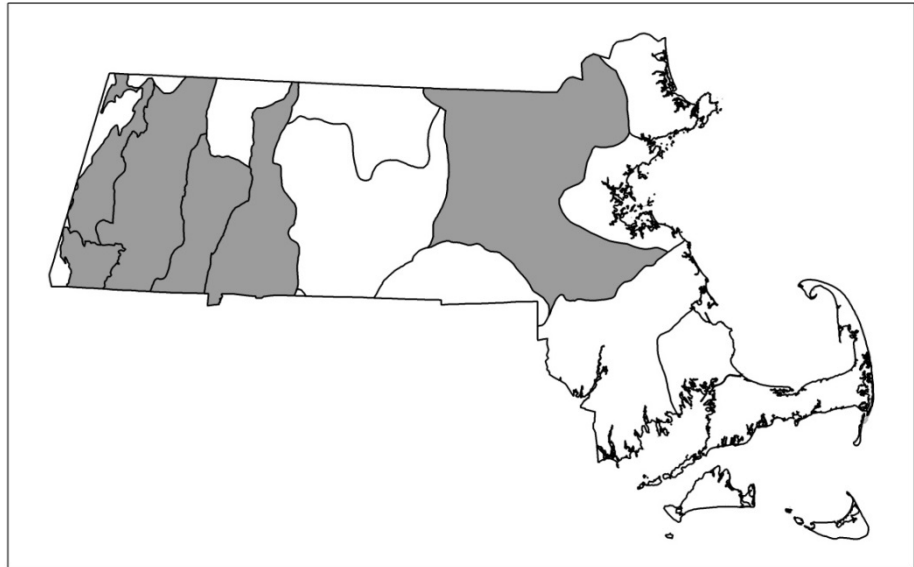




High-terrace Floodplain Forest

Community Code: CP1A2B4000

State Rank: S2



Concept: Mesic, deciduous hardwood forests of high alluvial terraces above the zone of annual flooding. This community type also occurs along riverbanks of high-gradient, northern rivers.

Environmental Setting: High-terrace Floodplain Forests occur on raised banks adjacent to rivers and streams, on steep banks bordering high-gradient rivers in the western parts of the state, on high alluvial terraces, and on raised areas within Major-river and Small-river Floodplain Forests. In general, these communities are within the 100-year flood zone of rivers, and thus are river-influenced, but they typically are not flooded annually, as indicated by the presence of a distinct surface soil organic layer. Soils are typically silt loams. As with other types of floodplain forests and Rich, Mesic Forests, the rich soils and moist conditions make disturbed areas in them prone to invasions by exotic plant species.

Vegetation Description: These floodplain forests typically have more structural and species diversity than other floodplain forests. They have a mix of species that includes many that also occur in lower floodplain forests and others from mesic, deciduous hardwood forests, particularly Rich, Mesic Forests. The canopy may include red, silver, and sugar maples (*Acer rubrum*, *A. saccharinum*, and *A. saccharum*) growing with birches (*Betula* spp.), hickories (*Carya cordiformis*, *C. glabra*, and *C. ovata*), ashes (*Fraxinus* spp.), butternut (*Juglans cinerea*), sycamore (*Platanus occidentalis*), cottonwood (*Populus deltoides*), black cherry (*Prunus serotina*), basswood (*Tilia americana*), and elms (*Ulmus* spp.). Large hackberry (*Celtis occidentalis*) trees grow in High-terrace Floodplain Forests along the southern Housatonic River. Ironwood (*Carpinus caroliniana*) is characteristically in an open subcanopy that may also



include species from the canopy. The shrub layer varies from sparse to well-developed, with northern arrowwood (*Viburnum dentatum* var. *lucidum*), nannyberry (*V. lentago*), and winterberry (*Ilex verticillata*) commonly mixed with variable amounts of non-native shrubs, including Japanese Knotweed (*Fallopia japonica*), Japanese barberry (*Berberis thunbergii*), and buckthorns (*Frangula alnus* and *Rhamnus cathartica*). The herbaceous layer is a mixture of the characteristic floodplain forest plants - sensitive fern (*Onoclea sensibilis*), ostrich fern (*Matteuccia struthiopteris*), and wood-nettle (*Laportea canadensis*) - and rich upland herbs, such as lady fern (*Athyrium filix-femina*), zigzag goldenrod (*Solidago flexicaulis*), white snakeroot (*Ageratina altissima*), jack-in-the-pulpit (*Arisaema triphyllum*), and bellwort (*Uvularia sessilifolia*). Other characteristic herbaceous taxa include honewort (*Cryptotaenia canadensis*), floodplain avens (*Geum laciniatum*), jumpseed (*Persicaria virginianum*), trilliums (*Trillium* spp.), trout-lily (*Erythronium americanum*), enchanter's nightshade (*Circaea canadensis* ssp. *canadensis*), and the grasses bottlebrush grass (*Elymus hystrix*) and Wiegand's wild rye (*E. wiegandii*). Vines, very dense in places, include grape (*Vitis riparia*), prickly cucumber (*Echinocystis lobata*), moonseed (*Menispermum canadense*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), and the invasive Oriental bittersweet (*Celastrus orbiculatus*).

Differentiating Occurrences: Occurrences of High-terrace Floodplain Forests tend to be relatively small, narrow forests on high alluvial terraces that flood only occasionally (not annually) and for a shorter duration than other types of floodplain forests. Less flooding typically results in more structural and species diversity than found in other floodplain forests. High-terrace Floodplain Forests are most closely related to Transitional Floodplain Forests, Small-river Floodplain Forests, and Rich Mesic Forests. They are sometimes seen as a hybrid between floodplain and upland forests, as the vegetation composition of all layers of this forest type is a mixture of floodplain taxa, such as red and silver maple (*Acer rubrum* and *A. saccharinum*), and mesic, deciduous hardwoods including sugar maple (*A. saccharum*), shagbark hickory (*Carya ovata*), black cherry (*Prunus serotina*), American elm (*Ulmus americana*), and basswood (*Tilia americana*). Ironwood (*Carpinus caroliniana*) typically forms an open subcanopy. They have more litter accumulated than other floodplain forests. Alluvial Red Maple Swamps along low-gradient rivers flood annually and are slow to drain. Silver maple is often a codominant with red maple, without the mix of upland species. 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. Major-river, Transitional, and Small-river Floodplain Forests flood annually, are dominated by silver maple, and lack the upland forest species. Rich, Mesic Forests lack silver maple and other species of floodplain forests. They are not associated with river flooding.

Associated Fauna: High-terrace Floodplain Forests can contain low wet depressions that function as vernal pools and provide important amphibian breeding habitat. Being small communities, they are part of the habitat of wide-ranging riverine and upland



animals. Changes in water quality and quantity will alter herbaceous, and eventually tree, species, changing habitat for birds and browsers, such as deer and rabbits.

Public Access:

George L. Darey Housatonic Valley WMA, Lenox; Knightville WMA, Huntington/Chesterfield; Arcadia Wildlife Sanctuary (Massachusetts Audubon Society), Northampton; Bolton Flats WMA, Bolton/Lancaster.

Threats:

Most high terraces have been converted to agriculture. Remaining examples are typically small and disturbed by selective logging and trail clearing. The lack of natural vegetated buffers makes these communities highly susceptible to non-native plant invasions. Most known examples have non-native plant species comprising a substantial percentage of overall plant cover. Because these communities fall outside of wetland boundaries, they are not subject to wetland regulations making them targets for selective logging and clearing for agriculture.

Management Needs:

Removal of non-native species.

USNVC/NatureServe:

Acer saccharum - *Carya cordiformis* Temporarily Flooded Forest Alliance -- *Acer saccharum* - *Fraxinus* spp. - *Tilia americana*/*Matteuccia struthiopteris* - *Ageratina altissima* Forest [CEGL006114].