

Pin Oak Mixed Hardwood Forest

Site Characteristics: Stands occur on wet, poorly drained depressions often composed of fine-grained soils (silts and clays) of lacustrine origin with a pH below 5.5. The parent material is sand, gravelly or sandy alluvium, muck, or peat. Many stands are seasonally wet (mostly during winter and early spring) with a shallow, perched water table, but tend to be dry in late summer and early fall. These stands are often called 'flatwoods.' Although flatwoods are best developed on soils with massive, brittle fragipans, they are also well represented on relatively impermeable clay soils that are found on poorly drained uplands or in depressions on level glacial lake plains or outwash plains. In the Midwest, fragipans (or hardpans) are usually developed from glacial till of Illinoisan age. During the rainy season, water slowly permeates these soils and ponds in depressions. The soil dries rapidly in the summer or during drought, and herbaceous vegetation wilts in response to this stress. The penetration of tree roots in the subsoil and burrowing by animals are limited by the hardpan and tree species may appear somewhat stunted. Some stands are located on seasonally saturated sites that receive groundwater seepage. This water, combined with rainwater, keeps the soil saturated during wet periods and moist during dry periods.

Vegetation Characteristics: Stands exhibit a closed to partially open canopy dominated by Pin Oak and Red Maple. Oaks should comprise at least 25% of the dominance in a stand, with Pin Oak and Swamp White Oak commonly representing up to 50% of the stand (cover, basal area). Other wetland hardwood species may occur and the shrub, vine, and herbaceous species may vary widely. Shrub and herb layers are generally sparse, with stands found in seepage areas having a more hydrophytic flora

Range:

Conservation Status: G3 - Vulnerable

Management Considerations: Many stands have been drained and converted to agriculture

Iowa NRCS Plant Community Description

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3/5/2014

PIN OAK MIXED HARDWOOD FOREST SPECIES LIST

| SCIENTIFIC NAME | COMMON NAME | STRATA | FUNCTIONAL GROUP | IA CofC | SEEDS/LB | STATE STATUS |
|----------------------------------|-----------------------------|-------------------|----------------------|---------|----------------|--------------|
| <i>Acer rubrum</i> | Red maple | Canopy, Dominant | TREE | * | 22,720.00 | |
| <i>Acer saccharinum</i> | Silver maple | Canopy, Associate | TREE | 1 | 1,440.00 | |
| <i>Alisma subcordatum</i> | Water plantain | Herbaceous Layer | P-FORB | 3 | 825,000.00 | |
| <i>Betula nigra</i> | River birch | Canopy, Associate | TREE | 6 | 374,400.00 | |
| <i>Cardamine bulbosa</i> | Spring cress | Herbaceous Layer | P-FORB | 6 | | |
| <i>Cardamine pensylvanica</i> | Bitter cress | Herbaceous Layer | B-FORB | 4 | 275,000.00 | |
| <i>Carex blanda</i> | Common wood sedge | Herbaceous Layer | P-SEDGE, COOL SEASON | 2 | | |
| <i>Carex crinita</i> | Fringed sedge | Herbaceous Layer | P-SEDGE, COOL SEASON | 10 | 368,000.00 | SC |
| <i>Carex laxiculmis</i> | Weak-stemmed wood sedge | Herbaceous Layer | P-SEDGE, COOL SEASON | 10 | 277,427.00 | |
| <i>Carex rosea</i> | Curly-styled wood sedge | Herbaceous Layer | P-SEDGE, COOL SEASON | 7 | 848,000.00 | |
| <i>Carex squarrosa</i> | Narrow-leaved cattail sedge | Herbaceous Layer | P-SEDGE, COOL SEASON | 10 | 320,000.00 | |
| <i>Carex stipata</i> | Common fox sedge | Herbaceous Layer | P-SEDGE, COOL SEASON | 5 | 544,000.00 | |
| <i>Carya ovata</i> | Shagbark hickory | Canopy, Associate | TREE | 5 | 96.00 | |
| <i>Cephalanthus occidentalis</i> | Buttonbush | Shrub Layer | SHRUB | 6 | 96,000.00 | |
| <i>Cinna arundinacea</i> | Wood reed | Herbaceous Layer | P-GRASS, COOL SEASON | 4 | 973,374.00 | |
| <i>Claytonia virginica</i> | Spring beauty | Herbaceous Layer | P-FORB | 4 | 384,000.00 | |
| <i>Cornus</i> spp. | Dogwood | Shrub Layer | SHRUB | | | |
| <i>Eleocharis</i> spp. | Spikerush | Herbaceous Layer | SEDGE, COOL SEASON | | | |
| <i>Elymus riparius</i> | Riverbank wild rye | Herbaceous Layer | P-GRASS, COOL SEASON | 5 | 46,400.00 | |
| <i>Elymus virginicus</i> | Virginia wild rye | Herbaceous Layer | P-GRASS, COOL SEASON | 3 | 67,200.00 | |
| <i>Eupatorium perfoliatum</i> | Boneset | Herbaceous Layer | P-FORB | 6 | 2,560,000.00 | |
| <i>Gaylussacia baccata</i> | Black huckleberry | Shrub Layer | SHRUB | 8 | 354,000.00 | T |
| <i>Glyceria striata</i> | Fowl manna grass | Herbaceous Layer | P-GRASS, COOL SEASON | 5 | 2,560,000.00 | |
| <i>Juncus effusus</i> | Common rush | Herbaceous Layer | P-SEDGE, COOL SEASON | 4 | 16,000,000.00 | SC |
| <i>Liparis liliifolia</i> | Twayblade | Herbaceous Layer | P-FORB | 4 | 113,398,093.00 | |
| <i>Ludwigia alternifolia</i> | Seedbox | Herbaceous Layer | P-FORB | 4 | 15,119,746.00 | |

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| Luzula spp. | Woodrush | Herbaceous Layer | P-SEDGE, COOL SEASON | | | |
| Lycopus virginicus | Bugle weed | Herbaceous Layer | P-FORB | 7 | 108,000.00 | |
| Mimulus ringens | Monkey flower | Herbaceous Layer | P-FORB | 3 | 36,800,000.00 | |
| Onoclea sensibilis | Sensitive fern | Herbaceous Layer | FERN | 6 | | |
| Osmunda regalis | Royal fern | Herbaceous Layer | FERN | 10 | | T |
| Oxalis violacea | Violet wood sorrel | Herbaceous Layer | P-FORB | 7 | 800,000.00 | |
| Parthenocissus quinquefolia | Virginia creeper | Vine Component | W-VINE | 2 | 112,000.00 | |
| Penthorum sedoides | Ditch stonecrop | Herbaceous Layer | P-FORB | 3 | 20,800,000.00 | |
| Podophyllum peltatum | Mayapple | Herbaceous Layer | P-FORB | 4 | | |
| Polygala sanguinea | Field milkwort | Herbaceous Layer | A-FORB | 6 | 832,000.00 | |
| Polygonum sagittatum | Tearthumb | Herbaceous Layer | A-FORB | 4 | 125,000.00 | |
| Quercus alba | White oak | Canopy, Associate | TREE | 6 | 128.00 | |
| Quercus bicolor | Swamp white oak | Canopy, Co-dominant | TREE | 8 | 112.00 | |
| Quercus ellipsoidalis | Hill's oak, Northern pin oak | Canopy, Dominant | TREE | 4 | 245.00 | |
| Quercus macrocarpa | Bur oak | Canopy, Associate | TREE | 4 | 64.00 | |
| Quercus palustris | Pin oak | Canopy, Dominant | TREE | 8 | 410.00 | |
| Quercus rubra | Northern red oak | Canopy, Associate | TREE | 6 | 125.00 | |
| Sambucus canadensis | Elderberry, common elder | Shrub Layer | SHRUB | 1 | 291,584.00 | |
| Scirpus atrovirens | Dark green bulrush | Herbaceous Layer | P-SEDGE, COOL SEASON | 1 | 7,360,000.00 | |
| Scirpus cyperinus | Wooly bulrush | Herbaceous Layer | P-SEDGE, COOL SEASON | 4 | 27,200,000.00 | |
| Thelypteris palustris | Marsh fern | Herbaceous Layer | FERN | 6 | | |

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