

are balanced, the quantity of oxygen in the water is not altered

however many organisms are present. But if there is an excess of animal life the amount of oxygen decreases (as it always does in the dark); if there is an excess of plant life the amount of oxygen increases, provided there is light enough. Knudsen and Ostenfeld made some experiments to prove this. They filled some bottles with a capacity of 1 litre with sea-water, and into one they put some living crustacea (copepods). After three hours there was 3.88 cubic centimetres less oxygen in this bottle than in the others, while the quantity of carbonic acid had increased. They filled two litre-bottles with sea-water, and introduced equal quantities of vegetable plankton (diatoms), covering

Knudsen and Ostenfeld's experiments.

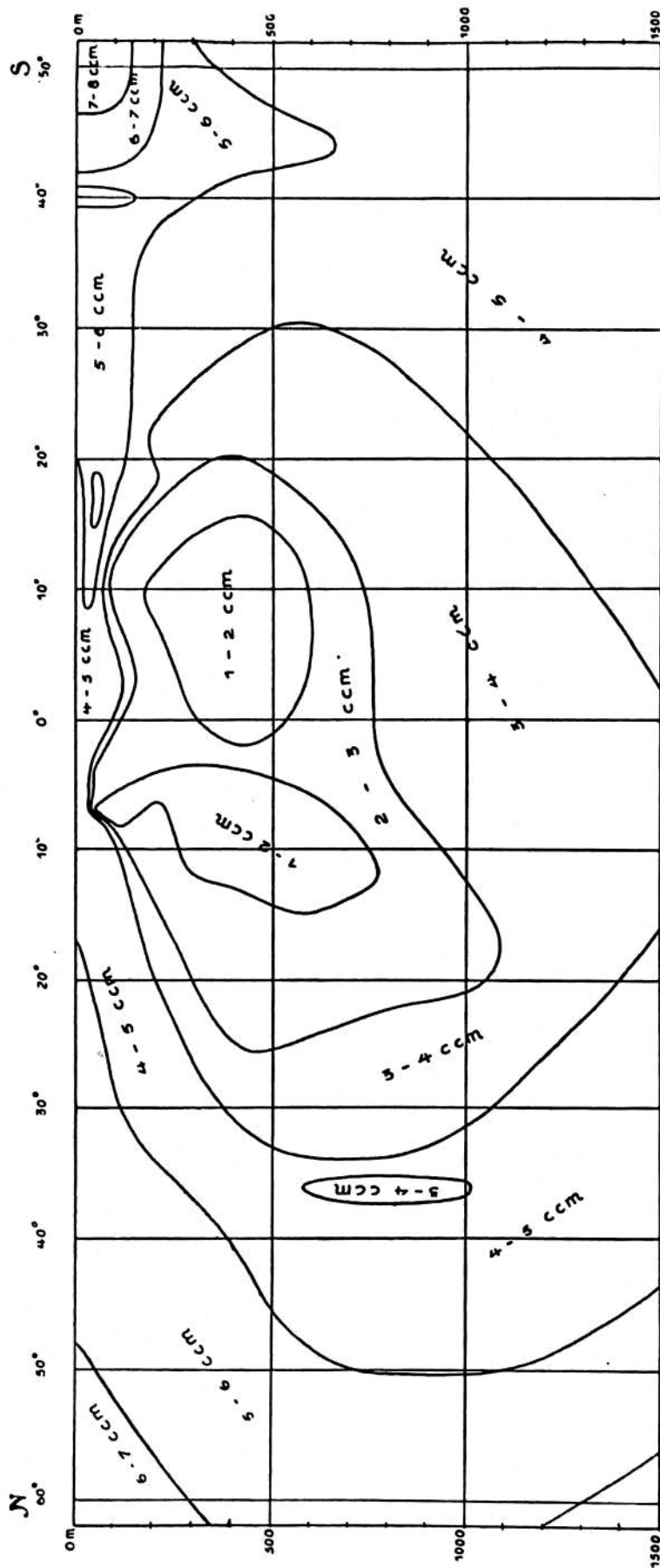


FIG. 173.—THE DISTRIBUTION OF OXYGEN IN THE ATLANTIC OCEAN BETWEEN 60° N. AND 50° S. The figures give the amount in cubic centimetres per litre of water. Depth in metres.

one of them with tin-foil so as to shut out the light. After