

could scarcely be of other than Siberian origin. We found several indications of this kind during our expedition, even when we were as far north as 86° , furnishing valuable indications as to the movement of the ice.

The force which sets this ice in motion is certainly for the most part supplied by the winds; and as in the sea north of Siberia the prevailing winds are southeasterly or easterly, whereas north of Spitzbergen they are northeasterly, they must carry the ice in the direction in which we found the drift. From the numerous observations I made I established the existence of a slow current in the water under the ice, traveling in the same direction. But it will be some time before the results of these investigations can be calculated and checked.

The hydrographic observations made during the expedition furnished some surprising data. Thus, for instance, it was customary to look upon the polar basin as being filled with cold water, the temperature of which stood somewhere about -1.5° C. Consequently our observations showing that under the cold surface there was warmer water, sometimes at a temperature as high as $+1^{\circ}$ C., were surprising. Again, this water was more briny than the water of the polar basin has been assumed to be. This warmer and more strongly saline water must clearly originate from the warmer current of the Atlantic Ocean (the Gulf Stream), flowing in a north and northeasterly direction off Novaya Zemlya and along the west coast of Spitzbergen, and then diving under the colder, but lighter and less briny, water of the Polar Sea, and filling up the depths of the polar basin. As I have stated in the course of my narrative, this more briny water was, as a rule, warmest at a depth of from 200 to 250 fathoms, beyond which it would decrease in temperature, though not uniformly, as the depth increased. Near the bottom the temperature rose again, though only slightly. These hydrographic observations appear to modify to a not inconsiderable extent the theories hitherto entertained as to the direction of the currents in the northern seas; but it is a difficult matter to deal with, as there is a great mass of material,