Bureau of Statistics. London: High Commissioner for Canada). The small volume supplements the larger and more purely statistical "Canada Year Book" and gives enough comparative statistics to present a survey of most aspects of Canadian activity. The reviews of agriculture, mining, and the development of water power are useful summaries. A statistical appendix gives tabulated figures for the last ten decades in population, production, trade, and other matters. There is also a list of official sources of information relating to Canada.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A male fishery officer in the Fisheries Department of the Ministry of Agriculture and Fisheries—The Secretary, Ministry of Agriculture and Fisheries, 10 Whitehall Place, S.W.1 (Mar. 31). A biochemical assistant at the Hannah Dairy Research Institute, Auchincruive, Ayr—The Secretary, Hannah Dairy Research Institute, Auchincruive, Ayr (April 1). A junior technical examiner in the Lands Branch of the War Department—The Secretary, Civil Service Commission, Burlington Gardens, W.1 (April 16). A head of the science and engineering department of Highgate School—The Headmaster, School House, Highgate (May 10). An adviser in entomology for the Bristol Province under the Advisory Scheme of the Ministry of Agriculture and Fisheries—The Acting Registrar, The University, Bristol.

Our Astronomical Column.

The Corona without an Eclipse.—M. B. Lyot's experiments with a sensitive polarimeter from the summit of the Pic du Midi, which is 9439 feet high, undoubtedly indicate the most hopeful means of observing the corona without an eclipse. They are fully described in a bulletin dated Feb. 14 issued by Science Service, Washington, D.C. A screen was used to cover the image of the sun's disc, and the prominences were then visible without the aid of a spectroscope. The polarised light that he ascribes to the corona can only be traced for 3′ or 4′ above the sun's limb, so that the method only extends to the bright inner zone of the corona. It is only observed in one position angle at a time; but by rotating the instrument round the sun's limb, it can be studied in all position angles. Dr. Deslandres is hopeful that it may be possible to photograph the images thus obtained. The article recalls that François de Plantade, an assistant of Cassini, used the Pic du Midi for astronomical observations two centuries ago. It also refers to the attempts of Prof. Hale and Dr. Steavenson to photograph the corona from high mountains; they did not, however, employ a polarimeter. A complete check of the new method will be afforded when the moon is very near the sun, but not actually encroaching on the disc; if the method is sound, the dark disc of the moon should be discernible.

The System of ξ Ursæ Majoris.—This has long been known as an interesting double star with a period of 59·8 years; it has been followed through more than a revolution. In 1905, Norlund detected an oscillation in the bright star with a period of 22 months, indicating that it has a close companion. The fainter star was found to be a spectroscopic binary, with a period of 9·8 days, by the Lick observers in 1918. *Lowell Observatory Bulletin* 432 contains a discussion of the spectroscopic orbit by L. Berman. The discussion is complicated by the double orbital motion; the light-time changes considerably during the description of the large orbit. The 22-month orbit is turned nearly edgewise to us, and observers are asked to watch for a possible eclipse on Feb. 4 or 5, 1932. We see the 9·8-day orbit nearly fully open, so the radial motion in it is small. A very accurate parallax can be derived from a combination of the data; the adopted value is 0·126″, giving a distance of 26 light-years. The combined mass of the brighter pair is $1\frac{1}{4}$ sun; that of the fainter pair is equal to the sun. Both the visible components are about $1\frac{1}{4}$ times as dense as the sun. The semi-major axis of the 9·8-day orbit is 7,319,500 km.; that of the 59·8-year orbit is about 20 astronomical units. The spectrograms were measured by Mr. Berman and Miss Hobe; they determined their personal equations by measuring spectrograms of Venus, the radial velocity of which is accurately known.

Annuaire Astronomique Camille Flammarion, 1931.—This useful almanac (Observatoire de Juvisy; 12 francs) contains details of the positions of sun, moon, and planets, diagrams of the orientation of the solar equator in different months, data of all oppositions of Mars up to 1956, elements of Pluto with a diagram of its orbit and details of the two total lunar eclipses of 1931, which are both visible in England and France. There is an excellent table of the elements of the orbits of periodic comets, compiled by M. Baldet; it includes comet Schwassmann-Wachmann III (1930 *d*). There are also meteorological data and many useful tables of physical constants. One notes the interesting fact that Mt. Canigou can be seen from Marseilles projected upon the setting sun on certain days in February and October; the distance is 253 km., and the straight line joining the points is 120 m. below the sea at the middle point; the visibility depends on refraction.

A table of Easter up to 2319 may interest some readers. One notes that Easter occurs in March once in $4\frac{1}{3}$ years; it will not occur on Mar. 22 (its earliest date) until 2285. It is, of course, assumed that the present mode of reckoning will be continued.

Report of the Leyden Observatory for 1930.—The Report begins with acknowledgment of the gift of 110,000 dollars from the Rockefeller Foundation. It is being used for the construction of a photographic equatorial of 40 cm. aperture, which will be erected at Johannesburg, thus strengthening the connexion between Leyden and the Union Observatory. Dr. van den Bos has now become chief assistant at the Union Observatory. Prof. Hertzsprung and Mr. van Gent are there temporarily.

The meridian circle at Leyden was used for observation of the Eros-reference stars. The proper motions of the reference stars in the selected areas are being discussed; also those of stars in the Pleiades in connexion with Prof. Hertzsprung's investigation. Mr. Kuiper has observed double stars with the 10-inch refractor on 63 nights.

Mr. van Gent has photographed several southern fields with the Franklin Adams camera, and has detected 82 known and 28 new minor planets. Prof. de Sitter and Dr. Oort have investigated the radial velocities of the spiral nebulæ in relation to the theory of relativity and the rotation of the galaxy.