

is peculiar in so far that southern species of molluscs, for instance, occur as isolated specimens even far north in the Norwegian Sea, while northern species have a sharp southern limit (see Chapter VII.). Vast numbers of small pelagic organisms are introduced into the Norwegian Sea from the Atlantic.

As the water-masses of a current are carried along, the

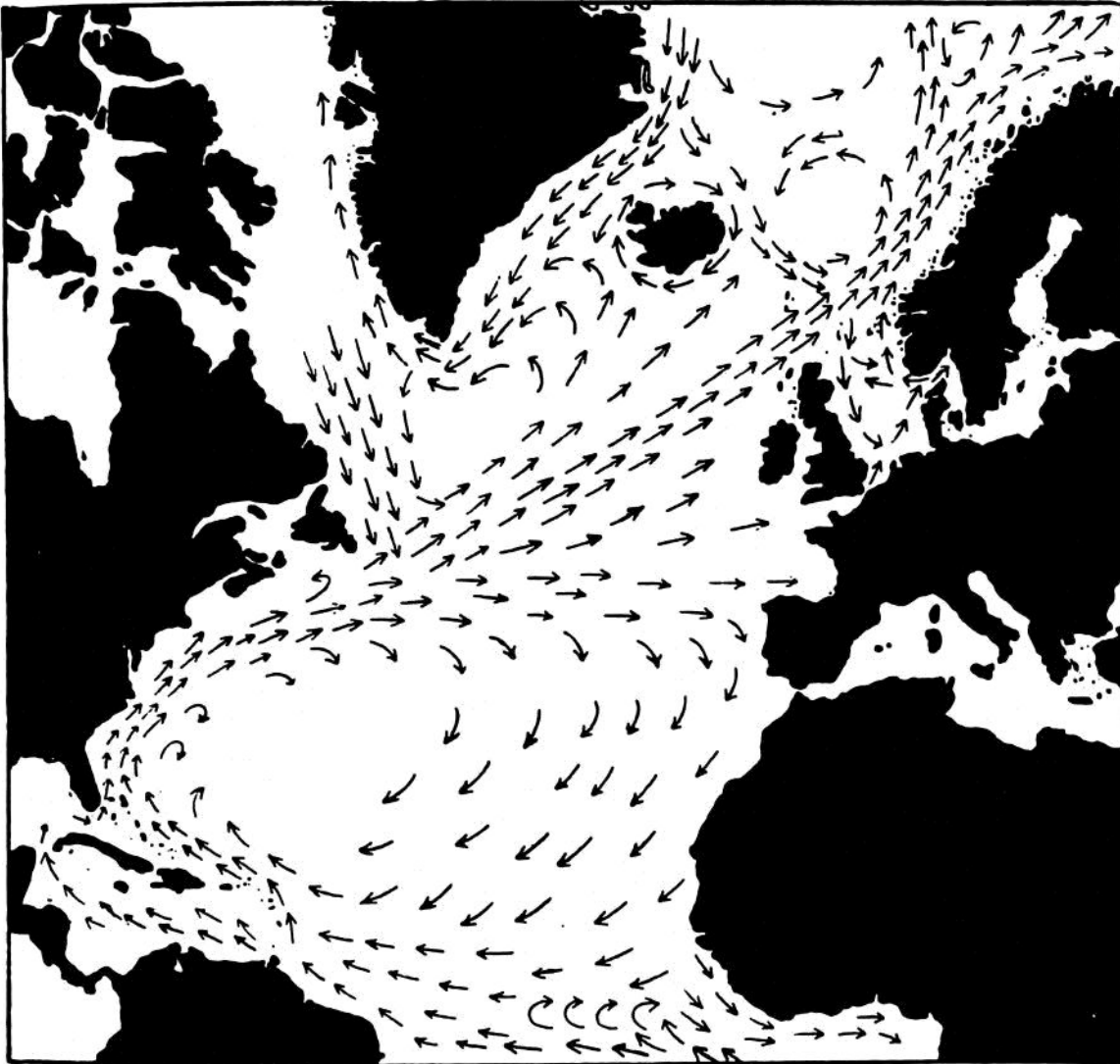


FIG. 50S.—CURRENTS OF THE NORTH ATLANTIC. (From Schott's "Valdivia" Report and Helland-Hansen and Nansen's memoir on *The Norwegian Sea*.)

conditions of existence for certain animals change, and as a consequence the fauna gradually changes in character. This change of fauna from place to place in the same expanse of water has always presented interesting problems in oceanic research. Sir John Murray writes upon this point as follows: "Where cold and warm currents meet at the surface of the ocean, there is a rise of temperature for the animals of the cold current, and a fall of temperature for the animals of the warm current, which results in a plentiful destruction of organisms.

Effect of large range of temperature in the surface waters.