CHANGE IN RAPTOR HUNTING BEHAVIOR FOLLOWING HEAVY SNOWFALL

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Newton (1979, Population ecology of raptors, Buteo Books, Vermillion, South Dakota) discusses the strong relationship between raptor distribution and food resources. Dispersion patterns during the breeding season are often linked with the distribution of food in an area. Although data are limited, a similar relationship between food availability and raptor densities has been assumed in winter populations (Newton 1979). This note reports observations of raptor response to a sudden change in food distribution and abundance caused by a heavy snowfall.

Observations were made in Columbia Basin shrub-steppe habitat in Morrow County, Oregon, near the town of Boardman. Natural vegetation in this area was represented by big sagebrush (*Artemisia tridentata*) and rabbitbrush (*Chrysothamnus* spp.)/cheatgrass (*Bromus tectorum*)/needle-and-thread grass (*Stipa comata*) habitat types. Dominant winter raptor species in the area included Rough-legged Hawk (*Buteo lagopus*), Marsh Hawk (*Circus cyaneus*), and Short-eared Owl (*Asio flammeus*).

On 8 and 9 January 1980, a storm dropped 36 cm of snow in the Boardman area. The only open ground was that cleared by highway maintenance crews. On 9 January, during the second day of uninterrupted snowfall, a raptor survey was conducted along approximately 95 km of road. Three Rough-legged Hawks, 2 Marsh Hawks, 1 Short-eared Owl, and 1 Barn Owl (*Tyto alba*) were observed. All were perched next to or flying parallel to the road. Those observed along Interstate I-84 (Marsh Hawks, Short-eared Owl, Barn Owl) flew along the median divider of the freeway alternately searching west and east-bound lanes. The deep snow precluded acquisition of prey in traditional hunting areas (i.e., hunting over shrub-steppe habitat) and caused raptors to forage along cleared highways for road-kills and possibly for live prey. Road searching behavior in raptors continued for three additional days until normal hunting territories were partially cleared by rain. These observations provide evidence to a strong relationship between food resources and winter raptor distribution as well as a demonstrated ability of raptors to adapt to sudden changes in food distribution and abundance.