

Twenty-seventh Ordinary General Meeting.

The Twenty-seventh Ordinary General Meeting of the National Institute of Sciences of India was held on Wednesday and Thursday, the 17th and 18th April, 1946, in the hall of the Royal Asiatic Society of Bengal, 1 Park Street, Calcutta. A public lecture on 'Cosmic Rays' was delivered by Prof. M. N. Saha on the first day, and the second day was wholly devoted to a Symposium on the *Development of Indian Fisheries: Objectives and Requirements*.

The following Fellows were present at these meetings:—

Mr. D. N. Wadia, <i>President (in the Chair)</i> .	
Prof. S. P. Agharkar, <i>Additional Vice-President</i> .	
Dr. W. D. West, <i>Additional Vice-President</i> .	
Rai Bahadur S. L. Hora, <i>Secretary</i> .	
Rai Bahadur K. N. Bagchi.	Dr. Hamid Khan.
Prof. A. C. Banerji.	Prof. G. P. Majumdar.
Dr. I. Banerji.	Dr. H. K. Mookerjee.
Dr. K. Banerji.	Lt.-Col. C. L. Pasricha.
Prof. N. M. Basu.	Dr. B. N. Prasad.
Dr. P. N. Bhaduri.	Dr. H. S. Rao.
Dr. J. Ghosh.	Prof. P. Ray.
Dr. S. Ghosh.	Prof. M. N. Saha.
Dr. J. C. Gupta.	Rai Bahadur J. M. Sen.
Prof. M. O. P. Iyengar.	Lt.-Col. R. B. Seymour Sewell.
	Dr. A. C. Ukil.

Besides the Fellows there were a number of visitors attending the lecture and the symposium.

The President reported the death of Sir U. N. Brahmachari, a Foundation Fellow, and of Mr. D. Hendry, an Ordinary Fellow, of the Institute, and requested those present to stand up in silence for one minute as a mark of respect to their memory.

1. The minutes of the Eleventh Annual General Meeting held on the 1st January, 1946, were read and confirmed.

2. The following persons were admitted as Fellows under the provisions of Rule 13:—

Dr. S. Ghosh, Dr. J. C. Gupta and Lt.-Col. R. B. Seymour Sewell, F.R.S.

3. Under provisions of No. 68 of the Rules of the Institute the Council proposed that Rule 19 be modified, as follows:—

'The subscription of *Resident* Ordinary Fellows shall be Rs.36 per year and of *Non-Resident* Ordinary Fellows Rs.16 per year. In the case of a Resident Fellow who is a member of other Science Academy or Academies in India working in co-operation with the National Institute in accordance with the Regulations for Co-operating Academies, a reduction of Rs.12 annually shall be allowed on his subscription on the evidence of a certificate from a Co-operating Academy, provided in subsequent years he himself certifies that he continues to be a member of a Co-operating Academy.'

It was unanimously resolved to accept the modification as proposed by the Council.

4. The following paper was read and discussed:—

Nuclear Energetics and β -activity. By M. N. Saha and A. K. Saha.

5. In the absence of authors, the following papers were taken as read:—
- (a) *Equilibrium Abundances of Isotopes.* By K. S. Singwi and R. N. Rai. (Communicated by Prof. D. S. Kothari.)
 - (b) *The Investigation of the Spectra of the Beta Radiations of S^{35} , Rb^{87} and RaD with the Screen Cathode Beta Ray Spectrometer.* By A. K. Saha. (Communicated by Prof. M. N. Saha.)
 - (c) *A Versatile Pulse Counting Circuit.* By B. M. Banerjee, A. K. Saha and A. Ghosh. (Communicated by Prof. M. N. Saha.)
 - (d) *Selachian Fauna of the Bombay Waters.* By S. B. Setna and P. N. Sarangdhar.
 - (e) *Catalysis in Volumetric Analysis. Parts III, IV, V and VI.* By G. Gopala Rao and others. (Communicated by Dr. N. R. Dhar.)
 - (f) *On maintained Vibrations.* By R. N. Ghosh.
 - (g) *Beta-Radioactivity of 5.3 Year Co^{60} .* By S. Das and A. K. Saha. (Communicated by Prof. M. N. Saha.)
 - (h) *Development of Endosperm in Zephyranthus Andersonii Baker.* By B. G. L. Swamy. (Communicated by Dr. A. C. Joshi.)
 - (i) *Studies in the Physiology of Rice. III. Vernalisation by Short Days.* By S. M. Sircar. (Communicated by Dr. P. Parija.)
 - (j) *Photochemical Analysis. Part III.* By G. Gopala Rao. (Communicated by Dr. N. R. Dhar.)
 - (k) *Narrow Cone Study of Azimuthal Effect at 22° Geomagnetic Latitude.* By P. S. Gill and S. P. Malhotra.
 - (l) *Meson Intensity in the Stratosphere II.* By H. J. Bhabha and collaborators.
 - (m) *Reversible Linear Changes in the Tissues of Plants and their Significance.* By C. V. Krishna Iyengar. (Communicated by Prof. S. P. Agharkar.)
 - (n) *Colchicine Effect on the Mitotic Division of the Body Nucleus in the Pollen Grains of some Ephedra Sps.* By P. N. Mehra. (Communicated by Dr. A. C. Joshi.)
 - (o) *Insect Population Studies. Parts III and IV.* By S. Pradhan. (Communicated by Dr. H. S. Pruthi.)

SYMPOSIUM ON THE DEVELOPMENT OF INDIAN FISHERIES : OBJECTIVES AND REQUIREMENTS.

The morning and afternoon sessions of the General Meeting on the 18th April, 1946, were devoted to a Symposium on the *Development of Indian Fisheries: Objectives and Requirements*. In inaugurating the Symposium, the President invited Lt.-Col. R. B. S. Sewell, F.R.S., F.N.I., to preside over it and remarked that, on account of Col. Sewell's eminence as a Zoologist and an Oceanographer, he was the most suitable person to guide the deliberations of the meeting on the Development of Indian Fisheries. He stated further that the National Institute was fortunate in having him at the meeting. He had been invited by the Government of India to advise them on the re-organisation of the Zoological Survey and to suggest a programme of work for the Marine Section of the Indian Institute of Fisheries Research. He wished the meeting every success.

On taking the chair, Col. Sewell addressed the meeting as follows:—

'MR. PRESIDENT AND GENTLEMEN,

Let me first thank you for the honour that you have paid me in inviting me to preside over this Symposium. It is a very great pleasure to me to be here to-day among so many of my old friends.

As Chairman of this Symposium I feel, if I may be allowed to adopt a similar article to the occasion, very much like a fish out of water, for I have better or no personal knowledge of freshwater fisheries, the greater part of my life's work having been taken up by the study of oceanography. I hope, however, that both you and I will learn something from the papers that will be read and that we shall all benefit by this exchange of views.

I have now much pleasure in declaring this Symposium open and call upon Dr. S. L. Hora to read his paper.'

Before reading the paper, Dr. Hora read out short messages received for the Symposium from Dr. L. F. de Beaufort of Amsterdam and Mr. L. K. Elmhirst of Dartington Hall, Totnes, South Devonshire. He then read messages for the success of the Symposium received from Dr. Bains Prashad, Fisheries Development Adviser to the Government of India, Dr. E. B. Worthington, Director, Freshwater Biological Association, England, Dr. E. Trewavas, British Museum (Nat. Hist.) and Dr. F. P. Koumans, Rijksmuseum Van Natuurlijke Historie, Leiden. He also read letters received from Diwan Bahadur Dr. B. Sundara Raj, Fisheries Development Officer, U.P. and Dr. B. N. Chopra, Officiating Director, Zoological Survey of India, intimating their inability to be present at the Symposium owing to pressure of work.

After Dr. Hora had read his paper, it was decided that a general discussion should be held after all the papers received for the Symposium had been read. Thereupon, the Chairman invited the following gentlemen to communicate their papers* :—

1. Dr. Hamid Khan, Warden of Fisheries, Punjab.
2. Mr. D. N. Sen, Superintendent of Fisheries, Bihar.
3. Dr. H. K. Mookerjee, Professor of Zoology, University of Calcutta.
4. Mr. I. H. Dundas, Assistant Director of Fisheries (Administration), Bengal.
5. Major D. D. Dasen, Assistant Director of Fisheries (Freshwater), Bengal.
6. Mr. G. N. Mitra, Assistant Director of Fisheries, Orissa.
7. Mr. B. S. Bhimachar, Fisheries Officer, Mysore State.
8. Mr. Q. M. Rahman, Special Officer, Directorate of Fisheries, Bengal.

Contributions from the following gentlemen were taken as read :—

1. Rao Sahib V. John, Deputy Director of Fisheries (Marine), Madras.
2. Captain W. R. Burgess, Assistant Director of Fisheries (Marine and Estuarine), Bengal.
3. Dr. M. Ramaswami Naidu, Director of Fisheries, Sind.
4. Dr. S. T. Moses, Director of Fisheries, Baroda State.
5. Dr. M. Rahimullah, Fisheries Officer, Hyderabad, Deccan.
6. Khan Bahadur M. Afzal Husain, late Special Officer, Agriculture, Bengal, and Member, Famine Inquiry Commission.
7. Dr. T. J. Job, Deputy Director of Fisheries (Inland), Madras.
8. Dr. Nazir Ahmed, Superintendent of Fisheries (Northern Circle and Development), Bengal.
9. Dr. A. C. T. W. Herre, Stanford University, California, U.S.A.

At the end of the discussion, the Chairman moved the following resolution which was unanimously adopted :—

The Fellows of the National Institute of Sciences of India, and the Fishery Officers assembled in Session at Calcutta, in view of the great importance of the development of fisheries for the provision of a basic food supply derived from

* The papers read at the Symposium and the discussions that followed will be published in the *Proceedings* at an early date.

aquatic sources for the whole population of India and for the betterment of the people employed in the fishing industry, desire to urge the establishment of a Central Department of Fisheries with a view to taking immediate steps to:

- (1) Conduct fishery development and research work throughout the whole country.
- (2) Plan a long-range development of the industry and to place it on a sound and scientific basis in order to—
 - (a) improve the status and general condition of the fishing population, and encourage their organisation as co-operative units;
 - (b) improve fishery technology and the methods of fish distribution and marketing; and
 - (c) establish scientific research in all branches of Marine, Estuarine and Freshwater Indian fishes.
- (3) Urge the Provinces and States to set up their own independent Fishery Directorates, and place Government fisheries of all descriptions under the administrative control of the Directorates of Fisheries.
- (4) Press for Naval assistance and the provision of Japanese fishing fleets from the authorities concerned, on the lines already proposed by the Directorate of Fisheries, Bengal, and such assistance to be on an all-India basis and to be co-ordinated by the Central Organization referred to above.
- (5) Urge the Provinces to set up Fishery Protection Services at the earliest possible moment and to arm them with such powers as are considered essential.
- (6) Bring about the much needed co-ordination between various Departments of the Government of India and of the Provinces so that Fishery Development of the country will not be unduly hampered by lack of such a measure of co-operation.