

# Calcareous Rock Cliff Community

State Rank: S3 - Vulnerable



Calcareous Rock Cliff. Photo: Bruce A. Sorrie, NHESP.

**Description:** Rock Cliff Communities occur on nearly vertical bedrock cliff faces. They have sparse scattered vascular plants on ledges and in crevices. Lichens may be dense on the rock face. Calcareous Rock Cliff Communities are on exposures of limestone, dolomite, or other calcareous bedrock. There is minimal soil development. Surroundings tend to be northern hardwood forest, sometimes

Sparsely vegetated, Calcareous Rock Cliff Communities include specialized ferns and other plants that grow in cracks and ledges in calcium-rich cliff faces. Calcareous cliff communities have more species diversity than do Acidic Rock Cliff Communities.

Rich Mesic Forests. Calcareous rock outcrop and summit communities may occur above calcareous cliffs, although much calcareous rock in Massachusetts is overlain by more resistant acidic rock. There is often calcareous talus below the cliff. Rock cliffs < ~5000 sq. ft. should be considered inclusions in the surrounding forest, or combined with talus or rock outcrops as appropriate.



Purple cliff-brake. Photo: Bryan A. Connolly, NHESP

**Characteristic Species:** The sparse vegetation of Calcareous Rock Cliff Communities is distinct and specific to the habitat. Purple cliff-brake, bulblet fern, maidenhair spleenwort, blunt-lobed cliff-fern, walking fern, and columbine are characteristic species of vascular plants. Harebell grows in drier open sites. Moister, shaded sites have early saxifrage, rock-pellitory, small enchanter's nightshade, hairy rock-cress, lyre-leaved rock-cress, and smooth rock-cress. Lichen and moss grow on the rock face and in

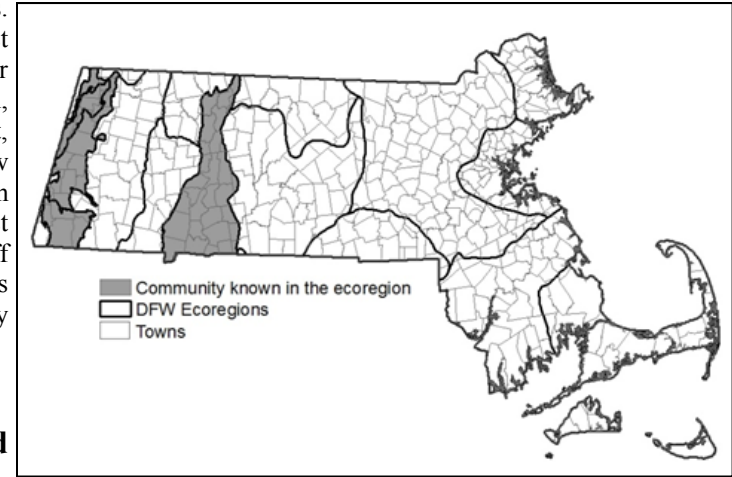
small cracks. Surrounding forest often includes sugar maple, white ash, basswood, butternut, and black and yellow birches. Trees from the surrounding forest may shade the cliff face resulting in less vegetation than sunny occurrences.

## Differentiating from Related Communities:

Rock cliffs support one of three types of sparsely vegetated natural communities depending on the chemistry of the rock: acidic, circumneutral, and calcareous (alkaline, named for calcium availability). Calcareous Rock Cliff Communities include rock pellitory 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. Acidic Rock Cliffs are less likely to include wild columbine, pink corydalis, marginal wood-fern, ebony spleenwort, maidenhair spleenwort and/or purple cliff brake. The differentiation between cliffs and rocky summits/rock outcrops 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 they 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:

Calcareous cliffs are easily damaged by visitation. Most landowners do not want their sites publicized.



Ferns on Calcareous Rock Cliff. Photo: Michael Batcher.

