

ACADEMIES AND SOCIETIES.

National Academy of Sciences, India:

April 1938.—M. A. H. SIDDIQI: *The Genito-urinary System of the Indian Ground Squirrel (Funambulus palmarum)*.—The gross anatomy of the male genito-urinary system has been described. A microscopic study of the entire lower portion of the system has also been made. J. DAYAL: *On a New Species of the Genus Astiotrema Looss., 1901, from the Intestine of a Fresh-water Fish, Clarias batrachus (from Lucknow)*.—*Astiotrema dassia*, a small trematode, 2.2 mm. long by 0.42 mm. broad is described. A key to the species of the genus is given. M. ABDUSSALAM: *On the Occurrence of Skrjabinema ovis (Skrjabin, 1918) in India*.—*Skrjabinema ovis* has been recorded as occurring in a fat-tailed sheep, born and reared at the Allahabad Grantee Farm, Jahania (Punjab), for the first time in India. U. N. CHATTERJI: *Studies on the Effect of Alcohol on the Respiratory Rate of Leaves*.—The acceleration of respiratory rate produced by alcohol decreases with time.

Indian Academy of Sciences:

August 1938. SECTION A.—B. F. FERREIRA AND T. S. WHEELER: *A Study of the Benzoin Reaction—VI. The Effect of Temperature Variation on the Benzoin Reaction*.—In the absence of solvents and diluents, the homogeneous auto-catalytic reaction remains unaltered between 80° and 110° C. while the slow heterogeneous reaction has its rate approximately doubled for each 10° C. rise in temperature. T. M. K. NEDUNGADI: *Diffraction of X-rays in Organic Glasses*.—Pictures have been taken with glycerine, salol and benzophenone, both in the liquid and the glassy state and compared. BISHAMBHAR DAYAL SAKSENA: *Raman Spectra of Some Organic Bi-cyclic Compounds. Naphthalene, Decaline, Tetralin, Indene, Trans-β-Decaline and Trans-β-Decalol*.—Polarisation measurements have also been made except for trans-β-Decalol, and the characteristics agree with the group theory results. The cis- and trans-lines of decaline have been separated. S. BHAGAVANTAM AND T. VENKATARAYUDU: *The Normal Modes and Frequencies of the Sulphur Molecule*.—These have been worked out on the assumption that the eight atoms in the molecule occupy the corners of a puckered octagon, and the conclusions are in agreement with the observations. Detailed expressions are also derived for the normal frequencies by postulating three types of forces, namely, primary valence, directed valence and repulsive forces. S. BHAGAVANTAM AND T. VENKATARAYUDU: *Raman Spectrum and Specific Heat of Sulphur*.—The specific heat of sulphur is represented as the sum of a Debye function and a number of Einstein functions associated with the various normal frequencies. The calculated values compare favourably with the observations. S. BHAGAVANTAM AND T. VENKATARAYUDU: *The Normal Frequencies of Phosphorus (P₄)*.—By the application of group theoretical methods, the frequencies and specific heat of phosphorus have been calculated and shown to be in agreement with observations. K. NAGA-

BHUSHANA RAO: *Diffraction of Light by Ultrasonic Waves*.—The results of Raman and Nath's general theory are shown to be in complete agreement with Van Cittert's theory. The amplitude function for oblique incidence is developed in *extenso* in a series of Bessel functions. K. S. K. IYENGAR: *On Linear Transformations of Bounded Sequences—III*.

August 1938. SECTION B.—H. CHAUDHURI AND MOHD. UMAR: *Molds of the Punjab—I. The Aspergilli*. H. CHAUDHURI: *Molds of the Punjab—II. The Penicillia*. G. N. RANGASWAMI AYYANGAR AND M. A. SANKARA AYYAR: *Linkage between a Panicle Factor and the Pearly-chalky Mesocarp Factor (Zz) in Sorghum*.—A factor Pa₁ produces loose conical earheads: factor pa₁ results in compact spindle-shaped earheads. These factors Pa₁ pa₁ affecting the panicle shape are closely linked to the factors Zz governing the thickness of mesocarp and the deposit of starch in it, with a cross-over value of 1.07 per cent.

Indian Chemical Society:

May 1938.—B. N. GHOSH AND S. S. DE: *The Effect of Hydrogen-ion Concentration, Electrolytes and of Normal and Immune Sera on the Cathoretic Velocity of Leishmania tropica—Part I*. S. N. RAY: *Effect of Hyperthyroidism on the Metabolism of Vitamin C*. TEJENDRA NATH GHOSH: *Quinoline Derivatives—Part V*. S. C. GANGULI AND DAS-GUPTA: *Studies in Indian Bauxite—Part I. Chromium and Vanadium*. K. M. CHAKRAVARTY: *Catalytic Formation of Methane from Monoxide and Hydrogen—Part V. A Study of the Promoter Effect upon Nickel Catalyst*. K. V. GIRI: *Further Studies on the Hydrolysis of Starch by Sweet Potato Amylase*. SUNIL BIHARI SEN-GUPTA: *Studies in the Fluorescence of Dye-stuffs*.

June 1938.—SHIVANANDAN PRASAD, AMRITANSU SEKHAR CHAKRAVARTY AND BALBHADRA PRASAD: *Viscosity and Density of Aqueous Solutions of Mercuric Chloride at 35°*. BASANTA KUMAR GHOSH: *Compounds of Hexamethylenetetramine with Simple and Double Salts of Cobalticyanic Acid and the Nature of Residual Affinity*. PRAFULLA KUMAR BOSE AND SACHINDRA NATH BHATTACHARYA: *Natural Flavones—Part II. On the Colouring Matters of the Bark of Oroxyllum indicum, Vent.* PRODOSHCHANDRA RAYCHAUDHURY: *Estimation of Chromium by Alkaline Mercuric Oxide*. ATMA RAM AND N. R. DHAR: *Formaldehyde Formation in the Photo-oxidation of Organic Substances and the Formaldehyde Theory of Carbon Assimilation*.

The Dacca Botanical Society:

August 1, 1938.—N. K. CHATTERJI: *Some Aspects of Respiration and Respiratory Quotient of Plants*. S. HEDAYETULLAH AND S. P. RAY CHAUDHURY: *A Note on the Study of Sclerotium oryzae*. P. N. MAZUMDAR: *Utility of a Planned Garden attached to Schools in Bengal*.