



Calcareous Rocky Summit/Rock Outcrop Community

Community Code: CT2A1C0000

State Rank: S2



Concept: An open community of shrubs and herbaceous plants, occurring on open calcareous ridgetops of the low hills edging the valleys in the Western New England Marble Valleys eco-region, as well as on steep, mid-slope calcareous ledges found in the same region.

Environmental Setting: Ridgetop calcareous outcrops are dry and typically are found on the ridgetops of low hills in the calcareous regions of Berkshire County. Their open aspect is maintained by trees uprooting and pulling away from the steep ridgetop areas. Because most calcareous bedrock in Massachusetts is overlain by more resistant acidic rocks, the community tends to be found on rock outcrops rather than actual rocky summits. The substrate grades from rock outcrops to steeper, but moister, shaded cliff faces that support Calcareous Rock Cliff Communities.

Vegetation Description: The ridgetop community supports relatively sparse herbaceous vegetation that includes ivory sedge (*Carex eburnea*), purple clematis (*Clematis occidentalis*), long-leaved bluet (*Houstonia longifolia*), balsam-ragwort (*Packera paupercula*) and lyre-leaved rock-cress (*Arabidopsis lyrata*). Shrubs include round-leaved dogwood (*Swida rugosa*) and roundleaf shadbush (*Amelanchier sanguinea*), as well as the less common northern prickly rose (*Rosa acicularis*), hairy honeysuckle (*Lonicera hirsuta*), and downy arrow-wood (*Viburnum rafinesquianum*). Calcareous rock outcrops off the summit ridges tend to be moister and are lightly shaded by trees characteristic of Rich, Mesic Forests, including sugar maple (*Acer saccharum*), white ash (*Fraxinus americana*), and hop-hornbeam (*Ostrya virginiana*). The herbaceous layer can include species characteristic of Rich, Mesic Forests, but typically has a high proportion of ferns such as bulblet fern (*Cystopteris bulbifera*), fragile fern (*C.*



tenuis), ebony spleenwort (*Asplenium platyneuron*), maidenhair spleenwort (*A. trichomanes*), walking fern (*Asplenium rhizophyllum*), and blunt-lobed wood-fern (*Woodsia obtusa*), along with the rarer ferns purple cliff-brake (*Pellaea atropurpurea*) and wall-rue spleenwort (*Asplenium ruta-muraria*). Other plants that are frequently found on these ledges include Pennsylvania sedge (*Carex pensylvanica*), harebell (*Campanula rotundifolia*), peduncled sedge (*Carex pedunculata*), early saxifrage (*Micranthes virginiensis*), smooth rock-cress (*Arabidopsis laevigata*), and columbine (*Aquilegia canadensis*). This community also has a number of non-native invasives, including Morrow's honeysuckle (*Lonicera morrowii*), Japanese barberry (*Berberis thunbergii*), and multiflora rose (*Rosa multiflora*).

Differentiating Occurrences: Calcareous Rocky Summit/Rock Outcrop Communities often include plantain-leaf sedge (*Carex plantaginea*), maidenhair spleenwort (*Asplenium trichomanes*), walking fern (*Asplenium rhizophyllum*), or herbaceous species typical of Rich, Mesic Forests. Columbine (*Aquilegia canadensis*), climbing fumitory (*Adlumia fungosa*), red cedar (*Juniperus virginiana*), pink corydalis (*Capnoides sempervirens*), broad-leaved woodland-sedge (*Carex platyphylla*), ebony spleenwort (*Asplenium platyneuron*), bulblet fern (*Cystopteris bulbifera*), or fragile fern (*C. tenuis*) may be in either Calcareous or Circumneutral Rocky Summit/Rock Outcrop Communities, but not in Acidic Rocky Summit/Rock Outcrop Communities. The differentiation between cliffs and rock outcrops/summits is arbitrary: cliffs are vertical to near vertical (about 60% slope). The assignment to type would be based on overall conditions: it is expected that small (< 5000 sq. ft.) patches would be considered to be variation of the surrounding type and would be included in that type. Rocky summit/rock outcrop communities are dominated by bare rock. Ridgetop Pitch Pine - Scrub Oak Communities also occur on rocky ridges, with pitch pine (*Pinus rigida*) and scrub oak (*Quercus ilicifolia*), but usually have less bare rock (this may not be true where abundant visitation has caused loss of plant and soil cover). In Scrub Oak Shrublands, scrub oak is dominant and dense, with few trees and little bare rock. Ridgetop Heathland communities are dominated by heaths, usually low-bush blueberry (*Vaccinium angustifolium*). Depending on size, one site could have multiple types of these communities: if one community type is predominant and the others are in small patches within it, the dominant community type would be named with notes on the variation. Forested ridgetops on calcareous bedrock may include yellow oak (*Quercus muehlenbergii*). These ridgetops are then classified as Yellow Oak Dry Calcareous Forest, a calcareous equivalent of Hickory - Hop Hornbeam Forest/Woodland.

Associated Fauna: Most animals of rock outcrop communities are not sensitive to the chemistry of the rock, but rather are responding to the elevation and dryness of the habitat. Any differences in resident fauna between calcareous and acidic outcrops are most likely due to geographical differences in species distribution rather than to qualitative differences among the types of outcrops. Calcareous outcrops are in the western part of Massachusetts, and so have the species that don't occur in coastal areas, such as deer mouse (*Peromyscus maniculatus*), woodland jumping mouse



(*Napaeozapus insignis*), and smoky shrew (*Sorex fumeus*), as well as other, more widespread small mammals of dry habitats, such as white-footed mouse (*Peromyscus leucopus*), short-tailed shrew (*Blarina brevicauda*) and, in grassy/sedgy areas with some soil accumulation, meadow voles (*Microtus pennsylvanicus*). Outcrops tend to be fairly small and only a part of the habitat of most vertebrate animals. Snakes would be those of dry areas, such as black racer (*Coluber constrictor*), ringneck (*Diadophis punctatus*), and redbelly snake (*Storeria occipitomaculata*). No turtles, frogs or toads would be expected. Ravens (*Corvus corax*) are all around high elevations, especially near cliffs where they nest. Invertebrates include tiger beetles.

Public Access:

Bartholomew's Cobble, The Trustees of Reservations, Sheffield; Rounds Rock, Mt. Greylock State Reservation, New Ashford/Cheshire.

Threats:

These communities can be threatened by development and by invasive species. This community has a number of non-native invasives, including Morrow's honeysuckle (*Lonicera morrowii*), Japanese barberry (*Berberis thunbergii*), and multiflora rose (*Rosa multiflora*).

Management Needs:

Control of invasive species.

USNVC/NatureServe:

Includes: CEGLO06180 *Juniperus virginiana* - *Ostrya virginiana*/*Carex eburnea* Woodland.