

NEWS AND COMMENT

A NATIONAL PARK FOR THE NORTHWEST TERRITORIES — THE EAST ARM OF GREAT SLAVE LAKE AND ARTILLERY LAKE

SINCE 1962 the subject of establishing the first National Park wholly in the Northwest Territories has been under study. The reasons for proposing a park in such a remote region as the east end of Great Slave Lake are manifold, but the problems involved are also numerous.

On 19 February, 1969 a public meeting regarding this proposal was held in Edmonton, Alberta. An overwhelming majority of the 102 people present were in favour of such a park. At that time no map of the projected site was available. However, it was known that the Parks Branch of the Department of Indian Affairs and Northern Development (DIAND) had proposed a "core" National Park of 1100 square miles with a "National Park Reserve" which would eventually increase the park area to 4300 square miles. The total reserve area would be added after a period of mineral exploration. At the meeting, various people who are familiar with the area gave informative talks and provided a short information sheet. Several days after the meeting a 17-page bulletin from the National Parks Branch of DIAND was received. Most of the material presented below was derived from this bulletin and the information sheet.

The DIAND bulletin describes the area thus: "Nowhere else is the treeline-tundra transition represented in such a dramatic manner. The scenic splendour is striking; green waters contrasting with red cliffs, waterfalls thundering into the gorges . . .". The entrance to the East Arm of Great Slave Lake is choked with a myriad of low, smoothly-contoured islands of Precambrian rock capped by stands of wind-sculptured black-spruce. To the east the islands grade into more rugged outlines, culminating in the vertical cliffs of awesome proportions on Redcliff and Et-Then Islands. Similar cliffs jut from the lake on mainland peninsulas and headlands.

The deepest body of fresh water in North America is in Christie Bay, the southern part of the East Arm. Here the water is over 2000 feet deep, and from above looks crystal-clear for almost 100 feet.

The geology of the region is responsible for the magnificent scenery. The most significant feature is the McDonald fault. This huge downfault in the earth's crust has given rise to a Graben comparable to that of the Red Sea or the Rhine Valley. It is responsible for the towering cliffs and the depth of the basin in which Great Slave Lake lies. Some of the oldest rocks on the surface of the earth form the country to the north. They are part of the Precambrian Shield and are between 2500 and 2600 million years old. This section of the Canadian Shield slopes steeply from 1200 feet elevation to the bottom of the lake, which itself is overlain by sedimentary and volcanic rocks. The immense reddish cliffs are composed of resistant diabase sills.

The McDonald fault, on the south shore of the lake, is an extremely well defined landmark. It extends about 350 miles from the Slave River to the Thelon River. In places it presents a straight wall of rock, sometimes over 700 feet high. To the east the fault is expressed as a trough, and associated with this are numerous small lakes and interconnecting streams known as Pike's Portage Route.

To the south of the fault the land rises in rolling country at about 1000 feet elevation. Here the rocks are younger, aged 1800 to 1900 million years.

The resistant nature of these rocks makes the streams flowing into the lake brilliantly clear. The rapid descent on the north shore makes the waters flow in white torrents over rapids and waterfalls from the small lakes above the rim of the

East Arm. The Lockhart River drains Artillery Lake into Great Slave. In falling 700 feet in 20 miles it surges over countless rapids and four waterfalls — Hanbury, Anderson, Perry, and Tyrell.

The river water lacks dissolved minerals and organic matter. This makes the lake waters almost alga free and transparent to such considerable depths. Such lakes are termed oligotrophic and represent the earliest stage in the transition of lakes to marshes, and eventually dry land. Nevertheless, there is aquatic life. There are populations of sport-fish such as Grayling, Whitefish, Pike, and Lake Trout, as well as other fish. Lake Trout breed predominantly in the East Arm.

A spectacular array of birds feed upon these fish. They include Arctic Loons, Grebes, Mergansers, Arctic Terns, Gulls, Cranes, and Bald Eagles. Great Slave Lake is one of the major breeding areas for the fast diminishing population of Bald Eagles. There are many Passerines inhabiting the forest; ducks and geese breed in the area.

The northern Boreal forest supports a contingent of characteristic small mammals. These are chipmunks, squirrels, marmots, flying squirrels, jumping mice, shrews, voles, and deer mice. Some of these fall prey to foxes or supplement the diets of wolves. Among the larger animals which are fairly common are moose, black bears, and caribou. The migration route of the caribou is close to Artillery Lake. The tracks of all these animals pock-mark the gravelly beaches of the lakes.

The theme of this National Park would be "Edge of the Barrens". One of the best known transitions from taiga to tundra is well delineated around Artillery Lake. The country grades from black-spruce forests to open lichen-woodlands and on to the barrens of the low arctic tundra. During the short summer the tundra flowers burst into a mass of vivid colour, typified by yellow mountain avens, red-purple fireweed, blue lupins, and a multitude of other blooms, busy with bumblebees and flies.

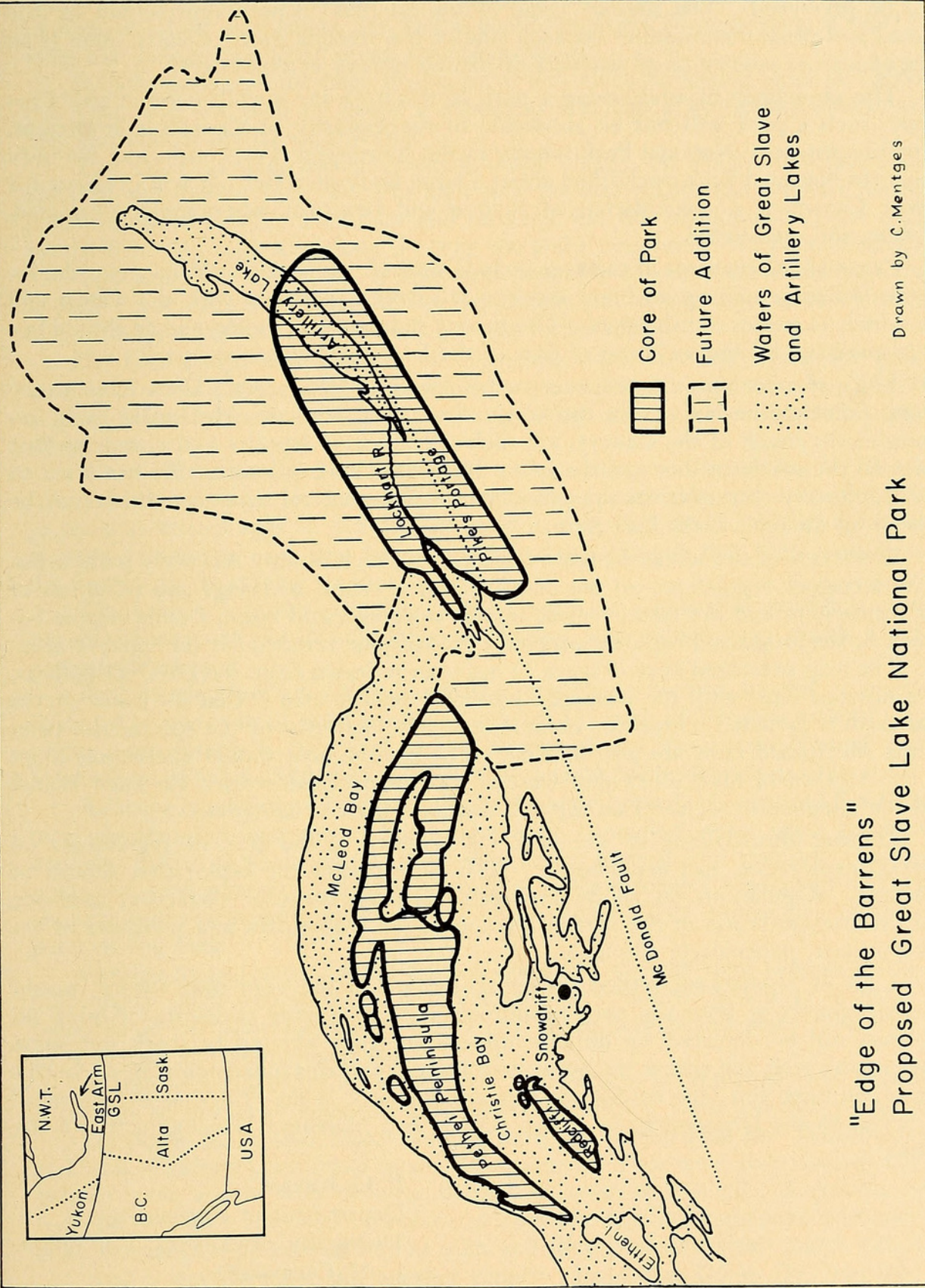
Ptarmigan thrive on the abundant food of the tundra, along with hares, lemmings, and other tundra animals. Here the caribou find summer fodder and wolves lope in search of prey. Occasionally the rare barrenground grizzly bear may venture into this region.

Eskers occur over the tundra as reminders of the receded icesheets of the last great glaciation. They break the homogeneity of the arctic barrens as distinctive serpentine landmarks.

The tundra-taiga transition zone has not been studied in detail. Much can be learned about plant and animal communities in general from an examination of the ecosystems associated with such an extensive and important ecotone.

History has its fair share of adventure to relate. Many famous northern explorers have their names linked with the areas around Great Slave Lake. Samuel Hearne and Alexander Mackenzie reached Great Slave Lake in the late eighteenth century. Captain Back established Fort Reliance at the mouth of the Lockhart River in 1833 on his scientific exploration in connection with assisting John Ross' arctic expedition. The ruins of Fort Reliance still stand as three disintegrating chimneys. The Back River was named for Captain Back and is associated with some of the searches for the lost Franklin expedition. John Hornby explored these regions, and died after immeasurable hardships in what is now the Thelon Game Sanctuary. In the 1880's Warburton Pike travelled in the area and left his name on Pike's Portage Route. Geological exploration started with Dawson and Tyrell in the late nineteenth century. Other famous names associated with Great Slave Lake are Mackinley, Bullock, Preble, and Ernest Thompson Seton.

The area presents us with a convergence of numerous unique features. Geographically, the lake itself with its depth and clarity, and the McDonald fault with its



Drawn by C. Mentges

"Edge of the Barrens"
Proposed Great Slave Lake National Park

FIGURE 1. Park area as proposed by Parks Branch of the Department of Indian Affairs and Northern Development.

ancient rocks effect the spectacular scenery. Climatologically, the area is 'Boreal interior' and is not represented in any other existing park. Historical interests will be preserved. The theme "Edge of the Barrens" is well represented by the animal and plant communities on each side of the treeline gate. Clearly, here is an area of intense interest to all students of natural history at every level.

The objections to establishing a park in this area are mainly commercial. Certainly, such a park will not be accessible to the majority of Canadians at present. It will be the only National Park wholly in the Northwest Territories, and the only Canadian National Park established about a large body of water. It will preserve for future Canadians a combination of unique and beautiful inheritances, protected, pristine, and unpolluted.

Commercial ventures in the area include fishing. A park would improve the lot of the Indian people by enabling them to sell their experience with the waters and the woods as guides to fishermen. The fishing rights of the Indian people should not be jeopardized by the inclusion of part of the East Arm within the park.

The major economic concerns come from mining enterprises. These have a very strong influence on activity in the area. Associated with the McDonald fault, responsible for much of the scenery, are such rich mineral deposits as the finds at Pine Point on the southern shore of the lake. Naturally, mining interests do not want to unconditionally surrender the opportunity to exploit mineral resources which may be present on the fault at the East Arm.

Extraction of ore would be from shaft mines which occupy relatively small areas. With stringent regulations on the area of above-ground workings and pollution of the atmosphere and the lake by dust, smoke, sewerage, and noise, a compromise between conservation and exploitation could probably be reached for the 'reserve area'.

The map presented here (Figure 1) has been redrawn from the DIAND bulletin. The obvious fault with the proposed park and reserve area is that no water of the East Arm is included within the boundaries. The majority of the spectacular parts of the McDonald fault are also missing. The reserve area should encompass more of the McDonald fault south and west of the town of Snowdrift, Et-Then Island, and the north shore of the East Arm if this park is to be complete.

Another shortcoming of the DIAND proposal is the lack of regulations on mineral exploration and exploitation. A 10-year period for exploration should be adequate. Regulations on all mining activities must consider extraction methods, and the transportation of the ores in relation to the whole park and pollution of the environment, particularly the lake.

A set of regulations, settled on by arbitration in the very near future, would ease the doubts of both the park supporters and the mining concerns. Above all, we must not be deterred by difficult opposition from striving to work out some agreement which will ensure the permanent integrity of this outstanding area. In this regard we urge you (the reader) to support this park at the "Edge of the Barrens" by letters to the Department of Indian Affairs and Northern Development and the press.

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