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Alvar soils and ecology in the boreal forest and taiga regions of Canada.

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Alvars have been defined as "...a biological association based on a limestone plain with thin or no soil and, as a result, sparse vegetation. Trees and bushes are stunted or absent ... may include prairie spp." (Wikipedia). They were first described in southern Sweden, Estonia, the karst pavements of Yorkshire (UK) and the Burren (Eire). In North America alvars have been recognised and reported only in the Mixed Forest (deciduous/coniferous) Zone around the Great Lakes.
An essential feature of the hydrologic controls on vegetation growth on natural alvars is that these terrains were glaciated in the last (Wisconsinan/Würm) ice age: the upper beds of any pre-existing epikarst were stripped away by glacier scour and there has been insufficient time for post-glacial epikarst to achieve the depths and densities required to support the deep rooting needed for mature forest cover. However, in the sites noted above, the alvars have been created, at least in part, by deforestation, overgrazing, burning to create browse, etc. and thus should not be considered wholly natural phenomena.
There are extensive natural alvars in the Boreal Forest and Taiga ecozones in Canada. Their nature and variety will be illustrated with examples from cold temperate maritime climate settings in northern Newfoundland and the Gulf of St Lawrence and cold temperate continental to sub-arctic climates in northern Manitoba and the Northwest Territories.