

by Beth Parks

*Did they come out of the West?  
And do they deserve the complaints  
of sheep farmers and deer hunters?*

# Yankee Coyotes

**T**HE NAVAJOS called it "God's dog." But Herbert Foster, octogenarian Maine trapper, claims it is "the evil incarnate in the animal kingdom." And Donald Kenyon, veteran Adirondack woodsman, simply labels it "a damned nuisance."

What kind of animal is this that triggers such a range of attitudes? In an effort to establish the facts, I focused my master's research at the University of Maine on the eastern coyote. I bred and raised these controversial canids in captivity, tracked them in the wild, searched for their dens, inspected their kills, and examined their carcasses in the lab. Equipped with the results of these studies and with a trio of captive-born coyotes, I presented scores of educational programs to eager listeners throughout the Northeast. My aim was to counter common misconceptions about these intriguing animals. Yet true to form, the eastern coyote is still generating controversy. Nothing about the species escapes debate—not its ancestry, not its eating habits, not its role in the ecosystem.

When coyotes began to attract notice in the Northeast some 60 years ago, they appeared to be hybrids—but of what, no one seemed sure. Some scientific studies described animals strictly coyote-like in appearance and behavior. Other studies reported some traits associated with wolves and even dogs.

One theory—the most popular one—

holds that the animals moved eastward from southern Canada, interbreeding with small Ontario wolves along the way. Another says they were in the Northeast all along but were confused with wolves. Still others suggest interbreeding with feral dogs, or a rapid evolutionary change instead of hybridization. As one result of this confusion, the animal is variously called coyote, coydog, coywolf, new wolf, brush wolf, and barking bush dog, not to mention a host of unprintable expletives.

Dr. John George, professor of wildlife management at Pennsylvania State University, postulates that the geographic split

between western and eastern coyotes occurs along the Mississippi River. Others limit the eastern coyotes' range to the northeastern states and southeastern Canada. We do know that the largest numbers are in the northeastern states. No one can produce a good estimate of just how many, yet they seem to be spreading slowly, much like an ink stain on a blotter.

Unlike their grayish western kin, eastern coyotes come in myriad shades of blond, red, brown, grizzled gray, and near-black. Bands of color encircle each guard hair and help to variegate the fur under the dappled light of forests and fields. Ginny Mott, a young Maine farmer who has raised three eastern coyotes and photographed them in the woods, can barely discern her charges in their leafy backgrounds. She marvels at the superb camouflage-value of those colorful, complex coats.

She and her husband, Gordon, a research forester, know that those same rich, full coats make coyotes look much bigger than they really are. Only the late spring molt reveals the animal's true appearance: a thin, narrow-chested individual with long, spindly legs. Eastern coyotes are larger than foxes but considerably smaller than most wolves. (They outweigh their western counterparts by about 10 pounds.) Adult males average about 35 pounds, females about 25. Even so, local



**The male coyote pup at right, one of the family group on page 4, was photographed in a Massachusetts pasture in October, 1979. The adult male on the facing page sired many pups raised by the author for her University of Maine coyote project.**

Bill Byrne



legends hold that eastern coyotes are huge.

Forest "Toby" Hart, an internationally recognized taxidermist, chuckles when he hears about 80-pound coyotes. "They shrink awful fast when they get on the scale," he quips. Yet heavier coyotes apparently do exist, at least in some areas. New York biologist Mark Brown claims that 50-pounders are common in the Adirondacks, with some individuals weighing even more. Brown notes that the larger animals tend to look like wolves.

Whatever their heritage, eastern coyotes breed true and produce offspring that closely resemble their parents. They mature sexually in their second winter and mate each year in February or early March. After about nine weeks of gestation, five or six pups on the average arrive in April or early May.

Both the male and female make excellent parents. Unlike male dogs, the male coyote feeds and defends his pups, then helps teach them to hunt. Some young coyotes strike out on their own in late summer or early autumn. Others may



Beth Parks

## *Reported attacks on humans are rare, but coyotes don't make good pets*

John Harvey of Alexandria, Maine, once told the Bangor *Daily News* that a "pack of coyotes" tried to attack him while he was hunting deer. Harvey claimed to have been sitting in a small group of jackfirs when he bent his head down to light a cigarette. He looked up to see a female coyote, "lips peeled back and fangs showing...running straight at him from about 30 yards away." He shot the animal in the head.

How explain John Harvey's experience?

Quite possibly, the female along with her family was chasing prey that was unseen by the hunter. She may never have seen the seated Harvey, nor known whence came the bullet that took her life.

Even captive coyotes friendly to humans remain skittish and shy. Parent-raised pups will often run and hide at the slightest hint of a human's approach. Coyotes simply cannot be compared with domestic dogs. Anyone who assumes the responsibility for raising coyotes must realize that the animals retain their wild traits. For example, rising aggression among coyotes during their breeding season serves to space the animals throughout

their habitat. Spacing helps to assure adequate food for both the parents and their young. Ignore this aggression and you're in for trouble.

Maine game warden Rodney Sirois chose to disregard the heightened aggression his "pets" displayed as their breeding season approached. Sirois' coyotes were intensely possessive of his wife, but repeatedly had rebuffed the warden and the couple's two young sons. One day the boys, as usual, followed their mother into the pen during feeding time. The coyotes growled a warning, then grabbed and shook the children much as they would their own errant offspring. Frantic and furious, Sirois dispatched both coyotes with his rifle.

Currently, controversy over another incident is reaching a fever pitch in Maine. A North Amity man, Hazen Hall, claims to have been approached by four coyotes as he crossed a field to cut wood in mid-August. According to Hall, the coyotes—three small ones and a larger one that "looked like it had something wrong with its fur"—slowly advanced toward him with their heads held low.

Thinking the sound of a chainsaw would

frighten them away, Hall tried to start the machine but failed. Panicky, he hurled the saw at the advancing animals and dashed for his car. As he jumped on the hood, he felt a gentle tug on his pants leg. He looked around and saw the smallest coyote growling at him from about ten feet away.

Hall asserts that when he climbed into his car and slapped the side noisily, three of the animals "sneaked off." The smallest coyote paused, retreated about ten feet, then growled and showed its teeth. Hall shot it. Later, Hall maintained that a fragment of cloth from his pants leg was found in the animal's mouth.

State biologists who examined the remains of the coyote determined that it was an 18-pound male about four months old. The youngster's belly was packed with chokecherries, a normal coyote summer food. The pup's body was "loaded with fat" and seemed in excellent condition. No cloth fibers were seen in the animal's teeth. The pup did not appear to be rabid. However, no test was performed because of delay in bringing the carcass to authorities and because Hall's rifle bullet had smashed the pup's brain and skull.

We may never know the full story behind this unwitnessed "attack." Without more facts, any attempt to explain the incident would be pure guesswork. —B.P.



remain with their parents until the next breeding season begins. Many people mistakenly call these family units "packs."

How often crossbreeding occurs in the wild is a matter of conjecture. Given a choice, coyotes will probably mate with their own kind. Still, coyote-dog hybridizations sometimes take place—with rather interesting results. If a male dog mates with a female coyote, the most common combination, the dog assumes no responsibility for caring for the young. If the pups survive despite this fact, some studies show, their mating season shifts backward about three months. This puts them out of phase with breeding coyotes. When they are forced to breed with dogs, their young are born in the dead of winter and rarely survive. You might call this "Mother Nature's Simplified Scheme to Control Coydogs."

No subject sparks more squabbles than the eastern coyote's food habits. This remarkably adaptable canid is an eager opportunist, certainly no more predator than scavenger. He eats anything readily available, putting out the least possible energy to procure his meals. In tallying the contents of coyotes' stomachs, biologists regularly find small rodents, vegetation, insects, deer, snowshoe hares, woodchucks, birds, fruit, garbage, and many other things. The last have included inedibles such as paper, tinfoil, dogfood bags, and leather belts with the buckles still attached. The eastern coyote is hardly a connoisseur of fine foods.

But just try telling a hunter that the coyote is no gourmet. Most sportsmen are fiercely possessive of "their" game animals and see each one lost to coyotes as one less available for their own tables.

Biologists agree that coyotes kill some deer but see this as no threat to statewide populations. Biologist Mark Brown believes the eastern coyote's impact on New York's deer herd "greatly overrated." Vermont's Ben Day, New Hampshire's Joe Wiley, and Maine's Chet Banasiak all concur. All these states lie on the northern fringes of white-tailed deer habitat, and it is probable that, aside from hunter kills, severe winters claim the greatest numbers of deer there.

Coyotes do kill deer, but do they take

only the sick and weak animals? The question is difficult to answer, and many sportsmen believe otherwise. Says Wayne Dwyer, who has hunted and trapped in Maine for more than 20 years, "Take the biggest buck deer in the state, put him in three and a half to five feet of snow...and he's a sick, weak deer." There's an element of truth in Dwyer's observation. Coyotes trot with relative ease over snow crusts that fail to support their heavier prey. And as nature would have it, the increased nutritional needs of pregnant coyotes coincide with the late-winter crisis for white-tailed deer.

On the other hand, coyotes live on strict energy budgets. Tracking studies reveal that if they fail to make a kill within a reasonable distance, they will pick up the trail of another animal. Northern winters are cruel and unforgiving,

tolerating mistakes from neither prey nor predator.

Let's also not forget that dogs wreak havoc on deer in every state, yet coyotes often take the blame. Mark Brown estimates that in the Adirondacks, "60 percent of the 'killer coyotes' turn out to be dogs." None of us wants to believe that old Shep will chase deer. But given half a chance, he will. Shep doesn't need to conserve his energy; he can come home at night for his evening meal. Nor does he need to make direct contact with a deer to cause damage. A chased deer cannot feed. Exhausted, it may go into shock and die of pneumonia or other complications.

Sheep-growers are also concerned about coyotes. Reports of sheep and even calf losses are fairly common when coyote populations run high. Connecticut, New Jersey, Pennsylvania, New Brunswick,

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**Three of six coyotes of a family group, above, at dawn on a dairy farm in central Massachusetts. Early mornings were the only time they ventured from cover to prey on rodents and grasshoppers. Right, captive-born, sleeping coyote pups.**



## *Defenders fights a Maine bounty and Massachusetts hunting season*

As hunters, trappers, livestock farmers—and wildlife advocates—take sides, eastern coyotes are becoming political animals, to be reckoned with by state legislatures and government officials throughout New England.

In two states, Massachusetts and Maine, what to do about coyotes has already become a burning public question. Defenders of Wildlife is playing a major part in that debate, by influencing decision-makers, expressing our views to the press, and testifying at public hearings.

In Massachusetts, coyotes have been protected from hunting and trapping for years. Late last year, however, the Division of Fisheries and Wildlife, stating that the coyote was "most appropriately regulated as a fur-bearing resource," proposed that a four-month coyote-shooting season be opened this fall.

Eight major environmental and humane organizations (including Defenders, the Massachusetts Audubon Society, and the Massachusetts Society for the Prevention of Cruelty to Animals) opposed the move, and more than 400 letters of protest, against fewer than 50 in support, were received by officials in a matter of weeks. Nonetheless, in April the Fisheries and Wildlife Board approved the new season on coyotes by a vote of 4-3.

Now wildlife advocates are pinning their hopes on the Massachusetts legislature, where a bill (H 2914 introduced by Democrat John E. Murphy of Peabody) to protect the coyote permanently as a nongame species has been taken up in the

House of Representatives. Active Defenders members in Massachusetts are pushing to have the Murphy bill passed before the coyote hunting season opens on November 1.

This year in Maine, Defenders' state chapter worked successfully to defeat three bills aimed at intensive control of coyotes. One bill would have established a \$10 state-paid coyote bounty. Maine environmentalists and officials of the Department of Inland Fisheries and Wildlife condemned the bill, which was killed in committee. The second bill, introduced on behalf of the Maine Trappers Association, would have legalized public use of wire neck-snares for coyote trapping. Now only permitted to be used by state wardens, the snare is a wire noose which strangles the animal as it struggles to free itself. The legislation was withdrawn by its sponsors following a public hearing. The third bill, also killed in committee, would have set up a permit system allowing farmers or their agents to hunt and trap coyotes and other predators continuously and in an unlimited area around farms.

Defenders is working on the eastern coyote's behalf throughout New England. Wildlife supporters can play a significant role in shaping long-range state policies and public attitudes on coyotes. Issues facing state legislatures, regulatory agencies, and citizens include:

- Whether to allow coyote hunting and trapping, and if so how and when.
- Whether to resort to bounties and poisons for "coyote control."
- Who should be responsible for protecting livestock, and how.

Defenders wants to be a voice for people who not only accept the coyote's presence in New England but welcome it.

—Teresa Nelson, *Defenders East Coast Representative*

Quebec, and Nova Scotia have all reported isolated incidents of coyote predation on sheep. In each instance, the affected farmer registered a strong sense of panic.

In an effort to determine the extent of coyote depredations in Vermont, the state Fish and Game Department sent questionnaires to members of the Vermont Sheep Breeders Association. About a third of those who responded reported some kind of predation, with dogs blamed for over 57 percent of all sheep killed or maimed and coyotes for 34 percent. Vermont biologists, aware that some breeders may pad the reports, take these statistics with a grain of salt. Henry Swayze, a Vermont sheep-grower, points out that some towns reimburse sheep-growers for dog damage but not for coyote predation. "When you just pay for dog damage," agrees Frank Gramlich, his voice tinged with irony, "coyotes will stop eating sheep." Gramlich, a U.S. Fish and Wildlife Service officer in charge of Maine's animal damage control program, attributed 100 sheep kills in his state last year to coyotes. "But," he hastens to point out, "of the hundreds of sheep-growers in

Maine, only about a dozen reported depredations. And of those, only four appeared to have serious problems."

Like most others involved with livestock, Gramlich and Swayze see improved husbandry practices, such as wise positioning of pastures, increased use of fencing, and prompt removal of carcasses that would serve to attract coyotes, as necessary anti-predation measures. They believe that widespread coyote control—meaning eradication—is neither warranted nor desirable and that control should be limited to depredating animals. Swayze believes the answer lies in the currently outlawed 1080 toxic collar. "Wholesale poisoning, bounties, or other methods aimed at cutting back populations just won't work," he says with certainty. And it is true that traps, guns, and even the EPA-approved M-44 devices have not taken much of a toll on "problem" coyotes.

Self-styled vigilantes mock the efforts of those who seek sound management methods. Coyote-bounty talk festers among them every winter and sometimes bursts forth in a bona fide proposal in early spring. This year, on March 19, the Bangor

*Daily News* quoted State Representative George Carroll, sponsor of a coyote bounty bill, as saying, "Get rid of them any way you can. I don't care how. Just get rid of them." Carroll, with fervent hyperbole, characterized the species as "the greatest criminal the forest has ever had."

Lee Perry of Maine's Department of Inland Fisheries and Wildlife countered, "Hunting and trapping are not controlling the numbers of coyotes. They may, in fact, stimulate a higher reproductive level than would otherwise be expressed." Perry was referring to the well-known fact that coyotes respond to population pressures by varying their litter sizes, producing larger litters in the fat seasons and cutting back when times are tough. (It is worth noting, however, that even under the most favorable conditions no more than half the young coyotes are likely to survive their first year.)

Years of costly federal programs show that bounties simply do not work. They are both ineffective and conducive to fraud. Stories abound of trappers who bring in carcasses from other states; of men who raise the animals, then kill off all but their breeding stock; of others who



# The search for eastern coyote origins

Modern canids, along with bears and raccoons, very likely descended from a common ancestor. Wolves probably gave rise to many of our modern dogs. Even today, wolves and coyotes remain close cousins. Scientists believe that western coyotes engendered the newer eastern variety, but that wolves and dogs may have played some role.

Why don't we know for sure? Scientific studies have failed to produce a definitive answer. Henry Hilton's research at the University of Maine revealed that eastern coyote skull characteristics tend to fall between those of wolves and western coyotes, but closer to the latter. Helenette and Walter Silver, formerly of New Hampshire's Fish and Game Department, noted wolf traits in their study animals but did not discount the possibility of dog influence. Gary Moore, University of Western Ontario graduate student, reports that some skulls appear very "coyote-like" and others "very dog/wolf-like." My own pups seemed identical to western coyotes in both their physical and behavioral development.

The eastern coyote, most biologists

now agree, is simply a modified larger version of its western counterpart. Taxonomists contend that the differences are too slight to warrant calling it other than a subspecies. So in scientific circles the eastern coyote is known as *Canis latrans* var. *Canis* is Latin for dog, *latrans* means barking, and the "var." stands for variety.

Mark Brown, wildlife biologist with New York State's Department of Environmental Conservation, points out that as wolf reports dwindled during the early 1900s, sightings of coyotes began to increase. It is possible that coyotes were entering habitat vacated by the retreating wolves. This would tie in with other evidence suggesting that coyotes arrived in the Northeast about 60 years ago. Yet some older records suggest that coyotes may have been resident in the region much earlier but confused with wolves. In New York's Oswego County on Lake Ontario, bounty records from the Revolutionary period refer to "big wolves" and "little wolves." Says biologist Brown: "We're taking a look at some of those old reports and specimens. Maybe some of those little wolves were actually coyotes."—*B.P.*

use single pelts to manufacture ears or other parts required for the collection of fees. A few enterprising individuals make out quite nicely at state or federal expense. But coyote control? Forget it.

Others who call for bounties worry that coyotes may pose a threat to people. They fear that it may no longer be safe to walk in the woods or even along the street in town. Actually, although dogs

bite many people each year, attacks on humans by wild eastern coyotes are extremely rare. In Maine, for example, only two such encounters have been reported to date. In both unwitnessed incidents, the men involved say they shot and killed the offending animal before it could inflict any wound.

Bounty proponents also claim that coyotes carry dread diseases. Like other crea-

tures, coyotes do suffer from parasites and diseases. But the diseases are primarily density-dependent mechanisms that help to trim population numbers back to the carrying capacity of the land. And while mange and distemper often run high in dense canid populations, incidents of rabies in coyotes are exceedingly rare.

Sometimes even healthy coyotes are accused of being rabid. An interesting incident is recounted in an eastern coyote fact sheet published by the Vermont Fish and Game Department. It happened in Sudbury, Vermont, in 1964. "A farmer spied a young coyote acting strangely in the middle of a pasture behind his barn. The animal was running erratically, jumping in the air, and snapping its jaws. Thinking the coyote must be rabid, the farmer grabbed a rifle and shot it. The carcass was given to department biologists for examination. The coyote's stomach was packed full of red-legged grasshoppers. This often-maligned predator had only been having a good time and was actually helping the farmer when he met his demise."

Tales like this are becoming increasingly common throughout the eastern coyote's range. It sometimes seems that no matter what problem arises, the coyote is a handy scapegoat.

But we know this much about the eastern coyote. It is elusive, adaptable, clever, and resilient. Regardless of the pressures placed on its populations, it will probably survive and thrive in proximity to man. As long as suitable habitat exists, the eastern coyote is here to stay—and to cause continuing controversy.

*Beth Parks, a biologist who lives in Old Town in Maine, is well-known for her research on eastern coyotes.*

**Although much discussed, wild eastern coyotes—like this one—are seldom seen.**

Bill Byrne

