

APPENDIX.

INTRODUCTION TO A SYNOPSIS OF THE FLORA OF NOVA SCOTIA.

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THE catalogue of Nova Scotian species presented, is published by the Institute for the purposes of affording information and opportunity for comparison to Botanists in other localities.

Without pretensions to more than a check list of native and naturalized plants so far described, it may be accepted as the most complete synopsis of the Nova Scotian Flora yet offered.

It has been compiled with care from materials supplied by several observers working independently in different sections of the Province; corrections and additions have been made previous to placing it in the hands of the publisher, and a further guarantee of its accuracy will be found in the correspondences existing between the different observers.

While claiming so much for it we are not unmindful of what the scientific Botanist will learn from a glance, viz., its imperfectness; since he cannot fail to notice that while the Pteridophyta exclusive of Cyperaceæ, and Graminæ are nearly complete, the Cryptogamia, excepting Filices and Lycopodiace, are but sparingly represented, the deficiency being owing to want of application, rather than the want of material upon which to work.

It is hoped, that the success which has attended the investigations, "of the Rev. E. Ball, a member of the Institute" into the number and variety of our native ferns, will serve to stimulate those who have the requisite skill and leisure, to attempt the same for the remaining orders of this division of our Flora, nor will the labor so applied yield less gratifying results.

The subarctic character of our flora will be observed from a study of our list. Another feature deserving attention is the preexistence of ancient forms, "also characteristic of our fauna," and probably owing to our woodlands consisting largely of coniferous trees, having served as an asylum, preserving them in situ not unlikely since the recession of the glacial period which scattered their congeners and descendants over the vast expanse of the

American continent in so much that our provincial flora presents as it were an epitome of the subarctic species found in the south and west.

The presence of common heather in our flora is interesting from affording an additional link to the chain of evidence which is indicative of relationship with the flora of northern Europe. It has been affirmed that true heath, *calluna vulgaris*, is not indigenous to America. Prof. Asa Gray, who is universally regarded as an authority, entertains a contrary opinion, and Prof. George Lawson in a former vol. of the Society's Transactions has afforded sufficient evidence of its existence in Cape Breton and Newfoundland, to strengthen the foundations of this opinion. Later still a new locality has been found in the vicinity of Halifax. Taking these with its existence in New England, where it was first discovered, we have sufficient grounds for claiming it as a native species.

The argument against its nativity, and in favor of its being introduced is founded upon its sparcity, but it may be said of this as of other rare species,—they are the remnants of more extensive communities, which, owing to unfavorable conditions have been caused to disappear, so that their present localities may be regarded as their final strongholds in our continent.

That the circumstance of rare occurrence does not always militate against the spontaneity of a species, is exemplified in our list by the presence of the *Rhododendron Maximum*, whose northern limit was confined to the New England States; yet one locality here has lately yielded specimens of this plant, which up to the present time, has been discovered no where else in the Province. Amongst our ferns also we find, *asplenium*, *trichomanes*, *woodsia ilvensis*, and *aspidium fragrans*, rare, and confined to few localities, yet we doubt not of their being indigenous.

We need but make mention of the operations of the agriculturist and lumberman in a country like ours, to have them recognized as effective causes, ever tending to change the character of our flora by producing the elimination of native, and affording favorable condition for the naturalization of foreign species. If we add to these influences the destructive fires which ravish our woodland annually, we find in them sufficient reasons for the supposition that species found, rare, and in sequestered places, are more probably native forms seeking refuge from extinction, than immigrants seeking establishment on a new soil.

'Tis true some introduced plants possess remarkable powers of spreading, and will sometimes be found in places very remote from

civilization; nevertheless in the vast majority of instances these species are found only in the vicinity of human habitations, i. e. cleared lands and pastures where they have room to spread, and dispute the soil with native plants but even here they do not always obtain exclusive possession; many native plants possess such vigorous powers of reproduction that they very often compete so successfully with the immigrants as to obtain the mastery in the occupation of cleared lands, which are neglected by the husbandman.

ABBREVIATIONS USED IN THE CATALOGUE.

- H.=Herbarium (Prov Museum) Prof. How, D. C. L., Kings' College, Windsor, N. S.
- Ln.= " Prof. Lawson, Ph. D., L.L.D., Dalhousie Coll., Halifax, N. S.
- S.= " Prof. Sommers, M. D., Halifax Medical College.
- K.= " A. H. McKay, B. A., Principal Pictou Academy.
- B.= " Rev. E. H. Ball, (St. Luke's) Halifax, N. S.
- C.= " D. A. Campbell, M. D., C. M., Halifax Medical College.
- Ly.= " A. W. H. Lindsay, M. D., Halifax, Nova Scotia.

n means near.