

blackberry and cranberry, after which came the orchard fruits, a sample of which, in the shape of some Gravenstein apples, had met with approval at a recent meeting. In fact the geographical situation of the Nova Scotian peninsula in N. latitude 45° might be expected to be favorable to the production of the finest fruits of the temperate zone. The *Vaccinium Vitis Idea*, cowberry, cow-cranberry, deserved special notice, economically regarded; for, though growing on both sides of the Atlantic, it claims as affording an article of diet, according to Professor Lawson, Dalhousie College, Halifax, were but little understood save in his own province. In Europe, he says, the use of the berry is unknown, and in America both Professor Gray and Mr. Wood speak disparagingly of it, and yet in Nova Scotia it is held in high esteem for making a delicious preserve.

The leaves of the *Ledum palustre*, or Labrador tea, were said to be used medicinally by a remnant of the aboriginal Indians as a remedy for consumption, and by the white inhabitants for imparting a pleasant flavour to beer. Employed sometimes for the latter purpose was the *Gaultheria procumbens*, the wintergreen, traderry, or partridge-berry, remarkable as yielding the substance known in commerce as wintergreen oil. Its name of "partridge-berry" might be derived from the leaves being fed upon by a native grouse called the partridge. Dr. Cogswell having found them in the stomachs of several of these birds which he examined.

Other samples on the table were the *Rhodora Canadensis*, the *Kalmia angustifolia* and *K. glauca*, the *Cassandra calyculata*, the *Andromeda polifolia*, the *Arctostaphylos uvaursi*, and the *Pyrola elliptica*. It was interesting to know, on the authority of Professor Lawson, that the Scotch heather, *Calluna vulgaris*, had been ascertained to grow naturally in several parts of Nova Scotia. The *Vaccinium myrtillus*, producing the bilberries or whortleberries so much prized in the Highlands of Scotland, also occurs in Canada, but only on the Pacific side of the Dominion.

The thanks of the Society were given to Dr. Cogswell for his very interesting and valuable remarks.

Dr. Cogswell exhibited a preserved specimen of *Utricularia vulgaris*, showing small fish, entrapped by the air bladders of the plant. It had lately been shown by Mr. Simms that large quantities of fish fry are destroyed by the *Utricularia* in rivers and fresh waters.

ONION seeds sown now and left in the ground through the winter with a mulch of hay or straw, will make fine bunch onions for next spring's use or sale.

I AM glad to see the *North Sydney Herald* turning its attention to so practical and useful a subject as the culture of small fruit. It is a subject that has hitherto been far too much neglected upon this Island. You very justly observe that it is not owing to any natural defects of soil or unsuitness of climate that our shortcomings in this respect are due. You hint that it is a just appreciation of the subject that is needed to cause the people to take a new departure. But the problem of getting the masses of the people who are or ought to be interested in the subject to give it sufficient attention is not so easy of solution, especially when it is considered that a vast majority of these are by nature or inclination not disposed to read upon the question. The brilliant success of Whetmore, Flewelling, Tingley and others in New Brunswick, or of Forsythe, Coleman, Shaw and scores of others who might be named in Nova Scotia, serve mainly to extort admiration, but little to excite emulation. You may tell them of Purdy, editor of the *Fruit Recorder*, raising 180 bushels of strawberries on an acre which at \$4 per bushel, which is only two-thirds of what they would fetch in North Sydney, would be \$720 per acre, or of Rev. Dr. Cannon raising at the rate of 250 bushels of currants per acre, which at \$5 per bushel is \$1250 per acre, or of a Richmond firm selling from one and a half acres \$900 worth of gooseberries, and which at 25 cents per quart—the price an amateur gardener in North Sydney gets this year—would amount to the nice little sum of \$1,600 per acre! These and kindred examples the average farmer regards as subjects of wonder but not of imitation. One reason of his reluctance to leave the beaten track of grain and potatoes is that he has few or no examples in his vicinity to copy from, and he is afraid there are mysteries in fruit-raising he cannot fathom. Inheriting the conservatism of his class the average farmer is skeptical of book knowledge of farming or fruit-growing, and hence the scarcity of modern works on horticulture among farmers. There is a general aversion to purchase such works as Fuller's, Barry's, or Downing's, although worth, to the intelligent man who can learn from them, their weight in gold. When men begin to read they begin to think, and when they begin to think they begin to progress. Fruit culture is a slow but sure outcome of improvement in farming. There has been almost a revolution in farming in the last fifty years in the United States and some parts of Canada, but the increase in small fruit culture, immense and wonderful as it has been, has not kept pace with the demand. Considering the prospect for supplying steamers and ships

that make this a port of call, together with the market at St. Pierre and other ports, North Sydney is probably the best market for small fruits in the Lower Provinces, and any man who will intelligently cultivate five acres of small fruit within a convenient distance of North Sydney will soon be an independent if not a wealthy man.—R. J. MOFFAT in *N. Sydney Herald*.

ANALYSES OF FERTILIZERS.

I have just received, in pamphlet form, a "Supplement to the Abstract of the Minutes of the Second Annual Meeting of the National Fertilizer Association," with the address of the president, Mr. Charles Richardson, of Philadelphia. It contains many true things, and some valuable suggestions in regard to means of securing greater uniformity of State legislation in regard to fertilizers, and greater uniformity in methods and results of chemical analysis.

But it seems to me that Mr. Richardson greatly overstates the present range of variation between different chemists who use the same methods and re-agents. He characterizes the discrepancies as "absurd and ludicrous," and says these terms are "very mild ones to apply when we come to consider their effect when applied to measure the value of goods that are produced at a cost of over twenty million dollars per year."

The determinations of different chemists of good standing for total ammonia, phosphoric acid and potash, run very close indeed. In ten denominations given below, and made by chemists 600 miles apart on the same samples, divided and submitted, the variations for total ammonia amount to only 3-10000 and 1-0000 respectively, and those for total phosphoric acid to only 4-10000, 13-10000 and 29-10000 respectively. This would be a variation of only 3, 1, 4, 13 and 29 pounds, respectively, in five tons, which is infinitely closer than any grocer's scales could divide up five tons of sugar or coffee into "small retail" packages.

But in available and insoluble phosphoric acid, the results and proportions are not so close. Let me explain briefly and in non-scientific language. Phosphoric acid in South Carolina phosphatic rock (and less so in bone) is in very refractory form or condition, and is very slow to give itself up as plant food. If the rock is ground very fine and "treated" with sulphuric acid, however, a portion of the phosphoric acid becomes "soluble" in pure cold water, and a still further portion is supposed to be soluble in soil water. The latter portion is called "reverted" or "precipitated," and chemists have tried to devise a weak solvent and a method of manipulation that should