Several authors raise interesting and confounding issues about effective public-policy determination in a society with deeply ingrained democratic traditions that support the rights of the individual. Rational planning for the long-run national welfare is sometimes unattainable simply because collective interest does not always prevail over individual desire and interest. As Hector Macpherson observes in chapter 11, "Few issues divide farmers and ranchers more sharply than do attitudes on governmental intervention in the land market. Many equate planning and zoning with Communism and antiChrist. A minority at the other extreme argues that the world will eventually starve unless the United States locks up every last acre of potential farmland."

Sampson addresses the ethical dimension of farmland protection in chapter 7. This section is a lineal descendent of the almost poetical final chapter of Aldo Leopold's famous "A Sand County Almanac, and Sketches Here and There" (New York: Oxford University Press, 1949). Leopold and Sampson agree that there is great fundamental truth that in the final analysis effective conservation and landuse planning are more a matter of ethics than of economics.

The final essay deals with the European experience with farmland protection. The chapter is short, only six pages, but it is the only section of the book to examine the problem of farmland and food production outside the American situation. I would have preferred a broad examination of the American cropland issue as perceived in the context of a rapidly shrinking "one world" with an accelerating population explosion. American food surplus in the current period of fortunately endowed crop seasons leaves little room for complacency, and there is the dreadful danger of focusing on farmland, food, and the future in a narrow, parochial perspective. Americans as a people must confront many questions if they are to achieve wise public policies for realistic land utilization in the decades ahead and for future generations. This little book performs a valuable service by marshaling a wealth of information and a wide spectrum of insight that will be helpful in the definition of these questions.—JOHN C. WEAVER

GEOGRAPHY AND SOIL PROPERTIES. By A. F. PITTY. xii and 287 pp.; maps, diagrs., bibliogr., index. New York and London: Methuen & Co., 1979. $24.95 (hardbound); $11.95 (softbound). 9 × 6 inches.

During the past fifteen years several books on pedology have been written for nonagricultural audiences and focused primarily on the geography of soil. This volume, written by a geographer, is a rigorous introduction to pedology, despite the title and an initial, palliative chapter on "geography and soils." Soil types are only outlined (after a mixed terminology) in an appendix, and there is no distribution map. But the book contains much that geomorphologists and biogeographers should know.

The first substantive chapter deals with the mineral fraction of the soil and derives its unique value from an up-to-date and comprehensive treatment of clay minerals. The unit on soil organic matter focuses on biochemical compounds and humification and provides considerable insight to processes that are generally glossed over. The next chapter makes accessible a little-known range of information and sources on soil structure, porosity, moisture, and

microclimate. The subsequent discussion of chemical properties includes useful data on oxidation-reduction processes, on the mobilization of iron, aluminum, and silica, on the processes involving potassium, calcium, magnesium, nitrogen, phosphorus, and sulfur, and on the mobility and the adsorption of micronutrients and soluble salts. This chapter relieves the need to consult agriculturally oriented texts on the basic processes associated with soil nutrients. The final chapters present properties such as bulk density, soil strength, swelling and shrinkage, compaction, induration, and soil color—concepts with which too few geomorphologists are familiar. Surprisingly in view of the author's geomorphological avocation, interlinkages with that subdiscipline are almost ignored.

This book is neither particularly attractive nor well written, being too terse, often disjointed, and including nothing but highly technical diagrams and maps, unrelieved by any visual models. Because of its rigor, however, the book does fill a real need and will hopefully be used as basic reference for intermediate-level courses in physical geography and biogeography. Students aspiring to work in environmental management should consult the book frequently.—KARL W. BUTZER

BIOGEOGRAPHY. By E. C. PIELOU. ii and 351 pp.; maps, diagrs., bibliogr., indexes. New York: John Wiley & Sons, 1979. $21.50. 9¼ × 6¼ inches.

Among biogeographical textbooks this offering by E. C. Pielou is unique because of the juxtaposition of two rare qualities. One quality is subject matter that is fully geographical, and the other is an emphasis that is not solely on plants. Each of these qualities reflects the field of zoogeography whose practitioners have not customarily been the authors of biogeographical textbooks. Plants are not neglected in Pielou's book; the coverage is well balanced, which makes an enjoyable book and one that is biogeographical in the full sense.

The objective of the book is to cover the entire field of biogeography for advanced undergraduates and other persons with a similar level of understanding. By the term "biogeography" Pielou essentially means the geography of "living things," that is, the aggregates with emphasis on what most ecologists would label populations. Pielou admits that she is not an expert on all branches of the subject as she defines it, and she draws heavily and effectively on the research of other scholars. The result is a collection of more or less independent chapters, each dealing with an important biogeographical topic. Pielou provides the coverage required by her broad definition of biogeography, but in a somewhat disjointed fashion.

The early chapters present the broad scale, while the later ones deal with topics that tend to be manifested at a local scale. Flora, fauna, and major classes of living things such as vertebrates and angiosperms are prominent elements in the early chapters. Later, genera and species are the dominant focuses of the discussion. No distinct organizing principle emerged from a careful consideration of the sequence of chapters. Because of this feature, the book may properly be called "topics in biogeography." The level of discussion is similar to that in most biogeographical textbooks. The treatment of geography is ef-