



MANAGING WILDLIFE DAMAGE

Black Bears

(Ursus americanus)

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BIOLOGY AND BEHAVIOR

The black bear is a large mammal with powerful limbs, a relatively small head, small ears, and black fur, although several less common color phases (e.g., cinnamon) can occur in this species (Figure 1). Its muzzle or snout is light brown or tan in color and some bears may have a small, white chest blaze. This species has five toes, each with a well developed claw on both the front and hind feet, and has teeth adapted for feeding on plants and animals. Adult females typically weigh 100-200 lbs. whereas adult males are larger, weighing 150-400 lbs.

Black bears are present throughout much of Alaska, Canada, and the western and north central United States. In the East, they occur primarily along the Appalachian mountains from Maine to Florida. Virginia has a healthy, resident black bear population, the bulk of which is located west of the Blue Ridge Mountains, while another

smaller segment exists in the southeastern corner of the state, centered around the Dismal Swamp. The distribution of bears in the commonwealth is expanding and bears are being observed more frequently in many areas within the Piedmont Region. An exact figure for the



Figure 1. Female bear with young-of-the-year cubs

bear population in Virginia is not known, but current estimates place it between 3,500 and 4,500 individuals statewide. Black bears can be found in a variety of habitats, ranging from

mature hardwood forests to 1- or 2-year old clearcuts comprised of thick, brushy regeneration intermixed with open weedy areas. They also use riparian and wetland areas as sources of food and cover, and particularly as travel corridors. Although black bears have a digestive system typical of a carnivore, by necessity they pursue an omnivorous existence; that is, they feed on a variety of both plants and animals. Bears work very hard to acquire sufficient food to survive and to prepare for the physiologically demanding overwintering period. The diet generally is a reflection of the foods available at a particular time of year. For example, bears may feed on skunk cabbage, squawroot, and tender grasses in spring; berries, fruits, and sedges in summer; and hard mast, such as acorns, beechnuts, and hickory nuts in fall. Insects, small mammals, and deer fawns also may be consumed when available. Bears will seek out and use alternate and readily

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available food sources, such as agricultural crops, the contents of beehives, and occasionally livestock, particularly when natural foods are not abundant.

Except for females with young and during the breeding season, black bears are solitary animals. During spring, summer, and fall, and especially during the breeding season, bears are active throughout daylight hours, but most commonly they are active around dawn and again at dusk. However, they rarely are seen because they are quite secretive and, for such a large animal, very quiet. Bears often become nocturnal where contact with humans is frequent. Individuals of both sexes will establish overlapping home ranges; those used by females are smaller (about 10-15 sq. mi.) than those of the more far-ranging males (about 20-30 sq. mi., but as much as 120 sq. mi.). Females typically do not breed until they are 3-5 years old, and then they reproduce only every other year. Breeding occurs during June or July, but embryonic development does not begin until late November or early December—a process known as “delayed implantation.” Two to four cubs are born in late January or early February while the female still is denning. These cubs will remain with the female throughout the next winter denning period and disperse the following spring. At that time, young males will move out of their mother’s home range whereas young females usually establish a range close to or overlapping with that of the mother. Mortality is highest among dispersing yearlings, especially males, as they travel considerable distances in search of suitable, unoccupied habitat. Although bears more than 20 years old have been captured in Virginia, such advanced ages are not common. The average age of a female bear is about 5 years whereas males average about 3 years.

Bears will den (overwinter) in brush piles or logging slash, large hollow trees, rock outcrops, the upturned root mass of a blown-down tree, or simply at the base of a large standing tree. The onset of and emergence from denning is dependent upon food availability, but often begins in early November and extends until mid-March and early April. Black bears do not enter a state of “true” hibernation, given that a bear’s heart and respiration rates and body temperature decline only slightly while denning. A denning bear will “wake up” if disturbed or may move to a new site if the winter den they selected is not ideal or if it is subject

to disturbance. Bears do not urinate or defecate throughout the entire winter.

ECONOMIC STATUS AND IMPORTANCE

The black bear is an important indicator species of the health of the environment and the habitats it uses. This species has been and continues to be an important part of our natural heritage, both for its aesthetic and ecological values. Today, black bears are managed as a big game species in Virginia and may be taken by licensed hunters during a regulated fall hunting season.

An international commercial trade in selected body parts (e.g. gall bladders, paws, hides) from bears has led to an increasing illegal harvest of all bear species, but especially black bears. Currently, it is unlawful to sell, either commercially or privately, any body part of a black bear.

When natural foods are scarce, bears will turn to whatever food resources are most available. As a result, conflicts between bears and agricultural producers, homeowners, outdoor recreationists, and other affected parties may arise where bears cause damage to personal property (Figure 2) or



Figure 2. Typical damage to beehives caused by a black bear

crops (Figures 3 and 4) as they search for food. Even so, because of their inherent value, every effort should be made by Virginians to co-exist with bears.

Unlike other species of bears, black bears rarely attack humans and very few deaths have been



Figure 3. Aerial view of pattern of damage resulting from a black bear repeatedly foraging in a corn field



Figure 4. Field-level view of foraging damage to corn caused by a black bear

attributed to them. However, black bears can become aggressive, particularly those animals that have become conditioned to humans (e.g., bears that frequent campgrounds or landfills), and such encounters can result in serious injury or death. Therefore, it is best not to provoke a bear, tempt one with food, or encourage bears to remain around the home, farmstead, or campsite.

CONTROL TECHNIQUES

To reduce the potential for damage to personal property, precautions should be taken before a bear develops an interest in or gains access to potential food sources. As with most wildlife damage problems, no single technique exists that will provide absolute protection from bear depredations. However, certain measures that are initiated in a timely fashion, maintained properly, and applied with an understanding of the habits or behaviors of bears can reduce the likelihood of significant damage. Individuals residing within the bear's range should remember that although bears generally are shy creatures, they are intelligent and possess good long-term memory. Additionally, these are wild animals; they will react to threatening situations accordingly. Therefore, any proposed damage management program for bears must take these traits into account.

Preventive Measures:

To reduce the potential for damage by black bears around the farm or home, don't encourage their presence or attract them to your property. Methods to accomplish this include:

- exercise good husbandry practices on the farm and around the home (i.e., be neat and clean),
 - remove all potential sources of supplemental food, such as readily available garbage or refuse, pet foods, bird feeders (especially suet after late-March), or animal carcasses,
 - move domestic farm animals into protected areas and away from areas with heavy cover,
 - maintain well-mowed, cleared corridors (of up to 50 yards where feasible) around beehives, agricultural crops, and livestock holding areas, and
 - alternate or strip plant row crops, particularly sweet corn, to provide less protective or hiding cover for bears.
- Outdoor recreationists should never feed bears or improperly store foods in or near the picnic or camp site—this will only attract bears and habituate them to

humans. Campers should learn how to properly hang food well above the ground and between two trees—remember, black bears are excellent tree climbers.

Non-lethal Controls:

Non-lethal controls are used to prevent or deter a bear from gaining access to property or a commodity. Examples of non-lethal measures include use of:

- loud noises (e.g., horns, clapping, shouting, pyrotechnic salutes), bright lights, or other harassment measures,
- temporary or permanent electric or heavy woven-wire fencing (Figure 5). The effectiveness of electric fencing often can be enhanced by baiting it with peanut butter, bacon grease, or sardine oil,
- bear hounds or guard dogs to ward off depredating bears,
- habitat manipulation (e.g., removal of protective cover) to make a site unsuitable for or unattractive to bears, and
- state wildlife personnel to capture (Figure 6) and relocate an offending bear, where appropriate and feasible (note: it is illegal for homeowners or private individuals to capture a live bear without special authorization....consult the nearest Virginia Department of Game and Inland Fisheries Regional Office for technical assistance or additional information relating to the translocation of problem bears).

Currently, only Capsaicin (concentrated hot pepper spray) is registered for use on bears as a personal protection repellent. Spray canisters used to propel this material have a maximum range of about 30 feet, so effective use of this material demands that an applicant be in close proximity to a bear. However, recent research has shown that bears may actually be attracted to the taste of weathered Capsaicin residue, so care is needed in how and where this material is applied. There are no fumigants or toxicants registered by the Environmental Protection Agency for use on black bears.

number of the sheriff's office that serves your county. After you have provided details on the nature of your complaint (e.g., location, time of event, type of damage, phone number) to the sheriff's office, a warden will be dispatched to respond to your needs.

References and Suggested Readings

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Black Bear Conservation Committee. 1992. *Black bear management handbook for Louisiana, Mississippi, and east Texas*. Black Bear Conservation Committee, Baton Rouge, LA. 28pp.

Virginia Wildlife. 1995. The entire September issue (Volume 56, No. 9) was devoted to coverage of black bears in Virginia.

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Figure 5. Temporary electric fencing used to deter bears from bee hives

Lethal Controls:

If all attempts to deter bear depredation with preventive or non-lethal measures fail, removal of an offending animal may be necessary. Where damage to fruit trees, crops, livestock, or personal property has occurred, the owner or lessee of the property may receive authorization to destroy an offending bear, **but only after such damage has been reported to and verified by the local game warden**. The warden will then issue a written permit that clearly states any limitations on taking the bear (e.g., length of time permit is valid, authorized methods of kill, disposition of carcass) and establishes how and when any successful take must be reported. To report suspected damage by a bear, to receive help in removing a troublesome bear, or to request a permit to take a bear, contact your local game warden by calling the non-emergency telephone



Figure 6. Portable culvert trap used by the Virginia Department of Game and Inland Fisheries to capture and transport black bears.