

Messrs. G. Bell & Sons announce that the Tercentenary Memorial Volume on James Gregory, containing his correspondence with John Collins and his hitherto unpublished mathematical manuscripts, together with addresses and essays communicated to the Royal Society of Edinburgh, has been recently published. The volume is edited by Prof. Herbert Westren Turnbull, F.R.S., and has been published for the Royal Society of Edinburgh. (Price 25sh. net.)

We acknowledge with thanks receipt of the following:—

"Journal of Agricultural Research," Vol. 59, Nos. 4-5.

"Agricultural Gazette of New South Wales," Vol. 50, Pt. 11.

"The Philippine Agriculturist," Vol. 28, No. 6.

"Biochemical Journal," Vol. 33, No. 9.

"Journal of Chemical Physics," Vol. 7, Nos. 10-11.

"Journal of the Indian Chemical Society," Vol. 16, No. 9.

"Journal de chimie physique," Vol. 36, No. 6.

"Chemical Products," Vol. 2, No. 6.

"Comptes Rendus (DOKLADY)," Vol. 24, No. 5.

"Experiment Station Record," Vol. 81, No. 4.

"Indian Forester," Vol. 65, No. 12.

"Transactions of the Faraday Society," Vol. 35, Nos. 222-223.

"Review of Applied Mycology," Vol. 18, No. 10.

"Nature," Vol. 144, Nos. 3647-3653.

"American Museum of Natural History," Vol. 44, Nos. 3-4.

"Occasional Notes" (Royal Astronomical Society), No. 6 (October 1939).

"Canadian Journal of Research," Vol. 17, Nos. 9-10.

"Journal of the Royal Society of Arts," Vol. 87, Nos. 4533-38.

"Journal of Research," National Bureau of Standards, Vol. 22, Nos. 5-6 and Vol. 23, No. 1.

"Sky," Vol. 3, No. 12 and Vol. 4, No. 1.

"The Lingnan Science Journal," Vol. 18, No. 4.

"Science Progress," Vol. 34, No. 134.

"Indian Trade Journal," Vol. 135, Nos. 1742-46.

ACADEMIES AND SOCIETIES

Indian Academy of Sciences

November 1939. SECTION A.—SIR C. V. RAMAN AND V. S. RAJAGOPALAN: Haidinger's rings in soap bubbles. Soap bubbles suitably maintained to have a perfectly uniform thickness exhibit by transmission or reflection interference figures consisting of concentric rings which are essentially of the same physical nature as the Haidinger rings due to a plane-parallel plate. H. J. BHABHA: Classical theory of electrons. B. D. SAKSENA: The complete Raman spectrum of glycerine. 21 Raman lines (some of them new) and an O-H band have been recorded: 12 of these are polarised and 3 depolarised. On dilution with water, the line 674 becomes more diffuse, and increases in frequency by 15 cm.⁻¹ at 25% dilution. T. VIJAYARAGHAVAN: On the irrationality of a certain decimal. F. C. AULUCK: On Poncelet polygons. J. A. NABAR, P. M. BARVE, A. M. PATEL AND B. N. DESAI: Adsorption of naphthols in the presence of different electrolytes and peptising agents and at different temperatures. The adsorption on cotton fibre has been measured, under various conditions to understand the mechanism of the process of dyeing. B. K. SINCH AND B. BHADURI: Studies on the dependence of optical rotatory power on chemical constitution—Part XVI. Bromo-, and Iodo-, Aryl derivatives of stereoisomeric methylenecamphors. V. T. CHITLONKAR: Rectification in discharge tubes. A quantitative study is made of the rectification as a function of the pressure in the discharge tube, disposition of the electrodes, etc. S. S. PILLAI: On the smallest prime of the form $km + 1$. S. S. PILLAI: On the number of representations of a number as the sum

of the square of a prime and a squarefree integer. S. S. PILLAI: On numbers which are not multiples of any other in the set. R. S. KRISHNAN: Scattering of polarised light in colloids. The depolarisation of light scattered in the transverse horizontal direction when the incident beam is inclined at an angle θ to the vertical, has been studied. The calculated relationship does not strictly hold for particles of any size and shape; the deviations are however not large and may be due to a second order effect. D. N. MOGHE: On the stability of equilibrium of an isolated fluid sphere. D. N. MOGHE: On some non-static solutions of Einstein's gravitational equations, and fluid spheres with the pressure and density as slowly varying functions of time. S. SIDDIQUI AND V. SHARMA: Studies in the conessine series—Part V. Reduction of nitro-conessine to conessine-oxime and conversion of the oxime to mono-oxo-conessine.

November 1939. SECTION B.—S. A. AKHTAR: On some nematode parasites from Afghanistan.

Indian Association for the Cultivation of Science (Proceedings):

August 1939.—DEBESHCHANDRA ROY: New measurements of aluminium monoxide bands. M. V. SIVARAMAKRISHNAN: A simple method of coating optical surfaces with aluminium. S. A. AZIZ: Raman spectrum of diphenyl in the solid state. J. N. BHAR: Studies of the ionosphere at Calcutta. MOHINIMOHAN GHOSH: Dynamics of the pianoforte string and the hammer—Part III (General Theory). L. SIBAIYA AND M. RAMA RAO: Surface tension and Lindemann Frequency. L. D. MAHAJAN: Liquid drops,

Indian Chemical Society:

September 1939.—SHARIFUDDIN WARSII AND SALIMUZZAMAN SIDDIQUI: The constituents of *Didymocarpus Pedicellata*—Part III. Isolation of a sesquiterpene and two polyterpene products and examination of the fatty matter. K. P. BASU AND M. C. MALAKAR: Calorific values of Indian foodstuffs. PANCHANAN NEOGI AND KANAI LAL MANDOL: Co-ordinated copper compounds with propylenediamine. N. L. VIDYARTHI AND C. J. DASA RAO: Fatty acids and glycerides of the fat from the seeds of *Garcinia Indica* (kokum butter). N. L. VIDYARTHI AND M. VENKATESH MALLA: Fatty acids and glycerides of the oil from *Sapota* seeds (*Achras Sapota*). K. P. BASU AND K. GUPTA: The role of vitamins and calcium in the diet in the utilisation of proteins. PHULDEO SAHAY VARMA, N. B. PAREKH AND V. K. SUBRAMANIAM: Halogenation—Part XXI. Direct replacement of aromatic sulphonic groups by chlorine and bromine atoms. N. R. DHAR AND E. V. SESHACHARYULU: New aspects of nitrogen fixation and conservation in the soil—Part III. Influence of light on bacterial numbers and nitrogen fixation. PHULDEO SAHAY VARMA AND (MISS) K. M. YASHODA: A note on the iodination of a few halogenated phenols. N. L. VIDYARTHI AND M. VENKATESH MALLA: A note on the occurrence of an isomer of ricinoleic acid in the fatty oil from the seeds of *Vernonia Anthelmenitica*.

Indian Botanical Society:

September 1939.—SAYEEDUDDIN, M., AND MOINUDDIN, M.: Anatomical study of *Holmskioldia sanguinea* Retz. (Verbenaceae). KRISHNA IYENGAR, C. V.: Development of embryo-sac and endosperm-haustoria in some members of *Scrophulariaceae*—III. *Limnophila heterophylla* Benth. and *Stemodia viscosa*, Roxb. FOTIDAR, A. N.: The primary vascular system of the stem of *Nyctanthes arborescens* L. SULTAN AHMAD: Higher fungi of the Punjab plains—I. The

Gasteromycetaceae. FOTIDAR, A. N.: An example of a naked ovule in *Galphimia gracilis*. PARIJA, P. AND SAMANTARAI, E.: March of transpiration of a leaf since its measurable stage to its fall. SÂNE, Y. K.: A contribution to the embryology of the *Aponogetonaceae*.

The Geological, Mining and Metallurgical Society of India:

The recent numbers (Vol. XI, Nos. 1 and 2) of the quarterly journal of the above Society contain several papers of geological and metallurgical interest. Of these the following may be mentioned: *Geology of the area around Phonda and parts of Bauda Jahgir (Ratnagiri Dt., Bombay)* by R. D. GODBOLE, and *Geology and petrology of the iron ore deposits of Mandi State, Punjab*, by S. K. ROY AND A. N. MUKHERJEE. A paper by D. SWARUP AND T. V. N. KIDAO records certain valuable observations on the "Heat treatment of high carbon stainless steels".

The Society has also recently published a Bulletin on "The uses and applications of sheet and waste mica" by the well-known mica specialist Ramani Ranjan Chowdhury, in which quite a lot of useful information has been condensed, which is sure to be of great value to those interested in the development of the mica industry in India.

Meteorological Office Colloquium, Poona:

October 12, 1939.—A. K. MALLIK: Sorption with special reference to the exchange of moisture between the air layers near the ground and soil and plant materials.

October 19, 1939.—DR. N. K. SUR: A discussion of some sounding balloon ascents during a depression in July 1937.

October 27.—C. RAMASWAMY: Petterssen's paper on some aspects of formation and dissipation of fog.

Errata

1. Vol. 8, No. 10, October 1939, page 470:—
Column 1, last line of the first paragraph: for "Kamai Lal Mandal" read "Kanai Lal Mandal".

2. Vol. 8, No. 11, November 1939, page 512:—
Note entitled "Condensation of Chalkones with Flavanones":

Column 1, line 4, for $\text{Ph} \cdot \text{CO} \cdot \text{CH} = \text{CO} \cdot \text{Ph}$ read $\text{Ph} \cdot \text{CO} \cdot \text{CH} = \text{CH} \cdot \text{Ph}$.

Column 2, line 1, for "pulverisodium" read "pulverised sodium".

Column 2, line 2, for "the last two being" read "the last two reagents being".