

Lac la Loche Old-Growth Forest

Sugar maple-yellow birch, yellow birch-balsam fir and eastern white pine stands

Exceptional Forest Ecosystem of the Abitibi-Témiscamingue Region

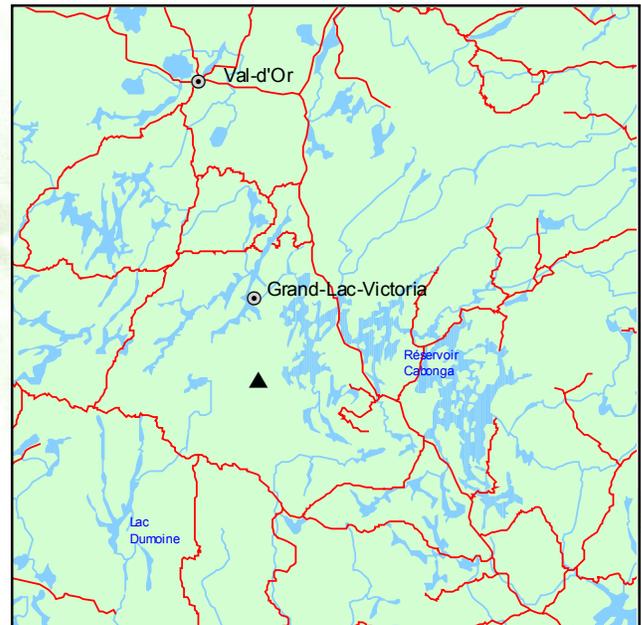
WHAT MAKES THIS ECOSYSTEM EXCEPTIONAL?

This old-growth forest has been classified as exceptional for two reasons in particular. First, it has not been seriously affected by severe natural disturbances (fire, insect epidemics and violent winds) for a very long time. Second, it is composed of virgin stands undisturbed by human activity of any sort. This is quite uncommon in Québec's mixed forest zone, which has been intensively managed for several decades. The stands in this forest are at least 250 to 345 years old. Since they have been left to evolve naturally over a long period, these stands have developed specific characteristics related to their structure, the tremendous size of some of the trees and the abundance of deadwood. Small gaps in the canopy created by trees that have recently died ensure the perpetual regeneration of the forest's yellow birch and maple stands. The openings allow younger trees in the understory to grow and eventually reach the upper stratum. It is this renewal process typical of old-growth forests that has resulted in stands containing yellow birch (*Betula alleghaniensis*) that are over 300 years old and that measure more than 80 cm in diameter, as well as 200 to 300 year-old eastern white pine (*Pinus strobus*) reaching up to one metre in diameter.

BRIEF DESCRIPTION OF THE LAC LA LOCHE OLD-GROWTH FOREST

The Lac la Loche old-growth forest covers an area of 354 ha and is located some 91 km south of Val-d'Or. It is part of the western balsam fir-yellow birch bioclimatic subdomain. This mixed forest ecological unit is primarily composed of stands that are dominated by balsam fir (*Abies balsamea*), yellow birch and sugar maple (*Acer saccharum*). Natural disturbances associated with spruce budworm outbreaks play a major role in the dynamics of mixed balsam fir stands. This ecosystem is situated in a gently rolling landscape made up of low hills.

The forest occupies a low-relief sector southwest of Lac la Loche. The thin layer of till covering the rounded hillcrests becomes thicker near the base of the hills. The forest is primarily composed of sugar maple-yellow birch, yellow birch-balsam fir/sugar maple and eastern white pine stands. It also contains some paper birch-cedar stands. In the maple stands, the oldest sugar maple trees growing on the rounded hilltops are up to 180 years old and measure nearly 55 cm in diameter and 25 m in height. The 250-year-old yellow birch trees measure between 65 and 70 cm in diameter. There are many small gaps in the canopy as well as numerous snags and coarse woody debris. The yellow birch-balsam fir stands also contain some very large trees, including yellow birch measuring 60 to 90 cm in diameter and white pine reaching 110 cm. The size of some of the debris is also very impressive. A few of the old paper birch-cedar stands contain unusually old and large birch trees (nearly 300 years and 50 to 70 cm in diameter). Huge old white pine trees are scattered throughout these stands, likely survivors of a fire that occurred several hundred



▲ Lac la Loche old-growth forest

Ressources
naturelles,
Faune et Parcs

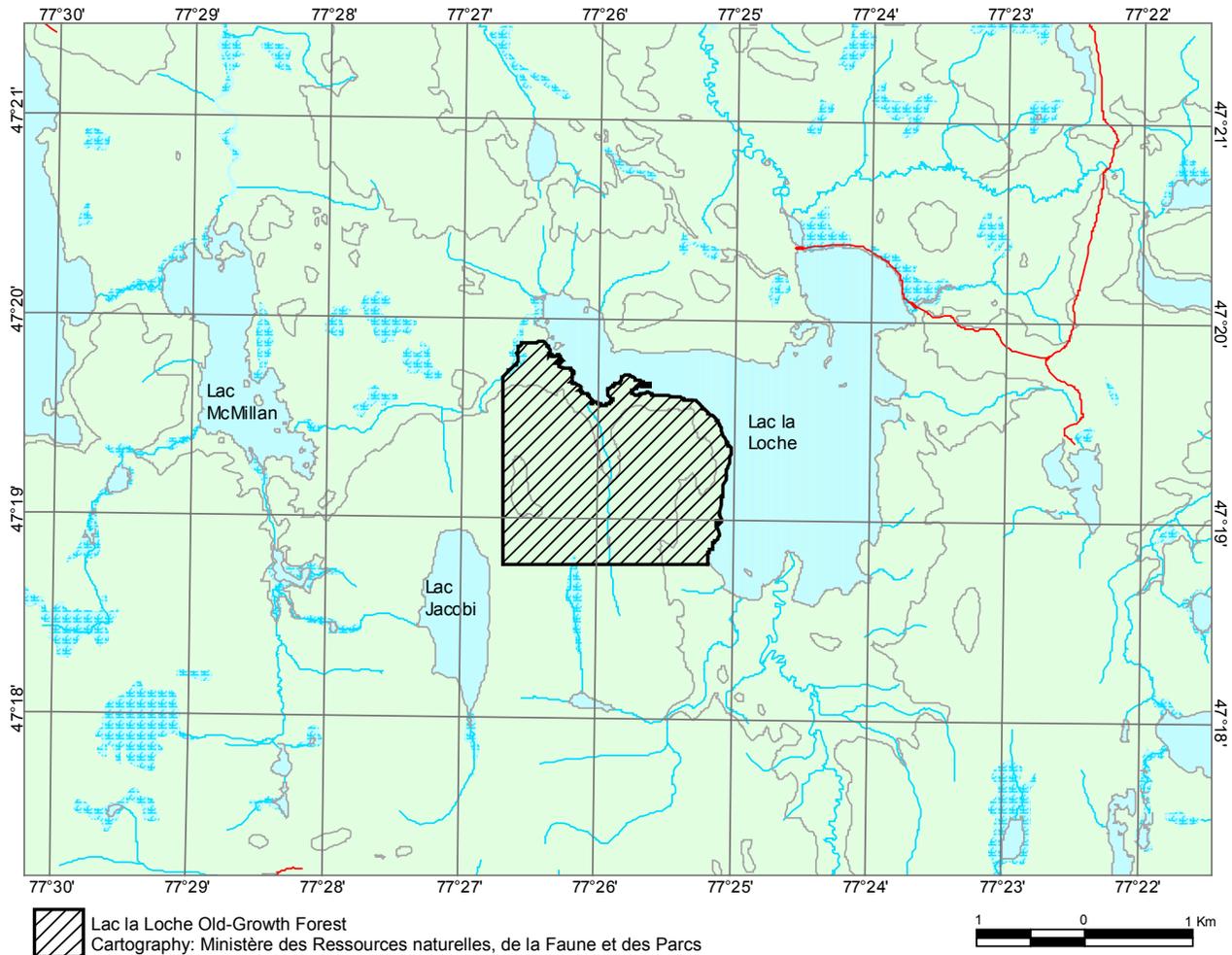
Québec



years ago. White pines also form very old pine stands which have remained untouched by fire for nearly 250 years. The largest pines measure between 60 and 100 cm in diameter.

The canopy is less dense in some areas of the forest, due to the effects that spruce budworm outbreaks have had on the balsam fir. Today the residual overstory in the balsam fir stands is dominated by either paper birch (*Betula papyrifera*), white pine or yellow birch.

Mountain maple (*Acer spicatum*), striped maple (*Acer pennsylvanicum*) and beaked hazelnut (*Corylus cornuta*) are frequently found in the shrub stratum of this forest. The most common herbaceous plant species are the spinulose shield-fern (*Dryopteris spinulosa*), wild lily-of-the-valley (*Maianthemum canadense*) and yellow clintonia (*Clintonia borealis*).



FOR MORE INFORMATION:

Ministère des Ressources naturelles, de la Faune et des Parcs
 Direction de l'environnement forestier
 880, chemin Sainte-Foy, 5^e étage
 Québec (Québec) G1S 4X4
 Telephone: (418) 627-8646
 Fax: (418) 643-5651
 E-mail: def@mrfp.gouv.qc.ca
 Web site: www.mrfp.gouv.qc.ca
 Publication no.: DEF-204 F-27

Ministère des Ressources naturelles, de la Faune et des Parcs
 Forêt Québec
 Direction régionale de l'Abitibi-Témiscamingue
 70, boulevard de Québec
 Rouyn-Noranda (Québec) J9X 6R1
 Telephone: (819) 763-3407
 Fax: (819) 763-3216
 E-mail: direction.forets.abitemis@mrfp.gouv.qc.ca

File no. 828