

described the butterflies of the district, and this account of the sphingids, bombycids, noctuids, and geometrids forms the second of three instalments.

WE have received from the Zenith Electric Co., of Willesden Green, London, N.W.2, a copy of its latest catalogue of regulating resistances. These devices are well known in laboratories, and are now often used in electrical works. The latest sliding type of resistance gives very fine adjustment and is cheap. As they are flash-tested at 2000 volts alternating, they are safe to use in electrical testing rooms.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A professor of education in the University of Bristol—The Secretary and Acting Registrar, University, Bristol (June 6). A visiting teacher at the Hackney Technical Institute, for instruction to junior workers in the chemical manufacturing trades—The Education Officer (T.1), County Hall, S.E.1 (June 6). An assistant veterinary inspector under the Surrey County Council to carry out duties under the several Acts and Orders relating to milk and dairies; diseases of animals; and such other veterinary duties as the council may require—The Chief Veterinary Officer, County Hall, Kingston-upon-Thames (June 8). An assistant marketing officer under the Ministry of Agriculture and Fisheries—The Secretary, Ministry of Agriculture and Fisheries,

10 Whitehall Place, S.W.1 (June 8). A full-time teacher of general elementary science and mathematics at the Technical College, Wolverton—The Secretary, Technical College, Wolverton (June 8). A lecturer in physics at the Birmingham Central Technical College—The Principal, Central Technical College, Birmingham (June 12). An assistant lecturer in zoology in the University of Bristol—The Secretary and Acting Registrar, University, Bristol (June 13). A library assistant at the University College of North Wales, Bangor—The Librarian, University College of North Wales, Bangor (June 13). A Thomas Wall reader in comparative education at King's College, London—The Academic Registrar, University of London, S.W.7 (June 15). A junior assistant (chemist) under the Department of Scientific and Industrial Research—The Secretary, Department of Scientific and Industrial Research, 16 Old Queen Street, S.W.1 (June 16). Keepers of, respectively, ethnology and geology in the Public Museums, Liverpool—The Town Clerk, Municipal Buildings, Dale Street, Liverpool (June 19). A Clothworkers' scholar in the University of Leeds for research in the physical properties of wool and other fibres—The Clerk to the Senate, University, Leeds. A graduate assistant master for engineering science and cognate subjects at the Cambridge and County School of Arts, Crafts, and Technology—The Education Secretary, County Hall, Cambridge.

Our Astronomical Column.

The Light-Variation of Eros.—*Astr. Nach.* 5784 contains two papers on this subject. S. Taffara, of Catania Observatory, discusses the period, finding the value 0.109796 day, which agrees exactly with that announced by L. Jacchia, of Bologna. Most observers take this value as the half-period, considering that the complete cycle contains two slightly dissimilar waves. The elongation observed at Johannesburg was stated to travel round in the double period 5 h. 16 m.

The other paper is from Uccle Observatory, by E. Delporte and P. Bourgeois. They determined the magnitude photographically, both by ordinary plates and by plates with a maximum of sensitiveness between wave-length 5200 and 5800. With the latter plates a yellow screen was employed, stopping all light of wave-length less than 4860. The curves obtained by the two methods are very nearly parallel to each other. The distance between them indicates a colour index of 0.77 mag. The colour has some influence on the parallax investigation, owing to differential atmospheric refraction. One advance in the present parallax campaign over that of 1900–1 is that on this occasion the spectral types of the comparison stars have been determined, so that it will be possible to make allowance for differential refraction, or at least to exclude stars of type differing much from that of Eros.

Absolute Magnitudes of *K*-type stars.—A method was recently devised by Strömberg for determining statistically the distribution of absolute magnitudes in a group of stars. The requisite data are proper motions and radial velocities, or derived functions of these quantities, from which accurate values of the frequencies of different absolute magnitudes in the group can be determined. Some interesting results have now been obtained by the author in applying

his method to *K*-type stars (*Astrophysical Journal*, vol. 73, p. 40). Amongst types *K*0 to *K*2, four distinct maxima appear in the frequency curve at absolute magnitudes -2.5 , $+0.3$, $+2.7$, and $+6.1$; the largest number (78.3 per cent) being of absolute magnitude $+0.3$. It thus appears to be necessary to subdivide the giants into three groups of mean absolute magnitudes equal to the first three maxima; and the designations of bright, normal, and faint giants have been provisionally applied to these groups. For stars of types *K*3 to *K*9 only three maxima appear, corresponding to super giants, normal giants, and dwarfs at absolute magnitudes -4.5 , -0.1 , $+6.7$ respectively.

New Catalogue of Comets.—Mr. I. Yamamoto has just published a new catalogue of comets in the current *Handbook of Kwasan Observatory*. Most of the book is in Japanese, but the catalogue is in English. It reproduces the orbits given in Galle's "Cometen-Bahnen", with the addition of those that have since been published, extending up to the end of the year 1930, so that it is quite up to date. The elements are given to the third decimal of a degree, which is near enough for most purposes. There is a useful separate table of the comets of short period, with the approximate date of their next apparition, and a list of the returns at which they were observed. There are a few errata. Some proper names are misspelt. Skjellerup's comet of 1927 is wrongly identified with De Vico's of 1846. Yamasaki's name is given, instead of that of Forbes, as the discoverer of 1928 IV. However, there are probably no catalogues of the kind that are quite free from mistakes. The book contains some other tables in English. They include elements of satellites and the more interesting minor planets, and a table for converting R.A. and declination into galactic longitude and latitude.