value and could be made available for nutrition of nonruminants and human beings by removal or inactivation of toxic gossypol.

In my opinion the book is a "must" for every scientific and technical library and will serve for a good many years as a competent guide in an extremely important and rapidly progressing field in which scientists and technologists, agriculturists and industrialists, and economists and nutritionists work hand in hand for the welfare of mankind.

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Guide to Russian Medical Literature. Scott Adams and Frank B. Rogers, Eds. National Library of Medicine, Washington, D.C., 1958 (order from Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.). iv + 90 pp. $0.40.

The ascent of Sputnik in the fall of 1957 gave rise to a sudden realization that we knew little more about Soviet science than we did about what goes on in the minds of the leaders of the Soviet Union. However, in scientific circles at least, this awareness predated Sputnik by a number of years. As far back as 1949 or 1950, the British Department of Scientific and Industrial Research had begun issuing its *Translated Contents List of Russian Periodicals* to meet a need created by a 1947 policy change under which scientific publications emanating from the Soviet Union appeared in the Russian language only; the American Mathematical Society had undertaken, around the same time, a series of translations of basic Russian papers in mathematics, and various other groups in this country had begun publishing cover-to-cover translations of Soviet journals in physics and chemistry.

Medicine was a rather late entry in the Russian translation field. Major activity in translating in the field of medicine did not begin until 1956, when the U.S. Senate Appropriations Committee made available funds to the National Institutes of Health for the organization of a Soviet information program. *Guide to Russian Medical Literature* is an outgrowth of this program.

There is an obvious need for guides to Soviet scientific literature among scholars and librarians, and *Guide to Russian Medical Literature* serves very nicely in its field, covering both Western-language and Russian-language sources of Soviet medical information, sources of translation, and methods of procurement of Russian medical publications and listing basic Soviet books and journals in the field. The book is keyed to the practical question of "how to get it" and does a good job of providing the answer.

There is a hint of special pleading in some of the passages having to do with present translation programs in the United States, and one could argue with some of the points raised to justify these programs. However, neither the justifications nor any arguments against them seem necessary. Any effort to expand the availability of a relatively inaccessible body of knowledge is bound to be a step in the right direction.

There are two rather unfortunate chapters at the end of the book which are translations of Russian articles on the development of Russian medical libraries and Russian medical publishing. Both chapters exhibit the Soviet preoccupation with numbers and the Soviet willingness to stretch the truth and twist it a little in order to make a point. These two chapters mix a good deal of misguidance with the guidance they offer. The book would not have suffered and probably would have benefited from their omission.

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Quantum Mechanics of One- and Two-Electron Atoms. Hans A. Bethe and Edwin E. Salpeter. Springer, Berlin; Academic Press, New York, 1957. viii + 369 pp. Illus. $10.

It has been said that when a physics book first appears one cannot trust its equations and that by the time it has been reprinted the text is out-of-date. The present volume—an exact reproduction, with the omission of Dumond and Cohen's article, of volume 35 of the *Encyclopedia of Physics,* edited by S. Flügge—steers a happy course between these two accusations.

First of all, while the *Encyclopedia* article itself is partially based upon Bethe's article of the same title in the Geiger and Scheel *Handbuch* of 1933, the text of the joint Bethe-Salpeter work has very definitely been brought up-to-date. Second, the present book (which sells at 2.7 cents per page) includes nine pages of addenda and errata (mainly updating the *Encyclopedia* article to mid-1957), a preface, and two indexes, in addition to the article from the *Encyclopedia* (which sells at 5.3 cents per page).

The aim of this book is twofold. First, as a reference work, it summarizes the calculations that have been performed on hydrogen-like and helium-like atoms and compares them with results obtained by experiment. Second, it is also a practical text for the study of applied quantum mechanics, especially in view of the vast array of generally useful mathematical tricks and approximation techniques which are included. Only the elements of quantum theory are presupposed.

The authors begin with a nonrelativistic treatment of the free hydrogen atom, including a detailed solution (in 23 pages) of the relevant Schrödinger equation in spherical coordinates. There follow sections on the Dirac theory and on radiative and other relativistic corrections for the free hydrogen atom. In the next part, the free helium atom is handled both nonrelativistically and relativistically. In part 3 the influence of external fields is described in sections on the Zeeman effect and the Stark effect. The final part considers interactions with radiation—the discrete spectrum, the photoeffect, and bremsstrahlung.

The book is definitely pedestrian when it comes to field theory. No formal derivations of quantum electrodynamics are given, but specific application to atomic systems of general field-theoretic results is described in detail.

Despite its pedigree, this volume contains some typographical errors. I noted about five such errors, all of them obvious. For example, note 3 on page 354 should read 0.124 and 0.160 rather than 1.24 and 1.60.

Nevertheless, this book is and will remain the standard treatment of the one- and two-electron atoms. It is an orderly, integrated summary of all that has been done, rendered in the simplest way compatible with the calculations.

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The Sloane Herbarium. An annotated list of the *Horti Sicci* composing it; with biographical accounts of the principal contributors. Based on records compiled by the late James Britten, with an introduction by Spencer Savage. Revised and edited by J. E. Dandy. British Museum (Natural History), London, 1958. 246 pp. Illus. + plates. £7 7s.

The remarkable herbarium assembled by Hans Sloane during the latter part of the 17th and first part of the 18th centuries (now preserved in the department of botany of the British Museum of Natural History) contains numerous valuable type specimens and is a virtual "mine" of botanical and horticultural historical information. That the abundance of source material present in this collection has not been appreciated or adequately drawn upon by those concerned with the natural history of the period has been amply demonstrated by the authors of the volume under review.