FEATURES

Horses and Wild Animals

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Throughout their existence, horses have been prey animals. Predators have been pursuing and feasting on them for eons, and they continue doing so today, despite the fact that domestication of the horse and the spread of civilization in general have decreased the range of both hunter and hunted.

Yet in a manner of speaking, there are more predators today. Some are as large as grizzly bears, and some are as small as mosquitoes. Granted, some of these creatures aren't predators in the true sense, but they are capable of causing a horse's demise. Instead of hunting a horse down and killing it, they take the more insidious route of infecting it with disease, such as mosquitoes harboring West Nile virus (WNV) or opossums spreading equine protozoal myeloencephalitis (EPM). Other wild animals, such as skunks and raccoons, sometimes carry rabies. One of the newest "predators" is the Eastern tent caterpillar, which has been implicated in fetal loss due to mare reproductive loss syndrome (MRLS).

We'll examine some animals that are predators in the true sense of the word and evaluate their potential for damage to a horse population, both domestic and wild.

They Eat Horses

In many parts of the country, there is virtually no problem with wild predators (meat eaters), but in parts of the West, the threat is real and constant.

When wolves were re-introduced into the Yellowstone National Park ecosystem in western Wyoming, ranchers began having problems. Since their re-introduction, the wolves have been doing what wolves do--killing prey animals for food. In most cases, the prey has been deer, elk, and buffalo, but there have been cases where wolves have attacked sheep, cattle, and horses.

Jon Robinett, a rancher near Dubois, Wyo., has lost one foal and one saddle horse to wolves. The foal, he said, was only seven days old and was in a corral. In that case, he says, it appeared to have been a "sport kill" because the wolves killed the foal, but did not eat it.

The saddle horse, he says, was in a pasture in a mountain valley and, in this case, the wolves killed the horse and ate it.

Wolves are not the only threats to the Robinett horse ranch. Grizzly bears have also been guilty of attacks. Robinett said that three of his horses have been attacked by grizzlies, and while they sport scars from claw marks, all survived.

There is a lot of that type of interaction between domesticated livestock and predators in the mountainous part of western Wyoming, according to Robinett. He doesn't blame the wolves and the bears. "They're just doing what they've been doing for years," he says.

However, he does take issue with government officials who protect grizzly bears and have re-introduced the timber wolf, which also is protected.

In northeastern Wyoming, mountain lions have become a threat to a band of wild horses that roam in the Pryor Mountains. The band is one of the most studied groups of wild horses in the country, and DNA tests at the University of Kentucky have indicated that they very likely trace back to early Spanish mustangs that roamed across the West.

Linda Coates-Markle, a Bureau of Land Management (BLM) wild horse and burro expert stationed in Billings, Mont., says that mountain lions are preventing the herd from expanding in size. As of early August 2004, there were 149 horses in the Pryor Mountains herd, but that number was decreasing at the rate of about two foals per week.

Coates-Markle said she fears that the entire crop of foals born this past spring will have been taken by mountain lions by the end of the year. Interestingly, she says, as recently as 10 years ago, there was almost zero predation in the herd, and it has been growing steadily over the past decade. The prime culprits this year, according to Coates-Markle, are a large mountain lion female and her two cubs that are now a year old.

Solving the problem is a little more complicated than just trapping or shooting the mountain lions, she says. The Wild Free-Roaming Horses and Burro Act, passed by Congress in 1971, mandates that bands of wild horses and burros should be managed as a natural

part of the ecosystem where they exist. It's a little hard to justify the concept of getting rid of the mountain lions this year, then a couple of years down the road spend public money to round up and find homes for excess horses in the herd.

"Our best recourse at the present," she says, "is to watch and monitor what is occurring."

Through the years, black bears also have taken some of the foals in the Pryor Mountains, but not many. The difference between a black bear kill and a mountain lion kill, says Coates-Markle, is that the bear will skin the carcass before consuming it, and the mountain lion does not.

Coyotes also are present in the Pryors, Coates-Markle says, but it is rare that they will take down a foal. In most cases, she says, the mares are successful in driving off coyotes, and their rare kills usually involve a newborn foal in a weakened condition.

The presence of predators changes the dynamics of the wild horse herd, according to Coates-Markle. For one thing, the dominant horse in each band--usually the lead mare--remains in that position longer than normal, indicating that the mare has perfected her survival skills.

In addition, small harems join together to form a large harem to provide strength in numbers. Still another change, she says, involves satellite bands of bachelor stallions that do not have bands of their own. The bands of bachelor stallions will grow in size as the threat continues, she says, and they will hover near the bands of mares and foals as additional protection. Coates-Markle says she first observed this behavior when working in the Montgomery Wild Horse Territory near Bishop, Calif.

She says mare bands have already been enlarged in the Pryors as part of the change in herd dynamics, but the activity of the satellite bachelor bands to hover nearby in a protective role has not yet materialized.

Another wild horse area where mountain lions are having a strong impact on the herd is in the Cerbat Mountains near Kingman, Ariz. Scott Elefritz, a wild horse and burro specialist in the BLM's Kingman office, says mountain lions have made it unnecessary to round up and remove any wild horses from the Cerbat herd for the past six to eight years.

The Cerbat herd area consists of 83,000 acres of land. The major physical feature of the area is the Cerbat Mountains, with its associated peaks, ridges, and canyons. The mountains are flanked by the Sacramento Valley to the west and the Hualapai Valley to the east. Cherum Peak, at an elevation of 6,983 feet, is the dominant landmark within the herd area, and it also is the heart of the wild horse area. Because the herd area varies in elevation from 3,400 feet to more than 6,900 feet, temperatures and precipitation also vary. Temperatures can reach 105 degrees in the summer and drop to zero degrees in the winter.

There are several popular theories concerning the origin of the herd. One theory is that the Cerbat wild horses are descendants of Spanish mustangs introduced in the early 1500s. Another theory is that the ancestors of these horses escaped from early 1700s explorers. Still another theory is that they were abandoned by ranchers or escaped from ranches in the early 1800s.

Regardless of origination, the herd has existed in the Cerbat Mountains since before the 1971 Wild Free-Roaming Horses and Burro Act was passed, and today they are protected by law.

Mountain lions definitely have kept a lid on herd expansion. Elefritz says that it is rare for more than five foals, 10 at the most, to survive their first year. Mountain lions also prey on deer, he says, and they have been responsible for keeping that population lower than what would be considered normal.

Also figuring into the overall equation concerning lack of recruitment--new members being added to the herd from other bands--has been four years of drought, according to Elefritz. Normally, he says, there is an annual recruitment of 17-20%. During the drought, he says, the recruitment has dropped to 8%, with a number of mares being barren.

While the mountain lion is the prime predator in the Cerbats, it isn't the only one. Elefritz says that packs of feral dogs also pose a threat. When they make a kill, it often is as much or more for sport as for food, and the dogs will eat only what they consider choice morsels and leave the rest of the carcass. During this past summer, he says, a pack of dogs harassed some of the burros in the herd area. Quite often, he says, the packs of feral dogs are enlarged by "pets" that are allowed to roam freely while their owners are at work.

Wolves pose little threat to the wild horse population in Wyoming, according to Stephanie Anderson, a BLM wild horse and burro specialist in the Rock Springs office. She says the wild horse herd area is beyond the range of the timber wolves that have impacted the Robinett ranch operation and other ranches in that area.

"If they do come down into the wild horse herd area," she says of the wolves, "I think they would find easier prey to bring down than horses."

She says that coyotes are plentiful in the herd areas, but their impact on the wild horse population is negligible.

Predators At Home

We turn now to wild animals and insects that can impact both wild and domestic horses, but aren't predators in the true sense.

The good news is that their effects can be negated with vaccines. Rabies is a case in point. Science has proven that skunks can often be the source of rabies. Some horsemen routinely vaccinate for rabies, and others do so when a number of rabid skunks show up in a particular area.

The homely little opossum is another wild animal that is implicated in spreading a disease--EPM. The disease occurs when protozoal parasites infect and invade a horse's central nervous system. There are characteristic lesions in the brain and spinal cord that cause lack of coordination and muscle atrophy. The two protozoal parasites implicated in EPM have been identified as Sarcocystis neurona and, less commonly, Neospora hughesi. Opossums are considered the definitive hosts for S. neurona. They shed the infective sporocysts (egg-like stage of development) in their feces. When a horse ingests food or water that has been contaminated with opossum feces, it is immediately at risk of developing EPM if the infective sporocysts are present in the feces.

According to researchers at the University of California, Davis, the definitive host for N. hughesi has not been identified.

However, a report from Davis adds another dimension to S. neurona--it has also been found in sea otters. In April of 2004, an unusually high number of dead or stranded sea otters from the Morro Bay area in California were found to be infected with S. neurona.

The Davis scientists are continuing their investigation. They had this to say in the July 2004 Horse Report:

"In horses, researchers have described the incidence of EPM, the geographic distribution of the disease, risk factors associated with infection, vulnerability of fetuses in the womb, and the age at which horses are more likely to be exposed to the parasite under field conditions. The case of Sarcocystis neurona appearing in two quite different species underscores the importance of understanding the basic mechanisms by which all disease spreads."

In the same Horse Report, Davis researchers also revealed that WNV, another example of indirect attack on horses by creatures in the wild, has made it all the way across the United States and is now in California. In the case of WNV, wild birds serve as a reservoir for the virus and mosquitoes feeding on these birds can spread the disease to the horse, which is a dead-end host (isn't thought to transmit the disease).

You can't vaccinate against mountain lions, bears, or wolf attacks, but you can take precautions with your horses in wilderness settings and the natural habitats of those predators. As for the smaller, more urban types of "predators," vaccines and management can be effective in preventing the diseases they carry.

Living Together

Here are 15 common sense suggestions that can facilitate co-existence of horses and wild animals. Some of the suggestions originate from game and fish officials, and some come from individuals living in areas where wild animals abound.

1. Some wild animals, such as bears, are scavengers. Keep horse and home areas free of attractants, such as garbage, low-hanging bird feeders, and accessible grain bins.

2. Store all grain in heavy metal or plastic containers that can be locked and are strong enough to resist bears.

3. Install an overhead surveillance light that comes on when darkness falls and remains on until sunrise.

4. Sometimes horses are attacked by domestic dogs running in packs while their owners are at work or away. In parts of the West where cattle and sheep are raised, the problem is quickly solved by ranchers. They simply shoot all stray dogs that are near the livestock. This isn't always a viable option. Contact law enforcement officers and report any dogs that are running at large in your area.

5. If a number of rabid animals--especially skunks--are reported in your area, be sure to vaccinate against rabies.

6. If practical, keep a watchdog in the vicinity of horses to sound an alarm if wild animals approach.

7. When riding horseback in grizzly bear country, make plenty of noise--talk, sing, and/or attach bells to horses. Bears generally do not seek confrontation and will leave the vicinity if they know a horse and rider are approaching.

8. When riding in bear country, always carry a readily accessible can of pepper spray--such as one attached to your belt. It has proven to be more effective than a gun in warding off an attacking bear.

9. When riding and camping in grizzly bear country, pack all food in bear-resistant containers and hoist them high in a tree at night.

Pitch sleeping tents well clear of the cooking area.

10. When living in an area where wolves, bears, or mountain lions are commonplace, put young foals inside a barn at night, if possible, and make certain mares about to foal are in a place that is not accessible to predators.

11. If a bear or mountain lion is encountered on the trail, stop your horse and sit quietly. Do not advance on the animal and do not turn and flee. If you advance, the animal might interpret it as an attack and might attack you in what it deems to be self-defense. If you flee, particularly from a mountain lion, it is a signal of fear on your part and the animal might be stimulated to attack--sort of like the inter-relationship between a domestic cat and a mouse that is seeking to escape its clutches.

12. Make certain that corrals and pastures are surrounded by sturdy fences so that your horses do not break through them and escape if frightened by a wild animal.

13. If you live in an area where rattlesnakes are common, discuss with your veterinarian the procedures you should follow if your horse is bitten by a rattler.

14. Don't forget the tiny attackers, such as mosquitoes. Clean up mosquito breeding areas and follow your veterinarian's advice concerning annual vaccinations against such mosquito-borne maladies such as West Nile virus.

15. Educate yourself about the wild animals in your area. Helpful sources in this endeavor are game and fish officials, your county agriculture agent, and your veterinarian. Learn about your wild neighbors so that you and your horses can co-exist with them in peace.

Remember, in most cases, the wild animals were there first and you are the interloper.--*Les Sellnow*
