added, diatom cultures did not develop, but when to such artificial sea-waters traces (say 1 per cent.) of natural sea-water were added, very good growth occurred. Experiments indicated that probably an organic substance in the natural sea-water stimulated growth, but its composition was still quite unknown. The culture method had also been used to obtain a minimum figure for the number of organisms living in a given volume of natural sea-water, and had shown that, whereas the number obtained in the usual way with the centrifuge was 14,000 per litre for a particular sample, there must actually have been at least 460,000 per litre.

Dr. E. C. Jee directed attention to the necessity for elucidating the movements of the current of dense water which pours out of the Mediterranean and forms an intermediate layer in the deeper waters of the near Atlantic Ocean. It seemed to him likely that the current moves northward, and in certain circumstances comes to the surface within the region of the pelagic fisheries of the British south-western area. It is important to ascertain the influence of this current on the northward migration of planktonic organisms and on the migrations of plankton-feeding fishes, and the investigation of its boundaries would throw light on the salinity variations observed in the surface waters of the English Channel, which are known to exhibit varying degrees of periodicity.

Mr. C. Tate Regan remarked that the study of the ocean was important in many other ways than in relation to fisheries, e.g. it was found, during the war, that a knowledge of salinity and currents was of great value in regard to submarine operations and the course of drifting mines. He suggested that work overseas should include the investigation of the seas on the coasts of our colonies; the fauna of the great area within the 100-fathom line that surrounds the Falkland Islands and extends northward to Montevideo is known only from two hauls made by the *Challenger* and five or six by the *Albatross*. In view of the pre-eminence of our Navy, mercantile marine, and fisheries, this country should lead the world in oceanographical research.

Prof. C. A. Kofoid pointed out that the magnitude of oceanographical problems and their diversity necessitate a definite but flexible programme and the co-operation of many investigators, for without such co-operation results must be fragmentary. Standardisation of methods, elimination of unnecessary duplication, and international co-operation are indispensable. He remarked upon the need for a monthly bulletin which should contain a bibliography of the subjects in this field of work together with synopses of the contents of these papers—a work which might well be undertaken by the International Commission for the Investigation of the Sea. He referred briefly to the project for the renewed exploration of the Pacific which is under consideration by a committee of the National Research Council of the United States.

Prof. J. E. Duerden urged that in the organisation of any extensive scheme of research in oceanography, or of a new *Challenger* expedition, the possibility of assistance from, and co-operation with, the various Dominions should be kept in mind. He had no doubt that, upon proper representation being made, the Union of South Africa would take its part, both financially and in personnel.

Mr. F. E. Smith, director of scientific research at the Admiralty, stated that his department had considered the question of a new *Challenger* expedition, and was of opinion that such an expedition was required, and he felt sure that the Admiralty would take its share in the organisation thereof.

At the close of the discussion a resolution was

unanimously agreed to pointing out the importance of urging the initiation of a national expedition for the exploration of the ocean, and requesting that the council of the British Association should take the necessary steps to impress this need upon his Majesty's Government and the nation. On the following day, at the Committee of Recommendations, this resolution also received vigorous support from other sections, e.g. those dealing with chemistry, physics, geology, and geography, in all of which, as well as in zoology, investigations are required which could be undertaken by such an expedition. The General Committee of the Association recommended the Council to appoint an expert committee to prepare a programme of work and to consider the personnel and apparatus required. It is the hope of all those who have heard the cogent reasons for the expedition that it may be possible for the Government, in the not distant future, to undertake this great enterprise.

The New Star in Cygnus.

FROM the occasional observations which I have been able to make of the nova in Cygnus, I have formed the impression that the star has followed the normal course for such objects, except that the rise to maximum may have been more prolonged, and the subsequent decline in brightness more rapid, than usual. On August 22, two days after discovery, bright lines were not discernible with a small spectro-scope attached to a 3-in. refractor, thus suggesting that the maximum had not then been reached. The star was seen for a short time on August 23, when it had risen to nearly second magnitude, but there was no opportunity of making spectroscopic observations. On August 26 observations were made by Sir Frank Dyson and myself with the 12-in. reflector of the Penylan Observatory, Cardiff, from 10h. to 11h. G.M.T. The star was then very slightly brighter than δ Cygni, but not so bright as γ Cygni, so that its magnitude would be about 2.8. Bright lines were then well developed, $H\alpha$ being conspicuous, and also the group of four lines in the green assumed to be $H\beta$, 4924, 5018, and 5169. On August 28, so far as could be observed with a 3-in. telescope (in London), the spectrum showed no marked change, though the star had then fallen to nearly fourth magnitude.

A. FOWLER.

The announcement of the discovery of the new star in Cygnus was received at the Hill Observatory, Sidmouth, on the afternoon of August 21, but the cloudy state of the sky prevented any observation being made on that night. The sky was, however, clear on the night of August 22, and several photographs of its spectrum were secured. The following table sums up the observations taken since that date, and shows the fluctuations in magnitude recorded and the number of photographs of the spectra taken:—

Day.	State of Sky.	Estimated Magnitude.	No. of Spectra obtained.
21	Cloudy	...	—
22	Clear	2.8	4
23	Cloudy	...	—
24	Clear	2.2	3
25	Clear	2.2	5
26	Clear	2.8	4
27	Cloudy	...	—
28	Clear	3.6	3
29	Clear	3.8	4

On the night of August 22 the spectra were all very closely similar to that of α Cygni, the type of star