Review

Lehrbuch der Klimatologie by B. P. Alissow, O. A. Drosdow and E. S. Rubinstein. Published by Deutscher Verlag der Wissenschaften, Berlin; 1956; pp. xvi+536; 160 Figs., 6 Plates and large number of tables. Price 45 D. M.

This is the German translation of Parts I and II of the celebrated text book on 'Climatology' in Russian by the same authors prescribed for the State University and the Hydrometeorological Institute, U.S.S.R.

Part I deals with General Climatological Principles and Part II treats Methodology at considerable length. Part III of the Russian original which is devoted to 'Climate of the Earth' has not been included here. However, the basic principles of climatic classification have been briefly treated in Chapter IV of Pt. I. The German translation for the first time made this outstanding, advanced course on climatology available to non-Russian readers, at a time when the large scale translation of Russian scientific literature into English had not begun. In this text book one finds a pronounced stress on the application of climatology to the benefit of man through aids to agriculture, town planning and other human activity aimed at overcoming wild inhospitable nature.

Part I has 8 chapters. Chapter I gives a thorough treatment of the problems of solar radiation measurements and heat balance. Chapter II is on the oceanic and continental control of climate and in this chapter there is a section on the influence of the distribution of land and ocean on the hydrological circulation and the atmospheric circulation including that of 500-mb level. The chapter closes with a treatment of the climate and the vegitation. Chapter III treats the general and local atmospheric circulation as a factor influencing the climate. Here the idea of tropospheric climatological fronts have been developed, these zones are considered to be regions where the synoptic fronts are seen to sharpen and cyclonic activity increases noticeably. Two of the six maps in the folder show climatological fronts and sea-level isobars on the globe during the months of January and July.

Chapter V illustrates the varying influences which orographic features particularly mountains have on climate, on local winds and vegitation.

Chapter VI consisting of 82 pages, is on "Micro-climatology' and a very thorough study of the climatology of the surface and the lowest layer of the atmosphere. Turbulent motion and the associated heat transfer problem near the surface is treated quantitatively and at length. Microclimate of various land forms such as grass land, forests and also inland water and sea coasts are discussed. A small section on 'Urban Climatology' closes the chapter.

Chapter VII is on climatic changes and oscillations. The statistical techniques employed in such studies have been explained, changes of climate during geological ages and the different theories put forward to account for the same have been next treated. Lastly, the recent changes in climate have been discussed.

Chapter VIII is devoted to the interesting problem of accidental as well as planned changes produced in climate due to man's activities; Stalin Plan, with a view to bring the arid zones under control for growing food and for building comfortable habitation has been mentioned. In this context one finds a thorough examination of the microclimatic effect of windbreaks.

In Part II, consisting of chapters IX to XI, questions such as statistical investigations of homogeneity of a series of observations, tests and causes of inhomogeneity, reduction of short series to longer period and examination of the variations of the individual elements have been taken up. Descriptions of machine methods of computation involved in marine, upper air and synoptic data conclude the chapter.

A comprehensive bibliography listed chapter-wise, appended at the end will enlarge the coverage of the subject for the more inquisitive students.

A special feature to be noted in this advance course is that, due emphasis has been given on the physical factors like radiation, moisture balances and atmospheric circulation in the determination of the climatology of a region, unlike the mere statistical and geographical treatment found in the more conventional type of books on climatology.

The book is beautifully produced and very reasonably priced.

U. K. BOSE