

ceous of the Peçora region.—P. **Zemiatčenskij**: The absorbent properties of Russian clays.—K. K. **Matvéev**: Radio-active minerals of the Borščovok range.—Ja. V. **Samojlov** and A. G. **Titov**: Ferro-magnesian concretions from the beds of the Black Sea, the Baltic, and the Barents Sea.

BOOKS RECEIVED.

The Life of Sir Clements R. Markham, K.C.B., F.R.S. By Admiral Sir A. H. Markham. Pp. xi+384. (London: J. Murray.) 15s. net.

The Life of Sir Colin C. Scott-Moncrieff. Edited by Mary A. Hollings. Pp. xii+374. (London: J. Murray.) 12s. net.

Adolescence. By S. Paget. Pp. 59. (London: Constable and Co., Ltd.) 7d. net.

The Human Body. By Prof. H. N. Martin. Tenth edition, revised by Prof. E. G. Martin. Pp. xviii+649. (New York: H. Holt and Co.)

The Wheat Problem. By Sir W. Crookes. Third edition, with Preface, and Additional Chapter, bringing the Statistical Information up to date, and a Chapter on Future Wheat Supplies, by Sir R. H. Rew. Pp. xvi+100. (London: Longmans and Co.) 3s. 6d. net.

The American Indian. By C. Wissler. Pp. xiii+435. (New York: D. C. McMurtrie.)

The Self and Nature. By Prof. De Witt H. Parker. Pp. ix+316. (Cambridge, Mass.: Harvard University Press; London: H. Milford.) 8s. 6d. net.

Notions Fondamentales de Chimie Organique. By Prof. C. Mouren. Fifth edition. Pp. 548. (Paris: Gauthier-Villars et Cie.) 20 francs.

The Chemical Constitution of the Proteins. By Dr. R. H. A. Plimmer. In three parts. Part i., Analysis. Third edition. Pp. xii+174. (London: Longmans and Co.) 6s. net.

Treatise on Applied Analytical Chemistry. By Prof. V. Villavecchia and others. Translated by T. H. Pope. Vol. i. Pp. xvi+475. (London: J. and A. Churchill.) 21s. net.

Quantitative Chemical Analysis. By Prof. F. Clowes and J. B. Coleman. Eleventh edition. Pp. xxiv+580. (London: J. and A. Churchill.) 12s. 6d. net.

Therapeutic Immunisation. By Dr. W. M. Crofton. Pp. 224. (London: J. and A. Churchill.) 7s. 6d. net.

Reagents and Reactions. By Prof. E. Tognoli. Translated by C. A. Mitchell. Pp. viii+228. (London: J. and A. Churchill.) 6s. net.

Locke's Theory of Knowledge and its Historical Relations. By Prof. J. Gibson. Pp. xiv+338. (Cambridge: At the University Press.) 10s. 6d. net.

The Problem of Creation. By the Rt. Rev. J. E. Mercer. Pp. xiii+325. (London: S.P.C.K.) 7s. 6d. net.

The Vegetable Garden. By E. J. S. Lay. Pp. 144. (London: Macmillan and Co., Ltd.) 1s. 6d.

DIARY OF SOCIETIES.

THURSDAY, DECEMBER 6.

ROYAL SOCIETY, at 4.30.—The Series of Legendre: Prof. W. H. Young.—The Discharge of Gases under High Pressures: L. Hartshorn.—Internal Ballistics: Lieut.-Col. A. G. Hadcock.—The Electrostatic Problem of a Conducting Sphere in a Spherical Cavity: Dr. Alex. Russell.—The Zeros of Bessel Functions: Prof. G. N. Watson.

INSTITUTION OF ELECTRICAL ENGINEERS, at 6.—Electrical Cooking as applied to Large Kitchens: W. A. Gillott.

CHEMICAL SOCIETY, at 8.—The Relation between Chemical Constitution and Physiological Action: Dr. F. L. Pyman.

MATHEMATICAL SOCIETY at 5.—A New Method of describing a Three-bar Curve: Col. R. L. Hippley.—Proof of the Primality of $N = \frac{1}{9}(10^{19} - 1)$: Oscar Hoppe.—New Tauberian Theorems: Messrs. Hardy and Littlewood.

NO. 2510, VOL. 100]

—The Curves which lie on the Quartic Surface in Space of Four Dimensions and the corresponding Curves on the Cubic Surface and the Quartic with a Double Conic: C. V. Hanumanta Rao.—(1) The connection between Legendre Series and Fourier Series; (2) Series of Bessel Functions: Prof. W. H. Young.

MONDAY, DECEMBER 10.

ROYAL SOCIETY OF ARTS, at 4.30.—Progress in the Metallurgy of Copper: Prof. H. C. H. Carpenter.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—The Future of Siberia and her Neighbours: Col. Harold Swayne.

WEDNESDAY, DECEMBER 12.

ROYAL SOCIETY OF ARTS, at 4.30.—Technical Training for Disabled Soldiers and Sailors: Lord Charnwood.

FARADAY SOCIETY, at 7.50.—Annual General Meeting.—At 8.—A Study of the Refractivities of Saturated and Unsaturated Compounds. I. and II.: Gervaise Le Bas.—The Thermal Properties of Sulphuric Acid and Oleum: Dr. Alfred W. Porter.—Iso-piestic Solutions: W. R. Bousfield, K.C.

THURSDAY, DECEMBER 13.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: The Formation of Nitrites from Nitrates in Aqueous Solution by the Action of Sunlight and the Assimilation of the Nitrites by Green Leaves in Sunlight: B. Moore.—The Transition from Rostro-carinate Flint Implements to the Tongue-shaped Implements of River-terrace Gravels: J. R. Moir.

LINNEAN SOCIETY, at 5.—Seeds with a Stony Endocarp and their Germination: A. W. Hill.—*Inter se* Experiments in Pheasant Crossing in evidence of Mendel's Law: Mrs. R. Haig Thomas.

ROYAL SOCIETY OF ARTS, at 4.30.—The Trade of India with Russia, France, and Italy: D. T. Chadwick.

OPTICAL SOCIETY, at 8.—Proposed Standard Optical Notation and Sign Convention: J. W. French.—Optical Nomenclature and Symbolism: T. Smith.

INSTITUTION OF ELECTRICAL ENGINEERS, at 6.—Discussion on the Metric System. Introductory Papers by L. B. Atkinson and A. J. Stubbs.

FRIDAY, DECEMBER 14.

ROYAL ASTRONOMICAL SOCIETY, at 5.
INSTITUTION OF MECHANICAL ENGINEERS, at 6.—The Use of Soap Films in Solving Torsion Problems: A. A. Griffith and G. I. Taylor.

CONTENTS.

	PAGE
The Co-ordination of Research	261
The Order of Nature. By J. S. H.	262
Higher Algebra and Dynamics. By G. B. M.	263
Biology of Water Supplies	264
Our Bookshelf	265
Letters to the Editor:—	
Earthquake in Burma.—F. N. Burn	265
The Nitrogen Problem	266
Science and Other Humanistic Studies in Schools	267
Notes	268
Our Astronomical Column:—	
Erratic Changes in Clock Rates	272
The Hector Observatory, New Zealand	272
Orbits of Three Spectroscopic Binaries	273
Palæontological Papers. By G. A. J. C.	273
Indian Irrigation. (<i>Illustrated.</i>) By Dr. Brysson Cunningham	274
Anniversary Meeting of the Royal Society	275
University and Educational Intelligence	277
Societies and Academies	277
Books Received	280
Diary of Societies	280

Editorial and Publishing Offices:

MACMILLAN AND CO., LTD.,
ST. MARTIN'S STREET, LONDON, W.C.2.

Advertisements and business letters to be addressed to the Publishers.

Editorial Communications to the Editor.

Telegraphic Address: PHUSIS, LONDON.

Telephone Number: GERRARD 8830.