

By way of contrast, a number of species occur on this side of the Atlantic only, such as the Sea Colander (*Agarum Turneri*), *Saccorhiza dermatodea*, *Ptilota pectinata*, etc. Many Arctic species, such as *Rhizoclonium riparium*, *Desmarestia aculeata*, *Odonthalia dentata*, etc., are found also on the Atlantic coast. Others, such as *Alaria membranacea*, *Polysiphonia arctica*, *Lithothamnion glaciale*, are exclusively Arctic, while other Arctic species, such as *Rhodomela Larix*, occur also on the Pacific coast of Canada.

The algal vegetation of the Pacific coast resembles that of the European Atlantic coast in the number of species belonging to the red group, doubtless owing to the warmer water, but there the comparison ends, for the species are mostly different. The same is largely true of the brown group in which many of the genera are also different, as in *Postelsia palmaeformis*, *Macrocystis pyrifera*, *Nereocystis Luetkeana*, some of which reach gigantic proportions.

One of the first lists of species to be compiled was that of Hay and MacKay⁹⁷ for the Maritime Provinces in which the distribution was shown of 4 species of *Cyanophyceae*, 15 species of *Chlorophyceae*, 31 species of *Phaeophyceae* and 33 species of *Rhodophyceae*.

Another more recent list by Bell and MacFarlane⁹⁸ for the same region included 24 species of *Chlorophyceae*, 39 species of *Phaeophyceae*, and 46 species of *Rhodophyceae*. For the Arctic coasts, Kjellman⁹⁹ mentions one species of *Cyanophyceae*, 8 species of *Chlorophyceae*, 15 species of *Phaeophyceae*, and 19 species of *Rhodophyceae*. That these figures do not truly represent the total marine flora is evident from the fact that Kjellman records 72 other species found on the west Greenland coast, most of which doubtless occur also in Arctic Canada.

Another Arctic list is that of Collins and his associates,⁸⁷ which includes a total of 53 species for the four colour-groups of which two species were previously undescribed. A separate list for Hudson bay by Howe⁹³ contained the names of 42 species (one being new) belonging to the four chief groups, together with 57 species of *Diatomaceae*.

For the Pacific coast of Canada, Collins¹⁰⁰ has recorded 40 species of *Chlorophyceae*, 45 species of *Phaeophyceae*, and 114 species of *Rhodophyceae*. As compared with the list for the Maritime Provinces, the preponderance of species belonging to the red group, as the result of higher temperature of the water, is very evident. Of the total species occurring on the coast of Vancouver island, Collins states that 38 p.c. of the brown and 25 p.c. of the red occur also on the Atlantic coast.

The various papers by Setchell and Gardner¹⁰¹ include the names of all species found on the coast from Alaska to California. It is noteworthy that several brown species such as *Postelsia palmaeformis*, *Pterygophora californica*, *Egregia Menziesii*, and *Pelvetiopsis limitata* find their northern limit on the southern coast of Vancouver island.

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