

Black Bear Tracking Is Rife With Pitfalls

By BARBARA S. MOFFET

In The National Geographic News Service
PISGAH NATIONAL FOREST, N. C. — The truck is perched on an overlook that drops sharply in the valley. Beyond rise the southern Appalachians — the nearby peaks a forest green, blending into successive scallops of blue and then translucent gray.

A wide antenna, sprouting from a hole in the truck's roof, twirls in the damp mountain breeze. Inside the truck, a steady beep, beep, beep tells the scientist something the eye cannot see: There are bears in these woods.

"That one's Baldy," declares research assistant Peggy Horner as she zeroes in on a signature beep with antenna and compass. "He's right over that ridge." The nature of the beep indicates Baldy is on the move. "If the signal is recording activity, I like to imagine the bear moving along, nibbling blueberries," Horner says. "If it records inactivity, I think of the bear curled up somewhere, asleep."

Collars Keep Tabs

Baldy is one of 17 black bears now in a scientific study led by Dr. Roger A. Powell of North Carolina State University. To learn about the bears' ecology and use of territories, Powell and his assistants have collared them with telemetric devices so that they can be tracked. The project, partly funded by the National Geographic Society, also will help determine how many bears the forest habitat can support.

The most common bears in North America, black bears once lived in the forests of nearly every U. S. state. Smaller than grizzlies, black bears also are more afraid of people and rarely tangle with them.

Exactly how many black bears dwell in western North Carolina's Pisgah National Forest is not known, but Powell thinks the number may be dropping. Many of the bears studied earlier have been felled by hunters' bullets — there is no limit on the total bear kill — and some are poached in the sanctuary set up to protect them.

Outside it, they are fair game during hunting season. "A bad year for acorns can drive the bears out of the sanctuary in search of food, and bang — they're hit," says Mike Fritz, a research assistant.

Progress comes slowly in this long-term study, which is also funded by Earthwatch, the North Carolina Wildlife Resources Commission, and the university. Some months, the group's only contact with bears is the signal picked up by the telemetry truck that cruises the Blue Ridge Parkway, often round-the-clock. The traps carefully laid in the remote forests lie empty, the sardine bait uneaten or snatched by a clever raccoon or opossum.

But when a bear does spring a trap — designed to hold its law painlessly — the group moves with the dispatch of a hospital emergency-room team.

Bear Dance Reversed

As one worker dances to distract the bear, another jabs it with a dose of tranquilizer. After waiting at least 10 minutes, the bear is nudged to make sure it's truly asleep. Provoking no response, the team moves in to record the animal's vital statistics. Blindfolding it to protect its eyes, they measure nearly every part of the bear's body, draw some blood, and pull a small tooth to learn the bear's age. The animal is tattooed with a number and outfitted with a radio transmitter. All the bears receive shots of penicillin to fight infection.

Some bears prove more challenging than others. The most memorable effort of research assistant John Zimmerman involved a mother bear called Glady and three cubs that were wintering in a hollow oak tree.

Zimmerman wanted to learn about the bears' winter physiology — it is different from that of other hibernators. After determining that Glady had entered the tree from a hole 15 feet off the ground, he took a crash course in rope-climbing, rigged a pulley system, and was hoisted into the tree. Glady laid curled up below him, her cubs tucked into her fur.

After tranquilizing the mother, Zimmerman was lowered toward her, feet first. "Knowing your foot's going to tap her on the top of her head is pretty scary," he recalls. Held by a harness, he reached down and pulled out each month-old cub. "They were at the clinging stage, and they just attached immediately to my shirt," he says.

Zimmerman handed each cub to co-workers on the ground, who quickly measured and weighed them. "As I handed the third cub down, the tree rumbled. I thought the mother had awakened...but we listened again, and she was only snoring." The team was able to replace the cubs before the mother bear woke up.

In spring and summer, a day in the life of a male bear at Pisgah might go like this: At dawn's first light, the bear is up and foraging alone, for berries, leaves, roots, carrion, insects, or honey. "Black bears are adapted to take advantage of any new food source they can find," says Powell. "Because they are so opportunistic, there is nothing abnormal about their visiting dumps or raiding campsites." Pisgah bears, however, rarely do. Unlike those at Yellowstone National Park, where hunting is not allowed, bears of Pisgah apparently have come to fear people.

Naptime Is Midday

From about 11:30 a. m. to 3:30 p. m. the bear takes a siesta, usually under a rock shelter or in a rhododendron thicket. Then it's time to resume foraging, which continues until the bear goes to sleep about midnight. Horner thinks each bear has a half-dozen regular sleeping spots.

In the fall, bears are busy eating acorns, in anticipation of winter. Winter means denning — retiring to a hollow tree or cave to sleep. But unlike other hibernators, the black bear's body temperature and metabolic rate drop only a little. "I don't know anything else that can go that long without eating, urinating, or defecating while keeping a high metabolic rate," Powell observes.

Powell's study focuses on the bears' use of territories. Research on black bears in Minnesota and Canada has shown the females to be highly territorial — setting up non-overlapping territories and strictly defending them from other females.



Calmed by a tranquilizer, Bear no. 87, also known as Glady, rests while a technician applies protective ointment to her eyes. After being weighed and measured, Glady was fitted with a radio collar so that scientists could track her wanderings through

North Carolina's Pisgah Bear Sanctuary. A long-term study, partly supported by the National Geographic Society, is focusing on the black bear's use of territories.

A scientific theory holds that animals are most likely to defend territories when the food supply is at an intermediate level. "I believe that because productivity of food is so much higher down here, the bears should be less territorial, and may not be territorial at all," Powell says. By closely tracking the movement of the female bears, he ultimately wants to learn exactly what effect food supply has on the Pisgah bears' social organization.

Territorial or not, each female in the Pisgah forest has a home range as large as 10 square miles, where she stays most of her life except to seek food during the "fall shuffle." Cubs remain with their mother for 1½ years. After that, the mother apparently relinquishes part of her range to her daughters, and the sons are pushed out by breeding males. Breeding takes place in July.

Snaggletooth Leaves Home

The scientists are still puzzling over the saga of Snaggletooth, a female bear that suddenly left her home range on the sanctuary last October. While she was missing, someone reported finding a

discarded radio collar in the woods, about 25 miles away. Fearing the worst about Snaggletooth, Horner and co-workers set out to find the collar.

After locating her signal from the Blue Ridge Parkway, they hiked with a portable antenna for several days through dense forest. But strangely, the signals seemed to move around, coming from different places, and finally fading out altogether. They realized that Snaggletooth must be alive and wearing the collar, a surprise because bears rarely travel that far. The discarded collar belonged to another bear.

It was then late December, time to den, and hunting season was on. As the scientists tracked Snaggletooth on her risky journey back to the sanctuary, they heard a gunshot. "We were praying she hadn't been hit," Horner recalls.

Soon, they picked up her frequency again, this time safely within the sanctuary. Snaggletooth is still out there today, rarely seen but frequently heard. The reason for the journey remains her secret.

Free, Reduced Price Policy Adopted

Warren County Board of Education recently announced its policy for free and reduced price meals for children unable to pay the full price of meals served under the National School Lunch and/or School Breakfast Programs. Each school and the central office has a copy of the policy, which may be reviewed by any interested party.

Children from families whose income is at or below the levels shown are eligible for free or reduced price meals.

Application forms are being sent to all homes with a letter to parents or guardians. To apply for free or reduced price meals, households should fill out the application and return it to the school. Additional copies are available at

the principal's office in each school. The information provided on the application will be used for the purpose of determining eligibility. Household income may be verified at any time during the school year by school or other program officials.

For the school officials to determine eligibility, the household must provide the following information listed on the application: names of all household members, social security numbers of all adult household members or a statement that the household member does not possess one; total household income; and the signature of an adult household member certifying that the information provided is correct.

Households are required to report increases in household income of over \$50 per month or \$600 per year and decreases in household size. Households receiving food stamps may provide their food stamp program case number instead of income information.

Applications may be submitted at any time during the year.

Under the provisions of the free and reduced price policy the school principal will review applications and determine eligibility. If a parent or guardian is dissatisfied with the ruling of the official, he may wish to discuss the decision with the determining official on an informal basis. If the parent wishes to make formal appeal, he may make a request either orally or in writing to James Jordan, P. O. Box 110, Warrenton, N. C. 27589, telephone number 257-3184 for a hearing to appeal the decision. The policy contains an outline of the hearing procedure.

If a household member becomes unemploy-

ed or if the household size changes, the family should contact the school. Such changes may make the children of the household eligible for reduced price meals, or for additional benefits such as free meals if the family income falls at or below the required levels.

In certain cases foster children are also eligible for these benefits. If a household has foster children living with them and wishes to apply for such meals for them, the household should so advise the school on the application.

The information provided by the house-

hold is confidential and will be used only for purposes of determining eligibility and verifying data.

In the operation of child feeding programs administered by the U. S. Department of Agriculture, no child will be discriminated against because of race, color, sex, national origin, age or handicap. If any member of a household believes he has been discriminated against, he should write immediately to the Secretary of Agriculture, Washington, D. C. 20250.

Eligibility will be determined on the household size and income.

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Graduate Of Catawba

Jones Will Coach WC Jayvee Team

By GAREY BALLANCE

Morton S. Jones, a graduate of Catawba College in Salisbury, has been named the new junior varsity football coach at Warren County High School.

He replaces John Coleman, who is now the varsity football coach.

Jones began playing football at Norlina High School before going to play for four years at Catawba. While attending Catawba, he served as vice-president of the Majors Club, which deals with physical education and recreation. Jones graduated from Catawba with a B.A. in physical education. This school year, Coach Jones will teach physical science, health and physical education at Warren County High.

When asked about his expectations for this year's team, Coach Jones said he would like to have an undefeated season but his main concern was preparing his players for varsity. He plans to do this by concentrating on teaching the fundamentals of the game to his team.

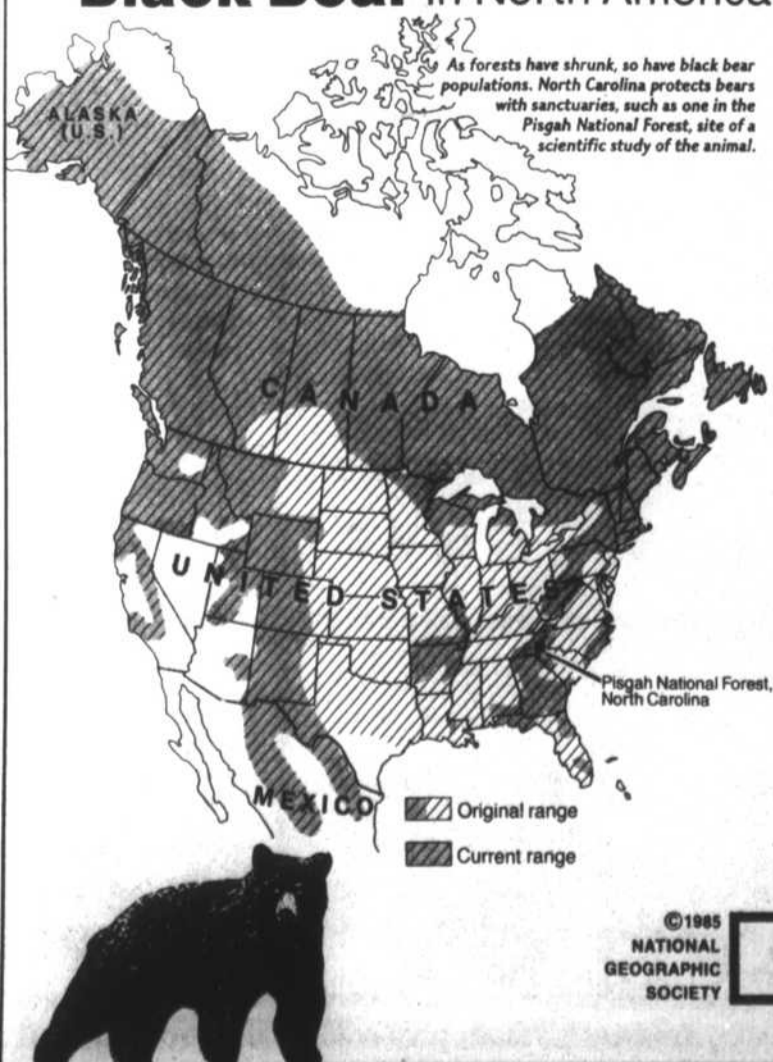
He also wants to instill a winning and positive attitude in his players.

We welcome Coach Jones to Warren County High and wish him much success.

Football practice is still open to any young men who would like to participate. Practice is held each week night at 7 p.m. at the high school. The first game for our varsity team will be on Friday, Aug. 30, against Louisburg.

It will be a home game played at John Graham athletic field.

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