

The Ferns of the County of York.

EDITOR CANADA FARMER:—As some notices of ferns have appeared in your periodical, I submit to you a list of species found in the County of York. The range of habitat and variation, and localities mentioned, are the result of personal observation during a number of years. As well as the giving of some localities, and the general distribution in the county, I will give the nearest locality to Toronto where each species will be found.

Adiantum pedatum, L.—One of our most common and most beautiful ferns, very constant in its form; its habitat is the bush, but it has a range from open cedar swamps to high pine ridges. Toronto, St. James' Cemetery.

Pteris aquilina, L. Common everywhere, very constant in its form; has a range of habitat from closely shaded damp woods to high, dry, sandy fields. Toronto, St. James' Cemetery.

Asplenium angustifolium, Michx. Very rare; found in Lewis' woods, rear of lot 35, 5th concession, Markham. I have lately seen fine specimens gathered at Cobocok by Dr. Cowdry of Toronto.

Asplenium thelypteroides, Michx. Not common, found sparingly in ravines opening into Wilcox Lake, Whitechurch; Taylor's wood, upper Don; ravines along Humber. Toronto, Helliwell's bush and field south, growing with *Aspidium thelypteris*.

Asplenium filixfoemina, Bernh.—A large and beautiful fern, exceedingly variable; its habitat is from dense, hardwood bush to partially shaded openings, common everywhere. Toronto, St. James' Cemetery.

Phegopteris hexagonoptera, Fee.—Rare; found in dense, underbrush thickets, half mile north-east of Rosedale, Yorkville.

Phegopteris dryopteris, Fee.—A small and delicate fern, with the aspect of an *Adiantum*: abundant in woods everywhere. Toronto, St. James' Cemetery.

Aspidium thelypteris, Swartz.—Very common in swamps and marshes throughout the county. Toronto, Alnus swamp; gaol farm; St. James' Cemetery.

Aspidium noveboracense, Swartz.—Not common, resembles the last, and found in similar situations. Mud Lake, 9th concession, Whitechurch; marshes upper Don.

Aspidium spinulosum, Swartz.—Perhaps the most abundant and most variable of our ferns; presenting among many more the following described forms—*Var. intermedium*; *Var. dilatatum*; *Var. Bootii*. In woods everywhere. Toronto, St. James' Cemetery.

Aspidium cristatum, Swartz.—Common; growing in damp shaded situations; somewhat variable, passing through *Var. clintonianum*, into forms resembling *A. Goldianum*, but the fronds of all surviving the winter.

Aspidium marginale, Swartz. Common in woods and openings throughout the county, fronds surviving the winter; a variety is found which is sometimes mistaken for *A. filix-mas*. Toronto, St. James' Cemetery.

Aspidium acrostichoides, Swartz. Very common throughout the county, in woods, especially wooded hillsides; fronds evergreen, rather constant in its form, though *var. incisum* is sometimes met with. Toronto St. James' Cemetery.

(Continued next month.)

"TODD'S YOUNG FARMERS' MANUAL" is a good book, a practical book, one containing matter to which a man need not be ashamed of putting his name. At least, so appears to think Mr. Mapes, who appropriated therefrom an article, "How to Plough," and sold it to the *Ohio Farmer* as his own production. From that journal it was copied (properly credited both to the *Ohio Farmer* and to Mr. Mapes) into the May number of CANADA FARMER. There it caught the eye of Mr. Sereno Edwards Todd, agricultural editor of the New York *Herald*, the author of the work. That gentleman, no doubt, feels flattered, both by the implied compliment paid him by Mr. Mapes in appropriating his thunder, and by the fact that the CANADA FARMER complimented his article as "concise and practical," without knowing that he was the author of it. But we can excuse Mr. Todd for feeling somewhat angry about the matter, as it is not the first time, he says, that Mr. Mapes has reproduced articles of which he (Mr. Todd) was the author.

SOME FARMERS WILL SMILE at the announcement that a Pennsylvania man has started the manufacture of wooden shoes for the use of farmers and others compelled to be outdoors, but the idea is not so ludicrous as it may appear at first sight. The maker sent a pair of them, by mail, to the *Practical Farmer*, the editor of which journal seems to be delighted with them. "Wooden shoes," he says, "are well adapted for the use of farmers about the barnyards, or driving in the cows in the morning when the grass is wet; also, women in the garden, milking-yard, scrubbing, or at the wash-tub. Not that we suppose that they will supersede leather shoes where persons do much walking, but to be used as a person does a pair of overalls or common clothing, thus saving their better ones and having dry feet. Parties who are now using them inform us they give entire satisfaction, easily slipped on and off, and the first feeling of awkwardness is soon overcome."

SOME YEARS AGO, a great excitement was raised upon Chufas or earth almonds which were to revolutionize everything and to become a great staple. They did not do it, however, and we judge from what an Iowa correspondent of the New York *Tribune* says, that it was lucky no more people were bitten by them. "Some ten years ago," he says, "I unluckily saw highly recommended a small root called Chufas, or earth almond. I sent for seed, planted well, and cultivated thoroughly, and in due time harvested a bountiful crop. From present appearances, our children's children will never lack a plentiful supply of these miserable edibles. Burdock and beggar-lice form a slight comparison with these everlasting. I would like to know if there is any way to destroy them without sifting the whole garden through a fine sieve. Perhaps this will bring the man who recommended them out to defend their bad habits and recommend their good ones. If he should appear, I think he will hear 'Hail Columbia' sang from more States than one."

THE NEW POTATO DISEASE in England seems to have been a false alarm, in that the disease is neither a new nor particularly formidable one. Our readers will notice what our correspondent "Saravak" says, elsewhere in this issue, of the disease being noticed at Owen Sound. With respect to the cases at the Chiswick gardens, where it was first noticed in England, the editor of the *Agricultural Gazette* says, after a personal examination of the disease on the spot:—We have never seen more healthy or vigorous growth than is displayed over the large area occupied by the potato crop here. It is only in the case of three or four rows, generally of imported sorts, that the shrunk, half-developed, and sometimes wholly withered plants betray the mischief that is at work. That such mischief was gradually developing in these few cases has been known for many weeks to the officers of the garden here; but so far as a rough examination goes, it is apparently nothing new. One has seen potatoes similarly affected elsewhere, and long ago, and the dying plants look very like they used to look forty years ago, when the curl was a common disease among them. The old cut sets were not in every instance rotten. In some cases they were perfectly sound, but a corroded surface and ultimately shrivelled condition of the stems between the set and the upper surface root fibres seemed to betray the cause of the failure. Since the rain, the upper root fibres are so developing and feeding the plant that it appears to be on its way to recovery.

"HAY FEVER," not the kind that a farmer is supposed to have when a flood walks off with his crop, but the form of summer catarrh with which some persons are afflicted as regularly as the haying season comes round, is a most distressing complaint. Hitherto there has been no remedy for it but to go far away from the presence of hay, just as Mr. Beecher goes every year to the Peekskill Mountains, and as some English gentlemen that suffer from it, bury themselves in the heart of London. A peculiar feature of the disease is that few families—we have only known of one—are subject to it, and yet, if the disease arises from the presence of spores thrown off by the hay, farmers should be the chief sufferers. Prof. Helmholtz, of Germany, himself a sufferer from hay fever for twenty years, observed that the malady was invariably characterized by the presence of very minute infusoria, not unlike the queer little creatures that we sometimes see in rainwater butts, only very much smaller. There he found sticking most

tenaciously in the lower cavities and recesses of the nose, and he noticed that at a lower temperature they were very sluggish and inactive, but woke up as it were, when they were warmed. It was found that infusoria might be poisoned by quinine, and of this fact Helmholtz availed himself. The learned professor made a very weak solution of sulphate of quinine, and lying flat on his back with his head down, he poured a little of it into each nostril, and found instant relief. By occasionally repeating the operation he completely routed the enemy, who, in spite of all his efforts to prevent them, had for so many years thus audaciously taken up their summer quarters not merely under his very nose, but in it. By this mean she could, he found, enjoy entire immunity.

IN GREAT BRITAIN, the loss every year from the spoiling of the hay by rain, and the damage by spontaneous combustion caused by the stacking of the grass in too wet a condition in anticipation of rain, amount to enormous sums. With the view of preventing this loss, reaching some years to from ten to twenty millions of pounds sterling—this year probably to the larger sum—an implement has been invented which is to dry the hay or the straw as it goes into the stack, the crop being passed through as through a threshing machine. The wet hay or grain is exposed to the action of a continuous stream of hot air, and at the same time is tossed lightly, as by the common hay-fork, so as not to bruise or hurt the tender fibres. A portable stove with a blast fan forces heated air beneath a long funnel which is itself subjected to oscillation by an ingenious contrivance, and the hay, thrown in at one end from the cart, is tossed along continuously by forks, resembling exactly in their action the movements of the human arm and elbow joints, and comes out at the other end dry and fit for stacking. A small portable steam-engine, or a water-wheel, keeps the apparatus going, so that it can be taken from field to field, or be fixed permanently near the hay-sheds. The process is not intended to supersede the sun and winds, but to aid when occasion requires in the final and most important stage of hay-drying. Foul and sodden hay dried in this way, and mixed with a small proportion of fragrant herbago comes out raised to a very respectable quality and much increased in market value. The inventor's name is Gibbs, and his machine is the product of fifteen years of patient study and of many thousands of pounds of money spent in experiments. One of the machines will be shown at the meeting of the Highland and Agricultural Society.

OF "WAYS THAT ARE DARK and tricks that are" anything but vain, so far as the unfortunate victim is concerned, the New York *Tribune* gives a notable instance, the publication of which may save some farmer's pocket a drain and his temper a trial:—"I was in the field, two years ago," says the narrator, "just after haying, when a man drove up and wished to know if I would like to buy a hay-fork. I said, 'No; the haying season is over.' Well, his fork was just as good for getting in grain as hay. But I had very little grain, and besides, my barn was not conveniently arranged for using a hay-fork. He would like to show me the fork and take a look at my barn. The fork was a queer looking thing, the shape of an old-fashioned sugar tongs. 'Why, my dear Sir, your barn is a splendid one for using a horse-fork in; just let me put one of mine up.' No; I would rather wait until another year. 'Now I'll tell you what I will do. I will hang a fork and wait for you to try it next year, and if you do not like it, you need not keep it. The price, including ropes, is \$23.' 'Very well, you can put one up on your own responsibility.' So he put it up. The next year I used it to unload a few tons of hay, and then hoisted it into the peak of the barn, there to stay until the inventor should come. In a few days my hay-mow began to smoke like a chimney, and I was compelled to throw most of it out again. After haying the gentleman came. 'How do you like the hay-fork?' Don't like it, not worth a cent. I get my hay in too green to use a hay-fork; it packs the hay too solid.' 'That is strange; however there is my bill; hope you will like the fork better next year.' 'But you put up the fork on your own responsibility, and I was not to take it if it did not suit.' 'Not a bit of it; you must take me to be a fool; I don't do business in that way.' Being rather a peaceable man, and having never yet fallen into the hands of a lawyer, I paid the bill."