

Calcareous Sloping Fen

State Rank: S2 - Imperiled



Across a Calcareous Sloping Fen in the fall. Photo: Patricia Swain, NHESP.

Description: Calcareous Sloping Fens are generally small graminoid and herbaceous dominated wetlands that may occur as multiple patches in a wetland or in wetland complexes with other wetland community types. They are on or at the base of shallow to moderate slopes and maintained by alkaline groundwater seepage with high concentrations of calcium dissolved from nearby bedrock or glacial materials. Where there is heavy groundwater discharge the mineral soil is exposed with organic matter accumulations in small hummocks between visible rivulets. Some form of disturbance is important to preventing dominance by woody species. Calcareous Sloping Fens may occur as openings at the bases of slopes, in upland forests or swamps, or may grade into more open wetlands downslope.

Characteristic Species: Calcareous Sloping Fens include many sedges, such as prickly sedge, delicate sedge, yellow sedge, tussock-sedge, marsh-sedge and

Calcareous Sloping Fens are open, sedge-dominated wetlands on slight to moderate slopes with calcareous groundwater seepage. They are often 'hot spots' for uncommon species.

porcupine-sedge. Herbaceous species may be dense with many calciphiles (calcium loving plants) as well as water-horehound, rough-leaved goldenrod, fen-goldenrod, and marsh fern. Shrubby cinquefoil is almost always present as a low shrub. A sparse, and generally low, canopy layer may include white pine, larch, red maple, and alders, with shrubby autumn, hoary, and silky willows along the margins. There is often a bryophyte layer, dominated by sphagnum moss species, though moss cover is generally less than in other calcareous or acidic fens.



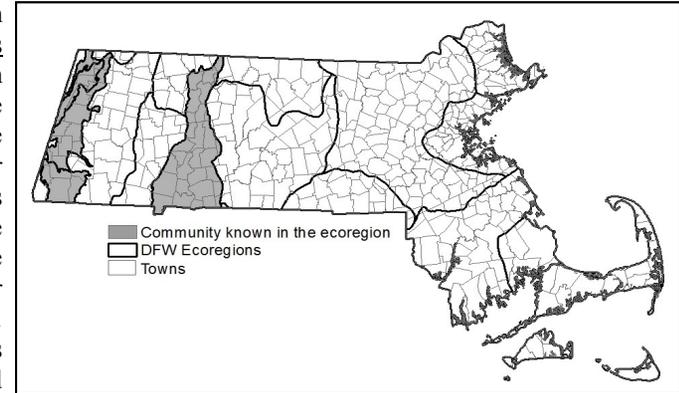
Characteristic species of Calcareous Sloping Fens. Shrubby cinquefoil (L). Photo: Bryan A. Connolly, NHESP. Kalm's lobelia (R). Photo: Donald Cameron.

Differentiating from Related Communities: All calcareous wetlands include shrubby cinquefoil. Most also have other calciphiles such as grass-of-Parnassus, Kalm's lobelia, alder-leaf buckthorn, hemlock parsley, autumn and hoary willows, and slender cotton-grass. Within a given site, calcareous fen

communities grade from one to another. Calcareous Sloping Fens are on shallow to moderate slopes and have more mineral soil than other calcareous fens: peat is mostly restricted to sedge hummocks. A diverse herbaceous layer dominates the vegetation. Tall shrubs and short trees may occur in scattered patches.

Calcareous Seepage Marshes have a mixture of herbaceous, graminoid and shrub species similar to an emergent marsh, with peat generally 0.5 to 2 meters deep. They are flat to slightly sloping. Calcareous Basin Fens have deep (>2.0 meters (6.5 ft.)) peat in basins. They are dominated by sedges with a sparse shrub layer; they generally contain a more developed bryophyte layer than the other calcareous fens. They share many species with acidic fens, but include species restricted to calcareous conditions, such as bog birch and the calciphiles listed above. Red Maple - Black Ash - Tamarack Calcareous Seepage Swamps are dominated by sparse trees and tall shrubs. Small openings share many of the species and conditions of Calcareous Sloping Fens.

Habitat for Associated Fauna: Small patch communities such as Calcareous Sloping Fens contribute variation within the habitats of large, mobile animals. Rare animals include turtles and dragonflies.



Examples with Public Access: Due to the sensitivity of calcareous wetlands to damage from visitation, most land owners prefer not to publicize the locations.



A rivulet carrying calcium-rich water through flowering shrubby cinquefoil in a Calcareous Sloping Fen. Photo: Henry Woolsey, NHESP.

