



## 29. Black Bear

One of the largest, and among the most secretive animals living in Pennsylvania is the black bear, *Ursus americanus*. The species ranges through much of forested North America from Mexico to Alaska and from Florida to northern Canada. In different regions, black bears exhibit different life patterns, denning times, tolerance of human activity, habitat preferences, travel patterns, reproduction behavior, pelt coloration and even size and weight.

### Biology

Bears are powerfully built animals. Adults are 50 to 85 inches in length, including a 3- to 5-inch tail. They stand about 30 inches at the shoulder and weights range from 140 to 400 pounds, with rare individuals weighing more than 800 pounds. Males, sometimes called boars, tend to be considerably larger and heavier than females, or sows.

Most Pennsylvania bears are black, although a few are a cinnamon color. (In other parts of its range, *Ursus americanus* may be brown, whitish, or bluish-gray, but the majority are black.) The body is glossy black, the muzzle tinged with tan. Often a bear will have on its chest a white mark, sometimes in a prominent "V." The fur is thick, long and fairly soft. Sexes are colored alike.

Bears walk in a shuffling, flat-footed manner. Each foot has five toes, each with a curved claw. Extremely agile for their size, bears sometimes stand erect on their hind feet to see and smell better. Their top speed is 30 mph over short distances. Black bears climb easily and swim well.

Black bears have an acute sense of smell, but their vision is comparatively poor. Hearing is believed to be similar to that of humans. They occasionally growl, "woof," or click their teeth together when threatened, and females communicate with their cubs using low grunts that signal cubs to climb a tree when danger is near or to descend after it has passed.

Bears are most active at dusk and dawn, with slightly lower activity levels during the day. They can also become nocturnal to avoid human activity. Alert and wary, they tend to avoid open areas. Individuals are solitary unless with cubs or during the breeding season. While most bears will run from a human, some that live in close proximity



to people can become habituated and appear indifferent. Bears that become accustomed to people can be attracted into backyards if food is present. Bird feeders, garbage cans and backyard grills all can draw bears. Bears that learn to forage on human-provided foods often become nuisances, causing property damage and increasing the risk of a human-bear encounter. Eliminating attractants typically prevents these types of problems.

Bears find food mainly by scent. They are opportunistic feeders, with a largely vegetarian diet. Common foods are fruit (including large amounts of berries), mast (acorns, hickory nuts and beechnuts), succulent leaves, grasses, insects (including eggs and larvae), plant roots, amphibians, reptiles, small mammals, fish, carrion and garbage. Enhancing forest diversity and protecting the large component of nut-producing trees found in Pennsylvania forests is probably the single best habitat-management tool for bears.

Black bears also can prey on newborn white-tailed deer fawns, although predation typically wanes after the first few weeks of a fawn's life. An occasional bear runs afoul of humans by preying on pigs, goats, sheep, rabbits or poultry;



or by eating corn, raiding campers' food stores or destroying honey-bee colonies (beekeepers with such problems should protect their hives with electric fences). Bears drink water frequently and, in hot weather, they wallow in streams.

In autumn, bears eat heavily to fatten themselves for winter. Bears enter hibernation late in the fall, with pregnant females being the first to enter dens, typically during mid to late November. Males den several weeks later. Onset of hibernation can vary from year to year depending on the availability of fall foods, with poor food years resulting in earlier denning.

The winter den might be a hollow tree, or an excavation resembling a bear-sized groundhog hole. They also den in rock crevices, cavities under large rocks, or in a nest beneath the roots of fallen trees. Some bears, including females with newborn cubs, may simply den in an open nest on top of the ground. Bears line their dens with bark, grasses and leaves. Females tend to select more sheltered sites than males. Males den alone, as do pregnant females (they give birth in the den). Females with first-year cubs den with their young.

Hibernation in bears more closely resembles resting than the deep torpor characteristic of other species. During hibernation, bears are alert and capable of fleeing or defending the den. Body temperature is not drastically reduced, but respiration and heart rate decline some. Bears do not urinate or defecate while dormant. On warm, late-winter days, they might emerge and wander nearby.

The average annual home range for adult male bears in Pennsylvania is 20 square miles. Adult females have ranges of 6 to 8 square miles, on average. Daily and seasonal movement is affected by food availability, breeding activities and human disturbances. In some areas, bears create trails while covering the nightly circuits. Individuals may scar trees with claw and

bite marks while rubbing their backs against them; these "rub trees" announce a bear's presence to other passing bears.

Bears mate from early June to mid-July. It is generally accepted that both sexes are polygamous. The male does not help rear young. Most female bears in Pennsylvania produce their first litter at age 3, although in remote areas where access to high-calorie human-related foods is absent, the initial litter might not occur until age 5.

Females give birth to cubs during early January while in the winter den. Litter sizes range from one to five, with three most frequent in Pennsylvania. Newborns are covered with fine dark hair, through which their pink skin shows. They are about 9 inches long and weigh 8 to 10 ounces. Their eyes and ears are closed.

Cubs nurse in the den. After about six weeks, their eyes open. In about two more weeks, they walk. They leave the den when 3 months old, are weaned by 7 months, and by fall usually weigh 60 to 100 pounds. Bears traveling in groups in autumn are usually females and their cubs. Cubs are playful, romping in water and wrestling with their littermates. The female protects them, sending them up trees if danger threatens. Adult male bears occasionally kill and eat cubs.

Mothers and 1-year-old cubs will den together again the winter after their birth. The family group disbands the following spring, when the female is ready to breed again. Consequently, a female generally raises only one litter every two years. The male cubs, now 16 months old and called yearlings, will disperse while female yearlings establish home ranges nearby.

Mortality factors include hunting, being struck by vehicles, or being killed due to damage control or nuisance activity. Natural diseases, predation or starvation are rare. Bears host ticks and internal parasites, and some become infected with mites that burrow into the skin and result in a condition called mange, which can be fatal. In the wild, a rare individual might live to 25 years. Age can be determined by examining a tooth in cross-section under a microscope and counting annual growth rings similar to how trees are aged.

## Population

In Pennsylvania, bears are found in large forested areas statewide. They currently occupy over three-quarters of the state, although sightings have been confirmed in every county. Large urban centers and agricultural areas, such as the southeastern corner of Pennsylvania, and parts of the western border, lack sufficient forest habitat and bears seen there mostly are transient. The total population currently is estimated to be 18,000. In the 1970s, there were fewer than 5,000 in Pennsylvania.

Because bear populations have the potential to further increase, which can result in more frequent human-bear conflicts, their numbers are managed using regulated hunting. The length and timing of hunting seasons is set such that populations with greater human-bear conflicts are reduced or stabilized while areas with few conflicts are allowed to increase. Population trend and harvest levels are closely monitored annually.