

Red Maple - Black Ash Swamp

State Rank: S2 - Imperiled



Red Maple - Black Ash Swamp with dense cinnamon fern. Photo: Patricia Swain, NHESP.

Description: Red Maple - Black Ash Swamps are deciduous wetland forests characterized by a high diversity of tree species, dominated by red maple and black ash, and a relatively diverse herbaceous layer with many tall shrubs in the understory. They typically occur in areas with circumneutral groundwater seepage and are relatively wet with seasonal inundation in depressions at or near the headwaters of streams, especially in the northern part of the state. Occasionally they occur on sloping edges of river floodplains adjacent to upland slopes where seepage input occurs or as small seepy pockets within larger red maple swamp matrices. The surface topography is hummock and hollow with fluctuating surface water levels between the hummocks.

Characteristic Species: Red maple and black ash are prominent in the canopy and subcanopy. Black ash trees do not usually grow very large in these wet environments and can be most abundant in the subcanopy. Common associates in the canopy include yellow birch, white

Red Maple - Black Ash Swamps are a species rich variant of Red Maple Swamps with black ash abundant in the canopy. Soils are enriched by circumneutral groundwater seepage.

pine, and hemlock. The subcanopy often includes American elm with young of the canopy trees. The most characteristic shrub in the variable shrub layer is winterberry usually with highbush blueberry, poison-sumac, speckled alder, spicebush and others in lower abundance. Cinnamon fern and skunk cabbage are usually the most abundant species in the lush and diverse herbaceous layer that includes a high coverage of royal, marsh, and sensitive ferns. Herbaceous associates include the seep indicators swamp saxifrage, golden ragwort, foamflower, and golden saxifrage, as well as widespread forest wetland species such as jewelweed, jack-in-the-pulpit, water avens, goldthread, and tussock sedge. Mosses (predominantly sphagnum) can cover the hummocks although there is little build up of peat.

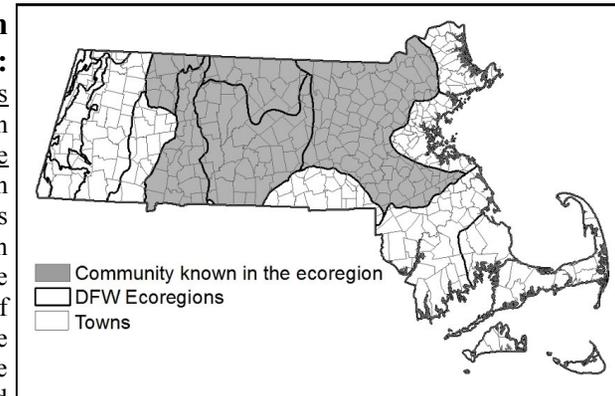


Black ash leaves showing the sessile leaflets (L) and rough bark (R). Photos: Keith Kanoti, Maine Forest Service, Bugwood.org.

Differentiating from Related Communities:

Red Maple - Black Ash Swamps (black ash swamps) are an enriched variant of Red Maple Swamps that are very similar in structure and general species composition. In black ash swamps, black ash must be close to codominant in at least parts of the swamp, otherwise the occurrence would be within the variation of the broadly defined

Red Maple Swamp. Black ash swamps generally include more abundant indicators of enriched seepage than do Red Maple Swamps. Red Maple - Black Ash - Bur Oak Swamps (bur oak swamps) are similar in structure and species composition to black ash swamps, but bur oak swamps occur in Berkshire County near calcium-rich bedrock and black ash swamps occur to the east. Both are forested wetlands with fairly closed canopies; but only the bur oak swamps have bur oak or their hybrid with swamp white oak; their shrub layers also have more ironwood and little poison sumac. Red Maple - Black Ash - Tamarack Calcareous Seepage Swamps (calcareous seepage swamps) have sparser canopies than do black ash swamps. The clearest difference is that even in openings, black ash swamps do not have the strong calciphiles found in calcareous seepage swamps. (Calciphiles include shrubby cinquefoil, grass-of-Parnassus, Kalm's lobelia, alder-leaf buckthorn, hemlock parsley, and autumn and hoary willows.) Rich Conifer Swamps have closed canopies with high proportions of hemlock, red spruce, or balsam fir, along



with variable amounts of hardwoods and white pine. Black ash is occasional.

Habitat for Associated Fauna: Red Maple - Black Ash Swamps add variation to the habitats of large, mobile animals. Fishless hollows that retain standing water through the spring function as vernal pools and provide important amphibian breeding habitat.

Examples with Public Access: Oxbow NWR, Harvard; Tully Lake project (USACE), Royalston; Satan's Kingdom WMA, Northfield; Mt. Holyoke Range SP, South Hadley.



Midsummer with herbaceous layer dominated by skunk cabbage. Photo: Patricia Swain, NHESP.

