventually top the forest harvest, people would have said you were nuts," says Al Berner, who leads the DNR Farmland Wildlife Populations and Research Group in Madelia.

Because farmland deer have few places to hide, it's easy to kill too many does, yet does are necessary to produce offspring to rebuild the herd. Stuck with a regulation that allowed hunters to shoot their choice of bucks or does, wildlife managers in the past had few options to restrict the doe kill. They could either close portions or all of the state to deer hunting, or shorten the season.

Exercising the former option meant that many hunters missed a treasured fall tradition. The latter didn't work because in some years even a one-day season resulted in too many does killed in open farm country. As a result of these limited options, farmland deer populations rose and fell in dramatic boom-and-bust cycles. During many years, the farmland deer season had to be closed entirely.

Deer populations and deer hunters both benefited when the

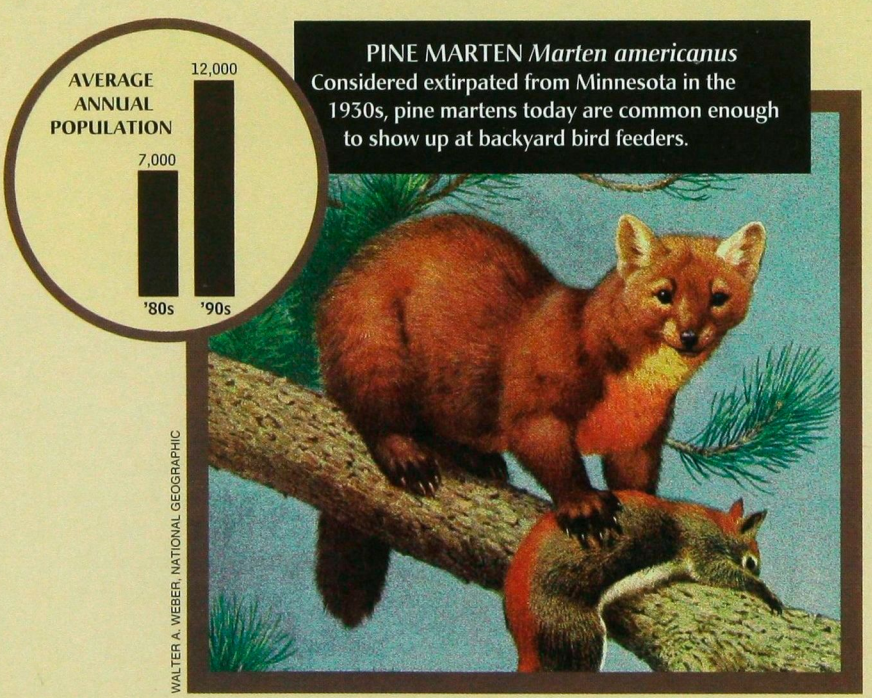
DNR began its antlerless permit system in 1976. The system allows biologists to adjust the number of does and fawns to be killed by hunters each year—and thus grow or shrink herds as necessary in each of the state's 120 permit areas.

FISHERS AND MARTENS

By the mid-1920s, the fisher and the pine marten—two relatives of the mink—had practically disappeared from Minnesota. Unregulated trapping and extensive logging had pushed the few remaining animals to the state's northeastern tip. In 1927 the state ended trapping for both species. The legal protection paid off. Helped also by forest regrowth, the furbearers slowly repopulated part of their original range during the next 50 years.

In 1977 the DNR decided to reopen the fisher trapping season. By 1985 the pine marten had recovered enough for a limited trapping season to begin.

"Now we've got martens in Duluth and Grand Rapids working over people's bird feeders," says Bill Berg, forest wildlife research scientist. "And fishers, which normally are a forest animal, are today living in wood-duck houses in the prairies



GLEN McCUNE

BLACK BEAR *Ursus americanus*
Granting bears big-game status gave the animal big-time respect among hunters.

around Crookston."

DNR biologists now carefully control the number of fishers and martens that trappers kill each year, adjusting limits and seasons as necessary. For example, the limit might be reduced when young pine martens die off after mice, their primary prey, grow scarce. Biologists keep tabs on fisher and marten populations by examining carcasses brought in by trappers when they register their furs, and through winter track surveys.

BEARS

People used to hate bears. From 1945 to 1965, the state paid a $10 bounty to anyone who shot and killed a nuisance bear. Viewed as varmints, bears were shot on sight and often left to rot. As a result, the bear population stayed low.

Today Minnesota has more than 20,000 bears—up threefold from the 1980s. Once confined to northern forests, bears now live as far south as Little Falls, and as far west as Detroit Lakes.

What explains this bear boom? According to Dave Garshelis, the DNR's top bear biologist, it all began in 1971, when Minnesota held its first hunting season for the black bear, which had just been designated a big-game animal. The state's bear population began to rise rapidly after 1982, when the DNR began restricting harvest with a quota

system. The system awards a limited number of licenses from a lottery. It also, says Garshelis, "greatly enhanced the bear's reputation as an important big-game species."

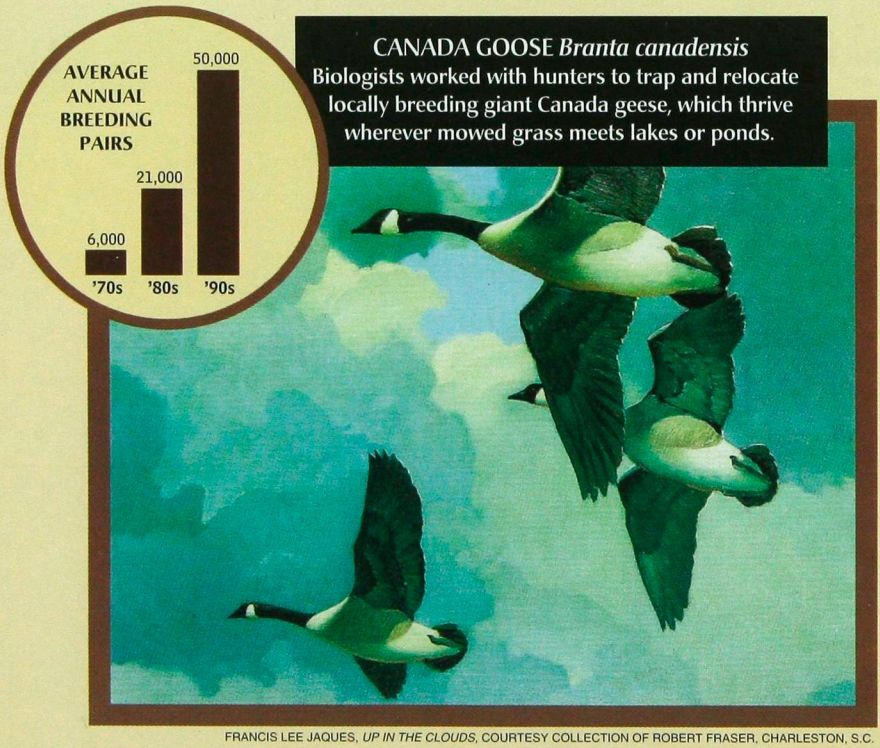
By adjusting harvest in the state's 11 bear permit areas (north-central and northeastern Minnesota), wildlife managers can now increase hunting pressure where bothersome bears raid farmers' crops and beekeepers' hives. And they can restrict harvest where bear numbers have declined.

Much of what Garshelis and his DNR colleagues Karen Noyce and Pam Coy know about bears comes from an ongoing DNR study that began in 1981. Researchers study bear mortality, reproductive rates, and population density. With this information they have built a computer model that predicts bear numbers based on factors such as hunter harvest and cub production.

CANADA GEESE

So successful has been the restoration of Canada geese over the past 30 years that today they are a nuisance in some cities and farming communities.

In the 1930s locally breeding Canada geese had all but disap-



CANADA GOOSE *Branta canadensis*
Biologists worked with hunters to trap and relocate locally breeding giant Canada geese, which thrive wherever mowed grass meets lakes or ponds.

FRANCIS LEE JAQUES, *UP IN THE CLOUDS*, COURTESY COLLECTION OF ROBERT FRASER, CHARLESTON, S.C.

MANFRED SCHATZ, *ON THE TUNDRA*, RUSSELL A. FINK GALLERY, LORTON, VA.

TROUBLING DECLINES

ALTHOUGH MANY GAME POPULATIONS HAVE MADE SPECTACULAR recoveries, other species languish.

ELK *(Cervus elaphus)* Before European settlement, this majestic member of the deer family roamed in herds across what is today western Minnesota. Now the state's tiny elk population has just 40 to 50 rarely seen animals, which live in the boggy forests near Agassiz National Wildlife Refuge. Wildlife biologists are confident they could increase the herd to several hundred animals. The major obstacle: Local farmers don't like the big ungulates trampling crops and eating grain.

NORTHWESTERN MOOSE *(Alces alces)* Though the growing moose population in northeastern Minnesota is a wildlife management success, the recent decline in moose numbers in the state's northwestern region has baffled biologists. Disease, predation by wolves, or some unknown cause has knocked down the northwestern moose population from 4,500 in 1984 to 1,700 in 1997. The DNR and U.S. Fish and Wildlife Service are trying to find out what's going on.

SHARP-TAILED GROUSE *(Tympanuchus phasianellus)* Before efficient fire control, the open brush and grass habitats favored by sharptails were maintained by naturally occurring wildfire. But as wildfires have been suppressed during the past several decades, so has the population of sharptails. From 1980 to 1998, as raptor-harboring forests have crowded in on open areas, Minnesota's statewide sharptail population has dropped by 74 percent. Though recent efforts to restore brushlands with controlled burns and shearing hold some hope, DNR biologists such as sharptail proponent Bill Berg remain concerned. "Sometimes we just don't appreciate a resource until it's on its way out," he says.

—*Tom Dickson*

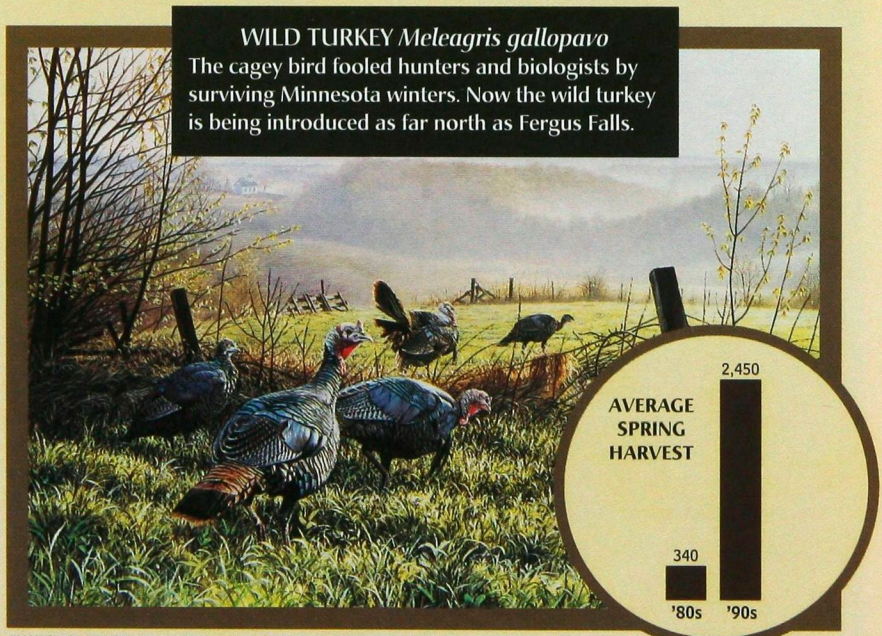
peared from Minnesota. Several thousand migrants still flew through, but the combination of egg gathering, unregulated hunting, and prairie marsh drainage had eliminated local flocks.

Migrant goose populations recovered by the 1960s, thanks to hunting restrictions and the establishment of Thief Lake and other state and federal refuges where the waterfowl could feed and rest during migration.

But not until the 1980s did "giant" Canada geese, a subspecies that makes up the state's breeding population, take off. The breeding population of giant Canadas has grown from about 5,000 pairs in 1979 to more than 50,000 in 1998.

"It used to be that geese were primarily in western Minnesota, and they were migrants," says Todd Eberhardt, who leads the DNR Wetland Wildlife Populations and Research Group at Bemidji. "Today there are resident flocks in Grand Rapids and Grand Marais, and throughout the northern forest region. That's been a huge change."

What accounts for the increase in the numbers of resident geese? Since the 1960s state and federal biologists, local conservation clubs, and large organizations such as Geese Unlimited have relocated giant Canada geese from Rochester and the Twin Cities to establish breeding flocks throughout Minnesota. Those



JIM KASPER, *FENCELINE CROSSING—WILD TURKEYS*, COURTESY WILD WINGS, LAKE CITY, MINN.

birds have found increased habitat in wetlands protected or restored during the past 30 years. The grazing waterfowl also thrive among the many mowed lawns near lakes and ponds in suburban housing developments, golf courses, and business parks.

Canada goose hunting harvests have increased accordingly. Minnesota often tops the nation in annual harvest with more than 100,000 resident and migrant geese killed. Yet resident goose numbers continue to grow.

WILD TURKEYS

Occasionally reported by pioneers arriving in what is today Minnesota, the wild turkey had disappeared from the state by the turn of the century. Today wild turkey gobbles reverberate from ridges in Houston County in the southeast to Becker County in the northwest.

Within 25 years the state's wild turkey population has grown from a few birds to more than 30,000. Harvest has followed suit. In the state's first wild turkey season in 1978, hunters bagged 94 birds. Last spring, a record 4,349 wild turkeys were shot during the spring season, up more than 1,000 from 1997.

Wild turkey numbers took off only after years of trial and error. From the mid-1920s through the mid-1960s, sports groups tried raising young turkeys on game farms and releasing them into woods. Foxes and coyotes grew fat on the easy prey. Not until wily adult wild turkeys were trapped from other states and transplanted into Minnesota did the population gain a foothold. The first successful stockings occurred in 1973, when biologists traded 85 ruffed grouse for 29 wild turkeys from Missouri, which they released in Houston County.

"Back then we thought wild turkeys needed large tracts of oak woods and might not survive Minnesota winters, so we assumed there wasn't enough habitat in this state to sustain more than maybe a few hundred birds," says Nick Gulden, DNR area wildlife manager at Winona. "We never expected anything like this."

Using funds donated by the National Wild Turkey Federation, biologists continue to trap wild turkeys in areas of Minnesota where the birds are abundant and then relocate them to suitable new areas. During the past three decades, the bird's range has continued to expand west and north.

According to recent studies by researchers at the DNR Farmland Wildlife Populations and Research Group at Madelia, the critical factor for wild turkey winter survival is the availability of food, such as corn or acorns. Dick Kimmel, DNR wildlife research biologist, says, "Anywhere you've got a combination of oak woods and food plots you've got a good chance of seeing wild turkey survival as long as the snow doesn't get too deep." ❑