

A black bear is seen climbing a thick, mossy tree branch in a dense forest. The bear's dark fur contrasts with the vibrant green leaves of the surrounding trees. The bear is positioned on the left side of the frame, facing right, with its head turned slightly towards the camera. The background is a soft-focus view of more trees and foliage, creating a sense of a deep, wooded environment.

Black Bear Neighborhood

The American black bear, ancient denizen of the primeval Appalachian forest, is reclusive and rarely seen. However, wildlife managers report that both its numbers and range appear to be increasing along the Appalachian Mountains.

BY BOB PROUDMAN
AND SUSAN DANIELS

Many A.T. hikers still consider a black bear sighting relatively rare, and a special treat. One thru-hiker recollected his Vermont sighting as his deepest spiritual experience, writing of his long walk many years later in the Tidewater A.T. Club's newsletter. Nonetheless, negative encounters along the Appalachian Trail, particularly at shelters and campsites where hikers and others fail to follow good food-storage practices or leave garbage behind, may be on the increase.

Ed Reed, wildlife biologist for the New York Department of Environmental Conservation, says that black bears naturally fear people and generally avoid human contact, even in park settings where encounters are likely. However, bears can become habituated to people and may grow to tolerate or ignore them. If people fail to follow good food-storage practices, this habituation can lead to the serious problem known by wildlife managers as a "food-conditioned bear"—one that associates humans with acquiring food. The mother bear, or sow, teaches this behavior to its cubs and yearlings during their first year spent foraging together. Research in

the western U.S. has shown that a bear will become food conditioned if it is successful as few as two times in 50 attempts to obtain human food. A bear that successfully obtains food by aggressive behavior becomes more dangerous.

In the worst cases, a food-conditioned bear will begin daylight foraging for food at shelter and camping areas. It may be hard to chase off. (Banging pots, yelling, and throwing rocks will generally discourage a bear from approaching.) It is difficult to change the behavior of a habituated bear, but land managers may use "aversive conditioning," including firing on it with rubber slugs or bean bags. Bears may be captured, tagged, and tattooed for future tracking. If the problem bear's behavior worsens, remediation requires moving the bear to another location or euthanizing it.

Although the natural diet of *Ursus americanus* is about 75 percent plant based—soft mast (berries, apples, and other fruits) or hard mast (nuts such as acorns, beech, or hickory nuts)—these highly adaptable omnivores are biological "generalists"—they will claw through a tree for bee honey, rob squirrel, bird, and insect's nests, prey on fawns, and eat carrion. They are opportunistic feeders.

Black bears are strong, with sharp curved claws that make them excellent tree climbers. The males grow larger and wander farther than mature females,

ranging over almost 60 square miles of habitat. This underscores the need to secure wildlife corridors as part of broader environmental goals. In fact, the Appalachian Trail, augmented by the many state and federal forests, parks, and game reserves along its length, may be an important travel corridor for the American black bear and other wildlife. Appalachian Trail Conservancy (ATC) director of conservation Laura Belleville has worked with Dr. Bill McShea of the Smithsonian Institute to survey wildlife along the A.T. in the mid-Atlantic area. This survey work has helped us to understand where wildlife species, including black bears, occur along the Trail in this region. Surveys such as this one, as well as studies to better understand landscape dynamics, will help A.T. managers enhance corridor protection for migrating fauna and flora. Recently, A.T. MEGA-Transect scientists have been engaged in developing a decision support system for managing Trail lands.

Nancy Bell with the Conservation Fund (TCF) has worked with ATC and state officials in Vermont and New Hampshire to identify and conserve black-bear travel corridors through the Green Mountains from southern Vermont to Killington and eastward. And, more recently, TCF and others working on the Mahoosuc Initiative, have been instrumental in connecting the Mahoosuc Range with the White Mountain National Forest boundary near the Rattle River, where black bears have been observed swimming across the Androscoggin River. At its best, the A.T. enables a symbiotic relationship—it protects and provides vital thoroughfares for the wildlife that make it their home, which in turn enriches the Trail experience for hikers.

But at its worst, human-bear problems may grow acute where both populations are on the increase, where people have moved into prime bear habitat at the "wildland interface," or where bear habitat improves as former farms revert to forest, old orchards become overgrown but still produce fruit, or (more problematic) where exurban and suburban homes have unprotected outdoor trash cans, bird feeders, and pet food. One such area along the A.T. is New Jersey, one of our nation's most densely populated states. There—in the northwestern corner, where it borders Pennsylvania and New York, and the A.T. follows both states' borders—one finds rich natural black bear habitat augmented by suburban foraging opportunities. New Jersey wildlife managers report that bear populations are spreading, with bear sightings, road kills, and population growth now occurring further east and south in the Garden State.

In December, New Jersey will hold its first black-bear hunt in six years, a controversial decision despite nuisance bears invading residents' garbage and bird feeders, or worse, attacking pets, killing livestock,



New York biologists prepare to attach a GPS tracking collar to a black bear captured as part of a research study on bears and backcountry camping.

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and causing significant property damage at private homes or farms. The New Jersey Fish and Game Council's *Draft Comprehensive Black Bear Management Policy*, required as a result of a 2005 New Jersey Supreme Court decision, should help wildlife managers to proceed with an integrated management approach that includes hunting. Sadly, it appears too costly to rebuild the state's solid waste infrastructure to require bear-proofing trash collection facilities.

Is the American black bear dangerous? Compared to its cousins, the grizzly, brown bear, or polar bear, attacks on humans are extremely rare. In the eastern U.S., the black bear is a benign animal for the most part. However, there have been three reported killings by black bears in the eastern U.S. in the past 10 years—two in Tennessee (in the Great Smoky Mountains National Park and Cherokee National Forest) and one in New York. In those attacks,

American black bears have sharp, curved claws that make them excellent tree climbers. Although their natural diet is about 75 percent plant based, black bears are highly adaptable omnivores and opportunistic feeders.

PHOTOS (PREVIOUS PAGE AND ABOVE) BY VAN HILL.





Above: A tranquilized, male black bear has been fitted with ear tags and a GPS tracking collar after being caught in a culvert trap. The combination of habituation, food conditioning, and rewarding aggressive behavior can increase the chances of a bear causing serious injury to a person.

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the bears were acting in a predatory manner, not just attempting to get food from someone.

Black bear expert Steven Herrero believes that the combination of habituation, food conditioning, and rewarding aggressive behavior increases the chances of a bear causing serious injury to a person. In contrast, Herrero believes that bears involved in human fatalities are more likely to be found “in rural or remote areas—where they have had relatively little association with people,” which he states in the book *Bear Attacks: Their Causes and Avoidance*.

Almost every year, reports come in of bears stealing food, damaging tents or packs, or being highly persistent and difficult to chase off at various shelters and campsites along the Trail. There have been two serious reported incidents at overnight sites. The first occurred in Pennsylvania in 2004, when a woman sleeping in a bivy sack at a campsite on state game lands suffered bruises after being dragged about 35 feet by a bear. In 2005, at a shelter in New Jersey, a bear grabbed a sleeping camper by the leg and









dragged him in his sleeping bag before being chased off by other campers. That bear was later trapped and euthanized by state officials.

While there have been no serious injuries reported, there have been other incidents of concern on the Trail. In one, a day-hiker with a child in a carrier on her back was knocked down by a bear after the hiker’s dog confronted the bear. In another incident, a hiker sitting on his pack while eating a snack was knocked over by a bear, which then ran off with his gorp. Problems are most likely to occur where campers fail to follow Leave No Trace practices, do not keep shelters, tents, and bedding free from food spills and smells, and do not store their food properly. Two A.T. shelters in Tennessee were closed for several weeks last summer due to bears attracted to trash and food left there. Persistent bears also were reported at shelters and overnight sites in North Carolina, Maryland, and Vermont. A.T. hikers have had packs dragged off by bears while they were taking down their tents or using a privy. In one instance, a hiker was awakened in his tent by a bear standing on him while it tried to reach the pack he had hung overhead. Bears that have learned to associate packs and tents with food may go after such gear even if it does not contain food.

ATC’s Trail crews have not been immune. In the Smokies, the National Park Service provides an electrified bear fence around the Rocky Top crew’s food and cooking area, but on returning to the campsite after breakfast one day last year, they found a tent and some equipment destroyed. Also in 2009, four tents used by the SWEAT crew (which uses a bear in its logo) were destroyed by bears. In 2002, the mid-Atlantic crew van was damaged by a bear apparently trying to get at food that was stored inside.

A number of A.T. maintaining clubs have recently asked ATC for more comprehensive guidance to prevent or minimize negative bear encounters along the Trail, particularly at overnight sites. ATC and its state and federal wildlife management partners need to share findings and invest more effort to prevent future problems with black bear/hiker encounters. Some clubs are installing food-storage systems, such as bear poles, food-storage cables, or “bear boxes,” at their shelters to prevent bears from gaining access to hiker food. These are effective as long as they are used properly, but there have been some problems. Some cable systems at shelters have had problems with hanging cables becoming wrapped around the top cable or have been damaged by people, requiring club work trips to make repairs. Bear boxes have been used as trash receptacles. An enterprising raccoon that learned to climb the bear pole at one shelter had to be relocated.

How can hikers protect themselves, fellow hikers, and the bears whose home the Trail passes through?

-  **Pack food carefully to reduce spills and smells on your gear;** launder tents and bags if necessary.
-  **Practice Leave No Trace camping.** Do not leave excess food behind. Pack out all trash. If you can, remove trash left behind by others.
-  **Use food-storage devices properly.** Do not place trash in privies or bear boxes.
-  If there are no food-storage devices, **hang food properly from a tree**, at least 12 feet up and at least six feet from the tree trunk or substantial branches. Techniques for hanging packs and food bags can be researched on the Web.
-  **Use bear bags or bear canisters.** Ed Reed of the New York Department of Environmental Conservation reports that the required use of bear canisters for food storage in the High Peaks region of the Adirondacks, an area that previously had many bear/hiker problems, has achieved a 95 percent compliance rate among hikers and reduced black bear food-conditioning to near zero. Bear-resistant products can be found on the Web.
-  **Do not cook near your tent or keep food in it.**
-  **Never deliberately feed a bear.** In some locations, it is illegal even to feed them inadvertently. Feeding bears and storing food improperly in the Great Smoky Mountains National Park can result in fines of up to \$5,000 and jail sentences lasting up to six months.
-  **Never run from a bear.** In the very unlikely event of an actual attack, fight back.

As visitors to the bruin’s neighborhood, we owe the black bear, superbly adapted to sniff out foodstuffs, better behavior. Our simple failure to put away the Oreo cookies may ultimately result in the death of a bear, or worse. Let’s clean up our acts.

For more information visit:

www.appalachiantrail.org

www.edc.uri.edu/ATMT-DSS/default.html

www.state.nj.us/dep/fgw

Problems are most likely to occur where campers fail to follow Leave No Trace practices, do not keep shelters, tents, and bedding free from food spills and smells, and do not store their food properly.



According to Leave No Trace standards, bear bags should be hung properly from a tree, at least 12 feet off the ground.

PHOTO COURTESY LEAVE NO TRACE CENTER FOR OUTDOOR ETHICS