ACADEMIES AND SOCIETIES

Indian Academy of Sciences: *(Proceedings)*

April 1942. SECTION A.—K. S. K. IYENGAR: ***Exact solution of the equations of the general cascade theory with collision loss.*** G. V. L. N. MURTY AND T. R. SESHADRI: *Raman effect and hydrogen bonds, Part III. Acetic acid and its mixtures with water and phenol.* G. V. L. N. MURTY AND T. R. SESHADRI: *Raman effect and hydrogen bonds, Part IV. Mixtures of acetic acid with donor substances.* T. S. SUBBARAYA, SYED YUSUFF AND S. SRINIVASA MURTHY: *Interaction of atomic energy levels—V.* T. S. SUBBARAYA, K. SESHADRI AND N. A. NARAYANA RAO: *Interaction of atomic energy levels—VI.* P. I. ITTYERAH AND KANTILAL C. PANDYA: *The condensation of aldehydes with amides. Part X. The condensation of* m- *and* p-*nitrobenzaldehydes and* 2 : 4-*dinitrobenzaldehyde.* V. I. VAIDHIANATHAN AND CHANAN SINGH: *A new phenomenon in the movement of the free water-level in a soil and its bearing on the measurement of water-table.* When there is stratification the top layer of the soil being finer than the bottom one, a falling water-level as observed in a pipe, will begin to rise, without the addition of any water, the top of the soil being exposed to the atmosphere. This phenomenon is caused by a decrease in the pressure deficiency brought about by a flattening of the water menisci at the surface of contact of the two layers of soil. BAWA KARTAR SINGH AND BHUTNATH BHADURI: *Studies on the dependence of optical rotatory power on chemical constitution. Part XIX. Stereoisomeric aminoanilino-, and dimethylaminoanilino-, methylenecamphors, and their derivatives.*

SECTION B.—T. S. RAMAKRISHNAN: *A leaf spot disease of* Zingiber officinale *caused by* Phyllosticta zingiberi *n.sp.* GIRIJA P. MAJUMDAR: *The origin of siphonostele in three species of* Selaginella *spr.* G. D. BHALERAO: *The genus* Cephalogonimus *in India and Burma.* KHAN A. RAHMAN AND ABDUL WAHID KHAN: *Bionomics and control of* Aeolesthes holosericea *F.* (*Cerambycidæ*: *Coleoptera*). M. J. THIRUMALACHAR: Phragmotelium mysorensis, *a new rust on Indian raspberry.* B. G. L. SWAMY: *Female gametophyte and embryogeny in* Cymbidium bicolor *Lindl.* KHAN A. RAHMAN AND ABDUL WAHID KHAN: *A study of the life-history and control of* Batocera horsfieldi *Hope* (*Lamiidæ*: *Coleoptera*)—*A borer pest of walnut tree in the Punjab.* ABDUL HAMID: *Indian water moulds—III.* H. CHAUDHURI AND M. L. BANERJEE: *Indian water moulds—IV.* H. CHAUDHURI: *Indian water moulds—V. A new genus of the* Saprolegniaceae: Hamidia *Gen. nov.*

Mining, Geological and Metallurgical Institute of India

A recent number of the *Transactions* of the Institute (Vol. 37, Pt. 1) contains the Presidential Address delivered by Mr. W. Kirby on the occasion of the Thirty-fifth Annual Meeting of the Institute held at Calcutta sometime back. In the course of his address, Mr. Kirby has dealt with some of the major mining problems being encountered by mining men in the two major coalfields—Jharia and Raniganj—and the steps taken to mitigate the difficulties and dangers arising therefrom. The most important of these problems is that connected with spontaneous fires in these mines caused in a variety of ways and it is necessary to adopt suitable measures immediately for the prevention of these, such as are embodied in the Coal Mines Safety (Stowing) Act of 1939. There are also quite a number of other problems confronting mining men in these areas, especially as workings become deeper and more extensive, such as, ventilation in extensive gassy mines, protection of dwellings and other surface property during pillar extraction, etc. Mr. Kirby concludes: "Success in the future development of mines depends on whether or not we have made the best use of our past experience. Safe and systematic working of mines will in the end prove to be the most economical, and furthermore, our coal resources will be conserved."

The Journal also contains a paper on "An investigation into the wet concentration of the vanadium occurring in the iron ores of Mayurbhanj," which is of special interest in view of the growing importance of vanadium in the iron and steel industry. The occurrence of vanadium-bearing titaniferous iron ores in this area was recently noted by Drs. J. A. Dunn and A. K. Dey of the Geological Survey of India; and Dr. D. Swarup and V. Gopalam Iyer have now investigated the possibility of concentrating the vandium from these ores as iron vanadate, with the ultimate object of working it up as ferro-vanadium. Details of the procedure adopted have been given in the paper. The authors propose to publish in the near future the results of further experimental work which is being carried out on the manufacture of ferro-vanadium from the iron vanadate concentrate, together with a note on the direct smelting of titaniferous iron ore in the iron blast furnace.

Allahabad University—Science Colloquium, 1941-42:

The following subjects were discussed during the year. The names of those who initiated the discussion are also mentioned.

(1) Viscosity of Colloids—Dr. S. Ghosh. (2) Thermal Ionisation—Dr. B. N. Srivastava. (3) Polytropic gas spheres—Mr. H. K. Sen. (4) Magnetic Properties of Hydrated Substances—Dr. Satya Prakash. (5) Surface Waves of Earthquakes—Dr. I. D. Seth. (6) Anti-resonance in Acoustics—(Miss) Chandrakanta. (7) Variable Stars and Banerji's Cepheid Theory of the Planetary System—Mr. H. K. Sen. (8) Brillouin Zone in Crystals—Prof. K. S. Krishnan.

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