Kathiawar cottons and the extension of several old schemes.

The Committee also considered a very interesting report on the work done by their Physiologist at Lyallpur on the causes of partial failures of the Punjab cotton crop and bad boll-opening. There are indications that the cause has been found and the Committee approved an additional grant for 1936–37 to enable this interesting discovery to be pursued and the causal or non-causal nature of certain organisms which are associated with this "disease" to be studied.

The Report of the Cotton Forecast Improvement Sub-Committee was approved. Very considerable progress has been made in tracing and eliminating source of error in the major cotton forecasts. A Cotton Crop Forecast Improvement Scheme for the Bombay Presidency was sanctioned in 1934 with the object of improving the accuracy of cotton crop forecast estimates for the Bombay Presidency and Sind. The Committee sanctioned the extension of the Scheme for undertaking full programme of work for a further period of 3 years, after which it is hoped that the respective Governments will continue the work at their own expense.

The Progress Reports of the Director of Technological Laboratory, Matunga, and the Publicity and Propaganda Officer were approved by the Committee, who recorded their appreciation of the work of these officers in their respective spheres.

Science Notes.

Fossil Finds in the Wardha District.—Recently the Nagpur Museum received a quantity of fossil wood and other rocks collected on the Arvi Range of the Wardha district by the Assistant Sylviculturist of the Forest Department. Amongst them are the basal portions of two palm trunks which are of interest as they come from a new locality.

They are of Intertrappean age and Mr. V. B. Shukla, Professor of Botany, Science College, Nagpur, has undertaken the study of them in conjunction with Professor B. Sahni of Lucknow and sections are being prepared. So far they appear to belong to the genus Palmoxylon and one of them appears to be an aquatic form.

The same locality has also produced the fossil *Bulimus prinsepii*, zeolistic amygdules resembling nutmegs, tourmaline, quartz, magnetite quartz rock, ferruginous gneiss and sandstone, serpentine, epidote conglomerates, mica schist, granite, ochres, travertine, etc.

* * *

Neanderthalers lived in Italy as well as elsewhere in Europe during the early days of the old Stone Age. This is confirmed according to a report in *Science* (Dec. 20, 1935, Suppl. 7) by the discovery of a second Neanderthaler skull at Saccopastore in the Tiber valley. A Neander skull was found in Italy several years ago, but since it was the only one known, it might have been a "Stray". The discovery of this second skull in the same geological formation and accompanied by the bones of animals used for food, is regarded as strong evidence that Italy once had its population of Neanderthalers. Dr. Blanc of the Geological Institute of Pisa and the Abbe Henri Breuil of the Palæontological Institute of Paris reported the find.

* * *

It is announced that Dr. Lothar F. Zotz, Curator of Pre-History of Breslau, has discovered in Schleswig, a cave where Ice Age cave bears lived and where Ice Age cave men lived after killing the bears. Many implements and utensils made of the bones and teeth of the monstrous bears have been discovered and there are abundant charcoal remains of the old hunters' fires.

* * *

The Flora of Gujerat including Cutch and Kathiwar.—We have recently received a book on the Flora of Gujerat in Gujerati. This is the first of its kind in any vernacular of India, so far published. The book is particularly welcome as an attempt is made for the first time to carry the results of scientific researches to the non-English knowing public and we hope to see this example set by Prof. S. C. Dixit, the author of the book (Prof. S. C. Dixit, Wilson College, Bombay 7) to be followed by others. No emphasis need be laid on the need for books on scientific subjects in various vernaculars. We congratulate Prof. Dixit on his pioneering work.

* * *

The Influence of Method of Picking on the Quality of Cambodia Cotton.—Frequent complaints made by consumers of Indian cottons both in India and abroad as regards the amount of trash present in Indian cottons are mostly due to careless and faulty picking. The method usually employed by the ryots was to let the coolies collect the seed-cotton in gunny bags, who gathered all available bolls indiscriminately, regardless of the fact whether they were fully ripe or green and immature. The kapas were later removed and sold at the nearest shandy without being dried, and the lint obtained from it was generally moist, weak and the seed was found to be green and not fully ripe.

The Madras Agricultural Department recommended an improved method according to which, the kapas were picked only from the fully opened and mature bolls leaving the locules in the plant itself. This not only gave mature lint and ripe seed, but also the seed-cotton contained fewer leaf bits and was generally cleaner than that obtained according to the cultivator's method. Two samples picked according to these two methods were tested at the Technological Laboratory, Matunga. The results showed that cotton picked according to the improved method was superior in all respects. (Indian Central Cotton Committee Technological Laboratory, November 1935, *Leaflet* 5.) It contained a higher percentage of mature fibres, gave 3 per cent. less total loss in the opening and cleaning processes, registered fewer breakages in the ring frame and the yarns spun from it were definitely stronger and less neppy than those given by the sample picked according to the cultivator's method.

* * *

Electrical "Eye".—An electron tube device, sensitive to both visible and invisible light was

demonstrated by Drs. Zvorykim and Morton before the American Association for the Advancement of Science. The Device comprises of an electron image tube of high overall magnification fitted with a fluorescent screen which acts as an artificial retina The incident light (whether in visible or invisible range) operates directly the cathode emitter of this tube, as it is sensitive to radiations over the whole spectrum from 1,800 Å to 13,000 Å. Thus an incident radiation (either in ultra-violet or infra-red portion of spectrum) will cause a visible image to be formed on the fluorescent screen. It is quite possible that this 'Electrical Eye' if developed further, will be of the greatest assistance in solving problems of navigation in fog in water or air, and in astronomical and biological work.

* * *

Disintegration of Atoms.—An electro-magnet weighing 58 tons formerly in use at the Annapolis, U. S. naval wireless station, has been transferred to the physics laboratories at Columbia University in connection with a fresh attack that is to be delivered on the atom. (*Electrician*, Jan. 3, 1936, **2**.) The field of 14,000 to 15,000 gauss that can be created by this magnet is 75,000 times greater than that of the earth. Protons and deuterons are to be introduced into this magnetic field and directed under the accelerating chamber devised by Prof. Lawrence of California University. Atomic projectiles with an energy of 15,000,000 V. will be emitted and the maximum energy that the equipment will produce is 20,000,000 V. It is hoped that this will enable the atoms of heavy elements such as gold, silver and lead to be disintegrated and that the creation of radioactive elements more powerful and much less costly than radium will be possible.

* * *

Tobacco plants as tall as trees are among the strange vegetation of the lower Andean country now being investigated by an expedition from the University of California under Prof. T. H. Goodspeed. (*Science*, Dec. 20, 1935, Suppl. 7.) One of the biggest tobacco growths measured by Prof. Goodspeed was sixty feet high. The expedition is engaged primarily in a search for wild relatives of the common cultivated tobaccos, to be used in hybridisation experiments. Seeds of many other kinds of plants, however, are being collected.

* * *

Fire Walking.—The University of London Council for Psychical Research has issued a special report on the recent performances before scientific witnesses of Kuda Bux, the Kashmiri Fire-Walker, who walked bare-foot on charcoal trench fire without apparent injury. According to a *Reuter* message recently appearing in the *Hindu*, the conclusion has been reached that it is possible for a slightly built man with chemically unprepared feet to take four rapid steps on charcoal at 430° without injury to his feet, the average time of contact for each step being approximately half a second. The reasons for the failure of two attempts imitative of Kuda Bux's performance are not clear from these experiments. Sir Leonard Hill suggested that increased immunity from burning was due to the power of the controlling activity of the sweat glands of feet and so they were absolutely dry. It is clear that further experimental research is necessary before the *modus operandi* of fire-walking can be considered to be fully understood.

* * *

Health Conference in Singapore.—The Ninth Session of the Advisory Council of the League of Nations Bureau was held at Singapore on the 15th January. Several representatives of Health departments from all parts of the East attended the Conference which was opened by H. E. the Governor, Sir Shenton Thomas. Lieut.-Col. G. G. Jolly, C.I.E., I.M.S., Public Health Commissioner, Government of India, represented India at the Conference. In the course of his opening remarks, H. E. Sir Shenton Thomas directed attention to the possibility of transmission of disease through the medium of air routes. The delegates discussed the question of the risk to Eastern countries caused by the development of air routes and were particularly concerned with regard to the yellow fever which has so far not extended to Asia. The disease at present was found only in Africa and South America and the first line of defence will be India. The importance of determining by the latest methods, the prevalence or otherwise of yellow fever in countries along the air routes was also stressed.

* * *

Development of Coastal Fishing in Bombay.—Remarkable progress has been made by the Fisheries Department of the Government of Bombay under the direction of Dr. S. B. Sethna. The annual report for the year 1934–35 of the Department of Industries, contains an account of the efforts made by the Department to develop Coastal Fishing in the Presidency. Two motor launches were purchased by the Department and sold to Fishermen on the hire purchase system. These boats were being operated at Jaigad and Ratnagiri and fishermen from neighbouring sites flock to sell their catch to the launches. The fish are rapidly transported to Bombay and arrive from 6 to 8 hours earlier than the catches brought by the ordinary sailing vessels and fetch anything from 60–100 per cent. more price. One more fishing vessel was recently purchased and put into service.

While devoting attention to the development of coastal fishing, the Department has not lost sight of the difficulties experienced in transporting fresh fish to mofussils. It is considered more profitable to increase the fresh fish yield in tanks and wells in up-country areas. As an experimental measure a large tank in the Bandra municipal area has been cleaned out and will be stocked with *Gourami* fish when it gets filled up by monsoon rains. It is also proposed to try experiments with *Catla*.

* * *

Soya bean vs. *groundnut cake.*—So much is being said and written about soya bean or 'wonder bean' as it is often called, that it is worthwhile examining the merits of this bean in relation to other materials abundantly available in India. In an extensive article appearing in *Hindu* (Jan. 22, 1936) Mr. N. has examined the merits of the question and incidentally refers to the work of Dr. McKenzie Wallis who in 1917 and later, investigated the nutritional value of pressed groundnut cake. The results of his work are reported in Vols. 4 and 6 of the *Indian Journal of Medical Research*. The pressed cake contains 9–10 per cent. oil, 44–47 per cent. protein and 24 per cent. carbohydrates. The corresponding

figures for soya bean are 9, 44–45 and 27. In both cases the protein is said to be highly assimilable and both contain similar amounts of phosphoric acid. Dr. Wallis, as a result of his investigations, produced a product called 'Nutramin' containing 84 per cent. groundnut meal, 14 dried milk and 2 sodium bicarbonate which contained abundant protein, sufficient fat and carbohydrate and mineral salts, especially phosphorus and calcium. It possesses good keeping qualities. A case is thus made out for conducting investigations on available food supplies before taking up experiments on soya bean cultivation.

* * *

Grants to Hand-Loom Industry.—The Government of India have published the report on the Tariff Board and Woollen and Textile Industry together with their conclusions thereon. The Board divides the Industry into woollen and worsted industries. While the Government consider that no case for protection has been made out they are impressed with the Board's view as regards assistance to hand-loom and small-scale industry and announce their proposal to grant, for purpose of scientific investigation, 5 lakhs of rupees spread over 5 years to be administered in the same way as is being done for the silk industry.

* * *

In order to stimulate research problems in the field of air hygiene and to gather and disseminate factual information relating thereto, a Foundation called Air Hygiene Foundation of America Inc., has been formed by a large group representing various industries, with headquarters in Pittsburgh, Pa. The Foundation will also co-operate with and assist ocher agencies active in this field. Dr. H. B. Meller has been appointed managing director. Under his leadership, a comprehensive investigation has been begun at Mellon Institute of Industrial Research, in which the hygienic, technologic and economic aspects of air contamination, especially by dust, in the industries, will be studied.

* * *

It is learnt that a Society for the Study of Alchemy and Early Chemistry has been founded in London. Scholars of international reputation are members of the Council. Regular meetings will be held to read and discuss papers, and a Journal incorporating discussions of papers, special articles by members, etc., will be published. Those who wish to become members may communicate with the Hon. Secretary, Society for the study of Alchemy and Early Chemistry, 8, Bream's Buildings, Fetter Lane, London E.C. 4.

* * *

The Annual meeting of the Association of Economic Biologists was held on 25th January, 1936. At the meeting the following office-bearers were elected. Mr. V. Ramanathan, L.Ag., Cotton Specialist—*President*; Mr. K. K. Rao, Assistant Sugarcane Expert and Dr. T. Ekambaram, Professor of Botony, Madras—*Vice-Presidents*; Dr. S. Kasinathan, Biochemist—*Assistant Secretary and Treasurer*. The retiring President, Mr. K. Ramiah, Paddy Specialist, delivered an interesting and illuminating address on "Genetics in Rice"

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At a meeting held on 30th July, the Central College Mathematical Society, Bangalore, passed a condolence resolution about the death of Mr. V. Ramaswamy Aiyar, the Founder of the Indian Mathematical Society.

* * *

University of Calcutta—Commemoration Day.—The Commemoration Day celebration was held on January 30th. In the course of his speech, H. E. the Governor of Bengal referred to the future of the University and said, "It has grown because it has answered a need among the people of the Province. Its very growth called new aspirations, new problems into being. So long as it sets itself to face these problems and calls forth to the solution all that is best in the coming generation it will not age with passing years. Its youth will be renewed from generation to generation and its strength will stand deeply rooted in the hearts and lives of men and women in Bengal."

* * *

The Diamond Jubilee of the Cuttack Ravenshaw College was celebrated in the College premises on January 18. All the old boys of the College were invited and many of them attended the function from different parts of Orissa. An exhibition of Utkal economic products, in addition to a Flower Show, was held in the College Arts Block. After the annual business meeting was over, Sir Courtney Terrell, Chief Justice of the Patna High Court, addressed the assembly. He spoke on the prospects of the new Province of Orissa, the question of a High Court and the probability of the College growing into a University in the near future. Mr. Bathija, Principal, spoke on the subject of unemployment.

* * *

We are happy to felicitate Prof. Bawa Kartar Singh on his appointment as Head of the Department of Chemistry, Science College, Patna. He is also the Chemical Advisor to the Department of Industries, Government of Bihar. Prof. Singh is well known for his researches in the field of optical activity of organic compounds. He was Professor of Chemistry and sometime acting Principal of the Ravenshaw College, Cuttack.

* * *

Imperial Council of Agricultural Research:—The Director of Industrial Intelligence and Research Bureau has been appointed member of the Imperial Council of Agricultural Research. The Central Provinces have nominated Rai Bahadur R. V. Pillai, Officiating Director, Veterinary Services, as representative of the C. P. on the Imperial Council of Agricultural Research in the vacancy caused by the death of Major R. F. Stirling.

* * *

The Paris International Trade Fair (*Foire de Paris*, will be held from May 16 to June 2. The exhibitors at the last Fair numbered well over 8,000 representing 35 different countries. As additional ground has been acquired to supplement the area of the Exhibition Park (400,000 sq. m.) there will be plenty of space for exhibitors.

* * *

The First International Conference on Fever Therapy will be held in New York City, in September 1936. The object of the Conference is to collect and crystallise available data regarding fever induced by physical and other agencies. Therapeutics, physiological and pathological phases of fever will also be subjects for discussion.

The International Union against Tuberculosis will hold its session in Lisbon, Portugal from September 8 to 10, 1936.

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It is announced that the 2nd International Congress on Mental Hygiene will be held in Paris, from July 27 to 31, 1936.

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It is understood that the International Committee of Weights and Measures have resolved, at a recent meeting held in Paris, that with effect from 1st January 1940 the "Absolute" (practical) system of electrical units should be used instead of the "International" system which is now in vogue.

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Science announces that Dr. J. Shoemaker of the Hague has accepted the presidentship of the International Congress of Surgery to be held in December in Cairo, consequent on the resignation of Prof. Von Eiselberg due to his advanced age.

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The Bausch and Lomb Saccharimeters.—A simple saccharimeter of the half-shadow type, of sturdy construction, in which are embodied features of a commercial instrument most essential to accuracy, ease and simplicity in cleaning and convenience in manipulation, has been described in a pamphlet recently issued by Messrs. Bausch and Lomb Optical Co., Rochester, New York (Agents for India :--Messrs. Martin and Harris Ltd., 17, Princep St., Calcutta). The instrument is provided with direct reading international sugar scale. The polarizer is either of the Lippich or of the Tellet type as the purchasers may choose; the illumination is provided by a 100-watt-concentrated filament Mazda lamp and a glass filter which has the same optical properties as a 15 mm. column of 6 per cent. potassium bichromate solution. Details can be obtained on application from the manufacturers or their agents.

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A prize of 250 *guilder* has been offered by the Dutch Association for genetics for the best work on the Inheritance of differences in resistance to disease in man and animals. The work must contain a review of the literature, especially regarding diseases of the blood, personal observations and conclusions. Further information can be had from A. L. Hagedorn, Secretary, the Dutch Association for Genetics, Soesterberg, Holland.

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Announcement:—

The India Institute of the Deutsche Akademie at its meeting on January 10th, 1936, decided to offer 16 scholarships in institutions of higher learning in Germany available for Indian scholars of outstanding ability, for the academic year 1936-1937.

The scholarships are as follows.—Medicine, 2; Mathematics, 1; Indology, 1; Chemistry, 2; Physics, 2; German Language and Literature, 2; Engineering, 2; Archaeology, 1; Veterinary Science, 1; Agriculture, 1; Mining, 1.

All applications should reach India Institute of the Deutsche Akademie before April 1st, 1936. Applications reaching India Institute later than this date will not be considered. The successful candidates will be notified by air-mail in the month of June, 1936, at the latest.

Applications must *directly* be sent to the following address: Dr. Franz Thierfelder, Hon. Secretary, India Institute of the Deutsche Akademie, Maximilianeum, Munchen, 8, Germany.

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We acknowledge with thanks the receipt of the following :—

"The Agricultural Gazette of New South Wales," Vol. XLVII, Pt. I, January 1936 and Index to Vol. XLVI.

"The Journal of Agricultural Research," Vol. 51, No. 5, September 1935.

"Indian Journal of Agricultural Science," Vol. V, Pt. 6, December 1935.

Department of Agriculture, Dominion of Canada :—

Bulletin No. 92. "Studies in Fruit Diseases VIII.—Preventing Peach Canker." (Publication 480).

"The Philippine Agriculturist," Vol. XXIV, No. 8, January 1936.

"The Allahabad Farmer," Vol. X, No. 1, January 1936.

"Journal of the Royal Society of Arts," Vol., LXXXIV, Nos. 4335-4339.

"American Journal of Botany," Vol. 22, No. 10. December 1935.

"Communications from the Boyce Thomson Institute," Vol. I, No. 28.

"Journal of the Institute of Brewing," Vol. XLII (Vol. XXXIII, New series), No. 1, Jan. 1936.

Carnegie Institute of Washington: "News Service Bulletins," Vol. III, Nos. 27-31.

"Chemical Age," Vol. XXXIII, Nos. 860-863; Vol. XXXIV, No. 864.

"Journal of Chemical Physics," Vol. 3, No. 12, December 1935; Vol. 4, No. 1, January 1936.

"Berichte der Deutschen Chemischen Gesellschaft," Vol. 68, No. 13; Vol. 69, No. 1.

"Russian Journal of General Chemistry," Vol. V (LXVII), Nos. 8 and 9.

"Journal de Chemie Physique," Tome 32, No. 10, December 1935.

"Experiment Station Record," Vol. 73, No. 6, December 1935.

"Transactions of the Faraday Society," Vol. XXXII, No. 1, January 1936.

"Indian Forester," Vol. LXII, No. 1, Jan.1936.

"Forschungen und Fortschritte," Vol. 11, Nos. 35 and 36; Vol. 12, Nos. 1-3.

Government of India Publications :—"Monthly Statistics of Production of Certain Selected Industries in India," August-October 1935. (Department of Commercial Intelligence and Statistics).

— Do. —List of Publications on Indian Entomology, 1934 (Mis. Bull. No. 7). (Imperial Council of Agricultural Research).

— Do. —"Indian Trade Journal," Vol. CXX, Nos. 1542-1545.

— Do. —"Forest Research in India," 1934-35, Part I.

Government of India Publications :—Department of Industries and Commerce, Bombay: "Annual Report for 1934-35."

— Do. —Lac Research Institute: "Annual Report for 1934-35."

"Quarterly Bulletin of the Health Organization," League of Nations, Geneva, Vol. IV, No. 4, December 1935.

"Scripta Mathematica," Vol. III, No. 4, October 1935.

"Journal of the Indian Mathematical Society," Vol. I, No. 8.

"Medico-Surgical Suggestions," Vol. 4, Nos. 11 and 12.

"Journal of the Annamalai University," Vol. V, No. 1, November, 1935.

"Mathematics Student," Vol. III, No. 3, September 1935.

"Science Forum," Vol. I, Nos. 4 and 5.

"School of Agriculture Memoirs," (University of Cambridge), No. 7.

"Research and Progress," Vol. II. No. 1. January 1936.

"The Micro," No. 3, January 1936 (Post Office Journal of Ceylon).

"Review of Applied Mycology," Vol. 14, No.12; Vol. 15, No. 1.

"Journal of the American Museum of Natural History," Vol. 36, No. 5, December 1935.

"Nature," Vol. 136, Nos. 3451-3452; Vol. 137, Nos. 3453-3154 and *Index to Vol. 136.*

"Journal of Nutrition," Vol. 10, No. 6.

"Ceylon Journal of Science," Section D, Vol. III, Part 4.

"Science Progress," Vol. 30, No. 119, Jan. 1936.

"Scientific American," Vol. 154, Nos. 1-2.

"Indian Journal of Venereal Diseases," Vol. I, No. 4, December 1935.

"Indian Journal of Veterinary Science and Animal Husbandry," Vol. V, No. 4, Dec. 1935.

Catalogues.

Verlag von Gustav Fischer in Jena: "Mitteilungen uber Neuerscheinungen und Fortsetzungen (1936)," No. 1, January 1936.

Wheldon and Westley Ltd.: "Monthly List of Books," January 1936.

Academies and Societies.

Indian Academy of Sciences.

January 1936. SECTION A.—C. V. RAMAN: *First Annual Meeting of the Indian Academy of Sciences.—Presidential Address.* MAX BORN: *Unitary Theory of Field and Matter. I. Classical Treatment. Charged Particle with Magnetic Rest-Moment.* C. S. VENKATESWARAN: *The Raman Spectra of Ortho-Phosphoric Acid and Some Phosphates.*—The step-wise ionisation of H_3PO_4 could be followed from Raman spectra. The structure of PO_4 ion is indicated as tetrahedral. B. SANJIVA RAO AND K. S. SUBRAMANIAM: *The Occurrence of Furan Derivatives in Volatile Oils—III. β-Clausenan and γ-Clausenan.*—γ-clausenan is isomeric with α-clausenan. The methods of isolating the clausenans and their physical properties are described. D. S. NARAYANAMURTHI AND T. R. SESHADRI: *Brucine Sulphate as an Internal Indicator in Titrations with Standard Dichromate Solutions.*—The Brucine sulphate indicator is in certain respects superior to diphenylamine, the colour change from green to bright red being very pronounced. M. RAMANADHAM: *Optic Moments of Organic Molecules in Relation to Crystalline and Magnetic Birefringence.*—The magnetic birefringences have been measured for solutions in carbon tetrachloride of naphthalene, diphenyl and dibenzyl. I. CHOWLA: *Vinogradow's Solution of Waring's Problem* (II). R. ANANTHAKRISHNAN: *The Raman Spectra of Some Organic Liquids under High Dispersion and Resolving Power.*—Benzene, Toluene, Phenol, Chlorobenzene, Pyridine and Cyclohexane have been studied. The structure of the 992 cm^{-1} line of benzene has been discussed in detail. C. V. RAMAN AND N. S. NAGENDRA NATH: *The Diffraction of Light by High Frequency Sound Waves. Part III. Doppler Effect and Coherence Phenomena.*

January 1936. SECTION B.—PRAKASH CHANDRA JOSHI: *Contribution to the Life-History of* Stellaria media *L.*—The megasporogenesis of the plant and the development of the pollen grain have been studied. ALBERTO CARLOS GERMANO DA SILVA CORREIA: *The Mussalmans of Goa.*—The Goanese Mussalmans are a mixed ethnic group, issued of the race crossing between Arabs mostly and the Hindus inhabiting Malabar, Deccan and Konkan. MAKUND BEHARI LAL: *A Review of the Genus* Paramonostomum, *Luhe; with Descriptions of two New Species and Remarks on the Genera of the Sub-Family Notocotylinæ.* C. R. HARIHARA IYER, R. RAJAGOPALAN AND V. SUBRAHMANYAN: *Estimation of Nitrogen by Fumeless Digestion. Part II.—Products of Oxidative Digestion of Organic Nitrogen and the Procedure for their Inclusion in the Estimate of Total Nitrogen.*—The conditions relating to oxidative digestion have been standardised and successfully applied to the estimation of total nitrogen in soils. A. C. JOSHI AND V. RAMA RAO: *The Embryology of* Gisekia Pharnaceoides *Linn.*—A comparison of the embryological features of Phytolaccaceæ, Aizoaceæ and *Gisekia* reveals that the genus *Gisekia* should be placed in Molluginaceæ, a sub-family of Aizoaceæ. S. C. DIXIT: *The Myxophyceæ of the Bombay Presidency, India.—I.*

The National Academy of Sciences:

January 10, 1936. N. K. SAHA: *On the Reconstruction of the Mass-Defect Curve and the Stability of the Beryllium Isotope* Be^8_4. G. R. TOSHNIWAL, B. D. PANT, R. R. BAJPAI AND B. K. VERMA: *Study of Ionosphere at Allahabad.* N. K. CHATTERJEE: *Studies in the Respiration of Mango Leaves.* SHRI RANJAN: *Studies in the Photochemical Action in Plant Respiration.* N. R. DHAR AND E. V. SESHACHARYULU: *Nitrogen Fixation and Azotobacter Count on the Application of Molasses to the Soil in the Field.*—Quantitative experiments show that there is no correlation between the bacterial numbers and nitrogen added thus indicating that agencies other than