

20. BLACK BEAR

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SUMMARY

Black bears inhabit remote forested habitats throughout much of Vermont. They require large tracts of unfragmented landscapes with a variety of food sources. In the spring, emerging succulent plants such as jewelweed, often associated with forested wetlands, as well as plants such as Jack-in-the-pulpit are critical for bear survival. At other times of the year, bears rely on fruits and nuts such as apples, acorns, mountain ash berries, and beechnuts to add fat stores for winter dormancy. Maintaining white clover food plots, releasing and retaining old apple trees, and maintaining intact beech and oak stands are all recommended to promote black bear populations. A forested buffer around wetlands is also critical when managing for bears. The most important habitat management consideration for black bears, however, is to avoid fragmenting remote forested habitat so they have refuge from humans and are able to move over wide areas and find food and mates.

NATURAL HISTORY

The black bear is Vermont's only species of bear and is the only bear species that occurs east of the Mississippi River. Adult female black bears are commonly 150 pounds, while adult males often weigh 200 pounds or more. Black bears have bulky bodies and short, stout legs that can carry them more than 25 miles per hour for short distances.

Black bears are well known for their acute senses of hearing and smell. The snap of a twig or a slight change of wind bringing human scent causes a bear to flee immediately. Bears are quite intelligent, but their behavior can be unpredictable so they should always be given a respectable distance when encountered.

Black bears are inherently wary due to a long history of hunting in Vermont. Bear bounties lowered bear populations to an estimated 100 to 200 animals statewide until the bounties were ended in 1941. Today, Vermont's bear population is carefully managed and has expanded to where bears are common in most towns that have large tracts of forest. Under the Vermont Fish and Wildlife Department's Big Game Plan (2010–20), the statewide bear population goal is to maintain the population between 4,500 and 6,000 animals.

Black bears are solitary creatures outside of the breeding season in early summer. Several bears together are almost certainly a family unit when spotted outside the breeding season. Female black bears give birth to an average of two cubs in mid- to late January, every other year. Only 8 to 10 ounces at birth, cubs weigh 6 to 8 pounds by the time they emerge from the den in April. Only the female bear cares for the young; she is extremely attentive and vigorously defends them. The cubs remain with their mother through the year and into the following spring until the female once again comes into season during the June to July breeding season.

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HABITAT REQUIREMENTS

Black bears are creatures of the forest, and except for large timber company holdings and some public lands, few people own sufficient acreage to satisfy all of the annual home range requirements of black bears. The annual home range of a female bear may comprise 10 to 25 square miles, and the home range of a male black bear may extend 50 square miles or more. Smaller parcels may still be important, however, if they contain critical feeding habitat, are very remote, or contain safe travel corridors.

Unlike white-tailed deer, which may flourish in fragmented habitats and close to civilization, black bears are intolerant of both. Distributed along the length of Vermont's Green Mountains and in the remote areas of northeastern Vermont, bears haunt remote forests. Ransacking excursions close to civilization are the exception rather than the rule. Construction of roads, buildings, or other developments that

encourage permanent or seasonal human occupation, diminishes or excludes the presence of bears.

Even though the cover of forested remote areas is one of black bears' greatest habitat needs, bears also require water and food. Wide-ranging bears have little trouble fulfilling their needs for water in Vermont's forests, but their food requirements vary seasonally and

when in short supply, can be life-threatening. The size of a bear's home range is directly related to the productivity of the habitat; if bears have to search far and wide to satisfy their annual requirements, the annual home range is much larger.

Few Vermont animals have food habits as diverse as black bears. Black bears are typically thought of as carnivores, and while they do eat some meat, black bears are principally herbivores. Bear diets vary seasonally, and spring is the most difficult period for Vermont's black bears. When the bears first emerge from their dens in late March or April, food supplies are scarce. Although bears may feed on evergreen needles, buds, roots, bulbs, carrion, and over-wintered acorns and beechnuts, they usually must turn to the succulent, emergent vegetative growth of wetlands and seeps. Forested wetlands often provide the only food bears will have during their first month or two out of the den, and bears may perish if their fat stores are depleted in spring or they are unable to find adequate access to wetlands.

As spring progresses, more and more herbaceous plants appear and bears may become grazers of lush meadowlands — particularly secluded fields or forest openings. Being opportunistic feeders, bears will occasionally eat the eggs or young of low nesting birds, rodents, or other animals.

During the summer, bears have a greater choice of foods such as raspberries, blackberries, blueberries, wild cherries, hazelnuts, and insects. Course woody debris on the forest floor provides cover for insects and

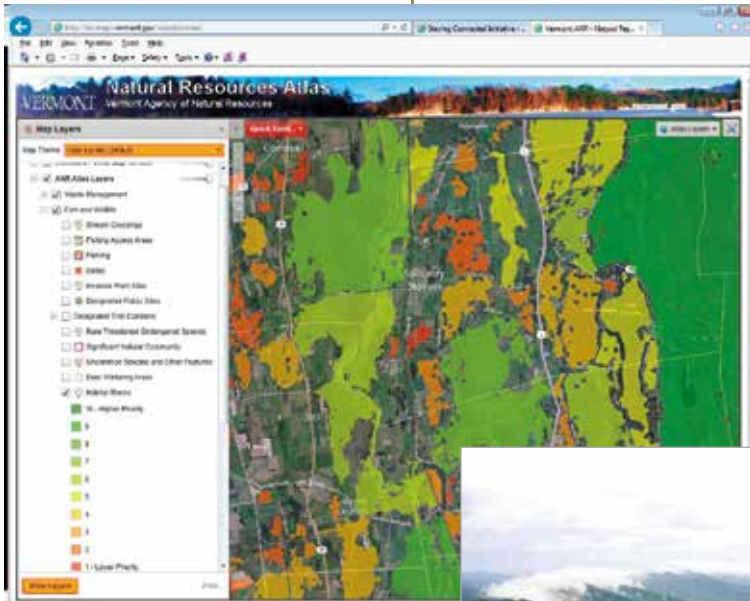


Figure 20.1
Map of large forest block



Figure 20.2
Wetlands with sedge and jewelweed

larva thereby providing a valuable food source to bears. Roots and tubers are also a food source for Vermont bears, particularly plants such as Jack-in-the-pulpit and jewelweed. Wetlands continue to provide an important food source for bears as well as areas for cooling off and for seclusion. Found in wet areas until frost arrives, the orange-flowered jewelweed plant may be consumed to ground level by feeding bears.

In autumn, bears enter a state of 'hyperphagia,' or a heightened feeding state, as they frantically attempt to store sufficient fat to carry them through the 5 to 6 months of winter. Bears may become more visible as they expand their range looking for fruits and nuts. Apples are a staple as are mountain ash berries, where available. Beechnuts, acorns, and other hard mast (nut) crops are especially critical to bear survival and reproduction as they are highest in fat content and allow bears to quickly build up fat supplies.

Unless a shortage of food supplies force them to den early, black bears begin their search for denning sites late in the fall. Bears may den in mountain ledges, hollow logs and trees, partially uprooted trees, lowland brush piles, or excavate dens between the roots of large trees. Denning needs of bears are sufficiently flexible that virtually any forested habitat can provide den sites. By late November or early December, Vermont's bears are denned for the winter.

HABITAT MANAGEMENT

You can improve habitat for bears on your land by adopting practices that increase the diversity of the forest as well as the diversity and abundance of bear foods. Prior to any active management, you should develop a map of existing habitat conditions on your property and then create a plan to maintain and improve those habitats. Small clearcuts (from 1 to several acres in size) can create sunlit openings for the development of herbaceous growth and early successional fruiting plants such as berries and cherries. Decayed stumps and logs from logging debris provide insects for foraging bears. Trees with large cavities should be retained whenever they occur as they are favored by bears as well as many other animals for denning and nesting.

You can also create long-term, 1-acre openings by bulldozing, seeding, and maintaining clovers and grasses (see **Chapter 11, "Wildlife Food Plot Management"** for specific information on food plots and resources). Occasional mowing or brush hogging during the growing season will prevent invasion of woody plants and ensure tender, young grasses and forbs on which bears feed. Woods roads and managed openings should be seeded and maintained in grass cover. Burning cycles of 3 to 5 years will maintain species such as blueberries and improve palatability and nutrition of understory plants, while removing shrubs and trees that suppress desirable herbaceous growth. Raspberries and blackberries can persist in dense stands under power line rights-of-way for decades. Contact your power company forester to ensure that the open space is managed to produce and maintain fruiting plants preferred by bears and other wildlife.

If you can have concentrations of beech and oak trees utilized by bears you should exercise caution when logging on the periphery of these areas. Concentrations of beech trees showing evidence of recent and historical use by bears may be a critical food source for many bears. In general, the greater the evidence of bear use (claw marks on the trunks,



Figure 20.3

A bear's diet consists of apples, mountain ash berries, beechnuts, and acorns.



Photo courtesy of Donna Pollard

The release, protection, and fertilization of soft mast-producing crops will promote and assure bear use.

“bear nests” in tree crowns), the greater the value of those trees to bears. Bears’ use of oak is not as easily distinguished. Claw marks on the bark are not readily apparent, and the bears may not create “nests” of broken branches as they do with beech. Bears may simply “windrow” piles of leaves as they pick acorns off the ground. If you suspect or know that your beech or oak stand is being utilized by bears, it is recommended that you enlist the advice of a wildlife biologist or forester for site-specific recommendations on how to maintain and improve these important wildlife trees. However, a good rule of thumb is to maintain all healthy beech and oak trees in a variety of age classes in order to ensure that they continue to provide food for bears and other wildlife for many years (see **Chapter 9, “Beech Mast Production Management”** for more information on managing American beech for mast production).

Abandoned farmland offers an ideal mix of food and cover for bears, particularly lands where apple trees, chokecherries, black cherries, and other food-producing shrubs abound. The release, protection, and fertilization of soft mast-producing crops will promote and assure bear use. Nut-producing trees should be released and retained. Bears are notoriously crude in their feeding habits, crushing plants and breaking branches. When attempting to grow new apple trees you should remove the first few crops of apples while they are still green to prevent black bears from damaging the young limbs in their attempts to get to the fruit.

When implementing habitat improvement practices, you must keep in mind the bears’ need for cover and seclusion. Cover is not a necessity for protection from the weather as much as a means of concealment. It is essential that sufficient forested or vegetative cover be provided to and from food sources as a travel corridor.

Protection of forested wetlands can be as important as increasing other food supplies. Cover (preferably softwood) around wetlands and allowing secluded travel to and from them is important. Bears are also attracted to wetlands during the summer months where they can cool off in the water and bed in the surrounding dense softwood cover. A minimum 100-foot undisturbed buffer is recommended around forested wetlands when managing for bear.

Before you begin habitat improvement practices for bears, be certain that your property is within bear range (contact any district Agency of Natural Resources Office for this information or go to the website shown in **Resources**). Even if your property is mapped as “Occasional Use” bear range, you may have critical habitats worthy of management and protection. Keep in mind that many of the habitat practices intended to benefit bears will also benefit a variety of wildlife species — birds as well as mammals.



RESOURCES

Hammelin, P. 2011. “Beech Management Guidelines.” Waterbury, VT: Vermont Fish and Wildlife Department.

Hammond, F.M. 2002. “The Effects of Resort and Residential Development on Black Bears in Vermont.” Final Report. Waterbury, VT: Vermont Fish and Wildlife Department, Agency of Natural Resources.http://www.vtfishandwildlife.com/library/Reports_and_Documents/Fish_and_Wildlife/VT%20ANR%20Beech%20MPA%20Guideline%203-22-2011.pdf

Vermont Agency of Natural Resources Atlas. <http://anrmaps.vermont.gov/websites/anra/>

Vermont Fish and Wildlife Department. 2010. *Big Game Management Plan 2010-2020. Creating a road map for the future.* 75 pages.