

SCIENCE NOTES AND NEWS

ATOMIC ENERGY RESEARCH

Mr. C. Rajagopalachari, Member for Industries and Supplies, Interim Government, recently announced the formation of an Advisory Board for Research in Atomic Energy. He said, "I am glad to announce that a Board of Research in atomic energy has been set up under the auspices of the Council of Scientific and Industrial Research with Professor Bhabha as Chairman. There are large deposits of monazite sand in the Travancore beaches, which is a valuable mineral required for the production of atomic energy. Perhaps the richest thorium ore in the world is to be found in the monazite sands of the Travancore coast. I am glad we have negotiated the agreement by which the mineral conservation policy of the Government of India can be given effect to in this connection.

"We shall have a Joint-Committee consisting of six members of the Board appointed by the Council of Scientific and Industrial Research and three representatives of the Travancore Government. The function of this Joint-Committee will be to advise the two Governments on all matters connected with research and development and the disposal and utilisation of raw material. I am especially glad to be able to announce that this Joint-Committee will be the authoritative advisory body both for the Government of India and for the Government of Travancore, thus bringing this important branch of power research and disposal of raw material into one co-ordinated scheme.

"The Joint-Committee will consist of Prof. H. J. Bhabha (*Chairman*), Prof. Meghnad Saha, Mr. D. N. Wadia, Dr. Nazir Ahmed, Sir K. S. Krishnan, Sir S. S. Bhatnagar, Dr. K. L. Moudgil, Mr. K. P. Menon and Mr. V. Mahadevan.

"I am grateful to Sir C. P. Ramaswami Aiyar, Dewan of Travancore, for the co-operation he has extended in this matter. We had deputed Sir S. S. Bhatnagar and Prof. Bhabha to go to Travancore and discuss matters with him, and the present arrangement is the result of those negotiations. The public may rest assured that the atomic energy resources of India will not be frittered away or go to waste."

MICA RESEARCH

The Travancore Government have entered into an arrangement with the Government of India for the purpose of conjoint research on mineral sands and mica research. They had also entered into certain arrangements with influential British concerns for a joint research and exploitation of the mineral sands of Travancore and production of atomic energy.

MINERAL DEVELOPMENT IN HYDERABAD STATE

Exploratory work to ascertain the occurrence of valuable mineral in different parts of the Nizam's Dominions has commenced under a

scheme sanctioned for the expansion of the Mining and Geological Survey Department.

The occurrence of further deposits of coal is being ascertained near the Singareni collieries and Jangaon, and gold development work at Hutti, Lingsoor Taluk, Raichur District, which had been suspended during the war, has been resumed.

Prospecting operations conducted recently in Asifabad Taluk, Adilabad District, are stated to have shown good deposits of clay suitable for manufacturing porcelain ware.

In Khammam Taluk, Warrangal District, prospecting operations have disclosed workable deposits of mica, and regular mining operations are in progress.

In the eastern parts of Paloncha, Warrangal District, abrasive minerals like garnet, alusite and kyanite have been discovered in appreciable quantities and are being leased out.

Corandum, which is a refractory mineral, is also found in abundance in the eastern parts of Paloncha.

PROTECTION FOR FRUIT INDUSTRY

The Government of India has decided to grant protection to the preserved fruits industry for a period of three years.

The Tariff Board, which considers that the industry has been established and conducted on sound business lines, recommended a protective *ad valorem* duty until 1950 of 60 per cent. on canned and bottled fruits; 40 per cent. on fruit-juices, squashes, cordials and syrups; and 80 per cent. on jams, jellies, marmalades and candied and crystallised fruits.

RADIO SONDE STATION FOR TRAVANCORE

"Radio-Sonde" station has been established at the Trivandrum Observatory by the Indian Meteorological Department and the first flight was conducted on 25th May 1947 in Trivandrum with a network of fourteen other radio-sonde stations distributed all over India.

Radio-sonde is the latest development in meteorological science for the determination of temperature, pressure and humidity of upper atmosphere.

The technique was entirely worked out by the officers of the India Meteorological Department during the last five years, and incorporates many new and ingenious devices, rendering the instrument accurate and reliable and easy of construction, reproduction, installation and operation. The method consists of sending up four-metre wireless transmitters attached to a balloon which sends out regularly signals of pressure, temperature and humidity. These signals are picked up by specially constructed receivers and are recorded on moving paper tape. From these records, the pressure temperature and humidity of air over Trivandrum at various altitudes are calculated.

The data obtained daily are expected to yield

valuable information regarding mechanism of monsoons and, in conjunction with those from fourteen other stations in India, it provides valuable aid to weather prophets at several centres of meteorological offices.

Until recently, before the introduction of radio method, balloons with self-recording instruments were used by the Department for the same purpose.

But, since the success of each flight depends on the chance recovery of the instrument after it falls to the earth, those flights were only of limited use for daily forecasting work. Radio-sonde helps obtain meteorological data at different stations at the same hour, and thus, places the science of weather forecasting on a surer basis. The Indian Meteorological Department itself manufactures every part of these instruments, calibrates them, and arranges to send them to different radio-sonde stations set up and run by them.

SNOW SURVEY IN THE HIMALAYAS

The presence of abundant snow water along the high crests of the Himalayas and even at much lower elevations of about 10,000 ft. above the sea level, had been proved. On May 20, the American expert, Dr. J. E. Church, at the Royal Asiatic Society of Bengal, related his experiences of the four expeditions in Sikkim and Nepal that he has carried out during the present spring. Dr. Church added that below that elevation, rivers depended almost wholly upon rains.

Dr. Church who has been invited by the Government of India to lay out a snow survey system in the Himalayas, is Chairman of the International Commission for Snow Survey, U.S.A. He is well known as the originator of the percentage forecast scheme by which the run-off of streams can be estimated in advance directly from the snow fields at the lower elevations. This helps in making a forecast of the volume of water in the great store of snow on high peaks.

The expeditions of Dr. Church this spring in the Sikkim and Nepal regions were in connection with the proposed Kosi and Teesta Dams.

SOVIET EXPEDITION TO THE ARCTIC

The Soviet Union is reported to be planning to sail the first big passenger and transport ships in Arctic waters.

A large air expedition will leave next month to study ice formation in the area and some 200 staff workers of the Arctic Research Institute will work in the Arctic meteorological stations and supply information about ice conditions to ships sailing along the northern routes.

SOVIET FISHING EXPEDITION

A scientific expedition to conduct research into the fishing resources of the seas of Okhotsk and Japan left Leningrad for Sakhalin and the Kurile Islands.

The expedition has four ships at its disposal and it is intended to send at least fifteen parties to various places in this immense area.

TRAINING OF INDIAN STUDENTS ABROAD —SCOPE IN EUROPEAN UNIVERSITIES

Efforts are being made for the higher training of Indian students all over Europe, and, according to latest information, fresh openings for these students are becoming available in most of the European capitals.

Mr. P. N. Kripal, Education Liaison Officer of the Government of India, who has just returned to London from Switzerland, told the United Press of India to-day that he succeeded in obtaining a large number of places in the Swiss Federal Institute of Technology, the Zurich University, and in the College of Engineering, Lausanne. It is expected that some forty to fifty Indian students will be accommodated in the ensuing year.

Mr. Kripal also had good response to his enquiries from Holland, Belgium, Sweden, Czechoslovakia and France. All these countries are said to be very keen on welcoming students from India. In view of the prevailing difficulties of accommodation in London, Mr. Kripal thinks that Indian students would be well advised to attend the continental colleges and try to acquire a rudimentary knowledge of their languages.

VANASPATHI RESEARCH

Two research schemes on Vanaspathi have been sanctioned by the Central Food Department, one to determine the nutritive value of Vanaspathi, and the other to determine its effect on human beings.

Research on the first will be conducted at the Indian Institute of Science, Bangalore, and the University College of Science at Calcutta, and research on the second will be carried out at Bombay, Delhi and Mysore or Madras.

Another research scheme sanctioned is in connection with a plant for the manufacture of soya bean milk.

LAUNDRY RESEARCH

New researches in laundering are reported to revolutionise the current methods of laundering. It has been found that dirt is often held to a fabric by electrical attraction. The problem in the removal of dirt from fabrics is to break this electrical attraction; this is done at present by the use of detergents—soap and kindred solutions.

The British Launderers' Research Association is now researching on the use of supersonic vibrations to speed up laundry processes. The function of these supersonic vibrations is to shake out the dirt particles, and emulsify them in the cleansing solution. This will prevent the dirt being deposited again on the fabric.

MACHINE DESTROYS WEEVILS BY DIZZINESS

A Sydney flour milling firm has installed a new machine which cleans flour by spinning weevils or any other insects in the flour to death.

The machine, called an "Entoletor", operates on the centrifugal principle. The flour is fed by chutes into a cabinet housing a conical rotor in the centre of two steel discs joined at the outside by metal studs. Directed on to the revolving rotor, the flour is flung against the

outer studs with such force that no insect, weevil, moth, egg or mite, is left alive. The rotor spins at 2,900 revolutions a minute and a $1\frac{1}{2}$ horse-power machine handles 2,000 lbs. of flour an hour. The 3 h.p. model handles 5,000 lbs. of flour; the 5 h.p. 10,000 lbs., and the $7\frac{1}{2}$ h.p. 15,000 lbs. an hour.

When treated in this way the flour remains sterilised indefinitely and tests have shown that the machine improves the flour by giving it greater aerating qualities.

STEPS TO EXPAND DAIRY TRAINING

The Government of India have appointed an *ad hoc* Committee to study the facilities now available for training in dairying in India, and make recommendation for expansion.

The Committee consists of Sir Datar Singh as Chairman, and the following members:—Mr. Zal R. Kothavala, Dairy Development Adviser to the Government of India, Mr. A. K. Yegna Narayan Aiyer, Retired Director of Agriculture in Mysore, and Dr. Sen, Director of Dairy Research, Bangalore.

CENTRAL GOVERNMENT TO START AN AGRICULTURAL COLLEGE

Detailed plans have now been worked out to start a Central College of Agriculture in Delhi during the current year. The aim of the College will be two-fold, to give a systematic course of scientific agriculture to young men, with a view to preparing them for promoting modern agriculture in the countryside on economic lines, and to train students for undertaking research in agricultural problems.

NEW MEDICAL COLLEGE FOR CALCUTTA

Calcutta will soon have an up-to-date medical college devised to train demobilised licentiate I.A.M.C. Officers for the M.B. and B.S. Degree and a hospital with several divisions, each of which will have its own out-patient department, laboratory, dispensary and wards. The Health Department of the Government of India is establishing this Institution on the Dhakuria Lake site in South Calcutta.

The Central Government have already spent Rs. 85 lakhs for acquiring the site and the equipment for the College and Hospital. The annual recurring expenditure on the College will be Rs. 4.8 lakhs and on the Hospital Rs. 22 lakhs, half of which will be borne by the Bengal Government to whom the management of the College and Hospital has been entrusted.

COLLEGE OF INDIAN MEDICINE

The Madras Government has decided to convert the present School of Indian Medicine, Madras, into a College of Indian Medicine with effect from July 1947.

Arrangements would, however, be made by the Government for the continuance of the stu-

dies of those students who are already in the School till their courses are completed.

SOVIET HONOUR FOR SIR C. V. RAMAN

Sir C. V. Raman, President of the Indian Academy of Sciences, has been elected as a corresponding member of the Soviet Academy of Sciences.

NATIONAL INSTITUTE OF SCIENCES

The Academy of Sciences of the U.S.S.R. has presented to the National Institute of Sciences of India 44 books on scientific subjects and 67 copies of journals published by the Academy. The National Institute of Sciences of India has gratefully accepted this welcome gift from a sister scientific body.

LADY TATA MEMORIAL TRUST

(Scholarships and Grants for the year 1947-48)

The International awards of the Trust for research in diseases of the blood with special reference to Leucæmias are made to Doctors Jorgen Bichel (Denmark), Pierre Cazal (France), Pierre Dustin (Belgium), Maurice Guerin (France), Simon Iversen (Denmark), Joseph Japa (Poland), Edith Paterson (Great Britain), Edoardo Storti (Italy), Peter A. Gorer (England), Johannes Clemmesen (Denmark), C. F. M. Plum (Denmark), Tage Kemp (Denmark), and Guido Totterman (Finland).

Indian scholarships of Rs. 250 per month each for one year for scientific investigations having a bearing on the alleviation of human suffering are awarded to Messrs. Suprabhat Mukerjee (Calcutta), Haridas Brahmachari (Nagpur), Kalyanmoy Mukerjee (Calcutta), Naresh Chandra Ghosh (Calcutta), P. R. Gupta (Bangalore) and Yeshwant Balkrishna Rangnekar (Bangalore).

A REQUEST

"Those interested in 'problems of theory of numbers especially Diophantische are requested to send their publications to the following address:—Dr. Alfred Moessner, in 13 a, Gunzenhausen (Germany-Bayern), Altes Schulhaus, Amerikanische Zone."

ERRATA

Note entitled "Vernalisation Response of Cultivated Indian Wheat", Vol. 15, No. 12, p. 352: In the names of authors, read Pal for Paul.

Vol. 16 No. 4, p. 133.—Note on "Proof of the Inverse Square Law and the Measurement of H". Line 8:

for :

$$\tan^2 \theta_A \tan^{3/2} \phi_B = 2,$$

read :

$$\frac{\tan^2 \phi_A}{\tan^{3/2} \phi_B} = 2$$