Already the *Atlas of Britain* has a historical quality. It presents Great Britain in the late 1950's. Works have closed, and new works have opened; the more precise and detailed the atlas, the more quickly it is dated. That is a risk the publishers take, but for the next decade or two this atlas will be the standard work on the distribution of economic activity in Britain.

NORMAN J. G. POUNDS
Department of Geography, Indiana University

Science for the Layman

A Short History of Biology. Isaac Asimov. Published for the American Museum of Natural History by Natural History Press (Doubleday), Garden City, N.Y., 1964. x + 182 pp. Illus. Paper, $1.25.

This little volume is packed with much material, especially in its latter half which treats modern aspects. It is written in Asimov's usual lucid style, with pinpoint accuracy, and covers the entire historical span of the evolution of the biological sciences from Alcmaeon and Hippocrates to Urey and Miller's experiment on amino acid synthesis in vitro and the roles of DNA and RNA in the cell. For obvious reasons of professional bias Asimov tends toward favoring progress in his own field of biochemistry and offers the reader the full and exciting story of such peak achievements as the discovery of enzymes, antibodies, protein structure, genes, nucleic acids, intermediary metabolism, and similar topics. Other phases of biology do not fare as well, plant and animal physiology for example. An author must, of course, choose his own points of stress. The outcome here justifies Asimov's choice, and the reader gains a good view of the great drama of the phases selected.

More serious is the criticism that can justly be raised with respect to the author's entire approach to Greek and medieval biology and medicine, however brief its treatment in the text. In that section one finds the usual stereotyping of a great era of inspired and laborious pioneering through brute hindsight evaluation and superficialities, the end result of having used standards of judgment which by no stretch of the imagination can be justified either historically or anthropologically. For example, no attempt is made to evaluate Galen's actual work, but his religious views are dragged in as though they influenced his skill as an experimentalist or the questions that he posed and the answers he could possibly obtain concerning the function of blood or nerves. The reader thus fails to perceive the great panorama of man's painful quest for science in that era, so devilishly beset by pitfalls within his conceptions and the prevailing level of knowledge. There is a tendency to blame individual views rather than the actual obstacles and intrinsic obscurities, which man ultimately defeats only to be faced with new challenges. Also, the vitalistic-mechanistic class battle is, in my opinion, greatly overplayed since the presumed combatants more often than not struggled with real biological problems rather than with philosophic ghosts.

Fortunately, these two points deal with only a small part of the book. In its totality it is a stimulating, readable, and informative account which fully lives up to the promise of its title.

MARK GRAUBARD
Natural Science, Interdisciplinary Studies, University of Minnesota

Soviet Geography

Geography of the U.S.S.R. Paul E. Lydolph. Wiley, New York, 1964. xii + 451 pp. Illus. $10.95.

Until very recently, those who teach the geography of the Soviet Union in the colleges of the United States have been seriously handicapped by the lack of English-language materials on that area. Fortunately the situation is improving—at least in terms of the quantity of material available. In 1961, the second edition of Georges Jorre's *The Soviet Union* (Longmans) appeared, to be followed by *A Geography of the U.S.S.R.: The Background to a Planned Economy* (Butterworths) by J. P. Cole and F. C. German. In the following year, the late George Cressey's *Soviet Potentials: A Geographic Appraisal* (Syracuse University Press) was published. These three texts, together with a growing volume of journal articles on various facets of Soviet geographic development, afford a basis for intelligent classroom use.

The most recent publication, by Paul Lydolph (chairman of the Department of Geography, University of Wisconsin, Milwaukee), should, if the lecture course is given a regional emphasis, prove to be the most useful elementary text available. It is divided into two main sections. Part 1, The Regions of the U.S.S.R., constitutes about two-thirds of the text; the remaining third, part 2, is entitled Topical Analysis of Cultural and Economic Phenomena. This organization is the reverse of standard procedure, the author's preference presumably having been determined by his successful experience in teaching. The author's justification for the organization as stated in the preface—"Analysis of interworkings of complexes of phenomena in specific localities attached to place names are more real and meaningful to the beginning student than are discussions of social and economic abstractions"—may be controverted, however. At any rate, Lydolph's topical section is not especially abstract, since it includes an assembly of a wide array of descriptive material drawn from a number of good English-language sources.

However, the general usefulness of the text in a regional lecture course should not conceal the basic methodologic weakness of the book's regional treatment. Lydolph has devised his own scheme of regionalization, rather than relying on Soviet practice. Although Soviet economic regionalization is frequently unsatisfactory because of boundary delineations, it is nevertheless based on subdivisions like the oblast and krai for which some statistical data are available in official Soviet handbooks and annuals. Lydolph, in an attempt to improve on the delineation of regions, has chosen to use the following as his criteria: (i) reasonably well-defined zones of agricultural production which are closely related to the natural environment, (ii) recognizable industrial nodal areas which lie within and transgress the boundaries of the agricultural regions, and (iii) traditional areas whose names have a real but unclearly defined significance in the minds of the Russian people. The end result is, in some instances, almost identical with Soviet practice or, in others, even more fantastic!

One wonders by what stretch of the imagination it is an improvement on Soviet practice to include within one large region the Vasyugan Swamp, the West Siberian Steppe, the Kuzbass industrial node, and the semiarid steppes