BOOK REVIEWS

Descriptive Legend of the 1:1,000,000 Soil Map of France (Notice explicative de la carte pédologique de la France au millième)


This booklet and its companion piece, the new soil map of France, together represent more than 30 years of research by French pedologists, who have built well on the foundation laid by their predecessors. Among these predecessors was V. Agafonoff, author of the first soil map of France (1936) who was embarrassed to report that the climatic zonality of soil regions in Russia was not nearly so apparent in France. J. Dupuis and his co-workers fully appreciate the complicated interplay of factors of soil formation in France that has resulted in her unique intricate soil pattern. With the aid of 20 scaled soil profile diagrams, the author describes succinctly the soils listed in the 46 soil associations of the map legend: Podzols and Podzolic soils (Spodosols), Sols Lessivés and Sols Bruns Lessivés (Gray-Brown Podzolics; Hapluudalfs), Sols Bruns Acides (Acid Brown Forest soils; Dystochrepts), Sols Bruns Eutrophes (Brown Forest Soils; Hapludolls), Sols Bruns Calcaires and Rendinas, both gray and red (Rendolls), Red and Brown Mediterranean soils (Rhodustalfs), Climatic and Erosive Rankers (Lithic Dystochrepts and Cryochrepts), Peats and Mucks (Histosols), Alluvial soils (Fluvients, Aquents), soils of marine sediments (sacric Aquents), Dune soils (Psamment), Lithosols and various associations of these, with hydro-morphic and saline phases. (The terms in parentheses above are from the new USA Classification have been supplied by the reviewer, using his best judgment.) Shattering of bedrock in Rendzina profiles is ascribed to periglacial frost action.—FRANCIS D. HOLE, Soils Dept., University of Wisconsin, Madison.

The Encyclopedia of Geomorphology


This is Vol. III in the Reinhold Encyclopedia of Earth Sciences Series. International in scope, the book is described by the publisher as the first alphabetic, encyclopedic treatment of the science of geomorphology—the study of the landscape and the geologic forces that produce it. While the book contains numerous definitions, it is far more than just a glossary. There are actually 410 articles prepared by 150 authors which give a comprehensive treatment of terms and topics. Each of these articles includes a list of literature references.

The book includes an extensive cross-reference system which has five components that (i) refer the reader to related disciplines in another volume; (ii) from the alphabetical listing to a specific article; (iii) from the body of an article to a subject taken up in detail elsewhere in the volume; (iv) to related articles; and (v) to literature references. An extensive subject index is also included, along with a large number of photographs, diagrams, and tables. Many of the units of measurement appear to be in metric units and in a number of cases the conversion to English units is included.

Because of the high cost, this volume will likely be purchased by libraries only, but it should have great value as a reference text. The editor and contributors should be congratulated for their efforts on this monumental task.—RCD.

L'Évolution des Sol (Soil Genesis)

By Philippe Duchaufour. Published in French by Masson, Paris, 1968. 94 p. 8 figures. Paper bound. 15F

This book complements the "Précis de Pédologie" (1965) by the same author. It sums up in a clear and logical manner current concepts of pedogenesis, with emphasis on chemical, mineralogical and ecological aspects. Following each of the fourteen chapters is a brief bibliography of international scope, but with an abundance of French references. Eight figures illustrate chemical and morphological relationships in soils. The text reflects the elements of the French soil classification: (1) degree of evolution of soils, (2) processes of alteration in soils, (3) types of humus in soils, and (4) influence of local (intrazonal) conditions on soil genesis. The book is divided into two parts: (1) Genesis of biochemical equilibria (transformation and complexing of mineral and organic colloids, ionic equilibria and biocycling); (2) Major processes of soil formation (as influenced by organic matter at various levels of saturation, by climate, by hydromorphism and by sodium). This publication will prove valuable to pedologists who are out of touch with the French pedologic literature and who wish a concise explanation of such terms as pseudogley, brunification and rubefaction. In any case Professor Duchaufour has presented us with a work showing the polish that we have come to expect of French pedologists.—F. D. HOLE, Dept. of Soil Science, The University of Wisconsin, Madison.