



SPECIAL FEATURES IN THE NORTHWEST TERRITORIES GLACIAL REFUGIA



REFUGIAL GLACIAL

What are glacial refugia?

During the last Ice Age (the Wisconsinan glaciation), which ended 10,000 years ago in the time of Beringia (the land bridge that connected North America with Asia), much of Canada was covered in ice. Most of Canada's plants and animals that survived the glaciation were able to migrate and establish themselves in new areas made available as the glaciers retreated. During the Ice Age, some areas remained ice-free. These areas are known as glacial refugia. Many species that lived in these areas before glaciation exist today.

Glaciation is a powerful force that shapes the landscape and results in the physical features of the land to be different than areas that are not glaciated. As a result, glacial refugia tend to be "biodiversity hotspots" where it is possible to find a high diversity of plants and animals, including rare and unique species and unique landforms. Refugia may contain relicts of species that were once wide-ranging but have now mostly disappeared, or species that evolved to have increased genetic diversity or even sometimes even into new species while isolated within the refugia.

GLACIAL REFUGIA

Glacial refugia in the NWT

Several ice sheets covering different parts of North America advanced and retreated during the Wisconsin glaciations. The last glacial maximum in North America (when ice covered most of the continent) occurred about 21,400 years ago. The glacial maximum in the Northwest Territories (NWT) appears to have occurred 17,350 years ago. This is also the age of the most recent refugia.

Parts of the NWT were ice-free during the last glacial maximum, including Cape Bathurst and part of the Mackenzie Mountains. Cape Bathurst is known to have a unique plant community that includes globally rare plants. The Mackenzie Mountains have been identified as one of 12 major areas in Canada that are home to a large number of plant species unique to Canada.

How can we protect glacial refugia?

Practice **“Leave No Trace”** principles in the backcountry

To minimize impacts on glacial refugia and associated conservation features, developers are asked to observe the following recommended best practices:

- If you are conducting land use activities within the boundary of glacial refugia, make sure to conduct a general biophysical survey, including a rare plant survey.
- Monitor and adapt your land use activities and mitigation efforts to make sure there are minimal impacts on glacial refugia.

Where can I get more information?

Visit the Conservation Network Planning **webpage** for other information sheets, reports and most recent maps.

Email Conservation Network Planning at **conservationplanning@gov.nt.ca**

