

—are of little importance in connection with lakes. In the Invertebrata, on the other hand, there was a vast field, very partially explored in this country, the chief work having been done on the Crustacea by Dr Scott. The Phanerogamia and higher Cryptogamia were only studied by the Lake Survey in a few districts; but the microscopic Algæ, occurring in the plankton, were important in all the collections.

In this first part of the paper the biology of the different parts of the lakes is first studied—the open water, the margin, the bottom—then the distribution, origin, etc. In the “Census of Species” given in Part II., only those lochs are taken into account which were bathymetrically surveyed, in order that the biological report may strictly correspond with the bathymetrical. A biological examination was made of many lochs not otherwise surveyed, and some interesting facts thereby added to our knowledge; but such facts will not be treated of here.

The distribution of some 700 species through more than 400 lochs offers difficulties in regard to its presentation in useful and convenient form. To give it in tabular form would need a large number of tables. While some of the plankton species have been found in nearly every loch, other species have been found in only one or two, or at any rate in very few lochs. There is no reason to believe that most of these latter are really more restricted in their distribution than the others. Many lochs may have been visited when those species were not in season; but the main reason for the inequalities in the number of records for different species is that the margins of the lakes, where the major part of the life resides, could only be examined in a few instances. The distribution might be more concisely tabulated by grouping the lochs into districts, but even thus the records would be so very inadequate and unequal as to be actually misleading, and it is doubtful if such tables would serve any good purpose. There are, of course, some species which are believed to be really rare or restricted in distribution. Those which, though not rare, have well-marked limitations of range, will be treated in a special section on Distribution. Those which are rare or sporadic in occurrence will be referred to in the notes on the species which follow the list of species in each class. In this census it may be assumed that species not specially remarked upon in the notes are fairly generally distributed over the country.

## THE PLANKTON

An understanding of the character of the plankton of the Scottish lochs may be obtained by considering, first, the features in which it