

FAUNAS OF CANADA.

collinus, *A. convallarius*, *A. Purshii*, *Sphaeralcea Munroana*, *Mentzelia albicaulis*, *M. laevicaulis*, *M. integrifolia*, *Oenothera pallida*, *O. andina*, *Phlox longifolia*, *Gilia aggregata*, *G. Harknessii*, *G. pungens*, *Collomia grandiflora*, *C. linearis*, *Pectocarya penicillata*, *Senecio Thomsoniensis*, *Erigeron concinnus*, *E. filifolius*, *Chænactis Douglasii*, *Chrysothamnus nauseosus*, *C. puberulus*, *Artemisia trifida*, *A. tridentata*.

CONCLUSION.

While it is impossible in a few pages more than to outline briefly the general characteristics of the flora of so large a country as Canada—a flora represented by nearly 5,000 well defined species and varieties of flowering plants—the enumeration of species representative of the different zones will, it is hoped, serve to give a fair idea of the flora as a whole and help a botanist unfamiliar with a particular region to determine what he may find there. Although there is a large and growing number of local botanists in Canada the general flora of the country is known to few but professional botanists, and it is chiefly for the information of the former class, and for those who do not reside in Canada, that this article has been written.

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Whether the fauna of the western hemisphere was derived from that of the eastern, or *vice versa*, as is contended by various authorities, there is a close relationship between them, and one of these contentions is certainly true. Geological evidence shows that in previous ages the northern circumpolar life was even more homogeneous than to-day, and types now found in but one of the great continental circumpolar divisions were once common to both. Old and now submerged land connections between the continents have been postulated both from zoological and geological evidence, and a more or less complete continuity of land throughout the northern hemisphere, in former times, must be acknowledged before present American biotal conditions can be thoroughly understood. That this connection was in the far north and in what is now arctic or sub-arctic climate did not prohibit a continual interchange of warmth-loving species, for the presence of coal in very high latitudes points to milder if not tropical or subtropical conditions where now we find perpetual snow and ice. We must therefore conceive of a pre-glacial time when tree-ferns and other luxuriant coal producing forests occupied extreme northern lands, and such species as elephants, horses and other warmth loving species could spread from one continent to the other.