

SOUTHERN APPALACHIAN FEN (GLADES SUBTYPE)

Concept: Southern Appalachian Fens are primarily herb-dominated wetlands fed by base-rich waters seeping from amphibolite or ultramafic rocks. The Glades Subtype covers the floristically distinct examples from The Glades in Virginia, and adjacent areas in Alleghany County. Only a very degraded example occurs in North Carolina, and more intact examples are unlikely to be found.

Distinguishing Features: The Bluff Mountain Subtype is distinguished from the Glades Subtype by floristic differences and by its higher elevation. While many species are shared, *Cladium mariscoides*, *Carex torta*, and *Triantha glutinosa* are abundant and frequent in the Bluff Mountain Subtype and are scarce or absent in the Glades Subtype, and *Thelypteris palustris*, *Glyceria striata*, *Helenium brevifolium*, and a number of shrubs are among the many species in the Glades Subtype but absent at Bluff Mountain.

Synonyms: *Alnus serrulata* / *Sanguisorba canadensis* - *Parnassia grandifolia* - *Helenium brevifolium* Shrubland (CEGL003917). *Alnus serrulata* / *Sanguisorba canadensis* - *Calamagrostis canadensis* Shrubland (CEGL004252).

Ecological Systems: Southern and Central Appalachian Bog and Fen (CES202.300).

Sites: Gently sloping areas with seepage emerging from amphibolite, hornblende gneiss, or ultramafic rocks. Elevations are 2400-3500 feet.

Soils: Soils are mucky and saturated.

Hydrology: Permanently or semipermanently saturated by waters seeping from mafic or ultramafic rocks. The water is high in calcium and magnesium and has a circumneutral pH.

Vegetation: The vegetation in existing examples in Virginia is a mosaic, with extensive shrub-dominated areas broken by herbaceous openings. The most abundant shrubs are *Alnus serrulata*, *Spiraea tomentosa*, and *Lyonia ligustrina*. Some *Acer rubrum* and *Pinus strobus* are present. Dominant herbs in portions include *Sanguisorba canadensis*, *Juncus subcaudatus*, *Thelypteris palustris* var. *pubens*, *Eleocharis tenuis*, *Agrostis gigantea*, *Scirpus expansus*, *Parnassia grandifolia*, *Glyceria striata*, and *Filipendula rubra*. Other notable species include *Leersia oryzoides*, *Onoclea sensibilis*, *Lysimachia terrestris*, *Solidago uliginosa* var. *uliginosa*, *Juncus effuses*, *Persicaria sagittata*, *Carex lurida*, and *Helenium brevifolium*. This composition probably is affected by past grazing or clearing, making it difficult to tell the natural structure and composition of this community.

Range and Abundance: Ranked G1. Only one highly degraded example is known from North Carolina. Well-developed examples occur in Virginia with a few miles of the state line.

Associations and Patterns: Unknown.

Variation: Two NVC associations are recognized that correspond to this subtype (listed in synonymy above). One is mostly shrubby, the other a mix of shrub and herbaceous dominance.

Dynamics: Nothing appears to have been written about the dynamics of this subtype. The presence of young trees suggests it may be prone to invasion by trees, at least in disturbed examples.

Comments:

Rare species:

References: