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Seasonal movements and habitat use of migratory elk in Mount Rainier National Park

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Descriptions

Attribute Name	Values
Creator	Cooper, Kevin Craig

Attribute Name	Values
Abstract	<p>Seasonal movements, habitat use, home range selection, and group interactions of Roosevelt elk (<i>Cervus elaphus roosevelti</i>) were studied in the upper White River watershed in west-central Washington. Over 2000 locations of 14 elk were recorded by radio-telemetry from April 1983 to December 1984. During winter, two herds used clearcut lands near the mouth of the West Fork of the White River (about 610m MSL). One herd migrated four km to a clearcut spring range at 1070m MSL, whereas the other remained on the winter range during spring. Both herds migrated 15 km up river corridors to subalpine parklands within Mount Rainier National Park where they remained from July to October. A third herd wintered in unmanaged old-growth forest within Mount Rainier National Park along bottomlands of the White River Valley (915m MSL). That herd then moved 5-10 km upriver toward summer range during June, and arrived on subalpine summer range the first week in July. All herds migrated back to winter ranges via river corridors following heavy snowfall on November 15, 1983 and October 15, 1984. Winter ranges of elk in both the managed and unmanaged segments of the study area were oriented along the valley floodplain. Consequently, ranges of elk in the managed forest contained greater proportions of old-clearcuts (12-30 years) and alder habitats (which occurred primarily on the floodplains) than existed in the valley. Preferred old-clearcut habitats contained a mosaic of dense, regenerating douglas-fir interspersed with open-canopied foraging areas. Old-growth and young clearcuts, which were located primarily on upland sites, were underrepresented in elk home ranges compared to their availability in the valley. Elk were generally unselective of habitats within the home range. On the spring range of one herd, mid-age clearcuts (4-12 years) and young clearcuts (0-4 years) occurred in a greater proportions than in the valley. Preferred habitats contained many mesic seeps and draws. Spring range in the unmanaged forests consisted of old-growth valley bottom habitats. Habitat preferences of elk varied between two summer ranges within Mount Rainier National Park. In general, elk preferred open subalpine forests, <i>Abies lasiocarpa</i>/<i>Valeriana sitchensis</i> habitat, and alder slide habitats. Additionally, Dry Grass, and Lush-low Herbaceous habitats tended to be used in proportions greater than availability.</p>
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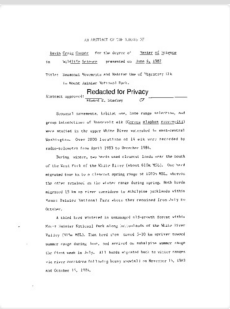

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Mount Rainier (/reɪˈniər/), also known as Tahoma or Tacoma, is a large active stratovolcano in the Cascade Range of the Pacific Northwest, located in Mount Rainier National Park about 59 miles (95 km) south-southeast of Seattle. With a summit elevation of 14,411 ft (4,392 m), it is the highest mountain in the U.S. state of Washington and the Cascade Range, the most topographically prominent mountain in the contiguous United States, and the tallest in the Cascade Volcanic Arc. Mount Rainier, an active volcano currently at rest between eruptions which can produce dangerous lahars and debris flows. Mount Rainier: The flat floor of the Puyallup River valley near Orting, Washington, is formed by deposits of the 500-year-old Electron lahar, which surged down from Mount Rainier (in background). Lahars, or volcanic mudflows, are rapidly flowing slurries of mud and boulders that destroy or bury most manmade

structures in their paths. Lahars from Mount Rainier can travel for tens of miles along river valleys and reach Puget Sound. (USGS photograph by D.E. Wieprecht.) Each year almost two million visitors come to Mount Rainier National Park to admire the volcano and its glaciers, alpine meadows, and forested ridges. However, the volcano's beauty is deceptive. One of the world's oldest national parks, Mount Rainier became part of the federal system in 1899, shortly after its last eruption. Park status was the culmination of a long campaign by John Muir and other conservationists to preserve a unique forest, field, and glacial landscape under threat from the timber and mining extraction that had already ravaged much of the American West. (Here's why wild salmon remains king in the Pacific Northwest.) Separated from the rest of the park by Rainier's bulk, the Carbon River area in the northwest has few facilities and few visitors but offers excellent hikes through the temperate rainforest. Carbon Glacier—the lowest elevation glacier in the lower 48 states—is a 17-mile (27.36 km) round-trip walk from the ranger station. Mount Rainier National Park is open year-round, but some roads and areas of the park are inaccessible during the winter months. There are regular nightly closures of certain park roads throughout the rest of the year, so make sure you pay attention to the road alerts. Temperatures also vary depending on what time of the year you visit the park. While it does warm up in the summertime, park temperatures tend to fluctuate and average on the cooler end. Seasonal activities in Mount Rainier National Park. Winter. Snowboarding & Cross-Country Skiing. To best protect the natural habitat and ecosystems, it has been determined that this limit will prevent any adverse effects on the park's natural resources. The Moraine Trail. 22 Elk Monitoring -- NCCN ▶ Most elk in park are migratory – few reside year-round (Ohanapecosh watershed) ▶ North and South Herds ▶ Aerial surveys – Autumn ▶ One of the longest-running annual monitoring programs at MORA. 23 Elk Herds and Aerial Survey Blocks at Mount Rainier National Park. 24. 30 Mount Rainier Specifics ▶ High elevation species vulnerable ▶ Effects of habitat and temperature change. 31 Human Dimensions of Wildlife Around the Park –Landscape fragmentation –Wildlife persecution/harvest –Road corridors –Other development –Contaminants – Range Expansion/Non-natives.

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