

the papers presented by them at the Bombay seminar in 1963 and symposium in 1965 and they have put forward their views regarding the mechanism of south-west monsoon—little or no rain over west and north Arabian Sea and over Sind and neighbourhood due to subsidence (presence of inversion) over the areas preventing formation of convective clouds and rain and (ii) over the west coast of the Peninsula, particularly in the northern portion and upto Kutch, rain occurs due to a quasi-stationary mid-tropospheric depression which develops, intensifies and dissipates over a period of two to three weeks in the vicinity of Bombay and whose origins are usually obscure. There was no attempt by any worker to modify the hitherto accepted theories of the south-west monsoon in the light of the IIOE results and one actually got an impression that according to them the existing ideas required a radical revision.

It may be mentioned that more than 40 papers were presented in the symposium in the four days and there was little time (in all about a total of four hours) for fruitful discussion of the interpretations put forward. As such the Indian Meteorologists present had no opportunity to present a revised mechanism of the

south-west monsoon reconciling the new important facts of observations over the seas during IIOE period. From the interpretations of the results presented during the symposium one cannot help getting an impression that much more attention needs to be paid to (i) the facts of weather and climatology during the south-west monsoon season and (ii) the orographic features of the Indian subcontinent. The reviewer proposes in the light of his experience of over twenty years in day-to-day forecasting of weather to interpret in due course the IIOE results modifying the hitherto accepted mechanism of south-west monsoon only to a small extent in so far as the effect of the Western Ghats is concerned to destroy the inversion and produce a more or less homogeneous air mass in the first 5 km. above the surface over the Peninsula.

1. Simpson, G. C., *Q. J. Roy. Met. Soc.*, 1921, 47 (199), 152.
2. Petterssen, S., *Proc. Ind. Acad. Sci.*, 1953, 37 A, 229.
3. *Climatological Charts for Airmen*, I. Met. D., 1943.
4. *Climatological Charts for the Indian Monsoon Area*, I. Met. D., 1945.
5. Ramakrishnan, K. P., et al., *Monsoons of the World* 19-21 Feb. 1958, New Delhi.

BIOGEOGRAPHY AND ECOLOGY IN ANTARCTICA *

ANTARCTICA has become a gigantic laboratory and research field, thanks to the International Geophysical Year, and it has been recognized so by the Antarctic Treaty signed in 1959 by the twelve nations which participated in the IGY Antarctic expeditions. The treaty guarantees freedom of scientific research in this vast territory for a period of thirty years, and the members have enjoined to use it only for peaceful purposes.

Most of the Antarctic mainland is an ice desert with the thickness of ice varying from 2,000 to 4,000 metres. As part of their programme for the IGY the twelve nations established permanent or semi-permanent bases on the Antarctic continent or on sub-Antarctic islands and collected a vast amount of scientific data in different fields of study. The book under review gives a general survey of what had been done by them in the way of biogeographical and ecological research. The Editors were actively concerned with the international

scientific activities in the Antarctic, and with the co-operation of a team of internationally reputed authors they have brought out a volume of great utility which not only sums up the present state of knowledge in the subjects of the title but also points the way to future planned investigations in the Antarctica.

The book is in two main parts. The first part of three chapters gives a detailed description of the different aspects of the environment including the geology and morphology, the climatology and the oceanography of the regions. The second part of fifteen chapters is devoted to the discussion of some of the main plant micro-organisms and animal groups of these regions. The subjects dealt with are Algae, Lichens, Vascular plants, Crustacea, Mollusca, Copepoda, Bryozoa. There are chapters on Acarology, Land arthropods, Fish fauna and Birds of Antarctica. A long article, in French, is the one on the "Ecology of Antarctic Penguins", which is illustrated by 24 plates. The book concludes with an interesting chapter on Human adaptation to life in Antarctica.

The book is an example of the significant fact that international co-operation can achieve a lot in the way of scientific advancement.

* *Biogeography and Ecology in Antarctica*. Edited by P. van Oye, and J. van Mieghem. (Dr. W. Junk, Publishers, 13 Van Stolkweg, The Hague, Netherlands), 1965. Pp. xxviii + 762. Price 115 Dutch guilders or \$ 31.95.