

Spruce - Tamarack Bog

State Rank: S2 - Imperiled



The Spruce - Tamarack Bog zone around an open peatland. Photo: Patricia Swain, NHESP.

Description: Spruce - Tamarack Bogs are forested communities that occur on thick peat deposits often as part, usually in the older, more stable areas, of larger wetland complexes that include other forested, shrub, and open community types. The forested bogs are late-successional peatlands that typically occur around more open bog mats. The layer of peat (dead and living moss and barely or partially decomposed roots and other plant material) isolates the plants from nutrients in ground water. The forest canopy is >25% cover, often with dense small (<12m (40 ft.), and dbh <15cm (6 in.)) black spruce and tamarack trees, although northern/higher elevation occurrences may be more forest like.

Characteristic Species: Black spruce and tamarack usually dominate the overstory. Their trunks and branches are often covered and draped in lichens, especially old man's beard. Associates include white pine, pitch pine and red maple, and red spruce can also occur. A mixture of tall and short shrubs provide nearly continuous cover in the understory.

Spruce-Tamarack Bog communities are acidic forested peatlands with an overstory of black spruce and tamarack and an understory of heath shrubs on sphagnum moss. They occur in kettlehole depressions, watershed divides, and along pond margins.

Labrador tea and bog-laurel are good indicators of the community, but they do not always occur. Other common shrubs are mountain-holly, wild raisin, and sheep-laurel. The ground is covered in sphagnum moss with three-seeded bog sedge, three-leaved Solomon's seal, bluebead-lily, goldthread, and, occasionally, creeping snowberry.



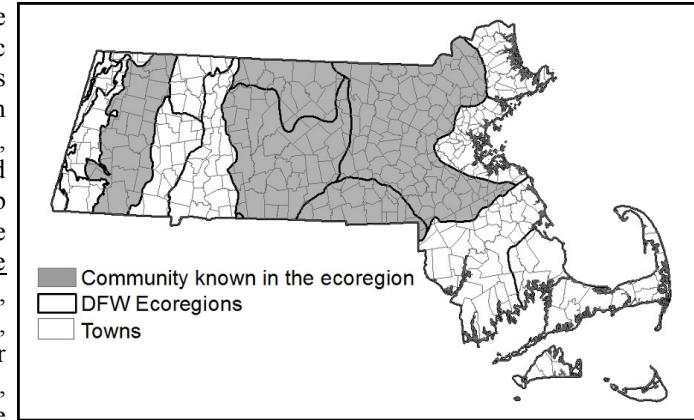
Black spruce branch with new growth. Photo: Keith Kanoti, Maine Forest Service, Bugwood.org.

Differentiating from Related Communities: Spruce - Tamarack Bogs have a tree canopy of >25%, dominated by black spruce and tamarack. Open (non-forested) acidic peatlands such as Level Bogs, Kettlehole Level Bogs, and Acidic Graminoid Fens may have clumps of trees, but with <25% canopy overall. Atlantic White Cedar (AWC) Bogs may not have >25% tree canopy and

the existing trees are dominated by Atlantic white cedar. AWC Bogs share many species with Spruce - Tamarack Bogs, but are generally found within Pitch Pine - Scrub Oak or oak - pine communities. Red Spruce Swamps have taller, larger diameter trees, dominated by red rather than black spruce, generally with a more open understory (fewer shrubs). They share species with Spruce - Tamarack Bogs, but also contain balsam fir. Red Spruce Swamp occurrences are often larger than Spruce - Tamarack Bogs. Hemlock Swamps are dominated by eastern hemlock. Red Maple - Black Ash - Tamarack Calcareous Seepage Swamps also contain tamarack, and may contain red spruce. However, these generally have much greater species diversity and occur in calcareous or circumneutral groundwater.



Inside a Spruce - Tamarack Bog with dense shrubs. Photo: Patricia Swain, NHESP.



Habitat for Associated Fauna: Small patch communities such as Spruce - Tamarack Bogs contribute variation to the habitats of large, mobile animals. Breeding birds include a suite of northern species typical of conifer forests such as Canada Warbler, Northern Waterthrush, Purple Finch and Red-breasted Nuthatch.

Examples with Public Access: Cookson SF, New Marlborough; Otis SF, Otis; Poutwater Pond Nature Preserve, Sterling; Muddy Brook WMA, Hardwick; Ware River Watershed, DCR, Rutland and Oakham.



Spruce - Tamarack Bog around a shrubby Level Bog. Photo: M.W. Nelson, NHESP.

