SCIENCE NOTES AND NEWS

Infra-Red Photography of Forests

The "magic eye" of the infra-red film, peering down from the cameras of the Royal Air Force photographic reconnaissance aircraft, is to probe the secrets of Scotland's forests. Marked "high priority" on the R.A.F. Central Photographic Establishment flying programme for 1949 is the project for infra-red photography of forests in the Strathyre-Loch Ard area.

The Survey is being undertaken for the Forestry Commission and it is expected that the use of infra-red photography from the air will enable the Commission to make a more exact classification of trees. At present it is possible to make a general classification from ordinary photographs sufficient to distinguish trees as either coniferous or deciduous. Infra-red photographs, however, are expected to show the state of growth of trees and to distinguish tree types within the coniferous or deciduous groups.

Some 200 square miles of forest have been selected as a testing ground for this experiment.

Need for Fundamental Research on Insects in India

In his Presidential Address delivered at the 11th Annual Meeting of the Entomological Society of India, held at Allahabad, on 4th January 1949, Dr. Hem Singh Pruthi stated that "On the whole India has not made many conspicuous contributions to the Science of Applied or Economic Entomology" principally because, "very little attention has been paid in India to fundamental work in Entomology, such as Insect ecology, physiology, morphology and taxonomy, on which alone good applied work can be based."

The Universities of India are the most suitable places for basic work, as in all other countries. In the laboratories of the Universities a great deal of work of an essentially basic nature on the problems of insect behaviour, genetics, heredity and evolution can be undertaken, besides morphology, physiology, ecology and taxonomy which will finally lead to proper and adequate application to economic problems in Entomology.

In the Indian Universities at present, the professors of zoology pay very little or no attention to work on insects although in foreign universities teaching and reserch on insects occupy a place equal in importance to all other Seience subjects. One of the reasons for this has obviously been that the heads of zoological departments are essentially zoologists with no special training in entomology and that suitable and competent entomlogists are not recruited on to their staff; furthermore, trained Entomologists in India are extremely few.

The Department of Scientific and Industrial Research of the Government of India should consider seriously the establishment of a National Entomological Laboratory for work on basic aspects of the science of entomology. Such a laboratory with suitable and adequate staff could initiate all fundamental work on insects in close collaboration with the different universities and also train qualified men in entomology to serve as Readers in entomology in the Universities. The Indian Universities Commission should also make provision for teaching and research on insects in their Departments of Zoology.

Quarterly Bulletin of the Indian Standards Instisution

The Indian Standards Institution has issued the first number of its Quarterly Journal, the *ISI Bulletin*. The Bulletin which is devoted to the publication of activities on standardisation in India and abroad caters to the needs of progressive industrialists, technologists, scientists and students in this field. In addition to the current news on Standardisation, the Bulletin publishes articles on technical subjects related to standardisation.

The first issue discusses the Standard Atmosphere for Testing in tropical and subtropical regions as distinct from the Standard Atmosphere in temperate regions. The advantages of adoption of this Standard Atmosphere in India are the simplicity of equipment, ease of operation and the comfort of the workers, which it answers.

A plea for Standardisation of Weights and Measures all over the country is made by Dr. Lal C. Verman, the Director of the ISI. He has also argued for the rationalisation, simplification and decimalisation of the fundamental units of length and mass, and

of the derived units of area, volume, etc., by introducing the decimal system, while retaining, as far as possible, the current terminology of Weights and Measures in India.

The progress of the Quality Control Movement in Industry, recently initiated by the ISI and the Indian Statistical Institute, forms the subject-matter of another article. Indian industry has begun to appreciate the need for adopting statistical methods of Quality Control in the manufacture of commodities. Courses have been established in Bombay for training technical personnel in the application of these methods. The ISI has reprinted the American Standard on "Control Chart Method of Controlling Quality during Production," for the use of manufacturers in India.

Seventh Pacific Science Congress

Some of the world's leaders in many branches of science gathered in New Zealand for the Seventh Pacific Science Congress.

About 120 scientists from over fifteen countries, including Britain, Canada and U.S.A. took part in the Congress which lasted until 23rd February, and which reviewed the whole field of science.

A transportation grant of $ 20,000 was given by Unesco to the Congress, which made it possible for many scientists from countries bordering on the Pacific as well as from Norway, Holland and France to attend the meeting.

The last Pacific Science Congress took place in San Francisco, in 1939. The seventh meeting was originally due to meet in the Philippines in 1941 but was postponed on account of war.

Unesco Book Coupons in U.S.

The American Booksellers Association has been appointed to administer the Unesco Book Coupon programme in the United States, Mr. Milton S. Eisenhower, Chairman of the U.S. National Commission for Unesco, announced. This follows a recommendation by the Commission's Panel on Books.

The Book Panel's recommendation is the result of considerble study in order to integrate the Unesco Book Coupon Scheme into U. S. publishing operations.

The scheme was started by Unesco to overcome currency exchange difficulties and to enable educators, scientists, professional people and others in soft currency areas to purchase books and other publications in hard currency countries. Holders of these coupons pay for their purchases in the money of their own country, and the coupons are redeemable by Unesco in the currency of the publisher's country.

The American Booksellers Association will transmit orders in the United States and arrange for redemption of the Unesco coupons.

CCRU Gives Institut Pasteur $ 15,000

A gift of $15,000 to the Pasteur Institute of France by the Canadian Council for Reconstruction through Unesco has been presented to Dr. Jacques Trefouel, Director of the Institute, by Dr. James A. Gibson, Chairman of the Executive Committee of the CCRU.

The money has been put at the disposal of the Institute to be used for the purchase of the scientific equipment.

In addition, the Institute has been offered for a period of three years, subscriptions to a number of learned and professional periodicals.

At a short ceremony at the Institute on 5th January, Dr. Gibson read a letter from Mr. Mackenzie King, until recently Prime Minister of Canada, saying this gift is designed to help the institution "to continue the scientific and humanitarian services which have earned for it the highest recognition throughout the world".

"The Council," Mr. Mackenzie King adds, 'have requested me to convey to you this intimation of their desire to share in helping to alleviate some of the grievous defficulties arising from six years of war, and to help forward, in some small measure, the life-giving activities of the Pasteur Institute."

The CCRU is a national body which groups some sixty non-governmental organizations dealing with educational and social problems in Canada. It was created at the instigation of the Canadian Government and works closely with Unesco on problems of mutual interest.

Unesco Handbook of Opportunities for Study Abroad

Over 10,500 opportunities for international study in 166 subject fields in 27 countries are reported in a Handbook of Fellowships, Scholarships and Educational Exchange, called "Study Abroad," just issued by the United Nations Educational, Scientific and Cultural Organization.

The largest number of awards is available in the various branches of science, especially, medical sciences and public health, engineering, technology and chemistry. The second

most important subject is education, and the third social sciences.

In addition, the Handbook contains notes on the fellowship programme of the United Nations and the Specialized Agencies as well as summaries on the techniques of fellowship administration for those engaged in planning fellowship programmes. Fifteen per cent. of the reported opportunities are unrestricted both as to the nationality of eligible candidates and the subject field of study.

The aim of the publication is to increase the number and quality of candidates applying for fellowships, to suggest to prospective donors where new programmes may be developed, and to bring into perspective possible overlappings of emphasis and areas of outstanding need.

The reporting countries are Australia, Belgium, Burma, Canada, China, Colombia, Czechoslovakia, Ecuador, Eire, Finland, France, India, Italy, New Zealand, Norway, the Philippines, Portugal, South Africa, the United Kingdom and the United States of America. These have also supplied information on seven other countries.

The Handbook is published in English and French and will be distributed to Ministries of Education, National Commissions of Unesco, International Non-Governmental Organizations, Universities, Educational Periodicals and Libraries throughout the world. It is also on sale for individuals at Unesco House, Paris, and Unesco sales agents throughout the world at the price of $ 1.00, 300 French francs or 5 shillings sterling plus postage.

Unesco Essay Competition

In order to stimulate public interest in its programme of work, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) has decided to conduct an essay and poster competition for young children in schools of member States.

The competition is entitled, "Together we build a New World". The entries should reach the Ministry of Education, Government of India by June 1, 1949, through the Provincial or State Government concerned from whom full particulars about the schene can be obtained.

Sir Ben Lockspeiser

Sir Edward Appleton, K.B.E., K.C.B., will relinquish on the 30th of April, 1949, his appointment as Secretary to the Committee of the Privy Council for Scientific and Industrial Research.

The King has been graciously pleased to approve the appointment of Sir Ben Lockspeiser, M.A, M.I Mech.E., F R.A.S., to succeed Sir Edward Appleton.

Sir Ben Lockspeiser is at present Chief Scientist at the Ministry of Supply and will take up his new appointment on the 1st of May, 1949.

Grant to British Universities

In the coming Budget, Sir Stafford Cripps, Britain's Chancellor of the Exchequer, is providing £ 12,814,500 (Rs. 17·09 crores) for recurrent grants to universities. He announced this in reply to a question in the House of Commons. This amount includes provision for the additional expenditure which universities will incur in bringing into operation the revised scales of payment of teachers in the medical and dental schools.

The progress of the universities' scheme for physical education necessitates an increase in the amount required for non-recurrent grants and Sir Stafford is providing £ 4,750,000 (Rs. 6·33 crores) for this purpose, as against £ 2,600,000 (Rs. 3·47 crores) for the current year.

Entomological Society of India

The Eleventh Annual General Meeting of the Entomological Society of India was held on 4th January 1949, in the Zoological Lecture Theatre of the University of Allahabad. The President Dr. H. S. Pruthi delivered the Presidential Address on "Need of Fundamental Research on Insects in India".

The following resolutions were passed:

1. In view of the need for greater contacts and collaboration amog entomological workers in different parts of India and between India and other countries of the world, the Entomological Society of India should periodically prepare a list of such workers engaged in Agricultural and other Applied Departments as also in various Universities, in India. Such a list should indicate the special interests of the individual workers and be published or otherwise printed for the information and use of all concerned.

2. In view of the great importance of fundamental research on insects, not only for solving various urgent problems in relation to crop, specially food production, the cottage industries of bee-keeping, silkworm rearing and lac culture, public health, forest management and conservation and life-stock improvement, but also for the better elucidation of

various scientific problems, such as those of animal (including human) behaviour, heredity and population, the evolution of forms, habits and communities, the laws of growth and migrations, etc., the Entomological Society of India feels that the establishment of a National Entomological Laboratory for fundamental researches is an urgent, national, scientific need. Such a Laboratory incidentally will provide the centre where research workers will occasionaly gather from all parts of India for information, guidance and training and also for inspiration and thereby improve the standard of entomological research all over the country. The Society, therefore, recommends to the Government of India to establish a National Entomological Laboratory for India and draws the attention in this connection to the recent statement of the Prime Minister of India at the Indian Science Congress session at Allahabad, to the effect that India should undertake and do much more fundamental or basic work in science than has been the case so far.

In view of the great and undeniable importance of Entomological Research, both, to the developing economy of India as well as to Science in general, and in view of the acute shortage of trained Entomologists in the country specially needed for various nation-building activities, the Entomological Society of India recommends to the Indian Univerasities Commission to take steps to extend, improve and intensify Entomological training and research in the univerasities of India. In this connection the Society, if invited, would gladly assist the Commission by providing concrete plans and suggestions as to how the desired development of Entomological Research and training may be brought about.

The following Office-bearers were elected for 1949-50:—

1. *President* — Dr. H. S. Pruthi (New Delhi).
2. *Vice-Presidents* — Dr. E. S. Narayanan (New Delhi), Dr. D. R. Mehta (Kasauli), Dr. N. C. Chatterjee (Dehra Dun), Mr. M. C. Cherian (Coimbatore).
3. *Councillors* — Dr. D. D. Mukerji (Culcutta), Mr. Ramchandran (Coimbatore).
4. *General Secretary* — Dr. S. Pradhan (New Delhi).

National Institute of Sciences of India

At the Annual General Meeting of the National Institute of Sciences of India, held at Allahabad, on the 4th January 1949, the following were elected Office-bearers and Members of its Council for the year 1949:—

President: Prof. S. N. Bose (Calcutta). *Vice-Presidents:* Prof. A. C. Banerji (Allahabad), Maj.-Gen. Sir S. S. Sokhey (Bombay); *Treasurer:* Dr. C. G. Pandit (Delhi). *Foreign Secretary:* Dr. J. N. Mukherjee (Delhi); *Secretaries:* Prof. D. S. Kothari (Delhi); Dr. H. S. Pruthi (Delhi). *Editor of Publications:* Dr. S. L. Hora (Calcutta). *Members of Council:* Dr. K. N. Bagchi (Calcutta). Dr. S. K Banerji Delhi); Mr. S. Basu (Poona); Prof. H. J. Bhabha (Bombay); Prof. S. R. Bose (Calcutta); Dr. B. B. Dey (Madras); Prof. A. C. Joshi (Hoshiarpur); Dr. S. Krishna (Dehra Dun); Sir K. S. Krishnan (Delhi); Prof. S. K. Mitra (Calcutta); Dr. B. Mukerji (Calcutta); Mr. G. R. Paranjpe (Poona); Dr. M. Prasad (Bombay); Mr. J. M. Sen (Calcutta); Dr. A. C. Ukil (Calcutta).

The following distinguished Foreign Scientists were elected Honorary Fellows of the Institute :—

1. Prof. Louis de Broglie, Professor of Theoretical Physics, Poincare Institute, Sorbonne, Paris. 2. Prof. Hans von Euler, Emeritus Professor of Chemistry, Stockholm University, Stockholm. 3. Dr. Harlow Shapley, Director of Harvard Observatory and President of the American Science Association. 4. Prof. Georg Tischler, Botanical Institute, Kiel University, Germany.

The following have been elected Ordinary Fellows of the Institute:—

1. Dr. Jnanendralal Bhaduri, Lecturer in Zoology, Calcutta University. 2. Dr. S Bhagavantam, Scientific Liaison Officer for India in the United Kingdom. 3. Dr. S. K. Chakrabarty, Director, Colaba and Alibag Observatories, Bombay. 4. Dr. D. Chakravarti, Lecturer in Chemistry, Calcutta University. 5. Dr. M. Damodaran, Assistant Director, National Chemical Laboratories, Delhi. 6. Dr. B. K. Das, Professor and Head of the Department of Zoology, Osmania University. Hyderabad-Deccan. 7. Dr. Kurien Jacob, Palæobotanist, Geological Survey of India, Calcutta. 8. Dr. T. S. Mahabale, Lecturer in Botany, Royal Institute of Science, Bombay. 9. Dr. H. K. Mitra, Refractories Engineer, Tata Iron and Steel Co., Ltd., Jamshedpur. 10. Dr. Kalidas Mitra, Officer-in-charge, Nutrition Scheme, Public Health Laboratories, Bihar, Patna. 11. Dr. A. H. Pandya, Director, Hindusthan Aircraft, Bangalore. 12. Dr. N. Parthasarathy, Geneticist, Indian Agricultural Research Institute, New Delhi. 13. Dr. C. Racine, Professor and Head of the Department of Mathematics, Loyola College, Madras. 14. Dr. K. C. Sen, Director, Indian Dairy Research Insitute, Bangalore. 15. Dr. R. S.

Varma, Reader in Mathematics, Lucknow University, Lucknow.

Awards of the following Research Fellowships were made:—

Imperial Chemical Industries (India) Research Fellowship:

Dr. S. N. Ghosh (Physics), Calcutta University, Calcutta. Dr. L. R. Row (Chemistry), Andhra University, Waltair.

National Institue of Sciences Senior Research Fellowship:

Dr. A. P. Kapur (Zoology), Zoological Survey of India, Calcutta.

Reports on Scientific Advances during World War II

Dr. Alexander Wolsky, the Principal Scientific Officer of UNESCO, New Delhi, has advised us that the Pontifical Academy of Science (Vatican, Rome, Italy) has undertaken to compile a general report of the scientific research work accomplished throughout the world during the critical years of the second world war, when scientific communications were greatly disrupted. "The initiative is in conformity with the august wish of the Holy Father to see international scientific communication restored promptly and on a large scale, thus contributing to ease the strained relations existing between peoples, as well as to enrich the fund of human knowledge by new and useful elements". It is proposed that the general report will be divided into a series of particular reports referring to one or more countries and will treat the various branches of science on the basis of the papers published in the well-known scientific journals or reviews, as will be selected by the respective authors of the reports. Dr. Wolsky has recently received 18 such reports the titles of which are listed below and the language is also mentioned in brackets :—

1. La Physique Du Noyau: Dans Certains Pays D'Europe Durant La Periode 1939-45 (French). By C. Manneback.

2. Progres Recents: De La Theorie Quantique Des Champs Et Du Meson (French). By C. Manneback.

3. The Liquid State: Position of the Problem in the various countries since 1936 until 1945. (English) By Andrew Van Hook.

4. Development of Mathematical Biophysics in U.S.A. from 1939 to 1945 inclusive (English). By N. Rashevsky.

5. Spektrochemie: Die Wichtingsten Spektrochemischen Veroffentlichungen in Deutschland: Aus Den Jahren 1939, 1940, 1941, und 1942. (German). By A. Gatterer.

6. La Meccanica Razionale: E La Fisica Mathematica Nell, Italia Centrale E Meridionale Dal 1939 A Oggi (April 1946) (Spanish). By Antonio Signorini.

7. La Meccanica Razionale E La Fisica Mathematica Nell ' Italia Settentrionale E in Svizzera Dal 1939 al 1945 (Spanish). By C. Somigliana, B. Finzi, C. Cattaneo.

8. La Geomatria Differnziale in Italia (Dal 1939 al 1945) (Italian). By Piotra Ruzano.

9. Geometria Algebrica: Nei Paesi Anglo-Sassoni (Dal 1939 al 1945) (Italian). By Beniamino Segre.

10. Analisi Matematica in Italia: Nel Campo Complesso (Dal 1939 al 1945) (Italian). By Aldo Ghizzetti.

11. La Geometria Albegrica in Italia (Dal 1939 a tutto il 1945) (Italian). By Fabio Conforto e Guido Zappa.

12. Ottica Fisiologica: E Problemi Della Visione Nei Vari Paesi Dal 1939 al 1945 (Spanish). By Francesco Schupper.

13. Lavori Geodetici Italiani: Dal 1° Gennaio 1939 Al 31 Dicembre 1945 (Italian). By Giovanni Boaga

14. Accion De La Tiroides Sobre El: Metabolismo de los Hidratos De Carbono Y En La Diabetes (Resumen de los Trabajos De 1939 A 1945) (Spanish). By Bornardo Houssay.

15. Progress in the Knowledge of Gram-negative Enteric Pathogenic Organisms during the years from 1939 to 1945 (English). By Oscar Felsenfeld Viola Mae Young Phyllis Conner.

16. La Produzione Cancerologica Sperimentale in Italia e in Germania Lal 1940 al 1945 (Italian). By Pietro Rondoni.

17. L'Aerodinamica in Italia (Dal 1939 al 1945) (Italian). By Enrico Pistolesie Carlo Ferrari.

18. I Motori Aeronautici in Italia (Dal 1939 al 1945) (Italian). By Antonio Capetti.

The periods covering the reports are also mentioned along with the titles. The bibliographies appended with each of these publications appear to be useful to the scientific workers in the respective fields.

These publications are being brought to the notice of our readers in the hope that these might offer an idea of the work carried out particularly in the countries of Europe, which were cut off from contacts with other countries in the course of the last world war.

Only one copy each of the reports is available at the Office of the UNESCO at Delhi for personal inspection, by those interested but in case of requests from long distances it might be possible to send them for perusal and speedy return.

ERRATUM

Note entitled "Varagu" (Pasupalum Scrobiculatum)

Curr. Sci., 1948, 17, p. 367, column 2, line 4—'Saponification value' *read* 170·7 for 107·7.

Editor M. Sreenivasaya, B.A., F.I.S., F.A.Sc.
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