

is therefore highly probable that, as in the case of the ρ Ophiuchi nebula described by Slipher (NATURE, vol. xcvi., p. 236), the nebula shines by reflected light of the star which it encloses. Other nebulae have also been investigated, and some of them show feeble traces of bright nebular lines in addition to continuous spectrum. Very long exposures were of necessity given in taking the photographs, and it is still uncertain to what extent the photographed spectrum is influenced by light of the associated star which is diffused in the earth's atmosphere.

IMPERIAL ASTRONOMICAL SOCIETY OF RUSSIA.—A cordial welcome will be extended to the bulletins of the Imperial Astronomical Society of Russia, the first number of which has recently been distributed. It contains a series of notes by M. Viliev, including an ephemeris of the planet (67) Asia, a search ephemeris of comet 1846 IV. (De Vico), and a note on the possible return of the comet of 1532. In opposition to Olbers, M. Viliev finds reason to believe that the comet of 1661 may have been a return of that of 1532, in which case its reappearance would be due about the present time; it remains, however, to make a new reduction of the observations made by Hevelius in 1661, and to calculate the perturbations during the three revolutions. A further note refers to the central line of the total eclipse of the sun of May 28-29, 1919. One of the notes is in English, and the remainder in French.

MONTHLY STAR MAPS FOR 1917.—In response to requests from naval and military officers and others, the annual publication of the Scottish Provident Institution has again taken the form of a star atlas and astronomical calendar, which has been prepared for the twentieth year in succession by Dr. Blaikie. In addition to the monthly maps, showing the stars in the now familiar gold on dark blue, there is a stereographic projection intended for the solution of many problems for which the celestial globe is ordinarily employed. There are the usual tables relating to the sun, moon, and planets, and these, together with the interesting series of explanatory notes, form an admirable popular guide to the heavens. This publication has doubtless done much to encourage a general interest in observational astronomy, and its usefulness in this respect might be increased if it were made available to anyone who was prepared to pay for it.

SCIENCE LECTURES TO THE TROOPS IN FRANCE.

AT the invitation of the War Office, the Young Men's Christian Association recently organised a special service of lecturers to visit suitable centres in France for periods varying from a fortnight to three months or more in order to provide the troops behind the line with recreation of a thoughtful kind. The lectures were arranged because of a desire expressed by many of the troops for occasional entertainment of a more solid or instructive character than is offered by moving pictures and concert parties. Their aim has been not merely to afford amusement to the men in their unoccupied hours, but to give an understanding of the causes and aims for which our troops are fighting, and to deal with military, naval, and political history, with science, literature, travel, and other subjects of general interest. The scheme has received the hearty support of the universities, the vice-chancellor of each of which has appointed a special committee to nominate lecturers. The details of arrangement have been in the hands of Prof. Gilbert

Murray for the War Office Educational Committee and of Mr. Basil Yeaxlee for the Y.M.C.A.

In connection with this scheme a number of lectures upon scientific subjects have been, and are being, given at base camps and other centres in France. Among the science lecturers who have already completed their courses are Prof. W. Bateson, Prof. Alex. Findlay, Prof. R. A. Gregory, Mr. J. Humphreys, Prof. O. T. Jones, Rev. T. E. R. Phillips, Prof. E. B. Poulton, Mr. W. E. Whitehouse, and Dr. F. Womack. Lectures have been given to the officers as well as to the men upon such subjects as heredity, chemistry of daily life, the sun, moon, planets, and stars, primitive astronomy, protective resemblance, war among animals, the life of a river, rocks and soils of northern France, the Great Ice Age, climate and vegetation, mechanical contrivances of plants, and so on.

The lectures are given in Y.M.C.A. huts, and are usually illustrated with lantern-slides. They have proved remarkably successful, and in most cases the huts have been filled with men who listened with attention and intelligent interest to simple discourses upon natural facts and phenomena and their scientific interpretation. Even when other attractions, such as concerts, moving pictures, and revues have been going on at the same time, large audiences have attended the science lectures, and have thus shown the existence of a real demand for more thoughtful recreation. The welfare work of the Y.M.C.A. with the troops abroad is admirable in every respect, and the scheme of lectures now in operation merits all the assistance and encouragement which men of science can give it.

Although a few separate lectures are given to officers, most of them are delivered to the men, and officers are rarely present at them, though they are attracted by concert parties and like entertainments. It ought not to be supposed that the officers of our Army are less interested in scientific subjects than are the men of the rank and file, and their absence from lectures may be due to the fact that the Y.M.C.A. huts are regarded as places of recreation for the men only. As, however, Mr. McCowen, the chief secretary of the Y.M.C.A. in France, reports that the lecture scheme has succeeded almost beyond expectation, it would be worth while to develop the scheme still further by arranging more lectures for officers, not so much for purposes of instruction as to excite interest in scientific matters.

Of course, lectures on history, literature, the allied countries, and similar subjects have also been delivered, and, on the whole, historical subjects are probably the most popular. There is no doubt, however, that the science lectures have been a source of pleasure and enlightenment to thousands of our troops at the base camps and further up the line, and the Y.M.C.A. is performing a very useful service in organising them. The work is of such decided educational value that it should receive practical support from the State in the form of grants. With so large a part of our population serving with the forces at home and abroad, it should be possible for the Board of Education to make the Y.M.C.A. an education authority, and provide a substantial part of the funds required to carry on and extend the educational enterprise so successfully begun.

NANNA'S CAVE, ISLE OF CALDEY.

CALDEY ISLAND, in Carmarthen Bay, two miles south of Tenby, has been occupied since the prehistoric period, and, as is shown by the raised beaches in the vicinity, has been exposed to periodical eleva-