

THE FLORA OF CANADA*

An earlier general description of the flora of Canada was prepared for the 1938 Year Book by John Adams (1938) and revised in 1945 by Harold A. Senn. This account noted descriptive works on the Canadian flora prior to 1945 and gave an excellent summary of the factors affecting plant life under the headings of climate (temperature, precipitation, light, wind and altitude) and environment (ecological relationships and groups, exotic and weed flora). It also included a large section on the classification of the flora, noting the status at that date of Canadian cryptogams (ferns and fern allies, mosses, liverworts, lichens, fungi, and freshwater and marine algae) and phanerogams (flowering plants, made up of gymnosperms and angiosperms), and discussing the various floral regions of Canada as illustrated by the ferns and flowering plants. Reference may also be made to the paper by Adams (1926) entitled *A Survey of Canadian Plants in Relation to their Environment*.

This article will again present an account of the various Floral Regions but, rather than repeat much of the remaining easily available information, will concern itself chiefly with advances in Canadian botany since 1945 in an endeavour to present a broad view of the problems with which Canadian botanists are concerned.

Plant-collecting ranks with bird-watching as one of the most popular activities of amateurs in the field of natural history, and science has benefited greatly from the fact that the amateur collector has often reported his findings in the literature, perhaps as a checklist covering a certain region, or has donated his material (or duplicates) to be incorporated into the collections of large institutions where it is available for study.

The beauty of flowers provides the initial stimulus for collecting plants, and the relative ease with which plants may be collected and preserved and the small space required for their storage contribute to the popularity of the hobby. The methods of collecting and preserving botanical specimens are described in general by Gleason (1958), Porsild (1957), and in more detail by Savile (1962).

Latin names present an obstacle, but only at the beginning. They actually simplify working with plants because of the precision with which they are applied to distinct forms. Many different plants are known by the same vernacular or 'common' name in different parts of the country, and many plants also have several common names, often making it impossible to pinpoint accurately the species to which one is referring. The 'binomial' Latin name also gives some information as to the relationships of the plant. The Rose Family (*Rosaceae*), for example, is made up of several groups (genera), each of which usually contains several species obviously more closely related to one another than to members of the other groups. One of these groups constitutes the genus *Rosa*. One of the members of this group is distinguished from other 'roses' by its thick, roughly veined (rugose) leaves, and is known as the species *Rosa rugosa*. Another group of the Rose Family unites the cinquefoils or five-fingers in the genus *Potentilla*, but these are all so different from any species of *Rosa* that they obviously justify being placed in a separate major subdivision.

Floral Regions of Canada

In a country the size of Canada, several different floral regions are to be expected as a result of climatic and topographical differences, diverse soils and past history (submergence of the land, glaciation, land-bridges, etc.). Some idea of the complexity of the Floral Regions may be obtained by reference to Sheet 38 of the *Atlas of Canada* (1957), which shows the major regions further subdivided on the basis of their "natural vegetation". Because the regions of natural vegetation are based largely upon their dominant trees, there is a striking similarity between this vegetation map and the accompanying map. Four of the Floral Regions are dealt with in this article under the names used for the corresponding Forest Regions: the Boreal, Acadian, Great Lakes-St. Lawrence, and Deciduous (Carolinian) Forest Regions. The titles used for the other Floral Regions are: Prairie

* Prepared by Homer J. Scoggan, Ph.D. (McGill), National Museum of Canada, Natural History Branch, Department of the Secretary of State, Ottawa. Bibliographical references (chiefly since 1945) are listed alphabetically by authors in the Bibliography at pp. 59-61.