



Patuxent Science Meeting 2004 Poster Abstract

Wetland vegetation dynamics in response to beaver activity on Mount Desert Island, Maine

Amanda M. Little

Beaver wetlands on Mount Desert Island (MDI), ME include wooded swamps, Sphagnum sedge fens, Sphagnum shrub fens, and open marshes / sedge meadows. In the presence of beaver flooding, Sphagnum shrub fens are more stable than other, "transitional" wetland types due to the formation of a floating mat. Of the transitional types, open marsh / sedge meadow communities are maintained by frequent beaver activity. Sphagnum sedge fens form when beaver abandon a wetland for >10 years. White-cedar/tamarack swamps form in the long-term absence of beaver activity. Wetland stability is positively correlated to site size and peat accumulation, but negatively correlated with microtopographic richness. Those wetlands currently inhabited by beaver tend to have higher pH and specific conductivity, and deeper water depths than those with no beaver activity. Stable sites had significantly ($p < 0.05$) lower ground- and surface water conductivity than transitional sites. They also had significantly more peat accumulation and lower microtopographic richness. Surprisingly, water pH did not differ significantly between the two types of sites.