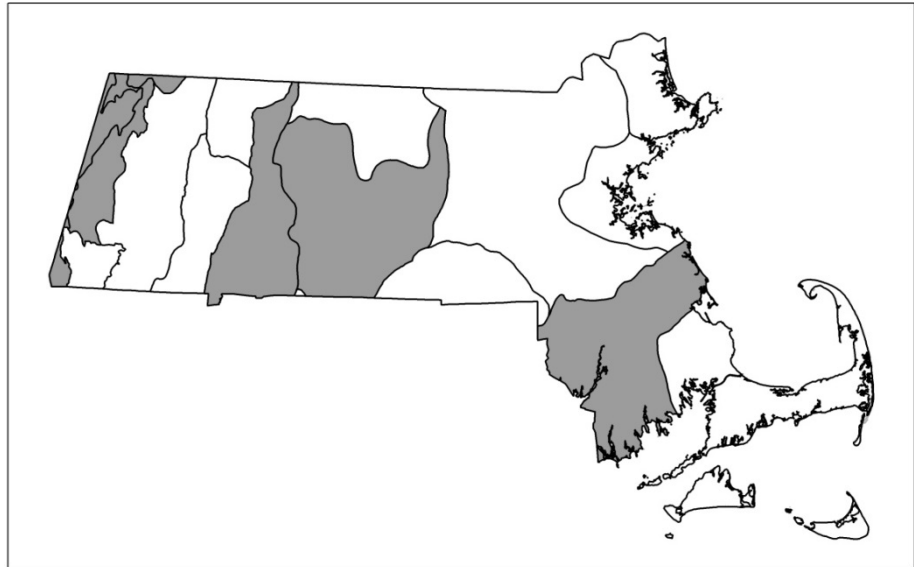




Mixed Oak Forest/Woodland

Community Code: CT1A300000

State Rank: S5



Concept: A broadly defined forest community of tree oaks that grades into other more narrowly defined communities. Includes areas with open canopies that could be considered woodlands.

Environmental Setting: Mixed Oak Forest/Woodland is a deciduous forest or woodland community, dominated by multiple species of tree oak that occurs on dry soils and exposed acidic talus or rocky slopes. The canopy may be closed or somewhat open (typically having ~70% cover) at ~20m (~60 ft.). More mature forest examples tend to have denser canopy cover. Trees in many examples are small (young or stunted with broken tops) with diameters 6-8", and only occasionally are there larger trees >10" diameter. The tall shrub layer may be patchy, over an often extensive lower shrub layer. The herbaceous cover is variable. The litter layer is predominantly undecomposed oak leaves.

Vegetation Description: In Mixed Oak Forest/Woodland, the canopy has a variable mix of oak species (black (*Quercus velutina*), white (*Q. alba*), red (*Q. rubra*), scarlet (*Q. coccinea*), and chestnut (*Q. montana*)), with birches (black (*Betula lenta*) and white (*B. papyrifera*)), and red maple (*Acer rubrum*). White pine (*Pinus strobus*), if present, typically makes up much <25% of the canopy. The canopy is generally somewhat open. An understory of saplings of canopy species with (depending on location) gray birch (*Betula populifolia*), striped maple (*Acer pensylvanicum*), mountain maple (*A. spicatum*), witch hazel (*Hamamelis virginiana*), shadbush (*Amelanchier spp.*) and/or chestnut (*Castanea dentata*) is dense in patches. The shrub layer may be extensive or at least also dense, with patches of blueberries (*Vaccinium angustifolium* and *V. pallidum*), huckleberry (*Gaylussacia baccata*), and mountain



laurel (*Kalmia latifolia*). A scattered herbaceous layer is often primarily wild sarsaparilla (*Aralia nudicaulis*) and Pennsylvania sedge (*Carex pensylvanica*).

Differentiating Occurrences: Mixed Oak Forests/Woodlands are part of a continuum of dry, acidic communities that contain a variety of tree oak and pine species. Mixed Oak Forests/Woodlands have more oak species than most other oak forests (black, scarlet, white, red, and chestnut oak), and birches. They lack abundant pines or hemlock, and lack hop-hornbeam and indicators of rich sites. 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 locally dense patches. Black Oak - Scarlet Oak Woodlands are woodlands. Abundant scarlet oak with black oak is the key indicator of the type. Open Oak 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. 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. White Pine - Oak Forests have >25% cover of white pine overall (not just local patches). Pitch Pine - Oak Forest/Woodlands have >25% cover of pitch pine overall (not just local patches).

Associated Fauna: Mature upland forest types provide valuable structural attributes, such as tree cavity den sites (used by a variety of bird and mammal species) and large woody material (used by various amphibian, reptile, and invertebrate species). Mixed Oak Forests/Woodlands may constitute only parts of the habitats of many animals found in them. Acorns in all oak forests are important for wildlife, including white-tailed deer (*Odocoileus virginianus*), black bear (*Ursus americanus*), grey squirrels (*Sciurus carolinensis*), and other small rodents. Birds include Wild Turkeys (*Meleagris gallopavo*). The understory of blueberries and huckleberries is used by many of these same species in areas with sufficiently large forests to provide all the habitat needs. Passerine birds of oak forests include Red-eyed Vireo (*Vireo olivaceus*), Ovenbird (*Seiurus aurocapillus*), Black-and-white Warbler (*Mniotilta varia*), Scarlet Tanager (*Piranga olivacea*), Great Crested Flycatcher (*Miarchus crinitus*), Downy Woodpecker (*Picoides pubescens*), Hairy Woodpecker (*P. villosus*) and Red-bellied Woodpecker (*Melanerpes carolinus*). Amphibians expected include northern redback salamanders (*Plethodon cinereus*) and spotted salamanders (*Ambystoma maculatum*). Ringneck snakes (*Diadophis punctatus*) and redbelly snakes (*Storeria occipitomaculata*) would be expected. Moths, including the orange swallow moth (*Pyrrhia aurantiago*), butterflies, and other insects of the southeastern oak and oak-pine forest occur in Mixed Oak Forest/Woodlands.

Public Access: Mt. Tekoa WMA, Russell; Minute Man National Historical Park, Lexington; Douglas State Forest, Douglas; Palmer WMA, Palmer.



Threats:

This widespread acidic community has few exotics, but could be susceptible to those adapted to acidic conditions. Lack of light fire is more of a threat than fire itself.

Management Needs:

This mid-successional forest is currently widespread and most occurrences are maturing: management for the type is not necessary. However, without very occasional disturbance, the oaks could be replaced by more shade-tolerant, fire-sensitive species.

USNVC/NatureServe:

NatureServe related to: A0624 *Quercus rubra* - *Quercus prinus* Woodland Alliance *Quercus rubra* - (*Quercus prinus*)/*Vaccinium* spp./*Deschampsia flexuosa* Woodland [CEGL006134]; *Quercus rubra* - *Betula lenta*/*Polypodium virginianum* Woodland [CEGL006585]; A2048 *Quercus velutina* - *Quercus alba* Eastern Forest Alliance - *Quercus (velutina, alba)*/*Vaccinium pallidum*/*Pteridium aquilinum* High Allegheny Plateau, Western Allegheny Plateau Forest [CEGL006018].