

Sandy Creek Headwaters

The headwaters of Sandy Creek are characterized by low relief and wide floodplains composed of shrub and graminoid dominated wetlands. Bishop Road and Scofield Road divide the site. The floodplain and adjacent slopes are wooded except for the lowermost section near U.S. 19. The forested areas are a matrix of Northern Hardwoods Forest and Hemlock (White Pine) - Northern Hardwood Forest. Near the lower end of the site where the floodplain is widest lies a Bottomland Oak - Hardwood Palustrine Forest. Most notable in this area is the presence of an Open Sedge (*Carex stricta*, *C. prairea*, *C. lacustris*) Fen in the northernmost part of the site. In the area of the fen, upstream of Bishop Road, no invasive plant species were found – an uncommon phenomenon in Mercer County.

The Hemlock (White Pine) - Northern Hardwoods Forest that occurs mainly above Bishop Road has hemlock (*Tsuga canadensis*), yellow birch (*Betula allegheniensis*), green ash (*Fraxinus pennsylvanica*) and red maple (*Acer rubrum*) as dominant species. Understory associates include spicebush (*Lindera benzoin*), American hornbeam (*Carpinus caroliniana*) and witch-hazel (*Hamamelis virginiana*). In places with less hemlock, cucumber tree (*Magnolia accuminata*) and black gum (*Nyssa sylvatica*) shared dominance. Typical herbaceous species are crested log fern (*Dryopteris cristata*), golden ragwort (*Packera aurea*), skunk cabbage (*Symplocarpus foetidus*), brome-like sedge (*Carex bromoides*), bristly stalk sedge (*Carex leptalea*), tussock sedge (*Carex stricta*) and largeflowered trillium (*Trillium grandiflorum*).

The fen is located as an inclusion in the Hemlock (White Pine) - Northern Hardwood Forest. Two plant species of special concern – **downy willowherb** (*Epilobium strictum*) and **Kalm's lobelia** (*Lobelia kalmii*) grow in the fen. The fen is mostly open with scattered areas of dense shrubs including alder-leaf buckthorn (*Rhamnus alnifolia*) and silky willow (*Salix sericea*). Herbaceous species growing in the fen include round-leaf goldenrod (*Solidago patula*), white nodding ladies tresses (*Spiranthes cernua*), purple avens (*Geum canadense*), green-head coneflower (*Rudbeckia laciniata*) and inland sedge (*Carex interior*).

The open areas next to the stream are shrub-dominated on the edges close to the woods and graminoid-dominated next to the stream. Species in the shrub swamp include winterberry (*Ilex verticillata*), silky dogwood (*Cornus amomum*) and speckled alder (*Alnus incana*). The graminoid area is dominated by lakebank sedge (*Carex lacustris*) and tussock sedge (*Carex stricta*). Along the border of the woods and the shrub swamp grows a Pennsylvania plant species of special concern, **highbush cranberry** (*Viburnum trilobum*).

The central sections of the site are covered with a Northern Hardwoods Forest dominated by red maple (*Acer rubrum*), white oak (*Quercus alba*), American beech (*Fagus grandifolia*), yellow birch (*Betula allegheniensis*) and black cherry (*Prunus serotina*). Hemlock (*Tsuga canadensis*) is present in the forest stand but is not common. Two species, winterberry (*Ilex verticillata*) and American hornbeam (*Carpinus caroliniana*) occur in the understory. Common herbs are gold thread (*Coptis trifolia*), Canada mayflower (*Maianthemum canadense*), painted trillium (*Trillium undulatum*) and

intermediate log fern (*Dryopteris intermedia*). The shrub swamp and marsh along the stream is narrow here and inundated due to beaver damming along Sandy Creek. Species in the marsh include sallow sedge (*Carex lurida*), stalk grain sedge (*Carex stipata*), tussock sedge (*Carex stricta*), blunt spike rush (*Eleocharis obtusa*), white meadowsweet (*Spiraea alba*) and speckled alder (*Alnus incana* ssp. *rugosa*).

The Bottomland Oak - Hardwood Palustrine Forest is mature and dominated by swamp white oak (*Quercus bicolor*), silver maple (*Acer saccharinum*), pin oak (*Quercus palustris*), red maple (*Acer rubrum*) and tuliptree (*Liriodendron tulipifera*). Understory species include silky dogwood (*Cornus amomum*), green ash (*Fraxinus pennsylvanica*) and black ash (*Fraxinus nigra*). Common herbs are skunk cabbage (*Symplocarpus foetidus*), wild ginger (*Asarum canadense*), golden ragwort (*Packera aurea*), sensitive fern (*Onoclea sensibilis*), nodding sedge (*Carex gynandra*) and brome-like sedge (*Carex bromoides*).

Threats and Stresses

The natural communities and the species of concern rely on ground water and ground water discharges. Activities that affect either the recharge zone of the wetland or the water quality or quantity that support these wetlands could change the community such that it is no longer viable. Removal of the nearby canopy could make the wetland more susceptible to invasive species and alter the (surface) hydrology of the wetland.

Recommendations

Informing the landowner of the presence of the wetland and plant species present on their property would be a good first step in ensuring the protection of this area. Maintaining ground water quantity and quality are the most critical factors in the viability of this natural community. Activities that lead to changes in the hydrology of the wetlands including ditching, draining or upstream development should be carefully evaluated. Removal of the canopy near the wetlands could lead to changes in microclimate, transpiration of water and encourage the colonization of exotic invasive plant species.