



**NATURE  
CONSERVANCY  
CANADA**

## ALVAR IN MANITOBA

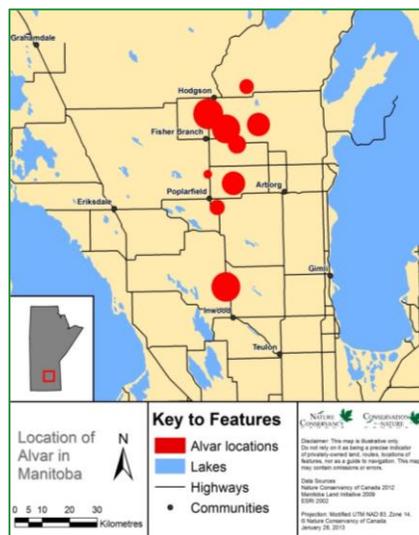
### Where and what is alvar?

Alvar is a plant community that grows over limestone or dolomite bedrock in 10 cm or less of soil. Much of Manitoba's alvar is shrubby, with large patches of bare rock at the surface. Some alvars resemble grasslands or wetlands, while others have scattered trees.

Alvar is a rare community found in only a few provinces and states in North America and only a few countries in Europe. Manitoba's Interlake region is characterized by ridges and lowlands that were created by the advancement and retreat of the glaciers. On some of these ridges, the soil was scraped or washed away from the limestone bedrock, leaving it flat and exposed. It is on these exposed ridges that alvar is found.

In Manitoba there are four main types of alvar:

- Savanna Alvar - trees are abundant, but remain below 60% canopy cover
- Shrubland Alvar - shrubs such as creeping juniper and bearberry are more abundant than grass
- Grassland Alvar - grass is the dominant species and there are usually no trees
- Wetland Alvar - sedges are dominant, with few grasses or shrubs



### Why is alvar important?

Alvar is rare all across the world; in Manitoba, just over 9700 acres (3925 ha) of alvar are documented. Some alvar types support species that do not grow in any other plant community in Manitoba and are rare across Canada.

These communities provide important gene pools and sources of information about plant adaptation in extreme environments. This could be applied in agricultural and horticultural research.

Alvar provides habitat for a variety of birds, reptiles, mammals and insects.

# ALVAR IN MANITOBA



Wetland Alvar; Photo by NCC

## DID YOU KNOW?

Some mosses and lichens dry out when there is no moisture and then come back to life, months later, when water becomes available?

Some liverworts grow flat on the ground, while others look so much like mosses that you need a microscope to tell them apart?

Snakes will use old quarries and small limestone caves to hibernate through the winter?

The Interlake is home to a number of mosses and liverworts that were recently discovered in MB for the first time, including *Grimmia* Dry Rock Moss and a small fern called *Gastony's* Cliffbrake that only grows on the sides of limestone cliffs and boulders?

## What you need to know about alvar:

The combination of species in alvar is unique. Some have an unusual mixture of boreal and prairie plants.

Alvars are often flooded in spring when water becomes trapped on the limestone pavement, then suffer drought conditions in late-summer.

Most alvars have an abundance of mosses and lichens that can grow on little or no soil and survive the harsh conditions.

At least 75% of alvar in Manitoba is grazed. Light grazing may be beneficial in some alvars by preventing the encroachment of trees and shrubs. Fire can also help keep alvars open and may even be necessary for the reproduction of species such as Jack Pine trees.

Some alvars have limestone cliffs associated with them. These cliffs provide habitat for a variety of mosses and liverworts that only grow on calcium rich substrates. They also provide habitat for two rare cliffbrake ferns.



Exposed Ridge Alvar ; Photo by NCC

## To learn more about alvar and our organization:

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