

rapidly and the lower temperatures gradually descend towards deep water during early spring and summer. Great changes in specific gravity, viscosity, and light-intensity accompany these changes in temperature; in the very magnitude of these changes we must look for the essential difference between the tropical and subtropical conditions on the one hand, and the arctic-boreal conditions on the other.

The greatest interest attaches to the fact that the immigration of Atlantic forms into the Norwegian Sea occurs at the season when the conditions in the latter are most similar to those of the Atlantic. The international investigations have contributed to our knowledge on this immigration. Schmidt,<sup>1</sup> for instance, in the Danish investigation-steamer "Thor," had the opportunity of studying the immigration of *Salpæ* from the Atlantic into the Norwegian Sea, and writes as follows:—

"The organisms concerned were the distinctly Atlantic *Salpæ* (especially *Salpa fusiformis*), which are so characteristic and which were taken often in hundredweights in each haul of our pelagic apparatus in the Atlantic beyond the 1000-metres line. The year 1905, during which we several times crossed the North Sea, made two cruises to and from Iceland and the Faroes, following approximately the 1000-metres line, then sailed southwards west of the British Isles to the Bay of Biscay, was thus specially well suited to give light on these conditions, as I have endeavoured to delineate on the accompanying Chart [reproduced in Fig. 510]. The shaded lines

Distribution  
of *Salpa*.

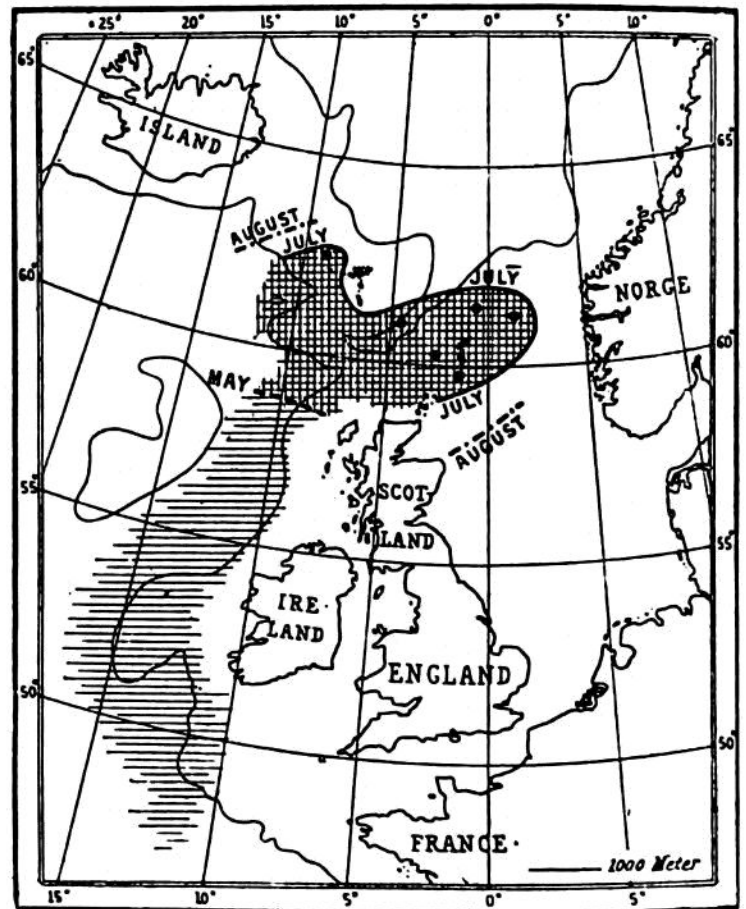


FIG. 510.—DRIFT OF SALPÆ (*SALPA FUSIFORMIS*) IN 1905. (From Schmidt.)

<sup>1</sup> Johs. Schmidt, "The Distribution of the Pelagic Fry and the Spawning Regions of the Gadoids," etc., *Rapports et procès verbaux du Conseil International*, vol. x., Copenhagen, 1909.