Riverside Seep Community

State Rank: S2 - Imperiled

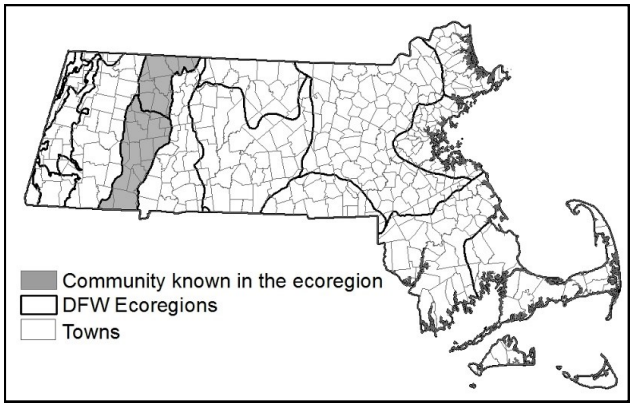
Riverside Seep Community in a rivershore meadow along a fast flowing river. Photo: Patricia Swain, NHESP.

Riverside Seeps are mixed herbaceous communities that occur at the base of steep riverbanks where nutrient enriched groundwater supports high species diversity.

Description: Riverside Seep Communities occur at the base of steep riverbanks where groundwater discharges from adjacent upland slope. Groundwater discharge in seeps may be diffuse or concentrated in seepage rivulets, and groundwater flow appears to vary substantially among seeps; some seeps may dry out during the summer; others flow year-round. They are often associated with riverside rock outcrop communities or near rapids. Others may be at the base of talus slopes and associated with high-energy riverbank communities or gravel bars. Organic soils are seldom present except in sheltered areas. Mineral-rich seepage leads to a high species diversity of mostly herbaceous plants. Periodic flooding and, likely, ice scour, from the river helps to prevent woody shrub encroachment.

Characteristic Species: The vegetation of Riverside Seep Communities is variable, apparently related to the flow and mineral content of groundwater. Seeps that dry during the summer months often have relatively sparse vegetation. The wettest parts of Riverside Seeps also have bare ground including wet rocks and sometimes open water, but are typically mossy with a mixture of herbs and sedges. The general vegetation of Riverside Seep Communities that flow year-round is fairly dense and includes many graminoids (not all at each site) such as brown beak-rush, creeping spike-rush, scabrous sedge, sallow sedge, marsh rush, jointed rush and grasses including Canada bluejoint, fascicled panic-grass, and riverbank wild rye. Forbs include northern dwarf St. John's-wort, swamp saxifrage, sensitive fern, and marsh bellflower. Characteristic marsh plans such as spotted Joe-Pye-weed, boneset, orange jewelweed, and fringed loosestrife also occur. Woody species such as speckled alder and willows are often present but not dominant. Muskflower, Canadian burnet, and golden Alexanders are indicative of mineral enrichment, and as a group are good indicator species of the community type. The non-native plants colt's foot and purple loosestrife can also be abundant in the community. The vegetation described here is from sites in the western part of the state; eastern sites may be different.

Mixed plants and rock in a Riverside Seep Community. Photo: Glenn Motzkin.



Differentiating from Related Communities: Riverside Seep Communities are small patch communities that often occur with and grade into High-energy Rivershore Meadows and High-energy Riverbank Communities along high energy rivers. Riverside Seeps occur at the base of steep riverbanks where groundwater seeps out of the bottom of the upland slope; they are wetter than associated High-energy Rivershore Meadows and High-energy Riverbank Communities. Muskflower, Canadian burnet, and golden Alexanders as a group are good indicators of Riverside Seep Communities. High-energy Rivershore Meadows are densely vegetated with a characteristic group of dominant plants - prairie dogbane, riverside-sedge and Canadian burnet - in a mix with other forbs and graminoids. High-energy Riverbank Communities have, on average, sparser vegetation and more bare ground than do High-energy Rivershore Meadows or Riverside Seep Communities.

Habitat for Associated Fauna: Being small communities, Riverside Seeps are part of the habitat of the wide ranging riverine and upland animals.

Examples with Public Access: Gilbert A. Bliss SF, Chesterfield; Knightville Dam property (USACE), Huntington; Catamount SF, Charlemont. These communities are disturbed by trampling from recreation which can lead to the invasion of non-native plant species already present at many sites.

Riverside Seeps in large cobbles along the Westfield River. Photo: Patricia Swain, NHESP.

From: *Classification of Natural Communities of Massachusetts* http://www.mass.gov/nhesp/
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