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peat sedge peat is deposited and this impedes drainage. In our diagram of successional relationships, this is the *Scirpus cespitosus*-*Dicranum leioneuron* Association rising up out of the Pioneer Stage* Nichols called it the "bog meadow association." In well-developed bogs this association occurs at the edges and determines the size of the bog through its expansion into forested areas* The wind tears into the dwarf trees bordering the bog, creating openings • and once light gets in, the shade intolerant pioneer *Sphagnum* species become established with the bulrushes • the sedge peat causing further destruction of the forest and thus further bog advancement* Within the bog, there is a swift accumulation of peat and the association of bulrushes and several species of *Sphagnum* takes over • Nichols' "wet bog association." This is *Scirpus cespitosus*-*Sphagnum* spp. The different species of *sphagnum* grow at different rates, and uneven topography emerges, mounds and hollows. And "as the mounds are being built up there is a corresponding rise in the water table. Some mounds eventually coalesce and form ridges enclosing shallow depressions. These become filled with water and create bog ponds. The ridges are built higher by *Sphagnum* species, strengthened by vascular plant remains and eventually become effective dams. With the underlying sedge peat impervious to drainage and the surrounding ridges maintaining the water table near the surface, the ponds become a permanent feature of the bog. The bog surface is continuously raised by the growth of *Sphagnum* mounds until, eventually, it is above the water level of the ponds and is no longer influenced by the seepage from them* At this stage drier surface conditions prevail" • and the bog advances to the Climax association of Black Spruce-Reindeer Moss (*Picea mariana*-*Cladonia rangiferina*)* Nichols called this the "dry bog association." f' *Picea mariana* - *Cladonia rangiferina* - * = ' • - ' • ' • 2??H' ~ Association (ponds) (CLIMAX) VF ' EROSION destruction of bog surface • *Scirpus cespitosus* - *Sphagnum* spp. Association (ponds) 4 / *Sphagnum* spp. Association 1' *Rhynchospora alba* - *Drosera intermedia* Association f (aquatic *Sphagnum* spp.) /* *Nuphar variegatum* Association -*Scirpus cespitosus* - *Dicranum leioneuron* Association Pioneer Stage BOG DEVELOPMENT series REGENERATION of surface *Eriophorum angustifolium* Association (aquatic *Sphagnum* spp.) *Nuphar variegatum* Association ponds Successional relationships of raised bog associations taken from Comeau's thesis ' gullies *Picea mariana* - *Rhododendron canadense* Association 1. *Scirpus cespitosus* - *Dicranum leioneuron* Association 4. *Nuphar variegatum* Association 2. *Scirpus cespitosus* - *Sphagnum* spp. Association 5. *Rhynchospora alba* - *Drosera intermedia* Association 3. *Picea mariana* - *Cladonia rangiferina* Association 6. *Eriophorum angustifolium* Association (7). *Picea mariana* - *Rhododendron canadense* Association (forest phase) 3 3 2 6 pond succession surface regeneration bog development Topographic sequence of raised bog associations. Maximum recorded peat depths in centimeters are given under each association. Prom Comeau*