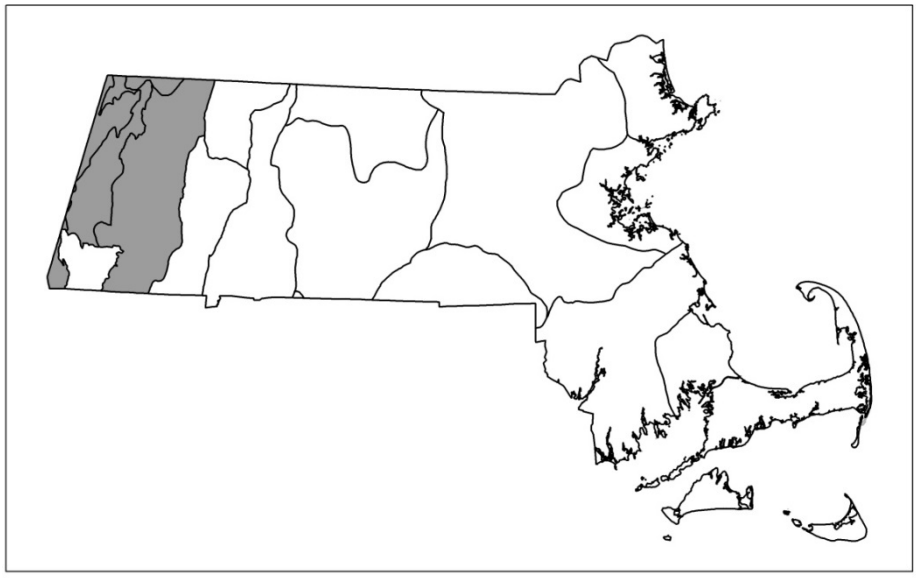
Red Oak – Sugar Maple Transition Forest

Community Code: CT1B300000

State Rank: S4



Concept: Forests with species of northern hardwoods (maples) and a smaller proportion of central hardwoods (oaks) together. Has few of the extreme northern or southern indicators.

Environmental Setting: Red Oak - Sugar Maple Transition Forests are tall forests with closed, predominantly deciduous canopies, with conifers usually providing <20% of the cover. Lower layers have variable density, often with scattered individual trees and shrubs; the herbaceous layer is typically sparse. Red Oak - Sugar Maple Transition Forests are often on north- to northeast-facing, well-drained to moist slopes. The soils are often rocky, somewhat acidic, and of intermediate fertility. Most occurrences are at low to mid-elevations, usually under 475m (~1560 ft.).

Vegetation Description: Red Oak - Sugar Maple Transition Forests have a closed (>75% cover) canopy dominated by (>~25% cover) of northern red oak (*Quercus rubra*) with sugar maple (*Acer saccharum*), and variable proportions of beech (*Fagus grandifolia*), black birch (*Betula lenta*), and <20% conifers (white pine (*Pinus strobus*) and hemlock (*Tsuga canadensis*)). White and black oaks (*Quercus alba* and *Q. velutina*), red maple (*Acer rubrum*), white ash (*Fraxinus americana*), and yellow birch (*B. alleghaniensis*) are regular minor associates. Shrubs are usually sparse; typical species include striped maple (*Acer pensylvanicum*), maple-leaved viburnum (*Viburnum acerifolium*), beaked hazelnut (*Corylus cornuta*), mountain laurel (*Kalmia latifolia*), and witch hazel (*Hamamelis virginiana*). The herbaceous layer is often patchy and dominated by ferns such as intermediate wood fern (*Dryopteris intermedia*), Christmas fern (*Polystichum acrostichoides*), hay-scented fern (*Dennstaedtia punctilobula*), and clubmosses (*Lycopodium clavatum* and *Dendrolycopodium obscurum*). Typical forest

species may be present, including wild sarsaparilla (*Aralia nudicaulis*), Indian cucumber (*Medeola virginiana*), Canada mayflower (*Maianthemum canadense*), and whorled wood-aster (*Oclemena acuminata*), with broad-leaved woodland-sedge (*Carex platyphylla*) in the less acidic sites.

Differentiating Occurrences: Red Oak - Sugar Maple Transition Forest is differentiated from Northern Hardwood - Hemlock - White Pine Forest by its greater amount of oak, and from Oak - Hemlock - White Pine and other oak forests by its greater prominence of northern hardwoods and lack of widespread blueberry family shrubs. Like Rich, Mesic Forest, Red Oak - Sugar Maple Transition Forest is usually in Northern Hardwood - Hemlock - White Pine Forest or the transition between Northern Hardwood - Hemlock - White Pine Forest and the oak-dominated forests to the south. Rich, Mesic Forest lacks oaks and beech, and the occasional conifers that are important in Red Oak - Sugar Maple Transition Forests. The understory of Rich, Mesic Forest has dense spring ephemerals and lacks the abundant evergreen wood fern, Christmas fern, and wild sarsaparilla found in Red Oak - Sugar Maple Transition Forests, which may have scattered spring ephemerals. Sugar Maple - Oak - Hickory Forest includes multiple species of hickories and oaks in more abundance than occur in Red Oak - Sugar Maple Transition Forests. They tend to occur to the south and east in the state, but overlap with the distribution of Red Oak - Sugar Maple Transition Forests. Red Oak - Sugar Maple Transition Forests are more dominated by red oak and appear to be more acidic, less nutrient-rich, and less diverse than Sugar Maple - Oak - Hickory Forest, with undecomposed oak leaves covering the forest floor.

Associated Fauna: This widespread forest type provides habitat to many, particularly opportunistic, animal species. All 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). Large mammals include Red Oak - Sugar Maple Transition Forest as parts of their habitat, but are usually more dependent on size of undisturbed forest than on the precise type. White-tailed deer (*Odocoileus virginianus*) are classic users of this forest type, although certainly not limited to it. Fisher (*Martes pennanti*) use larger, older examples. Most of the widespread small mammals would be expected in larger occurrences of the community. Frogs and salamanders breed in vernal pools and other wetlands and use the surrounding uplands in the rest of the year.

Public Access: South Mountain, Berkshire Natural Resources Council, Pittsfield; Monroe State Forest, Monroe.

Threats: Invasive species occur in less acidic sites with more nutrient availability.

Management Needs: Some occurrences, especially with abundant white pine, are old-field successional, and others have been managed as woodlots and were selectively cut in the past, or may continue to be logged to the present. The understory reflects the history of the sites.

USNVC/NatureServe: A3241 *Quercus rubra - Acer saccharum* Forest Alliance - *Betula alleghaniensis - Quercus rubra/Polypodium virginianum* Woodland [CEGL006584]; *Quercus rubra - Acer saccharum - Fagus grandifolia/Viburnum acerifolium* Forest [CEGL006633]; A3297 *Acer saccharum - Tilia americana* Limestone Woodland Alliance - *Acer saccharum - Tilia americana - Fraxinus americana/Ostrya virginiana/Geranium robertianum* Woodland [CEGL005058](more northern than SMOHF, less rich than RMF); A3303 *Quercus rubra - Acer saccharum - Betula lenta* Forest Alliance - *Quercus rubra - Betula alleghaniensis/Osmunda cinnamomea* Forest -- *Quercus rubra - Betula alleghaniensis/Osmunda cinnamomea* Forest [CEGL006000]; *Quercus rubra - Acer saccharum* - (*Q. alba*) Forest Alliance -- *Acer saccharum - Quercus rubra/Hepatica nobilis* var. *obtusa* Forest [CEGL006046]; *Quercus rubra - Acer saccharum/Viburnum acerifolium - Lindera benzoin* Forest [CEGL006635].