
ECOLOGICAL SYSTEM: ATLANTIC COASTAL PLAIN BROWNWATER STREAM FLOODPLAIN FOREST

Summary: This Atlantic Coastal Plain system ranges from the Inner Coastal Plain of Maryland, to the Outer Coastal Plain of southeastern Virginia to Georgia on floodplains of smaller streams that carry significant mineral sediment (brownwater or redwater streams). These streams have their headwaters in the Piedmont, Blue Ridge, or other interior regions, or in portions of the Coastal Plain where fine-textured sediment predominates. The water generally carries substantial amounts of silt and clay. Depositional landforms, at least a natural levee, are often distinctly present but are fairly small relative to the scale of communities but help create some variation in duration of flooding and nutrient input. Soils are generally fertile and not strongly acidic. Flooding is generally seasonal, but may range to nearly semipermanent. Vegetation consists almost entirely of forests of wetland trees. Wetter examples are strongly dominated by *Taxodium distichum* (bald-cypress) and *Nyssa* (blackgum) spp. Other examples have mixtures of these species with *Quercus* (oak) spp. and other bottomland hardwoods. Except in the very wet examples, understory, shrub, and herb layers are generally well-developed and woody vines are also prominent. Flooding is an important ecological factor in this system and may be the most important factor separating it from adjacent systems. Flooding brings nutrients and excludes non-flood-tolerant species. Unlike river systems, flooding tends to be variable and of shorter duration.

Range: This system is found throughout the Atlantic Coastal Plain, from New Jersey, Delaware and Maryland to southeastern Georgia. United States: DE, GA, MD, NC, NJ, SC, VA

Delaware Estuary Associations:

- Coastal Plain Oak Floodplain Swamp

CLASSIFIERS FOR ATLANTIC COASTAL PLAIN BROWNWATER STREAM FLOODPLAIN FOREST

Primary Division: 203

Land Cover Class: Woody Wetland

Spatial Scale & Pattern: Linear

Required Classifiers: Natural/Semi-natural; Vegetated (>10% vasc.); Wetland

Diagnostic Classifiers: Riverine / Alluvial [Brownwater]

Non-diagnostic Classifiers: Forest and Woodland (Treed)

COASTAL PLAIN OAK FLOODPLAIN SWAMP

Quercus (palustris, phellos) - Acer rubrum / Cinna arundinacea Forest

Range: This community is found in the Chesapeake Bay region north to the southern Coastal Plain of New Jersey and Pennsylvania. It occurs in Cape May, New Jersey within the estuary.

Environmental Description: This floodplain swamp community of the Chesapeake Bay Lowlands ecoregion and environs occurs in topographic depressions within alluvial floodplains. It occurs in pockets of saturated soils in, or at the edges of, depressions within a larger floodplain forest with annual flooding. Soils are poorly drained loams or clay loams.

Vegetation Description: The tree canopy is dominated by *Quercus palustris* (pin oak), *Quercus phellos* (willow oak), *Acer rubrum* (red maple), and *Liquidambar styraciflua* (sweetgum). The shrub layer is of relatively low cover and comprised of *Viburnum dentatum* (southern arrow-wood), *Viburnum prunifolium* (smooth blackhaw), and *Ilex verticillata* (common winterberry). *Vaccinium corymbosum* (highbush blueberry) is a less frequent shrub layer associate. Typical vines include *Toxicodendron radicans* (eastern poison-ivy), *Parthenocissus quinquefolia* (Virginia creeper), and *Smilax rotundifolia* (roundleaf greenbrier). The herb layer is characterized by *Cinna arundinacea* (sweet woodreed), *Boehmeria cylindrica* (small-spike false nettle), *Symphotrichum lateriflorum* var. *lateriflorum* (calico aster), and *Carex* (sedge) spp., with less frequent associates including *Arisaema triphyllum* (Jack-in-the-pulpit),

Eurybia divaricata (white wood-aster), *Lycopus virginicus* (Virginia water-horehound), *Ranunculus abortivus* (kidneyleaf buttercup), *Euonymus americanus* (American strawberry-bush), *Chasmanthium laxum* (slender spikegrass), and *Glyceria striata* (fowl mannagrass).

Characteristic Species: *Boehmeria cylindrica* (small-spike false nettle), *Cinna arundinacea* (sweet woodreed), *Quercus palustris* (pin oak)

Dynamics/Successional Trajectory: This floodplain forest is subject to annual flooding.

Reference Sites: Cape May, NJ, and potentially Cedar Swamp WMA, New Castle County, DE

Global and State Conservation Ranks and Reasons: GNR (27-Mar-2000). DE?: SNA, NJ?:SNA, PA: SNR.

VegBank Link for Plot Data: http://vegbank.org/natureserve/element_global.2.689632

References: Eastern Ecology Working Group n.d., Fleming et al. 2001, Harrison 2004, Harrison and Stango 2003, Patterson pers. comm., Thomson et al. 1999

MOST ABUNDANT SPECIES		
STRATUM	LIFEFORM	SPECIES
Tree canopy	Broad-leaved deciduous tree	<i>Acer rubrum</i> (red maple)
Tree canopy	Broad-leaved deciduous tree	<i>Quercus palustris</i> (pin oak)
Tree canopy	Broad-leaved deciduous tree	<i>Quercus phellos</i> (willow oak)
Herb (field)	Graminoid	<i>Cinna arundinacea</i> (sweet woodreed)