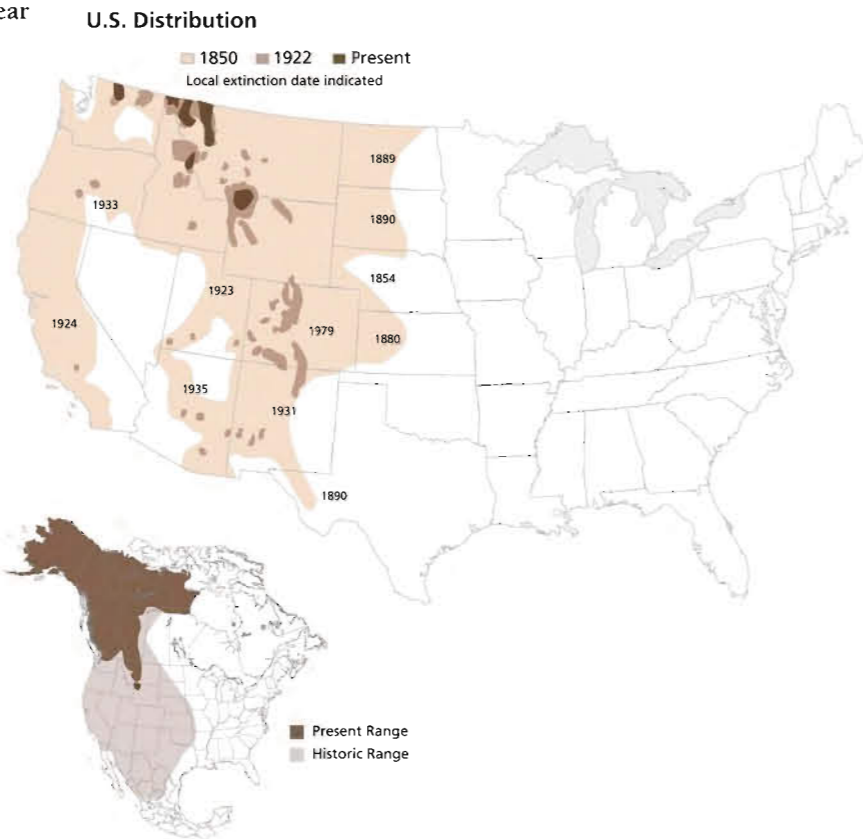


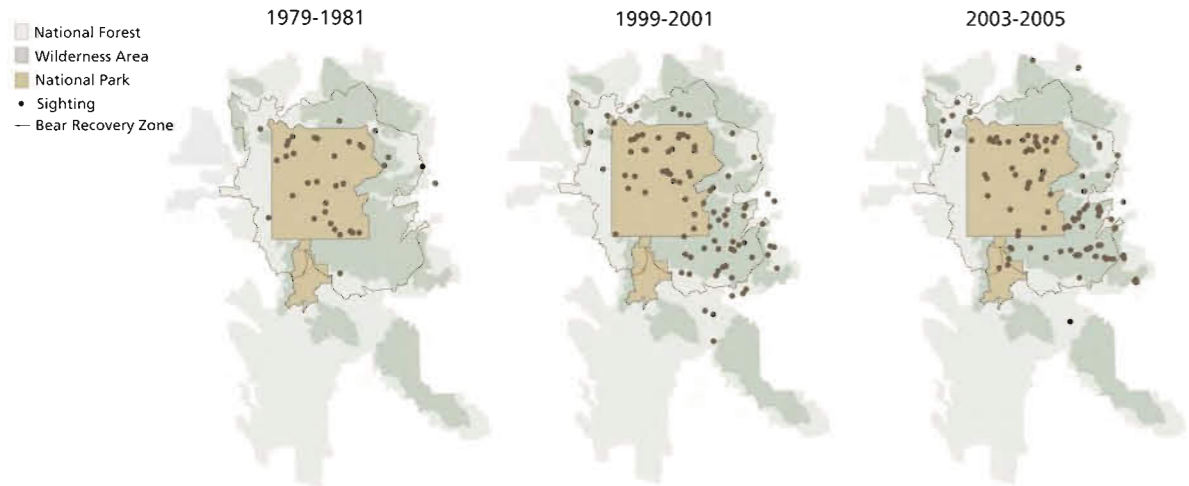
Grizzly Bears

Historic and Present Range of Grizzly Bear

Prior to European settlement, North American grizzly bears were distributed from northern Alaska to northern Mexico, and from the Pacific coast to western Missouri. European colonization of North America led to dramatic reductions in grizzly bear numbers and range. People shot, trapped, and poisoned the bears to reduce depredation on domestic cattle, sheep, and poultry. Grizzly habitat was converted to cities, farms, and ranches. Important foods such as salmon, bison and elk were depleted by dam building, market hunting, and competition with domestic livestock. By 1975, grizzly bears had been extirpated from Mexico and all but 2% of their historic range in the lower 48 states. Grizzly bears are still abundant in Alaska and northern Canada, where their populations are stable in all but a few areas where human populations and development are expanding rapidly. Farther south, however, habitat fragmentation, alteration, and destruction threaten remaining grizzly bear populations. The Great Yellowstone Ecosystem is the southernmost outpost of grizzly range as of 2007 and plays a key role in maintaining grizzly bear populations and genetic diversity.



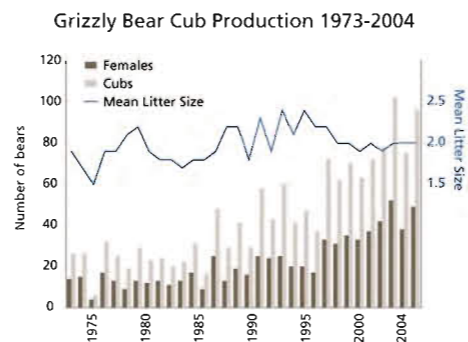
Initial Sightings of Grizzly Bear Females with Cubs



Observations of females with cubs provide a good representation of grizzly bear range expansion in the GYE since being listed as a Threatened Species in 1975. The area occupied by GYE grizzly bears has expanded from approximately 15,000 km² in the 1970s to 17,000 km² (1980s) to 34,000 km² (1990s) to 37,000 km² in 2005. Range expansion resulted from coordinated management of grizzly bears and their habitat between state and federal wildlife and habitat management agencies. Coordinated management reduced bear-human conflicts and led to higher cub production and survival, lower rates of

human-caused bear mortality, and significant improvements in the ability of grizzly bears and people to co-exist on public lands.

Annual counts of females with cubs are used to estimate grizzly bear population numbers and trends. The number of females producing cubs as well as the total number of cubs produced annually has increased since the mid-1980s. Due to range expansion and the increase in population numbers, the U.S. Fish and Wildlife Service proposed removing GYE grizzly bears from Threatened Species Status in 2006.



Seasonal Habitat and Food Availability

Grizzly bears are generalist omnivores that eat a wide variety of plants, animals, and insects. In the Greater Yellowstone Ecosystem, grizzly bears prefer concentrated high energy foods such as ungulate carcasses, elk calves, spawning cutthroat trout, army cutworm moths, whitebark pine seeds, and clover. Preferred bear foods are very seasonal in nature and fluctuate in abundance. Due to these perturbations, important foods are variable from year to year and somewhat unpredictable. As a consequence, grizzly bears require large home ranges to ensure they can meet their energetic needs. Greater Yellowstone Ecosystem grizzly bears spend approximately five months without food while hibernating in winter dens; therefore all energy requirements must be met in a seven month period.

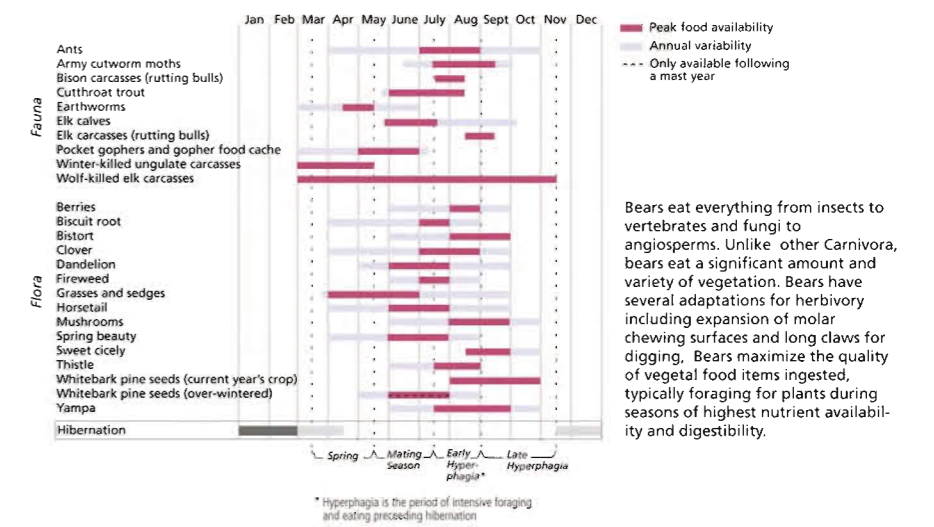
High quality spring habitat includes elk and bison wintering areas where bears scavenge winter-killed ungulates, and areas of early green-up where bears graze succulent vegetation. High quality summer habitat includes elk calving areas, streams with spawning cutthroat trout, and high elevation talus slopes where grizzly bears eat large quantities of army cutworm moths. High quality fall habitat contains cone producing whitebark pine trees. Grizzly bears obtain the fat and protein rich whitebark pine seeds by raiding red squirrel middens containing seeds stored for winter. In years without pine nuts, grizzlies forage more extensively on biscuit roots and yampha and eat more meat. Grizzly bears scavenge wolf-killed elk and bison during the spring, summer, and fall.

Bear Mortality

Grizzly bears in the Greater Yellowstone Ecosystem die from natural and human causes. Natural mortality results from old age, cubs and subadults being killed by adult bears and wolf packs, starvation, drowning, avalanches, den collapse, and other causes. A greater proportion of dependent young (cubs and yearlings) die from natural causes than do adult bears. Human causes of mortality include management removal of bears involved in conflicts with people, defense of life or property kills by private citizens, legal hunting, poaching, vehicle strikes, mistaken identification by black bear hunters, and electrocution by downed power-lines. Approximately 90% of adult grizzly bear mortality in the Greater Yellowstone Ecosystem is caused by humans. The proportion of total mortality due to natural causes is generally higher in national parks, whereas the proportion of human-caused mortality is generally higher outside of national parks.

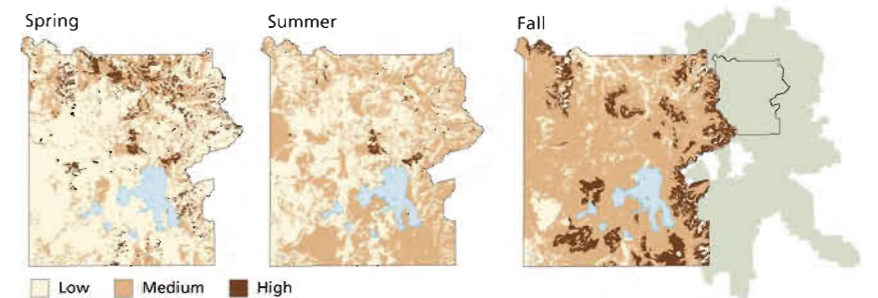
Most human caused bear mortality is directly related to bear-human conflicts. Bears come into conflict with people more often during years with poor production of native bear foods, especially fall foods. There tend to be far fewer bear-human conflicts and human-caused bear mortalities during years when native bear foods are abundant.

Availability of Common Bear Foods in the GYA

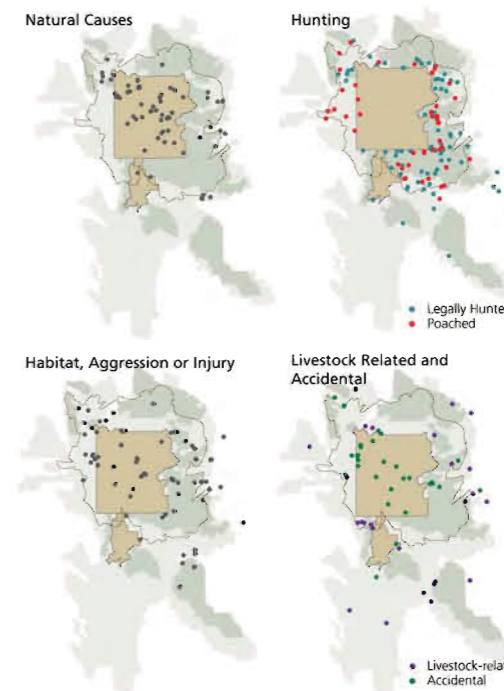


Bears eat everything from insects to vertebrates and fungi to angiosperms. Unlike other Carnivora, bears eat a significant amount and variety of vegetation. Bears have several adaptations for herbivory including expansion of molar chewing surfaces and long claws for digging. Bears maximize the quality of vegetal food items ingested, typically foraging for plants during seasons of highest nutrient availability and digestibility.

Seasonal Habitat Preference of Grizzly Bears



Grizzly Bear Deaths 1975-2005



Bear Mortalities Inside and Outside of Protected Areas

