

Forest Seep Community

State Rank: S4 – Secure



A narrow seep with sphagnum moss. Photo: Beverly Vucson, DFG.

Description: Forest Seeps are very small (often <1 ac) wetlands in upland forests. Forest Seep Communities occur where ground water emerges, often on a slope or at the base of one, as patches or linear areas perpendicular to slopes. Seeps may produce or be near stream headwaters, or may be isolated with the water absorbed into the surroundings. Upland trees rooted in the surrounding forest form the canopy, but species of the shrub and herbaceous layers are predominantly those of wetlands or moist areas. Seeps support diverse herbaceous layers suggesting nutrient enrichment relative to the surroundings. Downed logs are common due to being on slopes and wet soils promoting periodic windthrow. The ground surface is generally dominated by plant litter, though there may be areas of bare soil and scattered

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stones. The soils are generally mineral although a shallow organic layer may form.

Characteristic Species: In Forest Seep Communities the canopy is primarily (>75% cover) from trees from the surrounding forest that are rooted outside the seep. Because Forest Seep Communities occur statewide in all types of forest, the canopy cover trees may be any upland species. The shrub layer is variable, dense or barely present, and may include mixed wetland and upland plants including (depending on location) highbush blueberry, mountain laurel, hobble-bush, swamp dewberry, silky dogwood, winterberry, and, in coastal areas sweet pepperbush. Many Forest



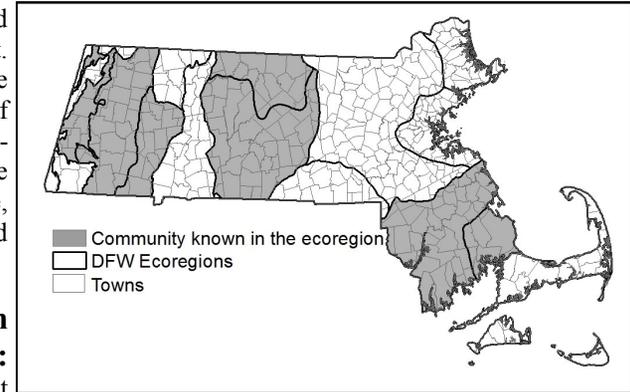
Orange jewelweed, typical plant of Forest Seeps. Photo: Jerry A. Payne, USDA ARS, Bugwood.org.

Seep Communities have dense herbaceous layers, with species dependent on location in the state. Golden saxifrage primarily occurs in seeps. Jewelweeds, golden ragwort, and crooked-stemmed aster are typical, but not restricted to seeps. Scouring rush, water avens, and an assortment of sedges including eastern rough sedge, bladder sedge, and three-seeded sedge are regularly found at seeps.

A mix of wetland and upland ferns may also be present. Some Forested Seeps have dense, shallow patches of sphagnum or other non-vascular plants. Invasive species include multiflora rose, Japanese barberry, and common buckthorn.

Differentiating from Related Communities:

The intention of defining Forest Seep Communities is to identify small areas that retain the overstory of the surrounding upland forest, but are wet but may not show up as wetlands on wetlands maps. Sites where wetland trees rooted in a seep contribute >25% of the canopy cover are defined as swamps. Swamps may receive seepage waters at upland edges, however the vegetation of such areas is considered to be variation in the swamp community and not separated out as separate community types. Seeps in forested edges of streams or stream corridors, including intermittent streams, can produce linear versions of this community or grade into floodplain or alluvial forests dominated by wetland tree species. Riverside Seeps occur at the base of steep riverbanks where groundwater emerges from of the upland slope; they are generally not forested and are associated with High-energy Riverbank Communities along high gradient, fast-flowing rivers. Many calcareous wetland communities receive seepage waters, but are defined as separate communities with distinct floras. Rich, Mesic Forests on slopes can have seasonally seepy patches that are included in the forest variation.



Habitat for Associated Fauna:

Despite their small sizes, Forest Seep Communities add important diversity to the forests in which they occur and are a part of the habitat of common wide ranging species. Pooled seepage waters can create vernal pools that would be used as breeding areas by amphibians inhabiting surrounding forests. Most tree dwelling species would not be affected by the presence of small seeps below.

Examples with Public Access:

Russell Millpond Conservation Area, Plymouth; SE Mass Bioreserve, Fall River; Warwick SF, Warwick; Hiram Fox WMA, Huntington.



Edge of a Forest Seep at the base of a slope. Photo: Beverly Vucson, DFG.

