

**COMPARATIVE FOOD HABITS OF GREAT HORNED OWLS
IN THREE DISTINCT HABITATS IN YELLOWSTONE NATIONAL PARK^{TWS}**

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Relatively few studies have been done on great horned owls (*Bubo virginianus*) in Yellowstone National Park and even less is known about their prey habits. These

diverse hunters are found throughout the Park in many different habitats and utilize a variety of prey from small mammals, birds, amphibians and reptiles. In 1998, great horned owl nesting and roosting sites were identified and 373 pellets were collected from at least four different pairs of owls from three distinct habitats: 1) low elevation xeric grassland (Gardiner); 2) mid-elevation sagebrush grassland (lower Slough Creek); and 3) mid-elevation lodgepole forest and mesic grassland (Old Faithful). We tested whether food habits from three different habitats within the Park are truly distinct or more similar to each other than would be expected. This was done by calculating the diet diversity at both the class and species level of mammalian prey and the mean weight of mammalian prey in their diet from pellet samples from different habitats. Shannon diversity indices were used to calculate diet diversity and diet breadth, chi-squared contingency tables were used to compare diets among owls and among different habitats. Owls in all three habitats had a similar diet composition, preying heavily on mammals and birds; but at the species level differences were found between habitats.