

# LARGEST COTTONWOOD IN SASKATCHEWAN?

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Several years ago, my wife Shirley and I came upon a large cottonwood tree in the valley of the North Saskatchewan River near Petrofka. By no means were we the first to notice the big tree, for there was a path through the bush to it and the surrounding ground was trampled bare. Obviously, impressed by the tree's girth, many people before us had walked around and posed beside it.

Situated 5 1/2 miles south and 6 1/2 miles east of the junction of Highways #12 and #40 at Blaine Lake, the tree is on the valley bottom about 220 yards from the west shore and 25 yards north of the old Laird ferry crossing trail, legal description SW31-43-5-W3, on Crown land leased to Sam Popoff.

In 1985 I led a group of senior citizens to the site, where enthusiasm upon seeing the massive trunk brought comments: write it up in *Blue Jay*—challenge others to report any larger cottonwood in the province — Saskatchewan should formally recognize distinctive trees. This note addresses these matters.

During that field trip, Paul Coutu approximated the circumference as 15 ft. 6 in. A later measure of girth was 16 ft. 1 in. at the standard height of 4.5 ft., yielding a diameter at breast height (dbh) of 5 ft. 1 in. The bark was about 4 in. thick. Equally impressive is the Popoff tree's spread. From Jerry Horbay's photographs made for proportioning purposes, the span was fixed at 104 ft. 6 in. and the height at 68 ft. 8 in. Form is that of a mature plains cottonwood: massive

trunk, wide-spreading branches, modest height, a shape broad and flat at age.<sup>1</sup>

This tree could not have inspired J. Kilmer to create his memorable poem "Trees." Unsymmetrical it is, branches longer on one side than another, all sagging to the ground then turning several branches bending grotesquely, the upper trunk misshapen. Beauty has none; character it has in plenty.

The tree is a cross between the plains cottonwood (*Populus deltoides* Mill. var. *occidentalis* Ryds) and the black balsam poplar (*P. balsamifera* L.) identified by Stan Rowe, and this common cross is a named hybrid *jackii*. In the stand, which extends a short distance along the trail as well as along the riverbank, there are plains cottonwoods, balsam poplars and other hybrid cottonwoods. In addition to identifying *P. jackii*, Vernon Harms noted a back-cross between hybrid cottonwood and balsam poplar. Up- and downstream from the site are other riparian stands of large trees, none of which, however, approaches the Popoff tree in size.

The stand's understory is mainly osier dogwood, a sign of good moisture conditions, the cottonwood's requirement with highbush cranberry and rose. Much of the valley bottom is cultivated.

The big tree is probably 150 years old, maybe 100 years, in Stan's judgment. Some plains cottonwoods in the area are 80 to 100 years of age.

Originally the tree was on the west side of the island. When initiated in 1909, the crossing was a two-ferry operation, the first ferry running between the river's west bank and the island and the second between island and east bank. In 1941 a dam — the grade of the present trail — was built across the west channel, that channel becoming cultivated land. The trail was closed in 1961. When heavy spring floods occur, as in 1987, water overruns the area, including the site, as debris marks attest. Sam Popoff notices a difference in his crops and believes this is natural fertilizing akin to the periodic flooding of the Nile. All these geographic features were evident when they pointed them out.

The soil on the site, according to Gary Meyer, who examined our sample, is a rich, fine-textured, typical loam. Given adequate moisture conditions, it would be good growing soil, as it drains well.

These historic and current conditions suggest that the growing environment was excellent in the tree's initial period of life, and it was still good later, although not as beneficial as formerly.

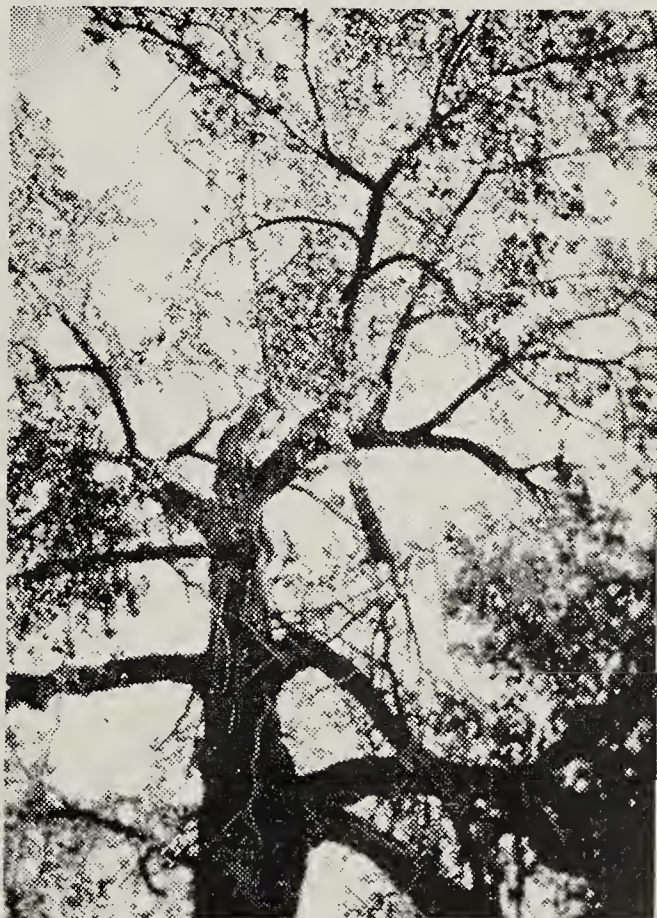
Considerable is known about events at the tree itself. The large depression to the north is an old borrow pit, soil being taken from here to build the trail grade across the old channel. Excavation to within 15 ft. of the trunk likely damaged roots. The ferryman's house once stood about 30 ft. to the south of the tree, its site still detectable. These two events suggest reasons for the paucity of branches on the two sides. To add insult to injury, the ferryman shot a bear out of the tree in 1937.

A small hole in the trunk was of special interest. Recently Sam removed from it a spout installed many years ago to gather sap in springtime.



Sam Popoff at tree

Dieter Martin



Trunk and branches

Jerry Horbay

At first glance from the trail, the tree appeared healthy, but it may be within 20 to 30 years of the end of its life. Close examination revealed poor condition. Many tips of upper branches are dead, possibly an effect of the drought of the 1980s. Several branches lie scattered around the tree, portions of some limbs are dead and bare of bark, a major limb high on the tree is split and the top of the trunk has been broken off. Decay was noticed by Dieter Martin at several places along the trunk.

The tree appears to have been spared brush fires, though one came close in 1989. Two attempts have obviously been made to start fires at the base (vandalism?), fortunately without success. (Several large charred snags scattered about are from land clearing on the opposite side of the trail.)

To me, two questions about this tree have always been: why so big and why just one? The factors discussed above go only part way toward providing answers.

A third question is: how did the tree escape the axe in the early 1900s? The opening of the ferry at that time provided access to the site. Incoming settlers on both sides of the river in those years, but especially on the west side — a Doukhobor village was abuilding only a mile away — would have placed heavy demands on trees for a variety of purposes. My hypothesis is that the Popoff tree was its own protector. At some 70 years of age, destined to be large, and favoured by excellent growing conditions, it was already big — the placement of the ferryman's house hints of that — too big for the cutting, transport and milling capacity available to remote settlers.

In 1984 the Saskatchewan Forestry Association launched a project to identify notable trees and the next year pub-

lished its first edition of "Saskatchewan Trees of Renown."<sup>2</sup> Candidate trees were those "that have gained prominence for some reason." Listed in a section on trees of record diameter are two specimens — the larger one is the Popoff tree. In the location description the Laird ferry is incorrectly named Doukhobor ferry. The diameter reported for the trunk is practically the same as the Popoff tree's. The species is stated to be balsam poplar. Included in the entry is the qualification that the Committee has not yet verified the record.

The Association contemplates production of a second edition of "Saskatchewan Trees of Renown." It is urged to continue its Trees of Renown program, giving it a higher profile and augmenting the stature of recognition. The meritorious program needs more publicity.

Some American states have developed formal recognition procedures for outstanding trees. For instance, the legislature may designate a notable tree as a state tree and an appropriate fence and monument may be erected. In certain jurisdictions in West Germany, once a tree surpasses a certain size, it enters the public domain in a sense and, though privately owned, may not be cut down without approval. We may not be ready for or even want these processes, but we do need, and I believe we are ready for, the next level of recognition and preservation above those in the Association's program.

The Saskatchewan Natural History Society should actively cooperate with the Association in respect to this program, which is but one of many facets of a conservation ethic.

Sam Popoff was a gold mine of information on the natural and human history of the Popoff tree and its environs. His family roots on the farm go back to 1905

and he has a genuine interest in the people and the countryside in his district. I am grateful for all his help.

I appreciated: the information Stan Rowe provided on identification, age and biology of the big tree and the comments he made on drafts of this article; the special photography undertaken by Larry Horbay and the opinions offered by Peter Martin about the condition of the tree, and for his photos. I acknowledge the information provided by Marie Grono,

Manager/Secretary, Saskatchewan Forestry Association; by Vernon Harms, Curator, The W. P. Fraser Herbarium; and by Gary Kruger, Saskatchewan Soils Testing Laboratory.

<sup>1</sup>HOSIE, R. C. 1969. Native trees of Canada. Queen's Printer, Ottawa. 380 pp.

<sup>2</sup>LEE, C. A., S. ROWE and D. B. WILLIAMS. 1985. Saskatchewan trees of renown. Saskatchewan Forestry Association, Prince Albert. 36 pp.

## EMIGRATING SNAKES

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An unusually large total of 11 garter snakes was seen while I was driving from farm to farm in the Norquay district during the afternoon of September 12, 1989, the first warm, sunny day in 3 weeks.

The snakes were on three 1.6- 4.8-km stretches of north-south roads: a paved highway 1.6 km west of town, a gravel road 1.6 km northeast and a dirt road 3.2 km southwest. The six live and four road-killed snakes were all going or heading east. About 3 hours elapsed between first and last observations.

Given the weather pattern, the number of snakes and especially the consistent apparent direction of travel, the

surmise was that a migration was occurring across a front at least 8 km wide. (With that number of snakes, if movements had been merely local, including sunning on the road, one would expect direction to have been random.) Since the sightings were spread over 3 hours, probably many more than 11 snakes were present, some having already crossed, others not yet having reached a road when I happened by.

According to Wayne Lynch, garter snakes in Manitoba's Interlake region may migrate as much as 18 km from hibernacula and move back to winter quarters in the first half of September.<sup>2</sup> Bernie Gollop recalled an old report of a hibernaculum near Pelly, Saskatchewan,