

RESEARCH ABSTRACT

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Study Title: Summer bird populations of upper subalpine zone of Mount St. Helens, Mount Adams, and Mount Rainier.

Key Words: terrestrial animal upland vertebrate birds
abundance subalpine diversity subalpine ashfall zone lahar
mudflow archives

Abstract: Species composition and abundance of summer birds in the upper subalpine zone of Mount St. Helens were compared to those of Mount Adams and Mount Rainier in order to document these populations as well as to examine effects of the May 1980 eruption on bird populations at the volcano.

The majority of birds in this zone at Mount St. Helens were instantly killed by the eruption. Study sites at Mount St. Helens, Pine Creek and Butte Camp, received thin mudflow and tephra deposits, respectively.

Bird species richness was highest at Mount Adams and Pine Creek and lowest at Mount Rainier. Bird abundance was highest at Butte Camp. There was virtually no difference in the number of species found nesting in each study area, but species composition was variable between sites.

Differences in bird species composition and abundance are partly due to different plant community composition between sites. The most marked effect of the volcanic activity was seen at Pine Creek where coniferous trees were killed, eliminating the seeds of these trees as a food source for certain bird species. There appeared to be no long-term impact on bird populations at Mount St. Helens due to the 1980 eruption except at Pine Creek.

Type of Measurement(s): Bird population measurements: relative abundance -- all birds seen or heard at each station; species composition -- total species and breeding species; birds classed into foraging guilds.

Vegetation community measurements: species and number of trees per hectare; understory cover estimated using four 1 meter square quads at each station.

Frequency of Measurement(s): July-August 1982, July-August 1985. Preliminary observations in 1981. Six visits per site, 8 minutes per station, 11-22 stations per site.

Data Storage: Field notebooks in personal possession. Data published in Manuwal et al., 1987.

Long-term plans: Data available for collaborative efforts: No future plans for study. Data is available for future collaboration.