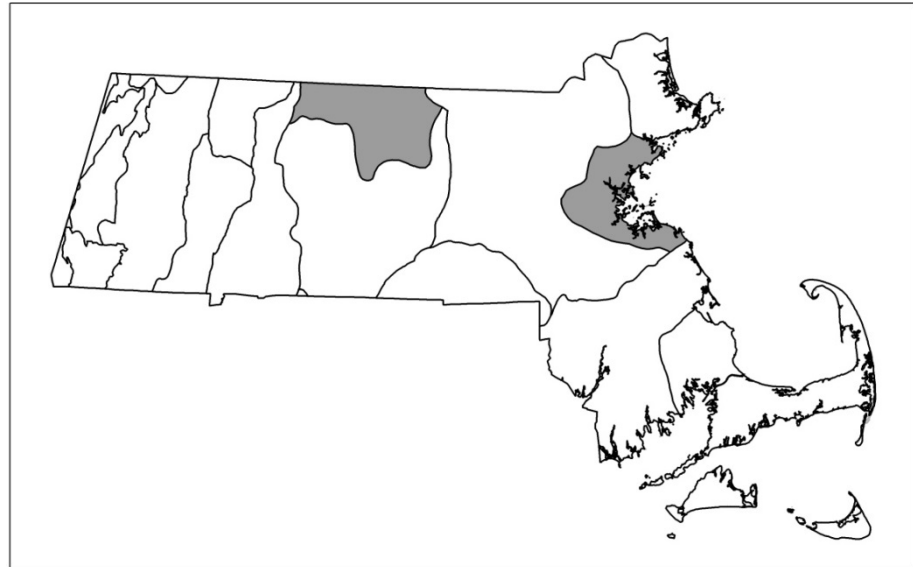




Open Oak Forest/Woodland

Community Code: CT1A3D0000

State Rank: S3



Concept:

Open Oak Forests/Woodlands are savanna or park-like communities on mountain slopes, with short trees scattered over a grassy or low shrub understory around small rock outcrops. They often occur between a rocky summit and the surrounding taller forest.

Environmental Setting:

Open Oak Forests/Woodlands are short (commonly <10m (~30 ft.), but up to <20m (~60 ft.) tall) oak/heath communities with interrupted or parklike tree canopies (commonly ~ 37%, but up to ~60% cover). These savanna-like areas are on slopes or near the summit of mountains with rock outcrops. The open oak area may include small areas of rocky summit or rock outcrop, which if larger (>~5000 sq. ft.) would be identified as separate community occurrences. Although often associated with rocky summit/rock outcrop communities, Open Oak Forests/Woodlands seem to need gradual rather than steep slopes below the summits. Soils are very shallow to bedrock. Surrounding landscape is forested. Fire may be important to maintaining the community; some sites have abundant charcoal, charred wood, and charring on the bases of sprouting oaks.

Vegetation Description:

The short, interrupted canopies of Open Oak Forests/Woodlands are dominated by red oak (*Quercus rubra*), with a lower cover of white oak (*Q. alba*) and red maple (*Acer rubrum*). Many of the trees are multiple-stemmed. A sparse (<25% cover) subcanopy (<5m, < ~18 ft.) has hop hornbeam (*Ostrya virginiana*) and striped maple (*A. pensylvanicum*). A slightly shorter tall shrub layer of approximately 30% cover is dominated by striped maple, red and white oaks, and maple-leaf viburnum (*Viburnum acerifolium*). A denser low shrub layer has patches of huckleberry (*Gaylussacia baccata*), chokeberry (*Aronia melanocarpa*), mountain laurel (*Kalmia*



latifolia), and early sweet lowbush blueberry (*Vaccinium pallidum*) with other scattered woody species. The herbaceous layer is continuous, except on the rock outcrops, with patches of different dominants. Lowbush blueberry (*Vaccinium angustifolium*) dominates (approx. 67% in patches) and seedlings of forest trees (oaks, maple, hemlock) with grasses and sedges, forbs, ferns, and mosses make up the rest of the layer. Common hairgrass (*Deschampsia flexuosa*) is common in the balds and in the Open Oak Forest/Woodland. Other species include pale corydalis (*Capnoides sempervirens*), early goldenrod (*Solidago juncea*), spreading ricegrass (*Oryzopsis asperifolia*), fringed bindweed (*Fallopia cilinodis*), running shadbush (*Amelanchier spicata*), downy goldenrod (*Solidago puberula*), and wild columbine (*Aquilegia canadensis*).

Differentiating Occurrences: Open Oak Forests/Woodlands are part of a continuum of dry, acidic communities that contain a variety of tree oak and pine species. Many types of oak communities grade into one another in time and space and are difficult to differentiate both in a classification and on the ground. They all have tree oaks and a low shrub layer dominated by blueberry family plants. Open Oak Forests/Woodlands occur on hill slopes, with short red and white oak trees scattered over a grassy or low shrub understory around small rock outcrops. They often occur between a rocky summit and the surrounding taller forest. Black Oak - Scarlet Oak Forest/Woodlands are also predominantly woodlands, but not usually associated with rocky outcrops. Abundant scarlet oak with black oak is the key indicator of the type. Mixed Oak Forests/Woodlands have more oak species than Open Oak Forest/Woodlands (black, scarlet, and white, plus red oak (*Q. rubra*) and chestnut oak (*Q. montana*)), and black birch (*Betula lenta*). Coastal Forests/Woodlands are within a few miles of the coast at <~60 ft. elevation and receive storm winds and spray. The diverse canopy includes oaks and often has American holly, sassafras, and black gum. Oak – Hemlock – White - Pine Forests are the most broadly defined in the continuum of oak-dominated forests; specific types are split out from this matrix type. Oak – Hemlock – White - Pine Forest is dominated by a mix of tree oaks with scattered white pine and hemlock, either of which may be in local dense patches. White Pine - Oak Forests have >25% cover of white pine overall (not just local patches). Pitch Pine - Oak Forests have >25% cover of pitch pine overall (not just local patches).

Associated Fauna: Open Oak Forest/Woodlands are small patch communities of transition areas that would constitute only parts of the habitats of most animals found in them. Acorns are important foods for white-tailed deer (*Odocoileus virginianus*), black bear (*Ursus americanus*), grey squirrels (*Sciurus carolinensis*), other small rodents, as well as Wild Turkeys (*Meleagris gallopavo*) and other birds. The understory of blueberries and huckleberries is used by many of these same species. Passerine birds of oak forests include Red-eyed Vireo (*Vireo olivaceus*), White-breasted Nuthatch (*Sitta carolinensis*), Ovenbird (*Seiurus aurocapillus*), Black-and-white Warbler (*Mniotilta varia*), Scarlet Tanager (*Piranga olivacea*), Great Crested Flycatcher (*Miarchus crinitus*), and Downy Woodpecker (*Picoides pubescens*). Small mammals would include those of dry habitats, such as white-footed mouse



(*Peromyscus leucopus*) and short-tailed shrew (*Blarina brevicauda*). 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.

Public Access:

Little Watatic Mt., Ashburnham State Forest, Ashburnham; Wright's Pond, Middlesex Fells, Medford.

Threats:

Trampling (Great Blue Hills and Watatic Mtn.). The Palmer site has invading white pine.

Management Needs:

USNVC/NatureServe:

Related to but not the same as: C EGL006134 is Chestnut Oak and but C EGL006018 is closed canopy mixed oak forest: A0624 *Quercus rubra* - *Quercus prinus* Woodland Alliance - *Quercus rubra* - (*Quercus prinus*)/*Vaccinium* spp./*Deschampsia flexuosa* Woodland (C EGL006134); A2048 *Quercus velutina* - *Quercus alba* Eastern Forest Alliance - *Quercus (velutina, alba)*/ *Vaccinium pallidum*/ *Pteridium aquilinum* High Allegheny Plateau, Western Allegheny Plateau Forest [C EGL006018].