

## Coyotes not decimating deer numbers according to expert

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Above, the Eastern Coyote whose population is growing in some areas of Pennsylvania. One Penn State researcher says increased numbers of coyotes have not led to decreases in the native deer population.

(PhysOrg.com) -- It's a question that has captured the imagination of Keystone State deer hunters and wildlife lovers: Has increased predation on helpless deer fawns by an growing population of Eastern coyotes resulted in dwindling whitetail numbers across Pennsylvania's rugged northern reaches? The answer is no, according to a deer researcher in Penn State's College of Agricultural Sciences.

"It's a cruel world out there for wildlife," said Duane Diefenbach, adjunct professor of wildlife ecology and leader of the Pennsylvania Cooperative Fish and Wildlife Research Unit housed in the college's School of Forest Resources, "but it's no crueler in Pennsylvania than

other states."

There is no question the coyote population has grown dramatically in the Northeast in recent decades, he said, and everyone agrees that coyotes do prey on fawns, "but our data tell us that coyote predation is not an issue in Pennsylvania."

Diefenbach should know. Nationally recognized for his [deer](#) research, he has been involved in all the Pennsylvania Game Commission's deer studies since 2000, overseeing a groundbreaking fawn-mortality study completed in 2002. For the last decade he and his students have been monitoring hundreds of deer they captured and fitted with radio collars, about 3,000 in total, carefully documenting the animals' movements, behavior and fates.

"Significantly, very, very few adult deer in our studies have succumbed to predation from coyotes, bears or anything else," he said. "We now know that in this state, once a deer reaches about 12 months of age, the only significant mortal dangers it faces are getting hit by a car or being harvested by a hunter. By far, most of the time when a coyote eats venison, it is from a road-killed animal, or from a deer that was wounded by a hunter but not retrieved."

We know fawns often are killed and eaten by coyotes and bears, Diefenbach said, but that has always been the case.

"When we monitored more than 200 radio-collared fawns from 2000 to 2002, the survival rates of fawns in Pennsylvania were similar to what was previously found in Maine, Illinois, Minnesota, Iowa and New Brunswick, Canada," he said. "Our research has shown that overall mortality here is not extraordinary."

About 50 percent of fawns make it to six months of age, Diefenbach said.

"The general pattern in Pennsylvania and in other states and provinces is that we have seen slightly higher fawn survival rates in agricultural areas because there is less predation, and in forested habitats we see slightly lower survival rates."

According to Diefenbach, the literature shows that fawn survival for the first year of life in forested landscapes is about 25 percent.

"Our work showed that Pennsylvania came in at about 28 percent," he said. "Our research also showed that fawns in Pennsylvania agricultural landscapes have a 52 percent survival rate."

Some people have encouraged the Game Commission to implement a study of fawn predation by coyotes, but Diefenbach contends that it is not needed.

"I know this may be an unpopular view, but it is not readily apparent to me how another study on fawn mortality will help us better manage deer," he said. "Our 2000-to-2002 fawn study showed that fawn-predation rates were normal here, and I don't have any evidence that anything has changed since then -- no available data, such as changes in hunter-success rates in harvesting deer, suggest that coyote predation is increasing. If it is, then hunters should be harvesting fewer young deer, and we are not seeing that."

Diefenbach points to information contained in recent years' deer-hunter harvests that show fawn predation is not growing at an alarming rate.

"The fawn component of the hunter harvest -- typically about 40 percent of antlerless deer killed by hunters -- has remained largely unchanged for many years. If fewer fawns were surviving because of increased coyote [predation](#), they would not be available to hunters."

Still, Diefenbach understands the emotional reaction of hunters and

wildlife lovers to fawns being killed and eaten by predators such as coyotes, and he said that continuing deer research conducted by his unit at Penn State is examining fawn numbers and survival.

"Peoples' natural reaction to hearing and seeing coyotes, and knowing that they are everywhere in Pennsylvania, is to wonder how many fawns they kill," he said, "but I don't know what we would learn if we conducted another fawn-survival study, especially because of what we already know about deer-coyote ecology. I am advising a graduate student right now who is evaluating the assumptions and methods that we use to track and monitor deer-population trends in this state. His research is focused on the validity of the model we use to manage deer. All of his work done so far -- both in the field and with computer simulations -- doesn't show any evidence of a decline in deer numbers because we are not recruiting fawns into the population."

Provided by Pennsylvania State University

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