tary astronomy (covering the planets, the sun, the moon, comets, asteroids, meteors, stars, and galaxies) and the structure of rockets to be launched into space. The simple approach to a quantitative concept of the vastness of the universe is of particular note. The entire book is simple, yet informative.

Frontiers of Science is truly a book about modern scientific development. The description of the use of the evaporograph as a means of taking pictures in the dark and the study of geobotany will be of interest to the scientifically minded person. The individual who is interested only in the sociological aspects of science will appreciate the chapters devoted to the theories of invention and diffusion in the discussion of human geography, the use of drugs in treating mental illness, and the treatment of organic diseases. In chapter 16 there is an excellent elementary discussion on the glow of the firefly.

It is difficult to describe these three books adequately in a short review. They present truth as it exists and should stimulate young people to study science. They all help to show the reader that the curtain of ignorance is being pushed ever farther open.

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American Agriculture: Geography, Resources, and Conservation. Edward Higbee. Wiley, New York; Chapman & Hall, London, 1958. x + 339 pp. Illus. $7.95.

This is a general book on the geography of American agriculture. Following three introductory chapters on broad land resources, climate, and soil, the author discusses the present agricultural patterns in the western states (13 chapters) and in the eastern states (11 chapters). The selected regions are discussed mainly in terms of the dominant physical features and present trends of land use. Maps and charts are used freely to illustrate the major regions. Diagrams of about 35 selected farms and several of communities, forest areas, and subregions are used to illustrate typical situations. Most of these are excellent but some of the large and complex ones of broad regions have been reduced too much.

In the regional chapters the author uses his case farms and such discussions as he feels will be helpful—sometimes he emphasizes soils, sometimes climate, and so on, depending on the area. Frequently he refers to significant historical, economic, and technological factors, and the effects of the agricultural programs for price supports, soil conservation, and the like. Since he does not do this consistently throughout, the basis for his selection of factors for discussion is not clear.

Orderly economic analyses of his sample farms would have helped the reader get a clear idea of the operating budgets of these farms.

Apparently the book is intended as a text for geography students who have had little or no previous training in agricultural science. It will help these students to get a conception of the variability and complexity of American agriculture and some general notion of the potentialities of our rural lands and of the problems of their use.

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Oil: From Prospect to Pipeline. Robert R. Wheeler and Maurine Whited. Gulf Publishing Company, Houston, 1958. ix + 115 pp. Illus. $2.95.

This very concise account of oil operations is intended for laymen and oil company personnel. Such a book has long been needed by the rather departmentalized professional and clerical staff of the oil companies and by countless mineral owners and investors in the oil business. It should be of great value to students contemplating a career in petroleum geology and other fields of oil technology.

In a clear and often entertaining fashion the authors have covered the technical, economic, legislative, and competitive aspects of finding and producing oil, using nontechnical language easily understood by laymen. A description of the first six chapters of the book follows:

"Oil is how you find it" considers the environment of oil accumulation and the techniques of evaluating prospects and exploring for production, all of which are within the province of the petroleum geologist.

"Drilling for oil" discusses the roles of the geologist and engineer in supervising drilling and testing operations.

"Getting the oil to market" discusses reservoir mechanics and the problems of securing oil production from the well bore.

"Who owns the oil" is a fascinating excursion into the legal problems of ownership, conservation, and legislation designed to promote the equitable sharing of this valuable natural resource.

"What's it worth" is an analysis of supply and demand, cost and profit, and unique tax legislation designed to encourage oil exploration—in general, a study of the economics of the domestic oil business.

"Pride, participate or promote" is an often amusing effort to compare the major and independent oil companies with regard to their philosophies of conducting oil operations, which run the gamut from pure prejudice to the most refined technology.

Following the main text of the book is chapter 7, an abridged oil dictionary designed to aid the secretarial-clerical staffs of the oil companies and conveying a good deal of the colorful language of the "oil patch."

The dictionary is followed by abbreviations used in oil reports, a tabulation of regional stratigraphic terminology for the important oil-producing regions in the United States, typical legal forms of mineral conveyance, and other useful tables concerning taxable income and fractional production equivalents.

Even to the experienced oil operator, this book will be of considerable interest and value because, as noted earlier, there is very little overlap between the professional departments in the oil companies. While it will not make experts of the geologists, geophysicists, reservoir engineers, landmen, and accountants in fields other than their own, it will give them some insight into and appreciation of the jobs of others.

Although most of the chapters could have been treated in considerably more detail, it was quite evidently the authors' object to treat each subject as concisely and consistently as possible. The simplicity and clarity of statement that characterize this presentation undoubtedly derive from the facts that Wheeler and his secretary, Maurine Whited, manage the operations of the Pyramid Oil & Gas Corp., and that the idea of the book was to help simplify each phase of oil operations for their directors and coinvestors.

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The Chemical Industry during the Nineteenth Century. A study of the economic aspects of applied chemistry in Europe and North America. L. F. Haber. Clarendon Press, Oxford, England, 1958 (order from Oxford University Press, New York). viii + 292 pp. $7.20.

This book defines its object as the filling of a gap in economic history, a gap that encompasses the chemical industry during its period of greatest growth. Without exhausting the subject, Haber accomplishes remarkably well the organization of this complex and obscure subject into a coherent and readable narrative. He proceeds through the jungle of sprouting and decaying business structures of the late 19th-century chemical industry with a facility which has