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## REVIEW

RUDLOFF, Willy: *World-Climates*, with tables of climatic data and practical suggestions.

Wissenschaftliche Verlagsgesellschaft MBH, Stuttgart 1981. 632 pages, 50 figures, 1474 climatic tables, 116 hygrothermal diagrams, 30 other tables and reviews. Price DM 180,—.

Interest in climatic conditions has increased in recent years due to several climatic disturbances all over the world. Climate has become a significant factor in the economic life of the world. Societies with their food and energy problems have become more sensitive to climatic variability. According to the World Climate Programme it is now urgently necessary for the nations of the world to take full advantage of man's present knowledge of climate and to take steps to improve significantly that knowledge.

Against that background the reviewed book has been published at a proper time. Although there are some other summaries of the world climates, this book has an important advantage: it contains a great deal of climatic information of the world in a very compact and easily readable form.

The first chapter is dealing with weather, general weather and climate as definitions and the principal elements of the weather and climate (temperature, atmospheric pressure and wind, atmospheric humidity, hydrometeors and clouds). It also contains the main principles of the global atmospheric circulation including descriptions of the circulation of water, the oceanic wind systems, anticyclones and depressions and centres of action in the atmosphere.

The second chapter discusses bioclimatic considerations giving a general description about human activities in different climatic conditions and in a more detailed way the heat budget of the body including considerations of metabolism, clothing, heat regulation and heat flow in the body. Climatic stresses are finally discussed.

The third chapter deals with the climates of the earth giving the principles of the Köppen climate classification system. The climate of the tropics and marine dry regions are discussed in greater details.

The largest part of the book, chapter 4, contains climatic tables of the world including monthly and annual data on

- mean absolute maximum temperature ( $t_x$ , °C)
- mean temperature ( $t$ , °C)
- mean absolute minimum temperature ( $t_n$ , °C)

- suitable clothing (polar, winter, normal, summer, tropical)
- liability to heat stress (occasionally, frequently, very frequently)
- mean amount of precipitation (p, mm)
- mean annual number of days with precipitation (dp,  $\geq 1.0$  mm)
- total duration of sunshine (hours)
- relative duration of sunshine (%)

Helsinki														
latitude: 60°19'n longitude: 24°58'e height: 58 m														
DClo	003-7	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
tx	3	3	8	15	22	26	28	26	20	14	8	3	29	°C
t	-7	-7	-4	2	9	14	17	16	10	5	1	-3	4	°C
tn	-21	-20	-17	-8	-1	4	8	7	1	-5	-9	-15	-24	°C
clothing stress	w	w	w	w	n	n	s	n	n	n	w	w	--	
p	49	34	32	41	38	47	68	71	70	72	61	58	641	mm
dp	10	9	7	8	7	8	10	10	9	11	11	11	111	days
sunshine	39	72	152	204	270	294	295	251	152	80	33	22	1864	hours
%	19	28	42	47	51	52	52	51	39	25	19	12	41	%

For each continent there is a brief introduction to the various regional climate conditions. It also contains a number of hygrothermal diagrams with morning and afternoon temperature and humidity conditions. These diagrams define the essential features of the climate and are useful for quick comparisons between different stations.

The appendices include a brief description of SI-units, tables of sunrise and sunset, time zones and the Globetrotters Rules of Health. Necessary lists of countries and stations are finally given in alphabetical order.

The purpose of a book review like this is naturally to discuss possible drawbacks, too. It has been quite difficult to find out some major errors and thus the remarks are of minor nature.

The German background of the author can be seen here and there. Some symbols come from German (N = precipitation, etc.) and several place names are in their Germanic form. Many of the figure texts are insufficient and explanations are given elsewhere in the text. Few references to other works are also hidden in the text.

In addition to heat stress a reader, at least in higher latitudes, would also wait for cold stress, because man's activities are ever more and more extending to polar and subpolar regions due to new, unused natural resources.

It is self-evident that the station information cannot be perfect due to several

changes of locations in the course of time. Various sources may cause confusions in the data, too. The reviewer can most easily check the information of his own country and there really are some confusions. Data of urban and nearby airport stations have been mixed in many cases. Although the differences may be significant in the national scale, they do not disturb the use of the book for world-wide reference purposes.

In conclusion, the text of the book is quite clear and easy to read with few errors or lack of clearness. The author deserves credit for his work to collect this useful book, which is an excellent contribution among few handbooks of climate.

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