

## **FOOD HABITS OF GRIZZLY BEARS AND BLACK BEARS IN THE YELLOWSTONE ECOSYSTEM**

Bears are omnivores that have relatively unspecialized digestive systems similar to those of carnivores. The primary difference is that bears have an elongated digestive tract, an adaptation that allows bears more efficient digestion of vegetation than other carnivores (Herrero 1985). Unlike ruminants, bears do not have a cecum and can only poorly digest the structural components of plants (Mealey 1975). To compensate for inefficient digestion of cellulose, bears maximize the quality of vegetal food items ingested, typically foraging for plants in phenological stages of highest nutrient availability and digestibility (Herrero 1985).

The food habits of grizzly bears in Greater Yellowstone Ecosystem (GYE) have been described in detail by Knight et al. (1984) and Mattson et al. (1991). Overall, army cutworm moths, whitebark pine nuts, ungulates, and cutthroat trout are the highest quality food items available to grizzly bears in the GYE. Grizzly bear food habits are influenced by annual and seasonal variation in available foods.

### **Spring**

From March through May, ungulates, mostly elk and bison, comprise a substantial portion of a grizzly bear's diet. Grizzly bears feed on ungulates primarily as winter-killed carrion but also through predation on elk calves (Mattson 1997). Grizzly bears also dig up pocket gopher caches in localized areas where they are abundant. Other items consumed during spring include grasses and sedges, dandelion, clover, spring-beauty, horsetail, and ants. During spring, grizzly bears will also feed on whitebark pine seeds stored in red squirrel caches during years when there is an abundance of over-wintered seeds left over from the previous fall (Mattson and Jonkel 1990).

### **Summer**

From June through August, grizzly bears continue to consume grasses and sedges, dandelion, clover, spring-beauty, whitebark pine nuts, horsetail, and ants. In addition, thistle, biscuit root, fireweed, and army cutworm moths are eaten. Predation on elk calves continues through mid-July when most grizzly bears are no longer able to catch calves (Gunther and Renkin 1990). In areas surrounding Yellowstone Lake, bears feed extensively on spawning cutthroat trout (Reinhart 1990). Starting around midsummer, grizzly bears begin feeding on strawberry, globe huckleberry, grouse whortleberry, and buffaloberry. By late summer, false truffles, bistort, and yampa are included in the diet, and grasses, sedges, and dandelion become less prominent.

### **Fall**

From September through October, whitebark pine nuts are the most important bear food (Mattson and Jonkel 1990). Other items consumed during fall include: pond weed root, sweet cicely root, grasses and sedges, bistort, yampa, strawberry, globe huckleberry, grouse whortleberry, buffaloberry, clover, horsetail, dandelion, ungulates, ants, false truffles, and army cutworm moths.

### **Black Bears**

The food habits of black bears in the Yellowstone ecosystem are similar to those of grizzly bears. The primary difference is that roots are less prominent in the diet of black bears (Knight et al. 1988). Black bears have short, curved claws better suited for climbing than digging. In contrast, grizzly bears have longer, straighter claws and a larger shoulder muscle mass which makes them more efficient at digging for food items in the soil such as roots, bulbs, corms, and tubers, as well as rodents and their caches (Herrero 1978).

## **LITERATURE CITED**

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