

BOOK REVIEW

WERNER WERENSKIOLD, *Fysisk geografi I*, Oslo, 1948. 319 pp., 127 figures. H. Aschehoug & Co.

In 1925 Mr. Werenskiold, professor of geography at the University of Oslo, published a textbook in Norwegian on Physical Geography. Now, after having retired from his chair, he has prepared a revised edition. This textbook is rather unique in that it treats, within the limited space of about 300 pages, all the main branches of geophysics: size and shape of the earth, earthquakes, magnetic and electric state of the earth, meteorology and oceanography. The chapter on meteorology comprises about half of the book.

The author has great experience in different kinds of geophysical field work. At the same time he is known as an able mathematician. His book contains not only purely descriptive parts, written in a very concise style, but also theoretical developments of an elementary but nevertheless exact character.

The first chapter gives an outline of potential theory, applied to gravity, and comments upon the notions of isostasy and displacement of continents.

In the second and third chapters the elements of seismology, terrestrial magnetism and terrestrial electricity are treated. In spite of the fact that Norwegian scientists have contributed fundamentally to the knowledge of aurora borealis, the author has reserved one page only for this topic. It might be hoped that in another edition more space might

be given to this item, as well as to the ionosphere, about which so much new information has become available in the last few years.

The fourth chapter gives an outline of meteorology which seems to be well suited to make students of geography acquainted with the main conceptions of that branch of geophysics. The author presents not only the fundamental ideas concerning the physics of the atmosphere and climatology, but also the principal theoretical considerations of dynamic meteorology. As to the theoretical part the following critical comments may be allowed. The derivation of the Coriolis force seems to be somewhat more complicated than necessary. The theory of viscosity has been developed only for laminar motion. Turbulence is mentioned only incidentally and lateral mixing or stresses not at all. The circulation theorems and their derivatives have been omitted.

The last chapter contains a descriptive and theoretical treatment of oceanography (depths, properties of the sea-water, temperature, currents, waves, tidal currents). The theory of the main types of wave motion is given in a very clear way.

Taking into account the good qualities of this textbook, one feels inclined to suggest that it be revised and translated from Norwegian to a language more widely spread. So an old tradition might be revived: the well-known textbook of *Mohn* was once translated from Norwegian and made its way to many countries.

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