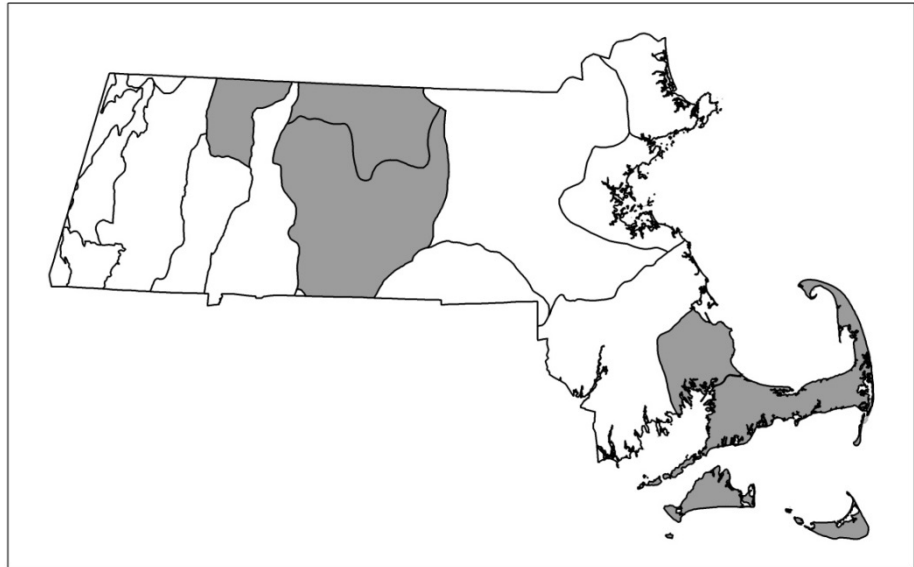




Red Maple – Black Gum Swamp

Community Code: CP1B2A0000

State Rank: S2



Concept: Forested acidic basin swamps with accumulations of peat. Black gum is dominant or codominant with red maple in the canopy.

Environmental Setting: Red Maple - Black Gum Swamps (black gum swamps) are small-patch deciduous swamp forests characterized by abundant black gum (*Nyssa sylvatica*) in the canopy. Some black gum swamps contain large, very old (300 to > 500 years) black gum trees, left behind during tree harvests due to lack of interest in the wood by settlers and subsequent loggers. Black gum swamps in Massachusetts have relatively small watersheds and limited drainage with a small intermittent outlet channel, but usually have no defined inlet and are usually isolated from perennial streams. Most reported occurrences are in depressions at about 1000 ft. elevation, perched on hillside benches or concavities in glacial till soils. The acidic, nutrient-poor peat or muck hummocks and hollows are generally saturated and/or seasonally flooded.

Vegetation Description: Red Maple - Black Gum Swamps have pronounced hummock-hollow topography, with woody vegetation confined to the hummocks. The canopy is open, often in the 25-50% cover range. Black gum (*Nyssa sylvatica*) is abundant in the canopy, often codominant with red maple (*Acer rubrum*). Eastern hemlock (*Tsuga canadensis*) is often abundant. Associates with lower abundance include yellow birch (*Betula alleghaniensis*), white pine (*Pinus strobus*), red spruce (*Picea rubens*), and black ash (*Fraxinus nigra*). The shrub layer is often well-developed but is variable in cover; typical species include highbush blueberry (*Vaccinium corymbosum*), common and smooth winterberry (*Ilex verticillata* and *I. laevigata*), common mountain-holly (*I. mucronata*), mountain laurel (*Kalmia latifolia*), and wild raisin (*Viburnum nudum*



var. *cassinoides*). Cinnamon fern (*Osmundastrum cinnamomeum*) is usually the most abundant herbaceous species present, growing primarily on the mossy hummocks. Although the herbaceous component is generally not diverse, other species include royal fern (*Osmunda regalis* var. *spectabilis*), marsh-fern (*Thelypteris palustris*), Massachusetts fern (*Thelypteris simulata*), beggar-ticks (*Bidens frondosa*), goldthread (*Coptis trifolia*), northern water-horehound (*Lycopus uniflorus*), swamp-dewberry (*Rubus hispidus*), and marsh St. John's-wort (*Triadenum virginicum*). Wet hollows are typically lined with sedges including silvery bog-sedge (*Carex canescens*), bladder-sedge (*C. intumescens*), tussock-sedge (*C. stricta*), and three-seeded bog sedge (*C. trisperma*).

Differentiating Occurrences: Red Maple-Black Gum Swamps are generally in small, topographically constrained basins, surrounded by upland forests, as opposed to being part of a larger wetland. Besides being dominant or codominant in defined Red Maple - Black Gum Swamp communities, black gum occurs in a variety of other settings, including seepage swamps and along fringes of ponds or shorelines. Black gum needs to be dominant or codominant in large areas of the swamp for the occurrence to be considered a Red Maple - Black Gum Swamp. Red Maple Swamps: Black gum needs to be dominant or codominant in the canopy in large areas of the swamp for the community to be considered separate from a Red Maple Swamp. Most Red Maple Swamps have a more diverse herbaceous layer and many are in larger basins. However, the species overlap is great and it is the presence of many black gums in the canopy that provides the distinctive difference to black gum swamps. Another forested swamp in Massachusetts that contains black gum is the Black Gum-Pin Oak-Swamp White Oak Perched Swamp known only from the Connecticut River Valley in areas underlain by clays in sediments of glacial Lake Hitchcock. The presence of pin oak and swamp white oak in the canopy, in addition to the topographic setting distinguish the type. This Perched swamp is found at low elevations and often nested within larger wetland systems. Other related communities include Red Maple- Black Ash Swamps and Rich Conifer Swamps. These wetland forests have many of the same species present in the herb, shrub, or canopy layers, but black gum is only a minor component.

Associated Fauna: Red Maple - Black Gum Swamps can function as vernal pool habitat if water remains standing for 2-3 months and they lack fish; these areas provide important amphibian breeding habitat.

Public Access: Oakham WMA, Oakham; Satan's Kingdom WMA, Northfield; Beebe Woods Conservation Area, Falmouth.

Threats: Hydrologic alterations threaten black gum swamps. Selective logging of trees other than black gum may have allowed the relative abundance of black gum to increase. More information is needed.

Management Needs: More information is needed to assess the management needs for black gum swamps.



USNVC/NatureServe:

Acer rubrum - *Nyssa sylvatica* Saturated Forest Alliance -- *Acer rubrum*-*Nyssa sylvatica*-*Betula alleghaniensis*/*Sphagnum* spp. Forest [CEGL006014] and *Acer rubrum* - *Nyssa sylvatica*/*Rhododendron viscosum* - *Clethra alnifolia* Forest [CEGL006156].