In the case of corn and potatoes, however, this method is being followed with most gratifying success.

This article is designed to correlate the practical and the scientific side of plant improvement. Once the creation and development of forms of plant life become associated with recognized laws and principles, the prosaic element quickly disappears and we regard these things in an entirely new light. Then it is that real progress is possible. The associating of natural law with the every-day industry of crop raising is the primary aim of the Canadian Seed Growers' Association.

FIELD NOTES OF CANADIAN BOTANY. I.

By Edward L. Greene.

Twenty years ago I had botanized a little in the beautiful woodland wilderness that then lay within an hour's walk of Victoria, Vancouver Island; also at several points on the British Columbian mainland, and even on the prairies of Manitoba. Never, however, until this season of 1909, had I done any field work in any part of the Dominion lying eastward of the Great Lakes.

Such readers of the OTTAWA NATURALIST as may have noted my rather numerous botanical papers published herein during at least a dozen years past, and may have observed that these contributions were all made upon specimens communicated to me by mail, supplemented by the field notes of those who had sent them—such readers will easily imagine that I would be likely to enter upon field studies of Ontario vegetation myself with keenest interest, not to say with some enthusiasm.

It was a little before the middle of June that from Port Huron, Michigan, I crossed into Ontario. Certain critical observations on the surpassingly rich flora of the Port Huron district where my herborizings were greatly helped and furthered by Mr. Charles K. Dodge, the resident botanist—had induced me to make my first halt within Ontario at a distance of only some fifty miles to the eastward of Port Huron and Sarnia. At Sarnia, just on the Canadian border, Mr. Dodge had done much field work, and, as he informed me, he had once had the happiness of conducting to its richest botanical garden spots, the veteran Professor John Macoun. I sought, as I always prefer to do, newer ground, and had fixed upon Strathroy in Middlesex as a first stopping place; this without having taken counsel of any one except the maker of my pocket map of Ontario, and partly because I had never heard that any one had botanized there.

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However, Strathroy was indicated as one of the small towns, and from such, good botanizing is apt to be found at the end of very short walks. Also, according to the map a river—the Sydenham—seemed to course near this town; an augury of more diversity in the flora and silva than strictly prairie or mere upland districts are favored with.

Landing at the railway station of this pleasant village a half-hour before noon of June 12th, less than two hours later, portfolio in hand, I walked forth on my first herborizing stroll in Ontario. Having reached within a few minutes the furthermost and half meadowy outskirts of the town, I beheld close at hand a depression in the open landscape, out of the midst of which arose the familiar narrowly cone-shaped heads of larches and arbor vitæ. No prospect could have pleased me more; and within a very few minutes I was in the midst of this tamarack marsh. The arboreal vegetation of this I found to be quite different from that of such tamarack swamps of southern Wisconsin as I had been familiar with long years ago. There the larches had been the only trees, and these so closely set as to form a thicket hard to penetrate. Here there was no density of arboreal growth. The larches stood somewhat apart from one another, and there was arbor vitæ freely interspersed; and there was no dearth of deciduous trees, red maple, ash, basswood and some others; but these small for their kind and slender; and the habitat of them all was subaquatic; for everywhere one had to pick his way along tufts of sedge, and the superficial roots of trees, to avoid sinking over shoe in water.

Between the dry bank that encircles the swamp and its wooded portion one crosses in most places a narrow belt or rim of Carices without shrubs or even much other herbaceous vegetation; usually more or less of marsh marigold and skunk cabbage. Here the ground is firmer and less aqueous.

Another treeless and shrubless portion of the tract is central, and consists of a somewhat sinuously outlined shallow pond, occupied mostly by yellow pond lilies, the muddy shore of it beset with *Calla palustris*, this not yet in flower in the middle of June.

Bounded on the outside by the narrow rim of the caricetum, and within by the considerable expanse of the calla-nymphæa pond, the main body of the marsh, where grow the hydrophile trees already listed, is the really paradisiacal part of it, as viewed by the botanical eye; for here, the woods being quite open, the open spaces are filled with a rich diversity of herbaceous plants,

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Geum rivale, Spathyema fætidum and Caltha parnassifolia* in a particularly tall and robust form being among the largest. In one place only I saw a colony of Smilacina trifolia, this just past flowering; and there were observed several groups of *Clintonia borealis*, some of the plants still in flower; but Unifolium canadense was almost everywhere, as also Trientalis americana. Naumburgia thyrsiflora was frequent, also larger than I am used to seeing it, but Comarum palustre was not seen, neither Menyanthes. No cranberry was seen, or any orchids whatsoever. In these particulars this Ontario larch swamp was in marked contrast with those I had become acquainted with in regions lying to the westward of Lake Michigan.

On my first entrance to the swamp I was delighted by the sight of a large decaying stump beautifully mantled with *Linnæa borealis* in full bloom. I did not again meet with the plant in this bog, or even in the Strathroy district anywhere.

On account of my deep interest in northern violets I regretted the lateness of my arrival in western Ontario, for I knew that by the middle of June all the earlier species would have passed their season of petaliferous flowering. In the caricetum border of this marsh I observed what seemed to be V. cucullata, growing as usual among the tufts of hydrophile sedges, but no flowers were seen. It was quite too late for them. At this moment, however, and scarcely two rods away, though now hidden from view by the trees and shrubbery intervening, there was blooming beautifully and almost copiously my V. prionosepala, as I shortly discovered. Within this sparsely wooded and bushy portion of the marsh all sorts of very wet spaces not occupied by larger herbaceous plants were quite filled with the combination of a small galium, a slender stellaria, and this particular violet, and there was no other violet associated with it. This was the first time I had seen the species growing; at least the first time since my publication of it. I had described it from very excellent herbarium specimens, supplemented by full, intelligible and most satisfactory notes, all supplied by As I now revert to my original valued correspondents. account of this fine species, it is something of a gratification to read how perfectly, even if mainly by the light of the mere dried specimens, I had divined the nature of this plant's habitat as compared with that of V. cucullata. The plants of V. priono-

*During some years past I have been convinced that we have no Caltha palustris in North America; and that our plant is specifically distinct from the European type of the genus was seen by Rafinesque more than a hundred years since. It was in 1807 that he published our plant as C. parnassifolia, indicating, among other characters the important one of its elliptic sepals. Those of the Old World plant are broadly round-obvate.

†VIOLA PRIONOSEPALA, Greene, Pittonia, V. 99 (1902).

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sepala grow singly as I had said, never like the other in tufts; and it would be difficult to name another acaulescent purple violet the leaves of which are so far from being describable as cucullate. Their almost absolute flatness contrasts strongly with the constantly involute foliage of the other. Not one of the marks at first attributed to V. prionosepala seems thus far to fail; but not until I had seen the two flourishing in their native haunts, and on the same acre of wild land, did I apprehend the matter of the difference in their respective times of flowering.

At one or two points in this Strathroy swamp I observed colonies of V. blanda: Over and above these two I saw here no other stemless violets.

THE PRAIRIE WARBLER (DENDROICA DISCOLOR) IN NORTHERN ONTARIO AND OTHER NOTES.

BY G. EIFRIG, OTTAWA.

On May 11th of this year the writer found a specimen of the Prairie Warbler on the edge of Lake Doré, near Eganville, Renfrew County. This is a distinctly southern form, whose metropolis is, say in the latitude of the State of Maryland. The northernmost points at which it has been taken so far are at Mt. Forest, Wellington County-and that once only, if I mistake not-and at Toronto, twice. So its finding in Renfrew County means quite an extension northward of its hitherto known range. Its occurrence there proved all the more remarkable, since it was a single female seen and taken, whereas in nearly all species of birds, if the two sexes do not migrate together, it is always the males that arrive first. Besides, the weather before the 11th had been so uninviting, cold and rainv-the thermometer stood at 35°-45° for more than a week previously, with the exception of two warmer days-that there were very few of even the hardy northern warblers to be seen, only one Myrtle Warbler and one Black and White Creeping Warbler being seen in a stay of hours at the edge of the lake and in the vicinity. Furthermore, whereas in its true home it is a bird that confines itself strictly to warm, dry hillsides and similar dry localities, this one was laboriously clambering about in the alder bushes at the water's edge, sometimes over the water. The bird was taken and is now in the writer's collection.

The occurrence of this southern species so far north seems to lend weight to a theory the writer has held for several years past, viz., that there is a distinct movement northward discernible on the part of the birds. Thus, the Chewink (*Pipilo*

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Greene, Edward Lee. 1909. "Field Notes of Canadian Botany. I." *The Ottawa naturalist* 23(6), 110–113.

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