

Grote professor of the philosophy of mind, University of London; *Botany*, Prof. J. Lloyd Williams, of University College, Aberystwyth; *Education*, Dr. W. W. Vaughan, headmaster of Rugby; *Agriculture*, Dr. J. B. Orr, head of the Rowett Research Institute, Aberdeen. Among the principal items already set down for discussion are transport problems, to which the Sections of Economics and Engineering will devote two days, with special reference to the railway centenary of the present year; the cost of farming and the marketing of agricultural produce (Sections of Economics and Agriculture); the functional significance of size (Zoology and Physiology); the ignition of gases (Chemistry and Engineering); tidal lands (Geography and Botany); variations in gravitational force and direction (Physics and Geology); recent investigations upon vocational guidance (Psychology and Education); the distribution of animals and plants in relation to continental movements (Geology, Zoology, and Geography); the acquisition of muscular skill (Physiology and Psychology), and discussions on health in schools, the disciplinary value of subjects, the training of teachers, and the teaching of biology. Prof. Parks, of Toronto, as president of the Geological Section, succeeds the late Dr. Willet G. Miller, the Ontario Government mineralogist, who was to have occupied the chair of the Section.

WITH the January number the *Illuminating Engineer* begins a new stage of its existence. Formerly it was merely the official organ of the Illuminating Engineering Society; it has now been extended so as to appeal to a much wider class of reader. This number is brightly written and shows that good methods of illumination are of general interest. During last year no very striking progress was made in inventing new lamps or incandescent mantles,

but considerable progress was made in the methods of applying illuminants. It is considered that the time has come to enlighten the public as to what is being done. Playing games by artificial light, lighting developments at the Zoological Gardens in Regent's Park, the psychology of illumination, lighting and tobacco, inadequate lighting and defective vision, illuminated name plates for motor cars, and artistic illumination are only a few of the subjects discussed. We were specially interested in the "possibilities and limitations" of motor-car headlights. It is pointed out that the glancing beam of the headlight does not show to the driver puddles of water in the road. During the floods of December, inability to locate fairly deep water ahead often proved embarrassing. This shows that headlight illumination is far from perfect.

IN our issue of February 14, p. 242, reference was made to an article by Mr. F. W. Shurlock on the Rev. A. Bennet, F.R.S., in the January number of *Science Progress*. Mr. Shurlock writes to point out that the statement that Bennet died at Fenny Bentley is inaccurate. He held the rectory of Fenny Bentley concurrently with the curacy of Wirksworth, where he lived, died, and was buried; a memorial tablet is in the church, on the south wall of the nave.

AN assistant is required in the new chemical laboratory of the City Analyst for Leicester. The work of the person appointed will be mainly in connexion with the analysis of food and drugs, water and sewage effluents. The latest date for the receipt of applications by the Medical Officer of Health, Leicester, is Thursday, March 5.

ERRATUM.—In NATURE of February 14, p. 236, column 2, line 46, for words "that is" read "at all events."

Our Astronomical Column.

THE LUNAR ECLIPSE OF LAST AUGUST.—C.R. *Acad. Sci.* of Jan. 19 contains a research on the brightness of the moon at this eclipse, made by J. Dufay and A. Conder at St. Geniez (height 3500 ft.) in a clear sky. They used the Dufay photometer, which gives results that are independent of the diameter of the body measured. The moon was compared with Mars and Jupiter, the magnitudes of which were taken as -2.6 and -1.8. In the following table D is the distance in minutes of the moon's centre from the centre of the shadow, V its visual and P its photographic magnitude, C the colour-index.

D	V	P	C	D	V	P	C
10'	-0.9 <sup>m</sup>	.. m	.. m	18'	-1.35 <sup>m</sup>	+0.7 <sup>m</sup>	2.05 <sup>m</sup>
12	-1.0	+3.2	4.2	20	-1.65	0.0	1.65
14	-1.1	+2.3	3.4	22	-2.1	-0.7	1.4
16	-1.2	+1.4	2.6	24	-2.7	..	..

The increase of red in the centre of the shadow is very noticeable, and was also observed in the telescope, the outer portion of the umbra being greenish grey, the next zone orange-red, the centre brownish red.

The colour-index of Mars was determined as 1.37<sup>m</sup> ± 0.06<sup>m</sup>. It presumably varies with the character of the markings on the disc at the time.

Comparison was made with the eclipse of Oct. 16, 1921, observed by M. Danjon. It was concluded that the moon in 1921 was four times as bright as in 1924,

presumably owing to greater cloudiness in the earth's atmosphere in 1924.

ASTROGRAPHIC ZONE 21° SOUTH (HYDERABAD).—The Hyderabad Observatory (Director, T. P. Bhas-karan) has shown most praiseworthy zeal and energy in completing not only the zone originally undertaken but also the zone -21° to -23°, which had been undertaken by two other observatories in turn, but abandoned by both of them. It was thanks to the liberality of the Nizam and his Government that this extension was possible. The present volume contains the measures of stars on the plates the centres of which are in declination 21° south. The average number of stars per plate is 491, a higher average than in previous zones; this is ascribed to improvement in the quality of the plates. Plates were rejected that did not show at least twice as many stars as Schön-feld's map. In the galactic zones, some fifteen times as many stars are measured as are contained in the map, although the measurers were instructed to pass over the very faint stars in these regions.

The catalogue contains the measured diameters, with data for deducing the magnitude, and the x, y co-ordinates to 3 decimals of a réseau interval; also provisional plate constants for reducing to R.A. and decl. The plates in the present volume were exposed between Dec. 1920 and June 1923.