

THE LICHEN FLORA OF SNOW CANYON STATE PARK. WASHINGTON COUNTY, UTAH. K. Anderson, L. Cooper, C. Hansen, K. Knight, L. Porter, L. Stewart, L. St. Clair, S. St. Clair, Department of Botany and Range Science Brigham Young University, Provo, Utah. [LG1]

The lichen flora of Snow Canyon State Park is rich and diverse, consisting of 81 species in 41 genera. The composition of the lichen flora appears to have been influenced by three major geographic regions: The Mojave Desert, the Great Basin, and the Colorado Plateau. Eleven species are new records for the state of Utah, and one taxa appears to be a new species from the lobate genus *Lobothallia*. The Snow Canyon lichen flora has an unusually high percentage of foliose species (46%), with only 37% crustose species. Most locations in the Intermountain Area are dominated by crustose species (48-60%). Other Intermountain Area locations with high percentages of foliose species include: southwestern Colorado (43%); west central New Mexico (53%); and southeastern Arizona (47%). This growth form pattern, along with the high number of new state records supports the conclusion that the development of the Snow Canyon lichen flora appears to have been influenced by several biogeographical regions. The single most important substrate for lichens in the park is Navajo Sandstone, which accounts for 56% of all species.

DEMO: A STUDY OF VARYING LEVELS AND PATTERNS OF GREEN-TREE RETENTION IN WESTERN OREGON AND WASHINGTON Keith B. Aubry, USFS, Olympia, WA, Michael P. Amaranthus USFS, Grants Pass, OR, Charles B. Halpern, Univ. of Washington, Seattle, James D. White, USFS, Trout Lake, WA, Brenda L. Woodard, USFS, Roseburg, OR, Charles E. Peterson, USFS, Portland, OR, Cynthia A. Lagoudakis, USFS, Juneau, AK, Alan J. Horton, USFS, Portland, OR. [DEM]

The Northwest Forest Plan requires retaining at least 15% of green trees within harvest units, and recommends placing at least 70% of the retention in moderately sized aggregates. These prescriptions have never been rigorously tested on a broad geographic scale, however. The ecological and social effects of various levels and patterns of green-tree retention (15, 40, and 75%; dispersed vs. aggregated) are being evaluated experimentally in the Demonstration of Ecosystem Management Options (DEMO) study on 8 replicate blocks located on the Gifford Pinchot and Umpqua National Forests, and the Capitol State Forest. We present a brief history of the scientific and management basis for the establishment of the DEMO study and discuss research objectives, experimental design, treatment prescriptions, and major areas of investigation.

THE LICHEN FLORA OF CHIRICAHUA NATIONAL MONUMENT, SOUTHEAST ARIZONA. Kim T. Anderson and Larry L. St. Clair, Department of Botany & Range Science, Brigham Young University, Provo, Ut. [LG1]

The lichen flora of Chiricahua National Monument is rich and diverse. From 867 collections made during the course of this study 171 species in 68 genera have been identified. Thirty six species are reported as new records for the state of Arizona. *Acarospora brouardi* B. de Lesd., previously known only from Mexico, is reported as a new species record for the United States. Growth form distribution patterns show an unusually high number of foliose species (47.4%), with almost equal numbers of crustose species (40.3%). Squamulose and fruticose species account for 7.6% and 4.8% of the flora respectively. Growth form patterns dominated by foliose species are unusual for much of the Intermountain area. However, the southern Rocky Mountains (southwestern Colorado, west central New Mexico, and southeastern Arizona) appear to be an exception to this pattern. The abundance of foliose species in this area may in part be influenced by the mild winter temperatures and summer monsoonal rains, typical of this region. Substrate distribution patterns for the lichen flora also depart from typical Rocky Mountain core patterns, with a much higher percentage of bark and lignum species (34.5%) compared to 21% to 29% for several sites in northern Utah and western Wyoming.

BIOMASS OF THE EPIPHYTIC FERN *Polypodium scolieri* IN OLD-GROWTH COAST REDWOOD FOREST CANOPY AT PRAIRIE CREEK REDWOODS STATE PARK, CALIFORNIA. Mark Bailey, Humboldt State University, Arcata, CA. [CNP]

Virtually no work has been done before now to determine biomass of epiphytic ferns in the temperate low elevation coastal forest canopy. This study at Prairie Creek Redwoods State Park, Humboldt County, California measures total biomass of the epiphytic fern *Polypodium scolieri* in trees of an old-growth coast redwood forest stand. It evaluates the affects on this biomass of architectural differences, branch size and orientation, and crown reiterations, comparing these parameters in coast redwood (*Sequoia sempervirens*) and Sitka spruce (*Picea sitchensis*). Ten trees were selected and climbed. Distribution of *P. scolieri* within trees was mapped. Height, distance and direction from bole, branch slope, and volume were measured for each fern accumulation. Stratified subsampling for biomass determinations was based upon three size classes. Determinations of total fern biomass per tree are currently in progress and will be available in March but initial indications show striking differences between redwood and spruce. Preliminary findings also indicate poor correlation between numbers of ferns in a mat, height, and branch basal diameters as well as azimuth from bole.

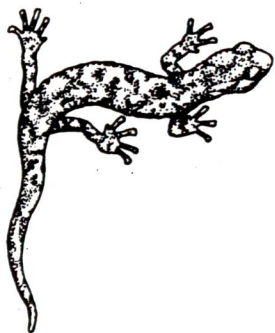


Final Program and Abstracts



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