



Across a Calcareous Basin Fen towards a fringe of Phragmites. Photo: P. Swain, NHESP.

Description: Calcareous Basin Fens occur in well-defined basins with permanently saturated deep (>2.0 m (6.5 ft.)) peat and consolidated or floating, sedge-dominated peat mats. Waters are circumneutral to alkaline (pH 6.0-8.1) with high concentrations of calcium and magnesium cations and bicarbonate anions dissolved from bedrock or glacial materials rich in those elements. They are the least nutrient rich (with respect to water chemistry) of the calcareous fen communities.

Characteristic Species: Calcareous Basin Fens are sedge-dominated peatlands with scattered shrubs. Typical sedges include slender woolly-fruited sedge, and water-sedge, with multiple other sedges, narrow-leaved cat-tail, and white beaksedge. There are often patches of hard-stemmed bulrush. Grass-of-Parnassus may also be present. Scattered shrubs include shrubby cinquefoil and sweet-gale associated with typical bog/

Calcareous Basin Fens are sedge-shrub peatlands occurring in well-defined basins that have calcareous water inputs. These uncommon communities are the least rich of the three types of calcareous fen communities described in Massachusetts.

acidic fen species such as pitcher plant, round-leaved sundew, bog rosemary, twig rush, buckbean, and large cranberry. Mosses, particularly species of sphagnum are extensive, forming the peat mat. In the wet area near the upland edge, a dense shrubby zone may include dense bog birch.

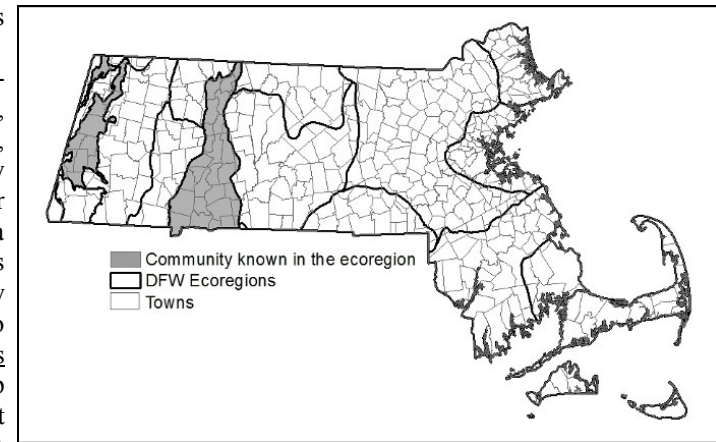


Bog birch grows at the edges of Calcareous Basin Fens. Photo: Donald Cameron.

Differentiating from Related Communities: All calcareous wetlands include shrubby cinquefoil. Most also have other calciphiles (calcium

loving plants) 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 may grade from one type to another. Calcareous Basin Fens have deep (>2.0 m (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. 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 2m deep. They are flat to slightly sloping. Red Maple - Black Ash - Tamarack Calcareous Seepage Swamps are dominated by tree species and tall shrubs. Small openings within them share many of the species and conditions of Calcareous Sloping Fens.



Habitat for Associated Fauna: Calcareous Basin Fens contribute variation within the habitats of large, mobile animals. Rare animals include 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.



Across a shubby Calcareous Basin Fen in a mosaic with Black Ash-Red Maple-Tamarack Calcareous Seepage Swamp. Photo: NHESP.

