

# Acidic Rocky Summit/Rock Outcrop Community

State Rank: S4 - Secure



Acidic Rocky Summit with shrubs in cracks, Williamstown. Photo: Patricia Swain, NHESP.

**Description:** Acidic Rocky Summit/Rock Outcrop Communities occur on typically dry rocky summits (balds), ridge tops, or rock outcrops with exposed acidic bedrock and little or no soil. Many occurrences are patchy and may be in a mosaic with Ridgetop Pitch Pine - Scrub Oak, Acidic Rock Cliff, and/or Open Talus/Coarse Boulder Communities. Generally the outcrop community is on steep slopes with aspects from SE through SW. Exposed rock outcrops have greater fluctuations in temperature and relative humidity than in adjacent forests.

**Characteristic Species:** Lichens and/or mosses often cover undisturbed rock surfaces. Vascular vegetation tends to be concentrated around the edges or is found discontinuously in pockets of soil within the outcrop. Low shrubs with clumpy grasses, sedges, and herbaceous plants dominate the community. Trees, when present, are widely scattered and usually stunted. Pitch pine, white pine, and red oak are commonly found near the margin of the bedrock. Scattered shrubs include scrub oak, huckleberry, early

Vegetated with shrubs, scattered grasses, mosses, lichens, and occasional trees, Acidic Rocky Summit/Rock Outcrop Communities occur on dry exposed bedrock, often in mosaics with other ridgetop communities.

sweet and low sweet blueberries, bearberry, black chokecherry, dwarf serviceberry, and occasionally dwarf chestnut oak. Little bluestem, poverty grass, common hair grass, Pennsylvania sedge, and cow wheat regularly grow in acidic outcrop communities with species from surrounding forests. Floristic diversity varies among occurrences due to geology, geography, and the local community structure.

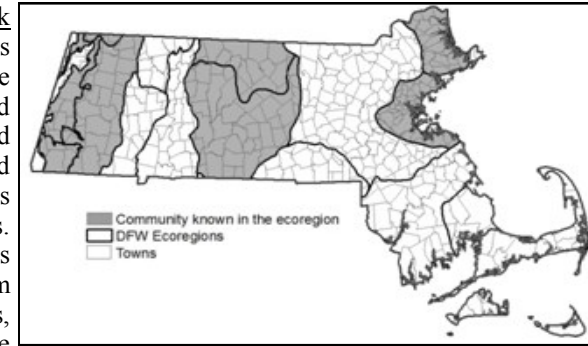


Acidic Rocky Summit lichens on rocks with lowbush blueberry. Photo: P. Swain, NHESP.

**Differentiating Among** the three named types of Rocky Summit/Rock Outcrop Communities depends on the inferred chemistry of exposed bedrock: acidic, circumneutral, or basic (named calcareous for calcium availability). Wild columbine, climbing fumitory, eastern red cedar, and pink corydalis occur in Circumneutral and Calcareous Rocky Summit Rock Outcrop Communities but

not Acidic Rocky Summit/Rock Outcrop Communities. Calcareous communities may be near or above patches of Rich, Mesic or enriched northern hardwoods forests and usually have dense shrubs and herbaceous plants on moist ledges that have an abundance of ferns. The circumneutral community is often near Hickory - Hop hornbeam Woodlands with mixed oaks, hickories, and sugar maples. In the Circumneutral Rock Outcrop community, grasses, sedges and herbaceous species dominate the vegetation. The acidic community is often associated with dry Pitch Pine - Oak Forest and is typically dominated by low shrubs with clumps of graminoids and a few herbaceous species.

**Differentiating from Other Ridgetop Communities:** Acidic Rocky Summits/Rock Outcrops can be difficult to separate from other ridgetop communities. When mapping rock outcrop communities the size of the various patches should be considered. If one community type is predominant and another is patches of < 5000 sq. ft. within it, the dominant community type would be named with notes on the inclusions. Rock Cliffs are arbitrarily defined as vertical to near vertical (> ~60% slope); Rock Outcrops are not. Open Talus/Coarse Boulder Communities are sparsely vegetated on broken rocks on a slope. Scrub Oak Shrublands are dominated by dense shrub oaks, have no pine and few other trees, and little bare rock. Ridgetop Pitch Pine - Scrub Oak Communities have scattered stunted pitch pine trees and dense scrub oak, and usually little bare rock. Shrub oaks and pitch pines need to be abundant for the community to be



PPSO. Ridgetop Heathland has large areas dominated by lowbush blueberry, and little exposed bedrock. Rocky Summit/Rock Outcrop communities are dominated by bare or lichen covered rock.

**Habitat for Associated Fauna:** Most animals of rock outcrop communities respond to the elevation and dryness of the habitat rather than the chemistry of the rock. Outcrops tend to be fairly small, and only a part of the habitat of most vertebrate animals. No turtles, frogs or toads would be expected.

**Examples with Public Access:** Mt. Greylock State Reservation, Adams; Watatic Mtn., Ashburnham; Middlesex Fells Reservation, Winchester/Stoneham.



Acidic Rocky Summit/Rock Outcrop. Photo: Patricia Swain, NHESP.

