

# Alluvial Hardwood Flat Community

State Rank: S3 - Vulnerable



Alluvial Hardwood Flat, typical context along a small river. Photo: Matthew Hickler

**Description:** Alluvial Hardwood Flat forests occur along moderate gradient reaches of small rivers and large streams where flooding is of short duration although intense as the small watersheds respond rapidly to local weather events. The soils tend to be coarse sand and gravel with mesic to locally hydric moisture regimes.

**Characteristic Species:** Scattered white pines are emergent above the sparse to closed hardwood canopy where black cherry is often codominant with red maple and occasional American elm, white ash, sugar maple, and white pine. The mid-story layer consists of saplings of the tree species, plus ironwood, smooth shadbush, alternate-leaved dogwood, and witch hazel. A wide variety of shrubs and saplings are consistently present at low density. The herbaceous layer is dense and species-rich; with mesic forbs, ferns, grasses, and sedges well-represented. The structure of the herbaceous layer varies from stand to stand and is often patchy

Alluvial Hardwood Flats are fairly open hardwood forests on alluvial flats along small rivers and large streams.

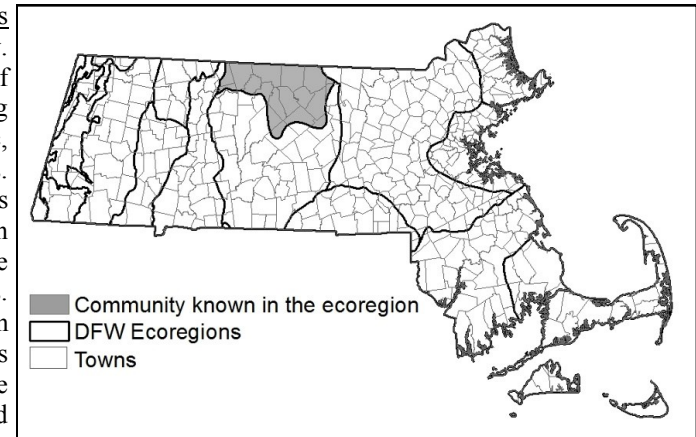
within-stand. Woodgrass and New York fern are characteristic species normally present, often patchily dominant. Other regularly occurring plants include jack-in-the-pulpit, lady fern, sensitive fern, interrupted fern, bristly dewberry, and tall meadow-rue. The non-native invasive shrub glossy alder-buckthorn is often encountered, occasionally at high densities.

**Differentiating from Related Communities:** Alluvial Hardwood Flats are along small streams that have multiple short flooding events throughout the year after storms. Black cherry and white pine are usually abundant in the canopy with red maple, but not silver maple. Alluvial Red Maple Swamps, along low-gradient rivers, flood annually and are slow to drain. Silver maple is often a codominant with red maple. High-



Alluvial Hardwood Flat with dense understory of glossy buckthorn. Photo: P.C. Swain, NHESP.

terrace Floodplain Forests do not flood annually. They have a mix of floodplain trees, including silver maple, and mesic, deciduous hardwoods. The diverse herbaceous layer includes floodplain species and others more typical of rich forests. Red Maple Swamps are in basins or hillside seeps along small drainage ways. They are dominated by red maple.



Small patch Alluvial Hardwood Flat with a mixed herbaceous layer dominated by woodgrass. Photo: Patricia C. Swain, NHESP.

**Habitat for Associated Fauna:** Alluvial Hardwood Flats provide shade for the associated stream and filter water coming from surrounding uplands, improving water quality for the fish and other animals of the stream. Being small communities, they are part of the habitat of the wide ranging riverine and upland

animals. Old meander scars and depressions without fish provide vernal pool habitat.

**Examples with Public Access:** Tully Lake property (USACE), Royalston Falls Reservation (TTOR) and Royalston SF, Royalston; Warwick SF, Warwick.



Alluvial Hardwood Flat with red maple, elm, and black cherry trees. Photo: P.C. Swain, NHESP.

