

lent cultivators' method when tested on their own fields over a period of seven years.

As the book is essentially a record of the research work carried out at the five experimental stations, it may be contended that it is not a monograph in the strict sense of the word. Doubtless, there are scientific aspects

of dry farming which require further study although at present the greater need would appear to be for the widespread adoption, with such local modifications as may be necessary, of the principles and techniques now revealed.

A. SREENIVASAN.

## SCIENCE NOTES AND NEWS

### POST-WAR RECONSTRUCTION PROGRAMME FOR TRAVANCORE

Travancore has made a praiseworthy start indeed with a succinctly laid out programme outlined in the address by the Dewan Sachivothama Sir C. P. Ramaswamy Iyer to the first meeting of the Post-War Reconstruction Committee. Announcing that Rs. 7 crores will be made available over a period of three years, the Dewan said, "Transport, Canal Traffic, Coastal Shipping, Production of Power, Fertilisers and Cottage Industries—you must embark upon these, whether there is gain or not, but the other industries such as ceramics and rayon, or what may be called semi-luxury industries, on which there will be tremendous competition, will take a secondary place only". Stressing upon the fact that efficient transport is the first desideratum for post-war development, the Dewan has proposed schemes for a large outlay on Roads, including cement concreting them, the opening of a cement factory with the co-operation of the powerful Associated Cement Company, manufacture of types in the Rubber Factory in co-operation with Messrs. The Dunlop and Company, improvements of the extensive canal routes by deepening them and strengthening the banks, and for a State-controlled coastal shipping service in agreement with the Scindia Steam Navigation Company. Rs. 16 lakhs have already been allotted for the restoration of the A.V.M. and other canals between Alleppey and Trivandrum. Additional developments of the Hydroelectric power resources in the Pallivasal and Periyar areas are also necessary.

"The manufacture of fertilisers is another industry that cannot wait." The Travancore Chemicals and Fertilisers, with a capital of Rs. 5 crores, has already drawn up agreements with the Government of Madras, the Government of India and with the suppliers of machinery so that the Factory can begin work in the very near future.

One of the biggest post-war schemes should tackle the very important question of cottage industries, in order to improve the condition of the peasants. There should be a survey of the possible cottage industries, and a concentration on those which can be taken up immediately on a co-operative basis or otherwise, and with gain, under the conditions prevailing in Travancore. The Government will be prepared to subsidise and give advances in the early stages.

Programmes for forest conservation, and for efficient utilisation of timber and soft-wood for the plywood industry, and a protected plastics industry are also required. Great pro-

gress has already been made with the Aluminium Industry, the Glass Works, and the Ceramic Factory, but further developments for their continued and successful working in a keenly competitive post-war world, must be formulated. Fisheries are another great asset to Travancore, and a flourishing research backed by Fisheries Department is a great necessity.

The address is replete with concrete and practical suggestions for programming, and we wish Travancore God-speed in all these schemes, which are after all but modest and none too ambitious, and should, therefore, be realisable according to expectations. M. A. G. RAU.

The Maharaja of Travancore Lord Curzon Prize of the University of Madras, "for the most meritorious original investigations in the physical sciences (Chemistry)" has been awarded this year to Mr. S. Rajagopalan, M.Sc. (of the Indian Institute of Science), for his thesis on "Essays in Chemotherapeutical Synthesis".

The Joint Annual Meeting of the Indian Academy of Sciences and of the National Academy of Sciences will be held at Poona from Wednesday, the 27th December 1944, to Saturday, December 30th, 1944, at the Ferguson College. The session will be inaugurated by the Rt.-Hon. Dr. M. R. Jayakar. Sir C. V. Raman will deliver the presidential address to the Indian Academy of Sciences, which will be followed by a symposium on "The physics of the upper air" to be opened by Dr. K. R. Ramanathan. In the afternoon a symposium on "The Chemistry, Pharmacology and Therapeutics of Sulphonamides" will be led by Lt.-Col. S. S. Sokhey. The second day's proceedings include a discussion in Magnesium in Relation to Structure led by Prof. Krishnan and the presidential address to the National Academy of Sciences which will be delivered by Prof. Birbal Sahni. A symposium on "The age of the saline series of the salt range of the Punjab" will be held on the third day under the chairmanship of Prof. Sahni. The rest of the programme includes the reading of original papers, public lectures and excursions.

Dr. C. N. Acharya has received the D.Sc. of the London University for his work on the preparation of composts.

### JUBILEE CONVOCATION OF THE PATNA UNIVERSITY AWARD OF HONORARY DEGREES

On the occasion of the Jubilee Celebrations, honorary Doctorates were conferred on seven-

teen eminent scholars of the country, distinguished for their contributions to the various branches of human knowledge. In the course of presenting these learned personages to the Chancellor, Sachchidananda Sinha, the Vice-Chancellor of the University, referred to the recipients as follows:—

SIR TEJ BAHADUR SAPRU.—“One of the most distinguished of our elder statesmen and one of the most eminent publicists; also a lawyer and jurist of great reputation, honoured wherever learning and character are honoured.” (LL.D.)

SIR MAURICE GWYER.—The first Chief Justice of India, “who in that capacity established a great tradition of scholarship and fairmindedness and whose remarkable gifts of organisation, tact and learning are now devoted to the cause of education as the Academic Head of the Delhi University.” (LL.D.)

KHWAJA SIR MOHAMMAD NOOR.—“For long a leading figure in Bihar’s public life, as a firm and tactful President of the Legislature, an able, independent and upright Judge, and a successful Vice-Chancellor of the Patna University.” (LL.D.)

SIR SARVAPALLI RADHAKRISHNAN, Professor at Calcutta and Oxford.—“The most brilliant exponent of Indian Philosophy, and an original thinker, who has been the academic head of the Andhra University, and is now Vice-Chancellor of the Benares Hindu University, whose reputation as a scholar and thinker, is international.” (D.LITT.)

SIR JADUNATH SARKAR “who was for many years professor at Patna, one of the most eminent of India’s historians and unquestioned authority on the Indo-Mughal period”. (D.LITT.)

DR. AMARNATH JHA, Vice-Chancellor of the Allahabad University.—“A most distinguished scholar of English language and a well-known authority on the development of English literature, who has now been for over fifteen years the Head of the English Department of the Allahabad University, and who, though a son of Bihar, has done his work so far in the United Provinces.” (D.LITT.)

SIR JOHN SARGENT, Educational Advisor to the Government of India, who is responsible for the monumental scheme for educational reconstruction, which reveals his liberal and sympathetic outlook, and his firm faith in the educational future of the country. (D.LITT.)

DR. JOHN MATTHAI, one of the foremost Economists, who is now head of the great firm of The Tatas, and is as such closely associated with plans for the economic industrial development of the country. (D.LITT.)

MR. DEBENDRANATH SEN, “a veteran educationist, who for many years was head of one of the leading Colleges of Patna, and who is held in high regard by his colleagues and by several generations of students”. (D.LITT.)

SIR VENKATA RAMAN, who is an international figure in Physics, being one of the outstanding authorities on Optics. He gave up a promising career in Government Service, and has dedicated himself since with enthusiasm and singleminded devotion to the cause of scientific research. He has built up a remarkable

school of Physical investigators, who have distinguished themselves far and wide, and to discovery of the rays known after his name has been of incalculable value. Since the death of Rabindranath Tagore he is the only Indian Nobel Laureate. (D.Sc.)

SIR MOKSHAGUNDAM VISVESVARAYA.—“A great and distinguished Engineer, and an eminent administrator, old in years but young in spirits. He is a unique figure in our public life, who is held in universal esteem for his high character and his constructive genius. He is an ex-Dewan of Mysore, which owes much of its prosperity to his administrative ability and engineering skill.” (D.Sc.)

DR. SIR ZIAUDDIN AHMAD, who has long been an outstanding educationist, a Member of the Calcutta University Commission, a distinguished mathematician, the academic head of the Aligarh Muslim University, and a prominent figure in the Central Assembly, where he is regarded as an expert on railway questions and affairs. He is an authority on systems of examination in various countries. (D.Sc.)

DR. LAKSHMANASWAMI MUDALIAR, “who has a recognised position among the leading physicians of the country. His great abilities are now devoted to the Madras University, of which he is the academic head, but he had also made great and valuable contributions to various branches of medical science”. (D.Sc.)

DR. PROF. BIRBAL SAHNI, “who has been a Professor of Botany at Benares, Lahore and Lucknow. Himself an eminent botanist and geologist, he is also the founder of a school of research. His work in Fossil Botany has been of very great importance and the results of his researches have been widely appreciated.” (D.Sc.)

DR. HOMI BHABHA, “who though young in years, has already attained a position of eminence by his brilliant researches on the cosmic rays. He is not only a scientist of distinction, but is a person of versatile gifts and rare powers of exposition. Of the living Indian scientists he obtained the much-coveted distinction of F.R.S. at the early age of thirty-two”. (D.Sc.)

PROF. PRAN KRISHNA PARLJA, a well-known botanist, who has for several years been connected with this University, and is now the academic head of the Utkal University. He occupies a prominent position among botanists in this country. (D.Sc.)

DR. SIR SHANTISWARUP BHATNAGAR, “on whom the degree of DOCTOR OF SCIENCE was conferred *in absentia*”.

#### MAGNETIC NOTES

Magnetic conditions during November 1944 were slightly less disturbed than in the previous month. There were 19 quiet days and 11 days of slight disturbance, as against 10 quiet days, 18 days of slight disturbance and 2 days of moderate disturbance during the same month last year.

The quietest day during the month was the 13th and the day of the largest disturbance the 10th.

The individual days during the month were classified as shown below;—

Quiet days	Disturbed days
	Slight
1, 2, 7, 8, 11-17, 19, 21-25, 29, 30.	3-6, 9, 10, 18, 20, 26-28.

No magnetic storms occurred during the months of November in the years 1943 and 1944.

The mean character figure for the month of November 1944 was 0.37 as against 0.73 for November last year. M. PANDURANGA RAO.

### SEISMOLOGICAL NOTES

Among the earthquake shocks recorded by the seismographs in the Colaba Observatory during the month of November 1944, there were five of slight and three of moderate intensities. The details for those shocks are given in the following table:—

Date	Intensity of shock	Time of origin I.S.T.	Epicentral distance from Bombay	Co-ordinates of epicentre	Depth of focus	Remarks
6	Slight	H. M. 02 . 26	(Miles) 90		(Miles)	
6	Moderate	12 19	1005			
11	Slight	09 51	1005			
15	Slight	05 48	1270		140	
16	Moderate	03 17	3760			Epc.: Near Philippine Islands.
16	Moderate	18 42	5765			
23	Slight	17 33	1035			
24	Slight	11 22	5505		125	Epc.: Probably near New Britain.

We acknowledge with thanks receipt of the following:—

- "Journal of the Royal Society of Arts," Vol. 92, Nos. 4675 and 4677.
- "Journal of Agricultural Research," Vol. 68, No. 11; Vol. 69, Nos. 2-3.
- "Agricultural Gazette of New South Wales," Vol. 55, Pts: 8-10.
- "Indian Journal of Agricultural Science," Vol. 13, Pt. 3; Vol. 14, Pt. 1.
- "Biological Reviews," Vol. 19, No. 3.
- "Biochemical Journal," Vol. 38, No. 3.
- "Calcutta Review," Vol. 99, Nos. 2 and 3.
- "Journal of the Indian Chemical Society," Vol. 21, No. 7.
- "Journal of Chemical Physics," Vol. 12, Nos. 7 and 9.
- "Discovery," Vol. 5, Nos. 9-10.
- "Indian Farming," Vol. 5, No. 5.
- "Transactions of the Faraday Society," Vol. 15, Nos. 9-10.
- "Indian Forester," Vol. 70, Nos. 9-11.
- "Genetics," Vol. 29, No. 5.
- "The Quarterly Journal of the Geological, Mining and Metallurgical Society of India," Vol. 16, No. 2.
- "Horticultural Abstracts," Vol. 14, No. 3.
- "Central Board of Irrigation Bulletin," Vol. 1, No. 5.

"Bulletin of the Indian Central Jute Committee," Vol. 7, Nos. 7-8.

"Mathematics Student," Vol. 12, Nos. 1-2.

"Indian Medical Gazette," Vol. 79, No. 10.

"The Review of Applied Mycology," Vol. 23, Nos. 8-9.

"Bulletin of the American Meteorological Society," Vol. 25, No. 6.

"Journal of Nutrition," Vol. 28, No. 1.

"Nature," Vol. 154, Nos. 3909-3913.

"Indian Journal of Physics," Vol. 18, No. 2.

"Journal of Research of the National Bureau of Standards," Vol. 32, No. 5; Vol. 33, No. 1.

"Science," Vol. 100, Nos. 2584, 2590, 2591-96.

"Scripta Mathematica," Vol. 9, No. 4.

"Science and Culture," Vol. 10, Nos. 5-6.

"Journal of Scientific and Industrial Research," Vol. 3, Nos. 4-5.

"Monthly Science News," Nos. 37-39.

"Sky," Vol. 3, No. 11.

"Indian Trade Journal," Vol. 155, Nos. 2002 to 2008.

### BOOKS

*Principles of Physical Geology.* By Arthur Holmes. (Thomas Nelson & Sons Ltd., Parkside Works, Edinburgh 9), 1944. Pp. 532. Price 30/-.

*Sex Education—A guide for parents, teachers and youth leaders.* (Messrs. Macmillan & Co., Ltd., London, W.C. 2), 1944. Pp. 290. Price 7/6.

*Radio Receivers and Transmitters.* By S. W. Amos and F. W. Kellaway. (Chapman & Hall Ltd.), 1944. Pp. 281. Price 21/-.

### CORRECTIONS

Vol. 13, No. 11 (November 1944)  
Article entitled "Role of Domestic Animals in the Spread of Helminthic Infections in Man"—

Page 274, column 2, line 40: read *Diphyllobothrium* for *diphyllobothrium*; line 49: read *Diphylidium* for *Diphylidium*.

Page 275, column 2, line 16: read recorded for recorded.

Page 276, column 1, line 25: read sources of infection for source of infections.

Article entitled "Production of Light-Effect Under X-Rays"—

Page 278, Heading of the note: read Light-Effect for Eigat-Effect.