

which have also a bottom stage on the coast banks. In August 1900 their distribution was identical with that of the pelagic cod fry, and was limited by curve III. in chart, Fig. 523. Similar instances might be quoted in profusion, especially from recent Danish and Norwegian investigations. Of special interest is the great number of observations of larvæ and young fish drifting from the Atlantic coast banks off the west coast of Scotland into the North Sea and the Norwegian Sea (compare the drift of *Salpæ*).

We will now proceed to review our knowledge as to the

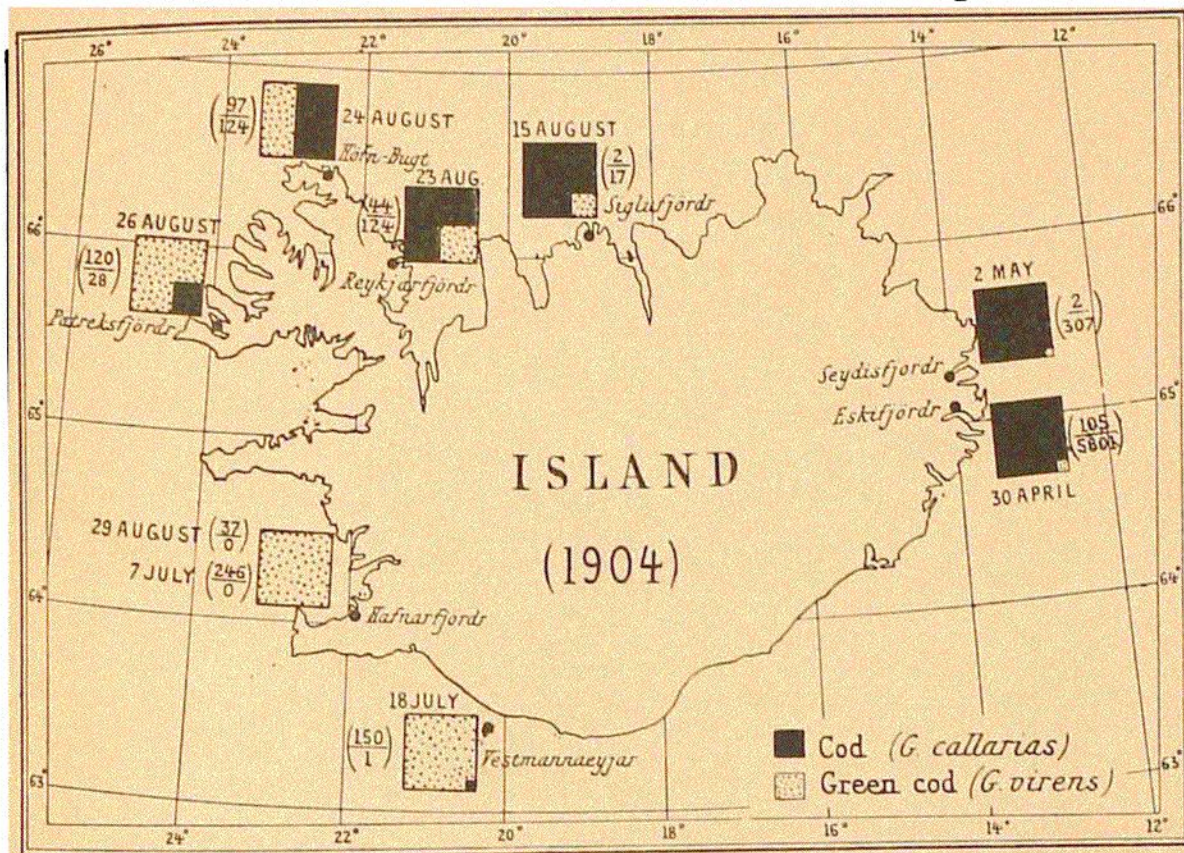


FIG. 525.—RELATIVE NUMBERS OF THE EARLIEST BOTTOM-STAGES OF *GADUS VIRENS* AND *G. CALLARIAS* AROUND ICELAND IN THE SUMMER OF 1904. (From Schmidt.)

conditions of the Atlantic, referring, for want of space, mainly to our own investigations.

It is not an easy matter to examine the reproduction of animals in the open ocean. Very few studies have, therefore, been made on the development of the oceanic fishes, and little is known as to their characters in early stages. Valuable information has been gathered and drawings have been made, especially by Günther and by Danish naturalists, Lütken and others, but complete series, showing the development of the species, are only available for a very limited number of species. Every expedition must, therefore, in the present state of our knowledge, make a laborious systematic study of the collections