

Working hand-in-hand with conservation-minded hunters, N.C. Wildlife Resources Commission biologists work through the agency's Black Bear Cooperator Program to ensure that black bear populations remain strong throughout the state.

BEARING RESPONSIBILITY

Written by Mike Marsh
Photographed Todd Pusser

Black bears were once considered to be nuisance animals. The largest predators in the state, bears caused severe damage to crops and orchards. They also occasionally took pigs, calves and other livestock. Back in those days, a farmer or settler figured the only good bear was a dead bear.

But the turnaround in the status of black bears has been absolutely remarkable. Although bears are still the culprits in a large number of nuisance complaints, occurring mostly in the mountains where new subdivisions are cropping up inside bear strongholds, they are now the state's premier big-game animal. The restoration of the bear population to a status envied nationwide has come through teamwork between the technicians and biologists of the N.C. Wildlife Resources Commission and North Carolina's hunters through the Black Bear Cooperator Program.



Hunting of a Different Sort

Dale Davis is the Wildlife Commission's northern coastal management biologist. Like many others in the commission's wildlife management staff, he was looking for hunter-harvested bears during the first week of one of the coastal region's 2008 bear seasons. The state has six different bear seasons occurring in various clusters of counties. The bear seasons are based on the data that biologists like Davis have collected from hunters in the field.

"During the first week of any bear season, whether it's in the mountain or coastal region, Wildlife Commission staff are in the field visiting hunters with their bear harvests," Davis said. "We have a number of ways of contacting hunters, and they also contact us. The bear line is open during the first week of any bear season."

The "bear line" or "bear hotline" is the Black Bear Cooperator Program's communications link. Through a cooperative agreement with the commission's Division of Wildlife Management and its Division of Enforcement, during the first week of any bear season, any hunter harvesting a bear can call the toll-free wildlife violations reporting telephone number of 1-800-662-7137 to request assistance in having biological information collected from the harvested bear. The Enforcement Division's dispatcher relays the call to personnel in the Wildlife Management Division, who in turn contact commission field staff via mobile phone.

Where once radio communication was used to relay the information, mobile phone service is now the norm, because most areas of the state, even remote mountains and coastal swamps that form the core of bear range, have transmitter towers for mobile phone communications.

In addition to this system, hunters may also directly call the Wildlife Management office in Raleigh at (919) 707-0050 during one of the seasons to let field staff know when biological data can be obtained. Davis explained that though some hunters contact him directly, others have used former hunter-check stations for so long that they still take their bears to those locations for the convenience of management staff.

"We divide opening weeks of the bear seasons into different days for each staff member who is working the Black Bear Cooperator Program," Davis said. "I'm working today [Wednesday], taking the place of someone who worked bears yesterday and the day

before. Either I or someone else will work these same counties on the remaining days of this opening week of the bear season. Rotating our management staff allows us to maintain the continuity of our other management activities. Hunting season is always a busy time of year for us. But sampling hunter-harvested bears is given an extremely high priority."

Bear hunters were having good luck, and calls were coming over Davis' cell phone. Some of the calls were referred to other commission staff members when a quick consultation revealed they were closer to the harvest sites than was Davis. But Davis continued to drive through his designated area in Tyrrell, Bertie and Washington counties, traveling through territories frequently visited by bear hunters, including several commission game lands. Davis received a telephone call directing him to his first site. But another staff member, Migratory Game Bird Coordinator Joe Fuller, was already finishing with the bear.

"This was a big male bear," Fuller said. "I've extracted both premolar teeth and weighed the bear. It weighed 540 pounds."

The hunter was Tracey Conner of Creswell, who was hunting with her friend Troy Sutton. She had stalked the bear after spotting it in a farm field.

"I've been bear hunting for seven years, and this is my first bear," Conner said. "I was happy to have the biologists come to see my bear. Now I know how much it weighed, and I know the information they collect will help them manage bears."

Fruit of Their Labor

Management has different definitions to different people. On the one hand are the hunters, who want to maintain a high enough bear population density to provide them with good opportunities for success. On the other hand are landowners and farmers such as Archie Spear, the owner of the land where Conner harvested her bear.

"I'm glad to have bear hunters like Troy and Tracey," Spear said. "Bears are getting kind of thick around here. That's a big bear, and he got that big by eating corn, soybeans and wheat. That's one bear I won't have to feed anymore."

Davis received another set of directions to a harvest site and contacted the hunters via mobile phone. After a 45-minute drive, he wound up at the hunting camp of Culley Wilson of Wild Wing Adventures Guide



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Service. "We had a good hunt this morning," Wilson said. "Several bears were seen. But most of the hunters decided to wait for bigger bears."

One hunter who had waited long enough was Steve Hurd of Burlington. After congratulating Hurd and Wilson and exchanging other pleasantries, Davis received permission to sample Hurd's bear.

"I've known Culley for a long time," Hurd said. "I've always wanted to do a bear hunt. It was my third day in the same stand overlooking a cornfield. I saw one bear yesterday, but I considered it too small. I watched it for an hour and 15 minutes. It was bigger than this one and probably weighed about 350 pounds. But today was different. Rain was forecast, and I knew it would be my last chance for this year. When I saw this one today, I decided to take it."

Hurd's bear was a female. Davis backed his pickup truck near the bear. The bed of the pickup held a frame and hoist. Davis used a hand winch to lift the bear off the ground and weigh it on a scale. The bear weighed 280 pounds. Davis then removed both premolar teeth from the bear and placed them inside a small envelope with the identification

information for the sample written on the envelope. Next he performed field surgery on the bear and deftly removed the bear's reproductive tract. The reproductive tract was placed in a bottle of liquid preservative. Davis wrote identification information on a label on the outside of the bottle.

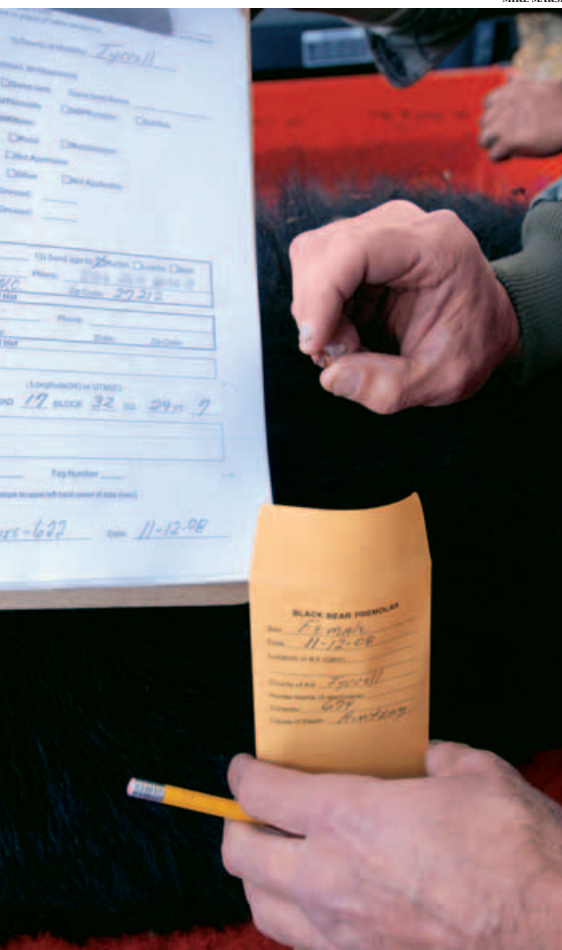
Davis had a clipboard full of Bear Cooperator forms. He filled out a form for the sample, including the information gathered from the bear, the county of the harvest, whether the method of hunting was dogs or still-hunting, and the name and contact information of the hunter.

"Anyone who harvests a bear and allows us to sample it receives a North Carolina Black Bear Cooperator cap," Davis said. "We mail the cap to them, along with information about the bear. The information we send to the hunter includes the age of the bear, which we receive from a laboratory that examines the premolar teeth. The reason we extract both premolar teeth is that sometimes examination of one tooth is inconclusive, or one of the teeth might be damaged during extraction."

"I've always wanted a Bear Cooperator cap," Hurd said. "They are really nice hunting caps."



MIKE MARSH



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Opposite page: Biologists remove both premolars from harvested black bears for further study, and record all pertinent data on the bruin. Above: Data collected includes each bear's weight and full contact information for hunters taking part in the cooperator program.

Our bear sanctuary system and our hunting regulations have certainly helped them. But bears have mostly helped themselves by adapting to an increasingly urbanized landscape.

In the past, cooperating hunters were given a fully camouflaged cap or a T-shirt. But hunters showed such a preference for the current style of cap that it is now the reward they receive.

"It has a camouflage bill and a hunter orange top, with 'North Carolina Black Bear Cooperator' and a bear inside a diamond, similar to a bear sanctuary or game land sign," Davis said. "It's almost a mark of honor for a North Carolina bear hunter because the only way to get one is to earn one by cooperating with the commission to further our management goals for black bears."

Davis received another call, sending him to a group of hunters who were hunting with hounds and had taken a bear in Hyde County. They had transported it to a closer location where Davis could meet them.

The successful hunter was Jim Copland of Burlington. Copland was already wearing a Bear Cooperator cap when he helped Davis weigh his bear, a 280-pound female.

"I've taken 16 black bears in North Carolina, other states and Canada, as well as a Kodiak brown bear and a grizzly bear," the 68-year-old Copland said. "Bear hunting is one of the most exciting sports in the world. To ensure the future of such a wonderful outdoor pursuit, I'm always more than happy to have biologists like Dale Davis sample any bear I am fortunate enough to harvest. It wasn't that long ago when there weren't very many bears in North Carolina. Thanks to science and sound management, bears and bear hunting will be around for our children and grandchildren to enjoy."

Davis removed the reproductive tract and premolar teeth from Copland's bear as he had done with Hurd's bear. He then completed the form with the identifying information.

The Next Step

Colleen Olfenbuttel is the commission's bear and furbearer biologist. She receives, compiles and translates the bear harvest and Black Bear Cooperator Program information. "During the first week of any bear season, hunters who harvest a bear can call the commission's Enforcement Division's violations reporting line," Olfenbuttel said. "But our sampling continues throughout bear season. After the first week, some hunters contact our local biologists, who will make arrangements to sample the bears. But we also provide all the necessary materials to many hunters who know how to take samples themselves."

Once the teeth have been obtained, they are sent to a laboratory in Montana, where researchers cut the teeth into extremely thin slices so they can examine the growth rings inside with a microscope. The growth rings tell the age of the bear the same way the growth rings of a tree tell a forester the age of the tree.

Examination of the reproductive tract tells whether the bear is pregnant and often how many offspring she may have borne in the past. "We take the ovaries and fallopian tubes from female bears because they tell us two things," Olfenbuttel said. "Examination of the ovaries tells us whether she was bred the previous summer. Examination of the fallopian tubes will show a visible scar if she's reproduced in the past. Fallopian tube examination is not 100 percent perfect because the scars can fade over time. But usually, the presence of scars will give us an idea of her reproductive history."

Using these data, Olfenbuttel said, the commission has been able to track the age structure and reproductive status of the state's bear population as a whole. The information shows whether the population is increasing, stabilizing or possibly decreasing.

"We have models that give us an estimate of the bear population," she said. "The information obtained from bear hunters, through these models, helps us establish our bear hunting seasons. Except for foxes, bears have the greatest variability in hunting seasons of any game animal in North Carolina. Bears are slow reproducers, so their management is very different from smaller mammals such as rabbits and squirrels that have huge litters. Bears average having only two cubs every other year, so we have to be careful how we manage them. We don't want too much mortality or it could create a population decrease. We have been conservative in what we recommend to avoid overharvesting our bears."

Successful Approach

Since the Black Bear Cooperator Program began in 1969, up through the 2007 hunting season, 17,212 bears were sampled. Though the lion's share of samples comes from hunter harvests, approximately 10 percent have come from road kills. Olfenbuttel said the commission obtains samples from approximately 50 percent of hunter-harvested bears in the mountains and approximately 40 percent of hunter-harvested bears at the coast. Not only does this information help safeguard



How Are Bear Teeth Adapted To An Omnivorous Diet?
See Nature's Ways, page 39.

the bear population, it could also be used to defend the state's bear hunting seasons in the event that anti-hunting groups were ever to challenge the viability of North Carolina's bear population, as has occurred in other states.

The bear data collected show the population and range of bears are still increasing in North Carolina, resulting in a new season in 2008 for Greene, Pitt and Lenoir counties. Olfenbuttel said 33 bears were harvested there during the 2008 hunting seasons.

"Based on the presence of breeding females in our samples, bears now occupy 45 percent of the state," Olfenbuttel said. "We estimate the coastal population to be 7,000 to 9,000 bears and the mountain population at 3,500 to 5,000 animals. Occupied bear range is estimated to be more than 10 million acres. When our bear restoration efforts began in 1970, there were only 4,000 bears occupying about 2.5 million acres. Bears have proven to be very adaptable to changes in the environment in North Carolina over the past 30 to 40 years.

"Our bear sanctuary system and our hunting regulations have certainly helped them. But bears have mostly helped themselves by adapting to an increasingly urbanized landscape. The biggest example is the gated communities in the mountains, where bears live among the houses. People who aren't used to seeing them complain of bears in garbage cans and bird feeders and eating pet food. People must learn to remove food sources so they can coexist with bears."

Room to Roam

The state's system of designated bear sanctuaries encompasses 392,446 acres. In addition, parks, watersheds, other state and federal lands, and private land where owners do not allow bear hunting create another 2,232,300 acres of de facto sanctuary within areas of occupied bear range that are considered to be bear habitat. "We have documented a bear sighting in nearly every county of North Carolina," Olfenbuttel said. "There's no breeding population in the Triangle area. But we recently had a bear killed by a vehicle at the Durham-Orange county line. Typically,

these sightings outside occupied bear range are sightings of young males dispersing, searching for a female or a new home range."

Bears have come a long way, from being extirpated from most of their original range to occupying nearly half the state and now generating excitement with sightings that can occur almost anywhere. The state's hunters can be justifiably proud, tipping their Bear Cooperator caps to themselves for their role in this stunning achievement.

"The Bear Cooperator Program provides us with an enormous amount of information, and it's very cost effective," Olfenbuttel said. "If staff or a university tried to collect the same amount of data, it would likely cost hundreds of thousands of dollars.

"We spend about \$100 to \$130 per bear sampled, which I feel is a real bargain for the amount of information we learn about the bear population. Most of that cost is paid through hunting license fees and the federal excise tax on firearms, ammunition and archery equipment. Our hunters manage our bears at all levels. Without them, we would have to find other funding and other ways of conducting bear research." ♦

Mike Marsh, a freelance outdoors writer living in Wilmington, is a frequent contributor to Wildlife in North Carolina.



Above: Whenever possible, the Black Bear Cooperator Program records information about bears killed on roadways. Below: Scientists with Virginia Tech are tracking black bears with GPS collars as part of a study to find out the animals' travel patterns. Hunters may harvest collared bears, but are strongly encouraged to take part in the cooperators program or at least call the number on the bear's collar.

