

THE FLORA OF THE PEACE RIVER REGION.

By JAMES M. MACOUN.

There is perhaps no part of Canada in which a greater diversity of plants is to be found than in the Peace River region. Though the number of species is surprisingly small, yet plants characteristic of an arid climate may be found within a few miles of those requiring wet, almost boreal, conditions and a wonderful display of gorgeous prairie flowers may be seen within a few yards of the typical flora of the sub-arctic forest.

For the purposes of this short paper the words "Peace River Region" will refer only to the district drained by about one hundred miles of the Peace River, that is, the country north and south of that river between Peace River Landing and a point about forty miles above Dunvegan. In other words the region bounded on the south and north by Lat. 55° and Lat. 57° , and on the east and west by Long. 117° and Long. 119° . This includes the whole of the area usually meant when the "Peace River Region" is spoken of. Westward from this district the country rises gradually to the Rocky Mountains, the Peace River taking its rise far to the northwest in British Columbia. From Peace River Landing the river flows northeasterly to Lake Athabasca, passing through what is known as the "Vermilion country."

The Peace River flows through the district under discussion in a deep valley, the bottom of which is from 700 to 1,000 feet, or even more below the plateau. The valley itself averages about three miles in width from rim to rim, the river flowing in sweeping bends from one side of the valley to the other cutting into the straight bank on one side while on the other a broad alluvial flat is formed, as is usual with all western rivers. The north bank of the valley is naturally warmer and drier than the south, as the full force of the sun strikes it, and this fact and the presence of a well-travelled trail on the north side accounts for the great difference between the two sides of the river. Repeated fires have almost wholly removed the forest, and the country between Peace River Landing and Dunvegan is almost all prairie, about 400,000 acres in all, while the south side is still clothed with forest. The extent of agricultural land in the valley is not great as the plateau is

reached by a series of slopes and "benches," the level land at the bottom never reaching a mile in width and seldom half a mile. It is on these slopes with a southern aspect that plants characteristic of an arid climate are found, chief among them a cactus, (*Opuntia Missouriensis*?) which is quite common. The grasses are those of the driest parts of the southern prairie region,

The prairie on the plateau above would delight the eye of those who admire large masses of one color, for abundant as individual flowers are the number of species is strangely small. Hundreds of acres will be seen on which a single species predominates to such a degree that it colors the whole landscape. To the writer this seems conclusive proof of two things, the first being the comparatively recent origin of these prairies, and the second, that only a small number of the prairie plants of the south can withstand the climate of the Peace River region. The most natural explanation of the occurrence of these prairie species there is that many of the seeds were brought from the south, attached to the buffalo which formerly were very abundant, and the forest having been destroyed by repeated fires the conditions were more suitable to prairie species than those of the forest. Those which first made themselves at home soon spread and occupied large areas, making it more difficult from year to year for new species to establish themselves. On the other hand, the seeds of many species must have been brought there, which if they germinated at all, were unsuited to the climate and soon disappeared. But whatever hypothesis be adopted to account for the prairie in the first place, or the introduction of suitable plants later on, the paucity of species is very evident. *Castilleja miniata* is perhaps the most conspicuous and the most abundant, and not being relished by cattle seriously interferes with the cutting of hay on the open prairie. Several species of leguminous plants are also common, the best of these for forage purposes being *Lathyrus ochroleucus*, *Vicia Americana* and *Hedysarum boreale*. The latter is among the most beautiful plants growing on the prairie, and to see masses covering many acres is a sight not soon forgotten by anyone. Though not usually a conspicuous plant, *Astragalus hypoglottis*, is on the Peace River prairies one of the most valuable forage plants, and it is not uncommon to see the ground covered with this species

for hundreds of yards in every direction. No species rare in Canada were seen on the prairie, or indeed anywhere with the exception of *Caltha natans*, which abundant enough in that region in brooks and natural ditches, is very restricted in its range. The same might be said of *Adoxa Moschatellina*, usually found among moss around the roots of trees.

The flora of the woodlands is that of the sub-arctic forest though even here the number of species is not very large. Impinging as it does on the prairie the border of the poplar and spruce woods, shows a very curious mixture of prairie and forest species more noticeable here than further south, where the boundaries of the prairie are constantly changing, and in the poplar bluffs prairie species are often common. In the Peace River region, however, the prairie often ends suddenly at the edge of the virgin forest into which the characteristic prairie plants do not penetrate, while the plants of the forest of course, do not thrive on the open prairie, so that one may walk a few yards from the prairie to the forest or *vice versa* and find floras in which there is not a species common to both. It gives one a strange feeling to leave the bright prairie covered with masses of the most brilliantly colored flowers, and after walking for five minutes through the forest, to find oneself on the borders of a bleak moor, on which the vegetation is scanty, and willows and dwarf birches the only shrubs. In such places one may collect *Astragalus alpinus*, *Pedicularis Groenlandica* and *P. euphrasioides*, *Parnassia parviflora* and other species characteristic of cold, wet, poor soil. It is hard to believe when among such plants that a few hundred yards away the prairie is blazing with bloom, and only a mile or two further the bluffs along the river are covered with cactus.

As regards the rarity of the plants and the number of species the Peace River region is not an interesting one, but it affords a splendid field for the study of many interesting points in connection with the distribution of plants. The most important lesson taught is that whatever the climatic conditions or the character of the soil Nature may be depended upon to cover up the earth with verdure of some kind, if the forest is permanently removed plants peculiar to meadows or prairies will somehow or other make their appearance and when by means of drainage or other causes a wet

area becomes dry plants suitable to the new conditions immediately appear. In the Peace River region a great variety of conditions exist in a very restricted area but even if the patch of alkali soil is only a few yards in extent or the dry hillside rises from among marshes and bogs the plants found are those characteristic of these conditions.

The trees found are those to be met with everywhere in the sub-arctic forest. The rivers are bordered by willows and balsam poplar (*Populus balsamifera*) while black spruce (*Picea nigra*) and tamarac (*Larix Americana*) grow in swamps and wet ground generally. The country as a whole is clothed with white spruce (*Picea alba*) and aspen (*Populus tremuloides*) and an occasional sandy ridge will be covered with Banksian pine, (*Pinus Banksiana*). There is almost no birch in the country except on or near the tops of the highest hills. None of the trees are large, 15 or 18 inches being the usual diameter for the largest spruces but though repeated fires have in many parts almost destroyed the forest there still remains an abundance of material for all the needs of the settler.

SOME BIRD-NOTES OF THE YEAR.

By G. EIFRIG.

A RED-LETTER DAY FOR WARBLERS. — The high-water mark in the spring migration of warblers was this year evidently reached on May 23rd. A perfect wave of warblers together with some thrushes, finches and wrens struck the city the night before this date. These lively and cheerful denizens of the tree-tops were very noticeable in the trees along our streets, in gardens and especially in those along the north side of the Rideau, where the bird army, coming from the low southern bank of the river would naturally strike first. In the afternoon of the above date, at three o'clock, I was in Lt.-Col. White's park, between Wurtemberg street and the Rideau. I have never seen so many birds and such a variety in so small a space before. In a spruce tree not over thirty feet high, I saw within about ten minutes, the following warblers: Blackpoll, Magnolia, parula, Blackburnin, bay-breasted, black-throated blue, black-throated green and the redstart, several



Macoun, James Melville. 1904. "The Flora of the Peace River Region." *The Ottawa naturalist* 18(6), 115–118.

View This Item Online: <https://www.biodiversitylibrary.org/item/28594>

Permalink: <https://www.biodiversitylibrary.org/partpdf/369198>

Holding Institution

MBLWHOI Library

Sponsored by

MBLWHOI Library

Copyright & Reuse

Copyright Status: NOT_IN_COPYRIGHT

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.