

vertical convection is provided by afternoon heating or insolation. For vertical convection due to strong surface heating, there must be inequality, i.e., the isopycnics must not be horizontal.⁶ The distribution of rivers and land apparently provide the necessary contrast in surface heating. The rivers may play a part in postponing the time occurrence of the nor'wester.

In the nor'westers there is an absence of an easily recognisable time sequence. Most of the nor'westers occur in the afternoons, i.e., are dependent on the afternoon heating or insolation. The main causes are due to insufficient wind velocity gradient at the 'cold front' due to lack of mountains and other marked orographic features and due to the temperature inversion. The temperature inversion can only break up if the low pressure area is marked. The low pressure areas of the western disturbances are not quite marked over Bengal. Insolation deepens the low pressure area. Hence the tendency to wipe out the inversion over a locality would be possible in the afternoons. The large river systems tend to disturb the even movement of the nor'westers.

The temperature inversion allows sufficient energy to accumulate until the explosive condition is reached, and may be responsible for the severity of the thunderstorms.

With an extended chart, it must be possible to trace all the air masses considered above.

But with a limited chart some helpful criteria can be given. The upper winds in and

around the Bay of Bengal and the weather there should be watched. An inflexion of bent back Tr to a secondary low pressure over C.P. or Orissa area⁴ moving ENE wards towards Bengal was found to pre-indicate the occurrence of nor'westers. The inflexion of Tr to the low pressure area could be deduced if the winds at latitudes south of about 17° N like Port Blair veered and become SE and the winds at stations to the north of the latitudes and almost to the west of Bengal were S.W. The winds in lower Burma and Tenassarim may also be used as for Port Blair. Here again, the time between the winds at Port Blair becoming S.E. and winds along North Madras and Orissa becoming S.W. and the onset of nor'westers can be decided after statistics have been collected over a long period. 36 hours may just be the outside limit.

1. Malurkar, "Winter Rain in the U. P.," *Curr. Sci.*, 1948, 17, 348. 2. *Eliot. Ind. Me. Mem.*, 1878, 1, 119. Normand *ibid.*, 1921, 23, 21. Roy and Chatterjee, *Nature*, 1929, 124, 481. Sohoni, *Sci. Notes Ind. Met. Dept.*, 1927-31, 1, 25 and 4, 19. Sen, *Nature* 1931, 127, 128. Das, *Gerl. Beitr. z. Geophys.*, 1932, 39, 144. Desai and Mal, *ibid.*, 1935 51, 2-5. Chatterjee and Sur, *Mem. Ind. Met. Dep.*, 1937, 26, 165. Pramanik, *Proc. Nat. Inst. Sci. (Calcutta)*, 1938, 5, 93. Roy, A. K., *Sci. Notes Ind. Met. Dept.*, 1938, 8 1. Sen Gupta, *Sci. and Culture*, 1941, 7, 134. Tech. Notes, *Ind. Met. Dept.*, 1944, No. 10. 3. Malurkar, "Forecasting Weather in and Near India," Bangalore, 1945, 110. 4. —, *Curr. Sci.*, 1947, 16, 139.

SOCIETY FOR THE STUDY OF THE HISTORY OF SCIENCE

THE need of forming a national society in India for the promotion of studies in the history of sciences in this part of the world was explained by Dr. Alexander Wolsky of UNESCO at a meeting of some delegates to the Science Congress at Allahabad on 3rd January 1949.

Dr. Wolsky explained the role which the UNESCO would play in his scheme of forming a National Committee or a Society in India. He said that the role of the UNESCO would be an indirect or passive one.

Dr. Wolsky thought that India with such a glorious past in the history of science was a bit neglected and there should be more active research in this direction. The rest

of the world should know far more about the scientific achievements of this country and it was really something which should attract attention all over the world.

Dr. Wolsky pointed out that a Society formed for the purpose of study of history of sciences in this part of the world would find it easier to ask for financial support from the International Union as he was confident it would be forthcoming.

After a short discussion of Dr. Wolsky's proposal, the Science Congress formed a committee with Prof. Banerjee as convener and with powers to co-opt, to formulate a scheme in this connection.

1851 EXHIBITION SCHOLARSHIP

ONE Science Research Scholarship will be awarded this year by the Royal Commissioners for the London Exhibition of 1851 to students from Indian universities or institutions having post-graduate departments of Science. The scholarship, which is of the value of £ 350 per annum and tenable for a period of two years, is intended to enable the selected student, who has already completed a full university course and whose record gives evidence of capacity for original scientific investigation, to devote himself to post-graduate research in some branch of pure or applied Science at any

institution abroad approved by the Commissioners.

Subjects of the Dominion of India below the age of 26 on May 1, 1949, will be eligible for this Scholarship. Applications from students whether residing in India or abroad have to be recommended by the authorities of a university or an institution and are to be made to Provincial Governments and local administrations through the universities and institutions concerned who would forward them so as to reach the Secretary, Ministry of Education, Government of India, not later than March 10, 1949.