INTERRELATIONSHIPS OF INTRODUCED MOUNTAIN GOATS

AND

SUBALPINE HABITAT IN OLYMPIC NATIONAL PARK[1]

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Abstract: The alpine/subalpine vegetation of the geologically complex Klahhane Ridge in Olympic National Park was mapped and is being studied with regard to the influences of non-native mountain goats. Klahhane Ridge is a west-east trending, mostly volcanic mountain in the northeastern portion of the Olympic Mountains. Steep topography and precipitous rock formations are basic habitat factors which have influenced the varied subalpine/alpine plant communities and experience accelerated erosion under mountain goat influence. A vegetation map of the ridge will be presented. This ridge is unique in the park in that there is no similar confined ridge to which mountain goats have dispersed.

Mountain goats (Oreamnos americanus), introduced in the late 1920's, have reached a population size that has affected the vegetation. The mountain goats have established themselves on Klahhane Ridge in greater number than anywhere else in the Park. Various types of influences from feeding to trampling to bedding and dust-bathing have been measured. Ratios of vegetated/unvegetated goat-used areas have been determined and will be compared to similar vegetation types that are little or not at all used by goats. Cover and density measurements were made of most plant species used by the mountain goats. Permanent plots have been established for monitoring changes and succession.

Summer food habits of the goats will be reported. Soil bulk densities were determined for all habitat types used by goats and compared to those not used by them. Five endemic plant species of Olympic National Park grow on Klahhane Ridge. Their status and condition will be reported.

Park management is confronted with keeping mountain goats and vegetation healthy. Therefore a look at management for the whole ecological goat-plant relationship is necessary.

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[1] This is a first-year report of an on-going study. Pre-publication copies are available from Dr. Ingrid Olmsted, College of Forest Resources, University of Washington, Seattle, WA 98195 or 805 W. Seventh St., Port Angeles, WA 19362.