

Circumneutral Rock Cliff Community

State Rank: S3 - Vulnerable



Circumneutral Cliff overhanging elderberry. Photo: Patricia Swain, NHESP.

Description: Circumneutral Rock Cliff Communities develop on sandstone, traprock, conglomerate or other non-acidic, non-calcareous rock. Plants in the sparsely vegetated Circumneutral Rock Cliff communities grow on small ledges and in crevices on a circumneutral cliff face in dry to moist conditions. There is often talus below the cliff, sometimes rocky summits or rock outcrops above. Rock cliffs less than ~5000 sq. ft. should be considered inclusions in the surrounding forest, or combined with larger talus or rock outcrops as appropriate.

Characteristic Species: The sparse vegetation of Circumneutral Rock Cliff Communities includes species of dry open areas such as pink corydalis, bearberry,

Plants in the extremely sparsely vegetated Circumneutral Rock Cliff Communities grow on small ledges and in crevices on a circumneutral cliff face. These communities tend to support a greater diversity of species than do Acidic Rock Cliff Communities.

plantain-leaved pussytoes, columbine, marginal wood-fern, little bluestem grass, ebony spleenwort, rusty cliff-fern, and mosses. Some species that are uncommon in Massachusetts are most likely to occur on circumneutral rock cliffs when they occur: linear-leaved milkweed, mountain Firmoss, maidenhair spleenwort, Michaux's sandwort, rock knotweed, and rock spikemoss. Red cedar is typically in the area, on adjoining rock outcrops and red elderberry may grow in moist cracks in talus below. Trees from the surrounding forest may shade the cliff face; shaded cliffs have less vegetation than sunny occurrences.

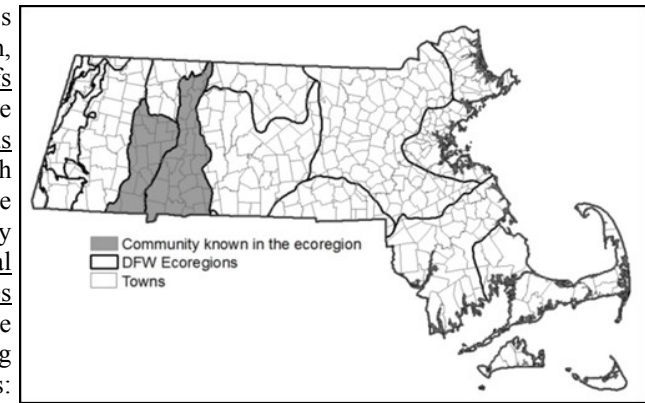


Maidenhair Spleenwort. Photo: Patricia Swain, NHESP.

Differentiating from Related Communities: Three types of very sparsely vegetated plant communities have been identified on rock cliff faces, depending on the chemistry of the rock: Acidic, Circumneutral, and Calcareous (basic, named for calcium availability). Circumneutral and Calcareous Rock Cliff communities have species that don't occur on Acidic Rock Cliffs, which

vegetationally are less distinctive. In distribution, Circumneutral Rock Cliffs overlap with and are more widespread than Calcareous Rock Cliff communities which are restricted to the Marble Valley and Connecticut Valley ecoregions. Circumneutral Rock Cliff Communities would be expected to have some of the following characteristic species: columbine, pink corydalis, marginal wood-fern, ebony spleenwort, herb robert, green rock-cress and/or and rock pellitory. Red cedar is more likely to be present in the vicinity of Circumneutral or Calcareous Rock Cliffs and associated outcrops than on Acidic Rock Cliffs and their associated rock outcrops. Calcareous Rock Cliff Communities include species requiring high nutrient levels (nutrient richness) or high pH such as smooth rock-cress, lyre-leaved rock-cress, fragile rock-brake, purple cliff brake, and bulblet-fern that are not usually found in Circumneutral Rock Cliff Communities. Rocky Summits, Rock Outcrops, and Open Talus Communities also have bare rock and could be confused with Circumneutral Rock Cliff Communities. The differentiation between cliffs and rock outcrops and summits is arbitrary: cliffs are defined as vertical to near vertical (~60% slope). Open Talus Communities have broken rock rather than continuous near vertical rock faces.

Habitat for Associated Fauna: All types of cliffs provide nesting habitat for Ravens and increasingly, Peregrine



Falcons, as the offspring of Peregrine Falcons released in urban areas since 1984 have begun to return to the natural habitat to breed. Cliffs were probably the native habitat of the Eastern Phoebe. No mammals, reptiles, or amphibians would be expected on the steep cliff faces.

Examples with Public Access: Rocky Mountain Park, Greenfield; Mt. Tom State Reservation, Easthampton/Holyoke; Mt. Sugarloaf SR, Deerfield.



Circumneutral Cliffs at Sugarloaf State Reservation. Photo: Bruce Sorrie, NHESP.

