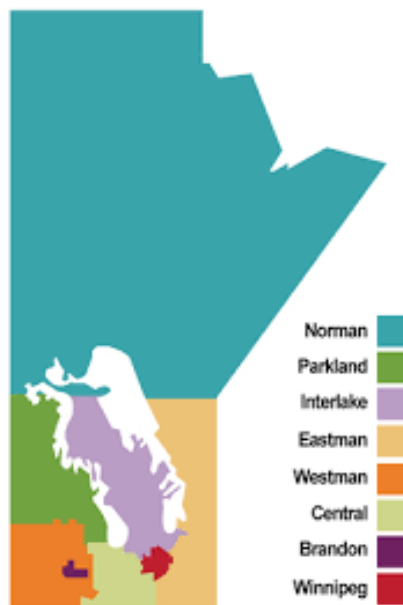


## NORTHERN PLANO: A SUMMARY

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Today, the population of the northern Manitoba (NorMan) region is around 80,000. Fifteen thousand years ago it was zero. That's because in those remote times the entire province -- in fact most of Canada -- was buried under several kilometres of solid glacial ice.

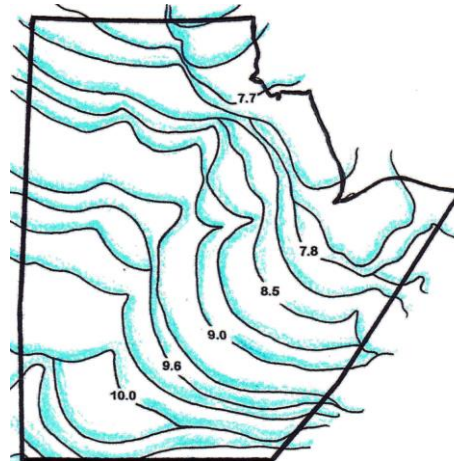


### *The NorMan region (blue) of Manitoba.*

As massive and imposing as it was, the glacier's days were numbered; by 7,600 years ago, it was history — at least as far as Manitoba was concerned. That doesn't mean that the northern landscape was now open to the sky and habitable, however. Beginning around 10,000 years ago, the ice sheet was replaced along the southern borders of the NorMan region by its own meltwater — an immense inland freshwater “sea” that we know as Glacial Lake Agassiz. For the next 2,500 years or so, large areas of the North were inundated by the huge lake as it followed on the heels of the receding ice margin.

However, just as the glacier was gradually shrinking, so too was Lake Agassiz – at least in the south. In the North it was actually expanding, but it was only a matter of time before the remnants of the decaying ice ‘dam’ finally broke up under the influence of a warming climate. The remains of the once-vast lake finally (and very quickly) drained away into the open-waters of the “Tyrrell Sea,” the ancient predecessor of Hudson Bay. But for thousands of years before

that, ice and water had covered the surface of the Canadian Shield without interruption, making the region entirely inaccessible to human beings for a very long time.

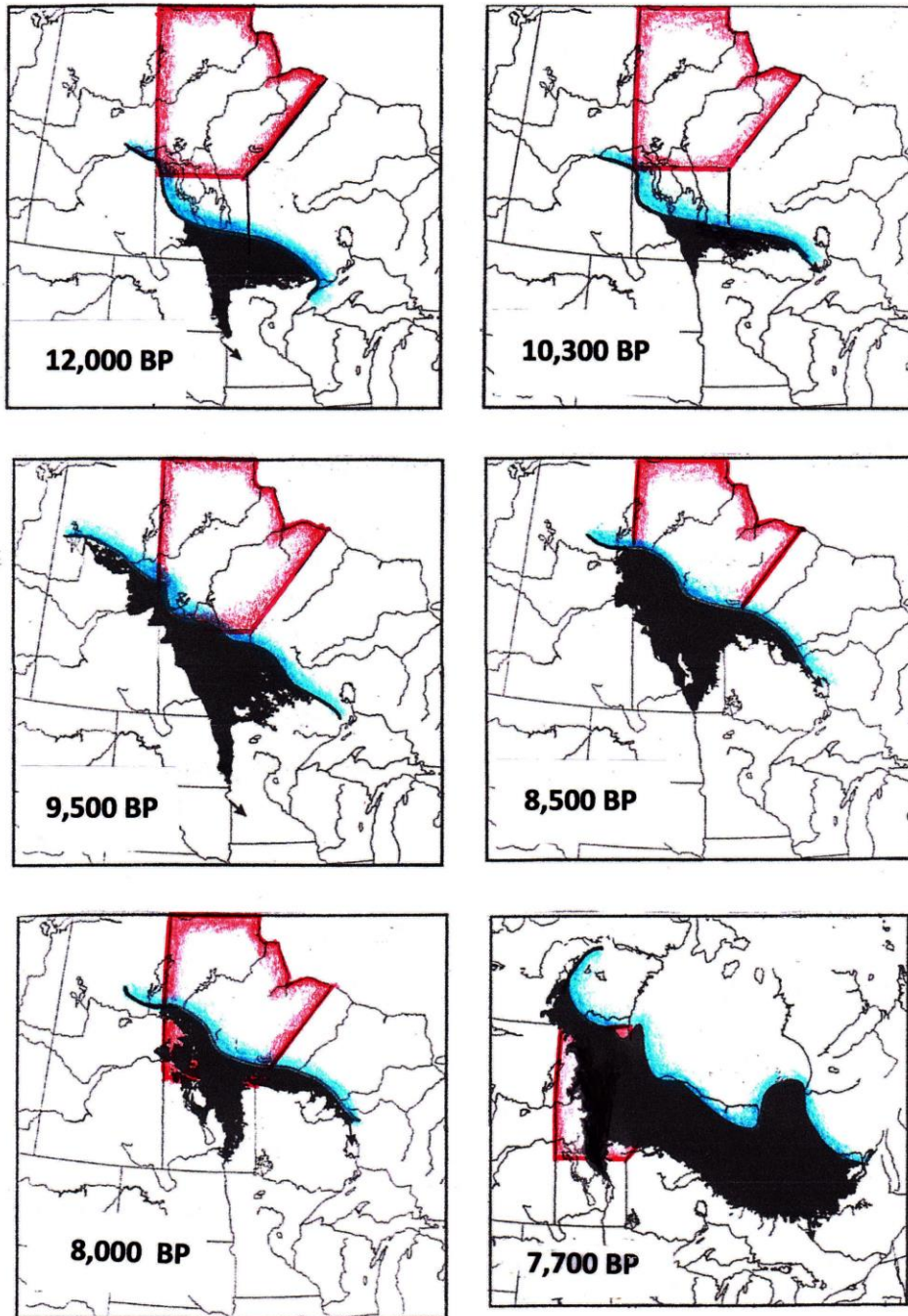


***“Isochrone” map of NorMan showing the ice-margin positions at various times between 10,000 and 7,700 BP. It took some 2,300 years for the ice sheet to gradually clear away from all of the region.***

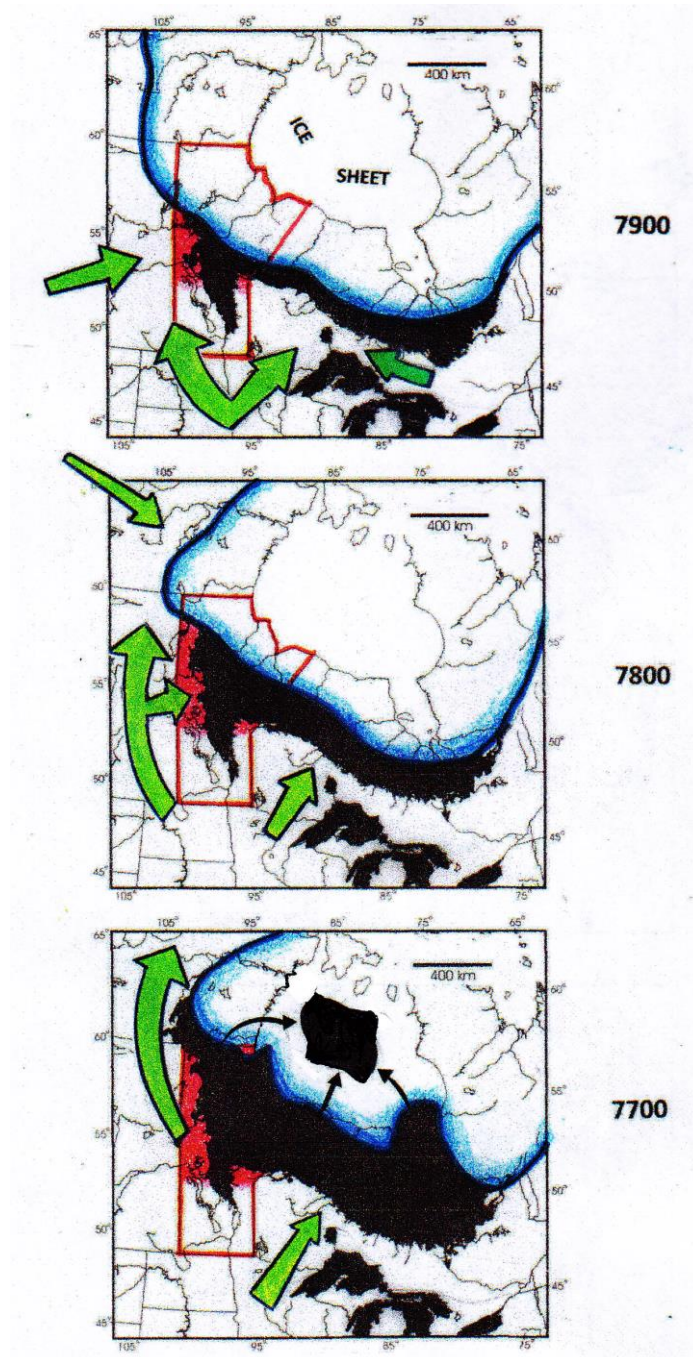
Even as the land surface was gradually opening up along the western flank of the province (Figure 2), the modern drainage patterns were starting to take shape. Dry ground was invaded by woodland vegetation communities from the south and west, and with them came the caribou, moose, bison, and numerous fur-bearing species. Waterfowl extended their migration flyways northward as new summer breeding grounds became available. The clear waters of Lake Agassiz had been home to a wide variety of fish, and their descendants now filled the much smaller lakes and the rivers that had taken its place.

Last but not least, there were The People (Figure 2).

Who were the original inhabitants of the North? Unquestionably they were Indigenes (literally the “First Nations”) and, arguably, long-ago ancestors of the northern Cree. They hunted game animals big and small, probably fished, and gathered wild plant foods. They were not rooted to any particular place, but moved about frequently and from season to season in family groups or small bands in pursuit of their livelihood. Their forebears had been bison hunters who for generations had occupied the grasslands to the south, where the surroundings and living conditions were notably different from those of the northern woodlands.

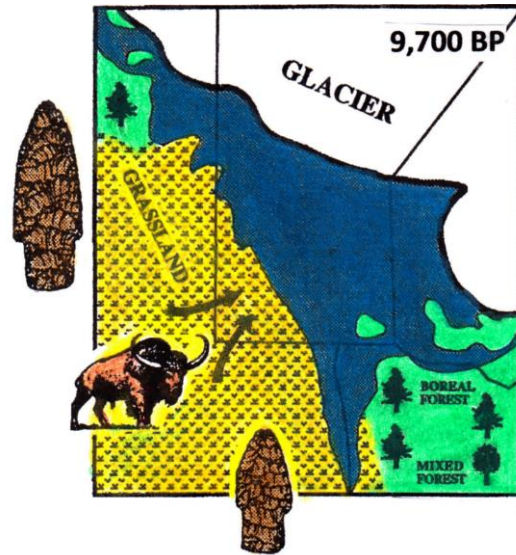
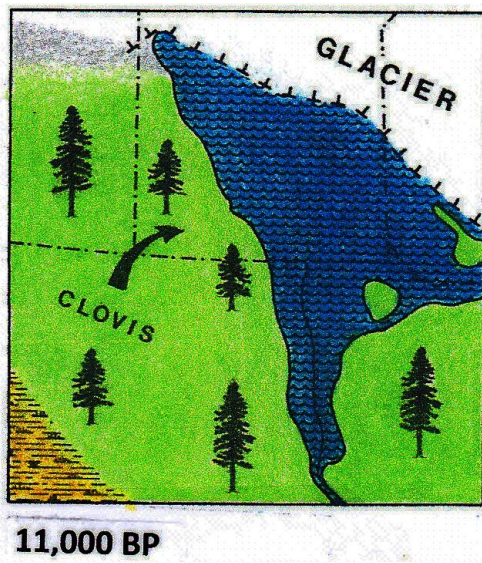


*The changing face of Lake Agassiz: The great lake (black) took on various shapes and sizes as it evolved through the ca. 4,300 years of its existence. NorMan region is outlined in red. The ice margin is defined in blue, and the territories north of the blue line were all under ice during the times indicated. It took over seven millennia since 7,700 BP for the entire region to become habitable by pioneering Indigenous populations. Base maps from Teller & Leverington, 2004, GSA Bulletin 116:729-742.*



***The final two centuries of the ice sheet and of Lake Agassiz. The green arrows represent movements of people into NorMan (red) and adjacent areas. The bottom map shows the last phase of Lake Agassiz and its emptying into the emerging Tyrrell Sea (black arrows) with the break-up of the remnants of the glacier. The significance of the arrow pointing from the northwest in the centre map will be indicated in the final paragraph of this article. Base maps from Teller & Leverington 2004.***





***When the Clovis culture (left) first made its brief appearance in Manitoba ca. 11,000 years ago, NorMan was entirely under ice. By 9,700 BP (right), when the Alberta/Cody tradition was making its appearance to the southwest, NorMan was still mostly sub-glacial, but Lake Agassiz was already making inroads across the southern margins of the region. In either case, there was no prospect of human colonization of the study area.***

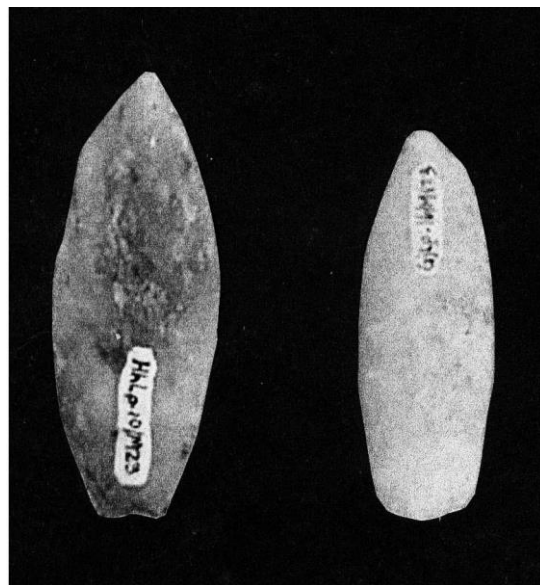
Several locations relating to the northerly and easterly shifts toward the margins of the grassy plains have been unearthed and studied on the Winnipeg River in southeastern Manitoba, on the South Saskatchewan River in central Saskatchewan, and near Buffalo Lake south of Edmonton. All of these have been dated by the radiocarbon method to around 8,000 years ago, or 6,000 BCE. The question is, what was it that had prompted this dispersion to the plains peripheries that, in the fullness of time, resulted in the long-term occupation of the forested country of the Canadian Shield?

The answer would seem to lie with the same ongoing trend toward a warmer and drier climate that had been responsible for the melting of the glacier, the rise and demise of Lake Agassiz, and the opening up of the North to plant, animal, and human life. The changing weather patterns created drought conditions on the southern prairies and high plains, and, at the same time, favoured a northward shift of the grasslands and deciduous parklands into areas that had initially been initially colonized by spruce woodland and possibly by patches of tundra. Botanists tell us that open grassland eventually covered the Prince Albert region of Saskatchewan. Beyond that, to as far as La Ronge to the north and The Pas, Manitoba to the northeast, was the parkland belt.

Seeking respite from the droughts on the plains, the people followed the expanding prairie and parklands up onto the southern fringes of the Shield and beyond in Manitoba and

Saskatchewan. Bison had been an important part of the grassland/parkland ecosystem, and small numbers of them – ancestors perhaps of the modern-day “wood buffalo” of the Canadian Northwest – became established in the woodlands; but they weren't the only resources available to these First Peoples of the new North. Caribou and moose were also components of the regional fauna, not to mention the variety of plant species that could be harvested for food and medicine.

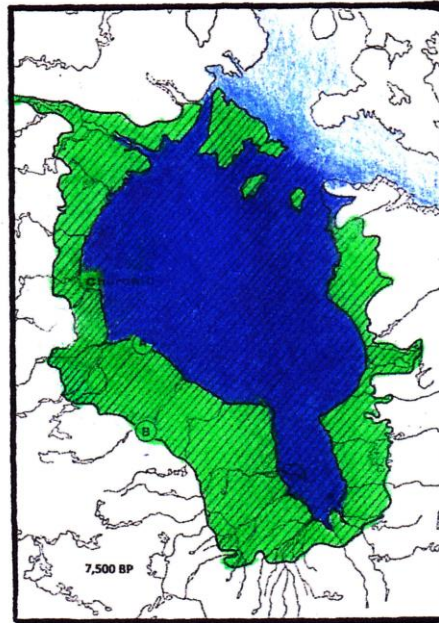
Thanks to the warm, dry climate of 8,000 years ago, the forest itself was rather different from the one we know today. Fires were somewhat more common, and the vegetational successions that followed each new burn combined with remnants of earlier ones to form a widespread patchwork or mosaic of habitats for the animals, particularly bison, moose, and woodland caribou that were part of the region's ecology. It should come as no surprise that bands of hunters and gatherers availed themselves of this diversity of food resources even as the grasslands to the southwest were under stress from the droughts that prompted the people to head north in the first place.



***Northern Plano ("Kamuchawie" complex) spear points from sites within the Southern Indian Lake drainage.***

Nor were the glacier and Lake Agassiz the only macro-phenomena that delayed the early peopling of northern Manitoba. After the ice dam broke up in the extreme northeastern reaches of the province, the ancestor of Hudson Bay (the aforementioned Tyrrell Sea) absorbed the outflow of terminal Lake Agassiz and transgressed inland to take its place. So the land in that quarter continued to be flooded, this time by seawater, and hence remained inaccessible to generations of people in the Shield country immediately to the south and west.

The grasslands to the south weren't necessarily the only source of migrants into the NorMan region: there is also some prospect that groups came from the northwest, originating in Alaska, the Yukon, and western Nunavut. Why people might have made the trek from that direction isn't clear, but the northern Rocky Mountains have long been known for their volcanic activity, and perhaps the rumblings of such impending events motivated some people to relocate to the southeastward into northern Manitoba (Page 4, centre map).



***Maximum extent of the Tyrrell Sea (dark blue + green) around 7,500 years ago, compared with the modern extent of Hudson Bay dark blue only; line A). At the end of the Palaeo cultural era, the shoreline of the Tyrrell Sea (line B) was situated well inland and all of the land surface (green colour, plus the Hudson Bay basin [dark blue]) was unavailable for human habitation. It took over 7,000 years for the bay to reach its present dimensions and the shoreline to recede to its present size position (dark blue, line A).***

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