BOOK REVIEW

Pedology: a systematic approach to soil science. *E. A. Fitzpatrick.* 1972. Oliver and Boyd, London; Hafner Publishing Co., Inc, N. Y., N. Y. 306 pages. $21.50.

The author's stated purpose in preparing this book was to produce an aid in teaching, primarily for undergraduates taking pedology as a part of their general training in soil science, not "a treatise for the specialist pedologist." For individuals approaching pedology for the first time, one group of unfamiliar terms and concepts is about as easy to assimilate as another. However, for others who may have only recently adjusted to the trauma of the 7th Approximation, this book provides yet another nomenclatural system.

The first chapter, the weakest in the book, considers fundamental concepts. It concludes with the description of a soil as "the space-time continuum forming the upper part of the earth's crust."

Chapters two through four are devoted to factors of soil formation, processes in the soil system, and properties of horizons. The chapters are highly ordered, each beginning with a brief outline of topics to be discussed. Most topics are covered briefly, but for the most part adequately. Symbols and subscripts used in the nomenclature to follow are introduced in each chapter. Diagrams and photographs are large and clear; however, their captions are terse and not very informative.

The rationale for soil-horizon nomenclature and for soil-designation nomenclature and classification is set forth in Chapter 5. The premise, to paraphrase the author, is that both horizons and soils form continua in space and time, and that divisions separating either are arbitrary and thus do not separate discrete entities. This situation, in the author's opinion, defies classification. The resulting classification or non-classification is an attempt to deal with the soil intergrades. To this end, seventy-seven horizons are recognized by two-letter combinations; intergrades are designated by parenthetically combining horizons. Each soil profile or pedounit is described individually by a sequence of horizon letter symbols, subscripted by their thickness. These are followed by letter combinations defining the parent materials. Each formula thus characterizes a group of soils having the same horizon sequence. Individual members of the groups are given local place names. Groups are arranged into classes which may be subdivided into subclasses based on the prominence of two or more horizons. Names are given to the classes, and binomial names are constructed from the combination of the class name followed by the series or member name.

Such a system can handle intergrades, but it does not offer either a philosophical or mechanical advance beyond classifications currently in use in North America or internationally which also recognize intergrades. These and other classifications are discussed briefly in Chapter 7.

Horizon names and symbols, together with both their traditional and 7th Approximation equivalents, and their limiting characteristics follow Chapter 5. Chapter 6 treats most of the soil classes, describing their general characteristics, morphology and genesis, principal variations, and use. Analytical data, including thin sections, are discussed where relevant. Four pages of color photographs of profiles of the principal classes add to the usefulness of this chapter.

The final chapter deals with relationships between allied classes and a number of factors discussed in the first chapters. A glossary follows this chapter, but unfortunately the terms appearing in it are not so designated at their first appearance in the text. The definitions appear to be entirely those of the author. Although there are some glaring omissions in the references, they are, on the whole, geographically representative through 1968.

It is unlikely that this book will find wide acceptance as an undergraduate teaching aid in the United States. Its greatest utility will be in graduate courses concerned with soil classification and genesis.

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Erratum

In *The Noble Limestone Member (Conemaugh Group, Pennsylvanian): new occurrences in Noble and Guernsey Counties, Ohio,* by James L. Murphy (v. 73, no. 1), incorrect indentation in the measured stratigraphic section (p. 44) has created some confusion. The two covered intervals should not be subsumed under the formal rock-stratigraphic units of the Ames Limestone Member and the Noble Limestone Member; nor should the 5′3″ and 6′9″ clay shale units be included in the Ames Limestone Member, the base of which occurs at the base of the 4″ fossiliferous clay shale unit. Similarly, the 2′3″ clay shale unit should not be considered part of the Ewing Limestone Member.