

very limited if only the scientific side of meteorology is considered, and with a limited membership it will be difficult to do much, while if the practical side of the subject be given sufficient attention, and this fact is properly impressed on the public, the membership can be largely increased and all the society greatly strengthened.”—*J. Warren Smith*, Chairman.

NEW BOOK.

Redway, J. W., *Handbook of Meteorology*. New York, John Wiley & Sons, 1921. Large 8vo. 294 pp., illus., tables, index. \$4.00 postpaid.

Here is an interesting popular book from the pen of an enthusiastic amateur meteorologist, who has a well-equipped meteorological laboratory and who for many years has been a coöperative observer of the U. S. Weather Bureau. It should appeal particularly to other amateur weather enthusiasts, especially to those who are making daily instrumental records of the weather. The outstanding feature is naturally its excellent description of instruments and their uses, which constitutes the 75 pages of Part 2. Part 1, which is essentially “an elementary synopsis of the general principles of air science,” is more likely to arouse interest in a wide circle of readers than is such a solid discussion as Humphreys’ “Physics of the Air,” on which much of Redway’s treatment is based. This advantage may be more than off-set, however, by the numerous inaccuracies which are bound to creep into a book on a subject in which the author is not a professional or scientific expert, except, perhaps, in one or two phases, such as, in this case, atmospheric dust. Thus, a student would not look to this work for precise information on theoretical meteorology, but for what an observer can provide out of his experience and study of his hobby for many years. The reproductions of the 15 large cloud photographs are excellent and constitute one of the most attractive features of the book. There is an appendix with 35 pages of useful reference tables.

While it is impossible in a short review to mention all the errors found, the following small selection at least should be called to the attention of prospective users of the volume:

- p. 22. “Solar constant” is used in the sense of “insolation.”
- p. 28. “bumps and holes” are not “due to sudden inequalities in temperature” in mid-air nor (p. 58) are they wholly ascribable to vertical currents. Gustiness is an important factor.
- pp. 25, 49, 112, 150, 155—diagrams are largely erroneous. On p. 25 the “heat belt” includes all of Labrador, Cape Horn, the South Shetlands and part of Graham Land. On p. 49 the latitudes of the sub-tropical belts of calms and of the sub-polar storm belts are too low. On p. 112 the cross-section of a thunderstorm is erroneously simplified. On p. 150 the diagram of a cyclone does not conform even to the textual description (on p. 156) and cloudiness is shown in the rear as far as in front. On p. 155 there is no indication of the calm central eye of a West Indian hurricane.
- p. 34. —96° F. should be —90° F., the lowest observed temperature on the surface of the earth.
- p. 46. 0.025 in. should be 0.075 in.—half of the diurnal variation of the barometer at a place in the tropics.

p. 50. 3rd line, "southwesterly" and "northwesterly" should be "northeasterly" and "southeasterly." 7th line, "westerly" should be "easterly." On same page, "Prevailing Westerlies" is misplaced to "Anti-Trades."

p. 57. "In meteorology the plane of contact (between air layers) is commonly known as a *ceiling* or *lid*"—only when the cool air is below, and the warm air above.

p. 76. The cloud picture is upside down. pp. 78 and 94, legends to cloud pictures are erroneous.

pp. 201, 254. "kilobar" should be "bar."

p. 173 and elsewhere in the interesting chapter on "Forecasting the Weather: weather folklore," the weather proverbs and the indications presented by the author are stated so positively that, if taken literally, they are likely to be disappointing in use.

In drawing attention to these errors and mentioning the presence of others, I merely wish to add to the usefulness of this book. Simply the valuable part on instruments and their uses and the handy reference tables are enough to earn for the book a place wherever meteorological instruction is given.

Charles F. Brooks.

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