

Sweet-gale – Leatherleaf Shrub Fen



System: Palustrine

Subsystem: Shrubland

PA Ecological Group(s): Peatland Wetland

Global Rank: GNR

State Rank: S1

General Description

Leatherleaf (*Chamaedaphne calyculata*) is dominant or co-dominant with sweet-gale (*Myrica gale*) and the shrubs are typically one-meter high and very dense. Other low shrubs like rhodora (*Rhododendron canadense*), sheep laurel (*Kalmia angustifolia*), black chokeberry (*Photinia melanocarpa*), Labrador-tea (*Rhododendron groenlandicum*), and bog laurel (*Kalmia polifolia*) are common. Tall shrubs like highbush blueberry (*Vaccinium corymbosum*), swamp azalea (*Rhododendron viscosum*), witherod (*Viburnum cassinoides*), alder (*Alnus* spp.), and arrow-wood (*Viburnum recognitum*) as well as red maple (*Acer rubrum*), red spruce (*Picea rubens*), tamarack (*Larix laricina*), and pitch pine (*Pinus rigida*) saplings are scattered throughout. Sedges are common and may include sedge (*Carex trisperma*), sedge (*Carex canescens*), tussock sedge (*Carex stricta*) and sedge (*Carex utriculata*). Other herbaceous species may include pitcher-plant (*Sarracenia purpurea*), sundews (*Drosera* spp.), coastal mannagrass (*Glyceria obtusa*), and water bulrush (*Schoenoplectus subterminalis*). hummock and hollow microtopography is pronounced with narrow and deep pools. Sphagnum moss (*Sphagnum* spp.) forms a thick carpet on hummocks.

Rank Justification

Critically imperiled in the jurisdiction because of extreme rarity or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation.

Identification

- Dominated by sweet-gale (*Myrica gale*) and leatherleaf (*Chamaedaphne calyculata* var. *angustifolia*)
- Occurs within Pocono Plateau
- Hummock and hollow microtopography

Characteristic Species

Shrubs

- [Leatherleaf \(*Chamaedaphne calyculata* var. *angustifolia*\)](#)
- [Sweet-gale \(*Myrica gale*\)](#)
- [Rhodora \(*Rhododendron canadense*\)](#)
- [Sheep laurel \(*Kalmia angustifolia*\)](#)
- [Black chokeberry \(*Photinia melanocarpa*\)](#)
- [Labrador-tea \(*Rhododendron groenlandicum*\)](#)
- [Bog laurel \(*Kalmia polifolia*\)](#)

Herbs

- [Sedge \(*Carex trisperma*\)](#)
- [Sedge \(*Carex canescens*\)](#)
- [Tussock sedge \(*Carex stricta*\)](#)
- [Sedge \(*Carex utriculata*\)](#)
- [Pitcher-plant \(*Sarracenia purpurea*\)](#)
- [Coastal mannagrass \(*Glyceria obtusa*\)](#)
- [Water bulrush \(*Schoenoplectus subterminalis*\)](#)
- [Sundews \(*Drosera* spp.\)](#)

Bryophytes

- [*Sphagnum* spp.](#)

International Vegetation Classification Associations:

None

NatureServe Ecological Systems:

[North-Central Interior and Appalachian Acidic Peatland](#) (CES202.606)

Origin of Concept

Zimmerman, E., and G. Podniesinski. 2008. Classification, Assessment and Protection of Floodplain Wetlands of the Ohio Drainage. Pennsylvania Natural Heritage Program, Western Pennsylvania Conservancy, Pittsburgh, PA. Report to: The United States Environmental Protection Agency and the Pennsylvania Department of Conservation and Natural Resources, Office of Conservation Science. US EPA Wetlands Protection State Development Grant no. CD-973081-01-0.

Pennsylvania Community Code

na : Not Available

Similar Ecological Communities

Sweet-gale – Leatherleaf Shrub Fen may have a similar appearance to Leatherleaf – Sedge Wetland but the Sweet-gale – Leatherleaf Shrub Fen is distinguishable by the prominence of sweet-gale (*Myrica gale*).

Fike Crosswalk

Sweet-gale (leatherleaf) - sedge shrub fen

Conservation Value

This is a rare plant community known to occur at one location within the state. Plants of concern found in the wetland or in adjacent waterways include sweet-gale (*Myrica gale*), Labrador-tea (*Rhododendron groenlandicum*), coastal mannagrass (*Glyceria obtusa*), and water bulrush (*Schoenoplectus subterminalis*). This community also serves as a buffer for sediment and pollution runoff from adjacent developed lands by slowing the flow of surface water causing sediment to settle within this wetland.

Threats

Beavers may be a threat to this community or may be integral to its maintenance through periodic disturbance.

Management

Hydrologically, this type receives surface water from creeks that flow through the system or from an adjacent open water body. It is likely that ground and surface water move through this wetland and provide greater nutrient availability and higher pH (acidity) than what would be expected in a bog. As long as there is sufficient water, occasional hydrologic disturbances and ample buffers, this community should be able to maintain itself. Monitoring water quality and exotic invasive species is recommended.

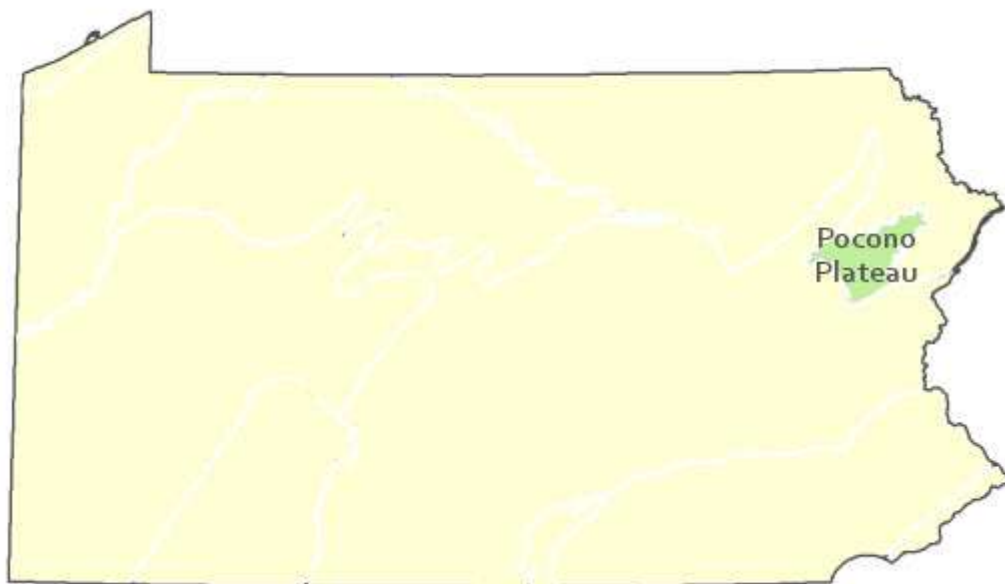
Research Needs

In addition to further studying the range of this type, there is need to monitor high quality examples of this community. Large expanses of this type should be inventoried for rare plants and animals, especially insects.

Trends

Little is known about this community and it is difficult to suggest that this type is increasing or decreasing in occurrence.

Range Map



Pennsylvania Range

Pocono Plateau

Global Distribution

Connecticut, Massachusetts, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont

References

The Nature Conservancy, PA Science Office. 2003. Tunkhannock Creek Watershed Plant and Aquatic Communities, and Rare Species Assessment, Monroe County, Pennsylvania. Tobyhanna Creek/Tunkhannock Creek Watershed Association, P.O. Box 796, Pocono Lake, PA 18347.

NatureServe 2010. NatureServe Explorer: An online encyclopedia of life Version 7.1. NatureServe,

Arlington, VA. Available <http://www.natureserv.org/explorer> (accessed: 23 November 2011).

Stone, B., D. Gustafson, and B. Jones. 2006 (revised). Manual of Procedure for State Game Land Cover Typing. Commonwealth of Pennsylvania Game Commission, Bureau of Wildlife Habitat Management, Forest Inventory and Analysis Section, Forestry Division. Harrisburg, PA. 79 ppg.

Pennsylvania Department of Conservation and Natural Resources (DCNR). 1999. Inventory Manual of Procedure. For the Fourth State Forest Management Plan. Pennsylvania Bureau of Forestry, Division of Forest Advisory Service. Harrisburg, PA. 51 ppg.