**THE IMPACTS OF ROCK CLIMBING ON LICHEN AND BRYOPHYTE CLIFF COMMUNITIES IN NORTHWESTERN NORTH AMERICA**

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Cliff-dwelling biodiversity is threatened by the increasingly popular sport of rock climbing. In cliff ecosystems lichens and bryophytes are often the most abundant and diverse organisms. Here we report how the popularity, difficulty, and age of rock climbing routes impacts bryophytes and lichens at two different climbing areas in Spokane County, WA, USA (McLellan Rocks and Rocks of Sharon). We compared sixteen rock climbing routes with adjacent unclimbed cliff face for abundance and diversity of lichens and bryophytes from 254, 0.5m2 plots. To control for variation among paired transects across sites we collected slope and rock heterogeneity for each plot, and aspect, and canopy cover per transect. For climbed transects we recorded route age, difficulty, popularity, and approach distance. Linear mixed effect models were used to test how rock climbing impacts lichens and bryophytes. Lichen and bryophyte cover was higher overall in unclimbed transects compared to climbed transects. Route age and plot height explained most of the variation in lichen and bryophyte cover. Older routes had higher lichen but lower bryophyte cover than newer routes. Lichen abundance was directly related to bryophytes at both sites; the lower the bryophyte cover, the higher the lichen cover. New county records and rare species were found across both groups, including the lichens *Henrica americana* and *Umbilicaria vellea* and the liverwort *Frullania californica*. Our results highlight the importance of including route age, climbing intensity, a paired transect study design, and detailed lichen and bryophyte diversity when creating data-driven management plans for rock climbing areas. Funding: American Alpine Club, Access Fund, Northwest Ecological Research Institute (NERI), ABLS