

inches, punched for a 3-ring binder, will certainly be hailed by the users and bemoaned by librarians. A more permanent binding than this loose-leaf notebook will have to be used on library copies, which are sure to see heavy use.

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Hackfruchtkrankheiten und Nematodenforschung. Festschrift anlässlich der Einweihung des Neubaus für das Institut für Hackfruchtkrankheiten und Nematodenforschung der Biologischen Bundesanstalt für Land- und Forstwirtschaft in Münster (Westf.). (*Mitteilungen aus der Biologischen Bundesanstalt für Land- und Forstwirtschaft Berlin-Dahlem*, vol. 99). Parey, Berlin, 1960. 119 pp. DM. 13.50.

The dedication of a new building, like the baptism of a child, is an act of faith. It is an assertion that the purposes for which the building was erected will remain valid for years to come. It is also, like the religious ceremony, a celebration of the maturity of the parents. This *Festschrift* marks the dedication of a new building devoted to research on the diseases of truck farm crops and on the nematodes that are parasitic on plants. Three technical papers on nematodes and four on viruses report current research at the institute and are of interest to specialists in the field. Of more general interest is the brief history of the institute and the excellent review of phytonematology in Germany.

Although soil-inhabiting nematodes have been known for many years, they have never been a part of the mainstream of biological research. Our scrutiny of the various groups of organisms about us has been strongly influenced by their size, brilliant coloration, or direct importance to man, either medically or agriculturally. The recent upsurge of work on the microscopic nematodes inhabiting soil and plants is a reminder that we still have an imperfect view of life on our planet. During the last two decades the number of workers in this branch of nematology has increased at least tenfold, but the field is still very small. The first German station for work in phytopathology was erected during the late

19th century to combat calamitous losses caused by nematodes in sugar beet crops. Little progress in understanding other plant diseases caused by nematodes was made until quite recently, when nematodes have been implicated in many plant diseases, both as direct pathological agents and as parts of complexes. The dedication of an institute having adequate space and facilities for research in this area represents an important step forward for German agriculture. We are happy to welcome this newest addition to research on nematology and look forward to the fulfillment of the promise of its new building.

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Physical Sciences and Engineering

Crystal Structure Analysis. Martin J. Buerger. Wiley, New York, 1960. 668 pp. Illus. \$18.50.

Imperfections in Crystals. H. G. Van Bueren. North-Holland, Amsterdam; Interscience, New York, 1960. 676 pp. Illus. \$16.75.

Here are two valuable additions to the summarizing literature of solid-state science. The two have different goals, but both will remain prominent sources of knowledge for a decade or more.

Martin Buerger, in addition to being an outstanding research investigator, is a pre-eminent teacher. His book is intended primarily to help the serious advanced student who wants to master the field of x-ray crystallography along his way. The volume grew out of nearly 15 years of experience in the lecture room and the teaching laboratory, and it represents a basic summary of generally valuable material. His recent book, *Vector Space and Its Application in Crystal Structure Investigation* (Wiley, New York, 1959) is in the nature of a supplement on more advanced topics.

Crystal Structure Analysis deals thoroughly and logically in a step-by-step way with each of the topics that the would-be professional crystallographer must have at his fingertips. The diffraction relations are treated both qualitatively and quantitatively. The ways for selecting and preparing specimens are described in detail. The various meth-

ods for measuring intensity and the factors that affect intensities are discussed thoroughly. The unit cell and its variations are described. The concept of the structure factor is developed, and, for illustrative purposes, the principles are applied to several simple crystal structures. The topics of Fourier synthesis, reciprocal lattice theory, and all of the implications of symmetry are treated in a direct and pragmatic way. The methods of determining the phases of Fourier coefficients, in both general and special cases, are reviewed; the results are applied to some of the standard problems.

The text is very clearly and painstakingly written, and it is profusely illustrated with clear figures and excellent tables. I do not believe the book has a rival, at least in the English language. It should become an indispensable aid in teaching basic x-ray crystallography wherever English is used.

Van Bueren's book on crystal imperfections represents the first really comprehensive attempt to discuss in detail the broad sweep of research on imperfections in crystals, particularly of the research since 1945. Other books, more specialized or otherwise, which are more critically written, may come in the future, but this book has all of the principal ideas laid forth in a very direct and readable manner. The author, a member of the Philips Research Laboratories (Eindhoven, Netherlands), obviously had the advantage of discussing the text with a substantial number of informed colleagues.

The book begins with a general account of the perfect crystal and the types of imperfections which it can sustain. The importance of temperature and the accidents of growth and chemical composition are described.

The second part deals with imperfections in metals, giving an account of the causes and effects of plastic deformation and of the importance of foreign atoms, diffusion, and the myriad of matters of interest in modern metal physics. It should be mentioned that almost two-thirds of the volume is concerned with the properties of metals. Part 3 deals with the salts and monatomic semiconductors, such as silicon and germanium. It uses the background of concepts introduced in discussing the metals, emphasizing the characteristic similarities and differences between metals and nonmetals.

It should be emphasized that the book is essentially qualitative or semi-quantitative in nature in the sense that much of the material is treated in a descriptive way. On the other hand, the most basic equations which are important in the theory of imperfections are presented and discussed in a readable way. If the book can be said to have an imperfection of its own, it is that the writer remains somewhat impartial in discussing the various views held by his colleagues throughout the world. On the whole, he states their cases, even when their viewpoints differ; he is willing to remain a somewhat unimpassioned chronicler of the facts as he sees them.

The book should do a great deal to make the subject matter available in an understandable way to those outside the family of solid-state physicists and chemists responsible for its development. For this reason, it should have very general value.

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The Theory of Space, Time, and Gravitation. Vladimir Fock. Translated from the Russian by N. Kemmer. Pergamon, New York, 1959 (Moscow, 1955). xviii + 411 pp. \$15.

Although his book is intended to be a text, academician Vladimir Fock's approach to Einstein's theory of gravitation is sufficiently unconventional that the translation affords English and American readers a welcome opportunity to examine the ideas as presented by the author himself. Besides, the book is written so clearly and lucidly that it is a pleasure to read, though perhaps, in view of the price, not a pleasure to buy.

To the extent that Fock's book covers standard topics in special and in general relativity, there is little need for a detailed review. Very naturally, the contributions by Soviet physicists and mathematicians receive more attention than works written in the West; there is, however, no tendency to claim credit that is not well documented.

In his introduction, Fock presents his views about the philosophical aspects of the special and the general theory of relativity. Whereas he agrees that the special theory of relativity is indeed "relativistic"—the geometry of the space-time manifold is homogeneous and isotropic—he asserts that in Ein-

stein's theory of gravitation (normally called the general theory of relativity) the homogeneity of space-time is reduced; accordingly, Fock calls the latter theory the theory of gravitation. To me, Fock's attitude appears questionable. The introduction of a Riemannian metric into a co-ordinated space-time manifold introduces no more anisotropy and inhomogeneity into that space than does, for example, the introduction of an electromagnetic field into a Minkowski space. Whereas the basic geometry of the special theory of relativity contains a flat metric, which itself is not a physical field and does not obey dynamical laws, the metric tensor of the general theory of relativity is a physical field, determined by the dynamical laws of physics, and to be viewed as part of a particular physical situation. The properties of space-time that are not subject to dynamical laws but form, as it were, the absolute substratum, or stage, on which the physical events take place, are purely topological. Einstein conceded the possibility that in the future even these remaining "given" properties might be eliminated or reduced.

The significance of the requirement of general covariance, that is to say the equivalence of all curvilinear co-ordinate systems, appears to me to lie in the "physicalization" of the metric. Admittedly, the physical principle of equivalence is frequently overstated or misstated; its experimental foundations are somewhat slender and at present subject to critical re-examination.

Quite properly, Fock calls attention to the importance of boundary conditions in addition to the local differential equations governing the dynamics of a physical field. He suggests that in all physically interesting cases the metric turns flat at very large distances, a fact that does not follow from the field equations (the local laws) alone. He appears to conclude that Einstein's theory of gravitation should be considered, from the global point of view, as another Lorentz-covariant field theory, and he has worked out a scheme that reduces, by means of co-ordinate conditions, the invariance group of the theory to the Lorentz group. Very recent work appears to indicate that this point of view cannot be maintained as a matter of mathematical fact, though it is perhaps more cautious to consider the question as open, for the time being. That actual gravitational systems occurring in nature look as if they satisfied the requirement of Lorentz in-

variance only might well be considered a disturbing fact that tends to throw some doubt on the eventual validity of the invariance postulates of the general theory of relativity. But then, the properties of the cosmos at large even cast some doubt on the validity of the Lorentz group as well. Very obviously, the fundamental properties of space and time, as they relate to very large, and to very small, dimensions, are not yet entirely understood.

All in all, Fock's book, written by one of the great living theoretical physicists, is a thought-provoking work that will be of interest both to the specialist and to the general scientist interested in the philosophical foundations of contemporary theoretical physics.

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Cosmic Radio Waves. I. S. Shklovsky. Translated by Richard B. Rodman and Carlos M. Varsavsky. Harvard University Press, Cambridge, Mass., 1960. xvi + 444 pp. Illus. \$12.50.

It is Shklovsky's position that radio astronomy cannot be discussed apart from optical astronomy and the subject of cosmic rays. In texts on radio astronomy, this unified viewpoint is quite unusual but very important. It makes the discussions much more valuable, and leaves the reader with a well-integrated picture of the processes in our galaxy which lead to the emission of radio waves, cosmic rays, and light.

After a concise technical introduction to the special problems of the detectors used in radio astronomy—receivers and antennas—Shklovsky reviews the basic observational results on galactic radio waves. It is a most valuable review, and quite up to date, even though the Russian edition was first published in 1956. This English edition incorporates material up to and including the radio astronomy symposium held in Paris in 1958; in addition, it has an appendix which records progress in the field up to April 1960.

Much of the discussion refers to subjects to which the author himself has contributed very greatly, notably synchrotron emission from electrons moving with relativistic energies in magnetic fields and the problem of the generation of cosmic rays in supernovae. The mechanism for emitting

radio waves nonthermally is discussed in great detail, as well as the mechanism for emitting the 21-cm hydrogen line. This sets the stage for a discussion of the structure of our galaxy and its radio spectrum. Next, the special problems associated with supernovae are described, in particular the radio emission of the Crab Nebula and the relation to the origin of cosmic rays. In the final chapter extragalactic radio sources are described.

The translation is smooth and reads easily. A detailed index has been added. The book could have been improved by better reproduction of the photographs.

The emphasis of this volume is definitely on galactic and extra-galactic radio emission, and as a result the radio astronomical work relating to the sun and the planets is not covered. However, in all other respects the present volume sets a landmark in the discussion of galactic radio astronomy. It should be useful, as a textbook for courses in astrophysics, specifically radio astronomy, but it is also written so that the reader with a fairly general scientific background can acquire, quite easily, an intimate knowledge of the present state of research in radio astronomy.

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International Education in Physics.

Proceedings of the International Conference on Physics Education. UNESCO House, Paris, 18 July to 4 August 1960. Sanborn C. Brown and Norman Clarke, Eds. Technology Press and Wiley, New York, 1961. 191 pp. \$4.50.

In the summer of 1960, 86 physicists met in Paris to confer on physics education. The conference was sponsored by the International Union of Pure and Applied Physics. Immediately after the conference, its chairman, Sanborn C. Brown (Massachusetts Institute of Technology), and its secretary, Norman Clarke (the Institute of Physics and the Physical Society of the United Kingdom), retired to a small English inn to compile the proceedings.

Perhaps the major value of any such conference is to its participants. However, this speedy publication of the proceedings guarantees that the Paris conference will have a significant impact on international physics education.

The book begins with background information on the conference and a list of the 86 delegates representing 32 countries. It then lists the resolutions adopted unanimously by the conference. The conference affirmed the importance of physics "as an essential part of the intellectual life of man at the present day," and recommended that all children should be given some formal education in physics. It recommended that support be given to many attempts to improve physics education and that IUPAP accept responsibility for organizing such support. It recognized that physics education is dependent upon good physics teachers and recommended some measures to increase the supply of teachers. The final resolution raises the hopes of those who were not present by proposing that more such conferences be held from time to time, each to discuss certain aspects of the problems of physics education.

The major part of the proceedings consists of a report on the papers presented at the conference and the ensuing discussion. There are chapters on physics as a part of general education, the roles of examinations and of laboratory work in physics education, selection of students, experimental programs in physics, curriculum content and presentation, training of teachers, problems in teaching physics to nonphysics students, the postgraduate and mathematical education of physicists, and the impact of professional physics organizations.

An American physicist will be surprised to discover how widespread are some of the problems that he considers peculiar to the United States. Even in Switzerland (where most high school physics teachers have the Ph.D. and receive high salaries), teachers are being wooed away from high school teaching into industrial or university careers. And in France, the physicists try to maintain the integrity of their service courses for nonphysicists, putting major emphasis on fundamental principles rather than on practical applications, but they worry about whether mathematicians teach enough mathematics appropriate for physics students. With all the similarities, however, there were many differences in perspective among the various delegates. Physicists concerned about educational problems are well-advised to study carefully the report of the Paris conference.

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Management Sciences, Models and Techniques. vol. 1 and vol. 2. C. West Churchman and Michel Verhulst, Eds. Pergamon, New York, 1960. xxix + 602 pp.; xiv + 511 pp. \$30.

Although mathematical analysis has long been applied to certain management problems, it is only since World War II that the systematic integration of scientific techniques into management problems has been a central theme in advanced business thinking. It is interesting just to browse through these volumes, which contain the proceedings of the sixth international meeting of the Institute of Management Sciences, and to note that scarcely any form of business activity has not been scrutinized, subject to optimization, suboptimization, analysis, synthesis, and otherwise put through the operations research wringer. Of course, this development is natural; in a world grown so complex, questions which require quantitative answers require quantitative analysis. But those of us with a touch of the romantic will suffer momentary regret that the daring entrepreneur is to be replaced by the unfailingly conservative computer.

It is not possible to comment on any sizable number of the papers presented, but I will try to mention some of the major trends in current management research, as evidenced by these reports. The greatest interest is presently being accorded to management gaming and business simulation. These are old and honorable aids of the military but new to management, and consequently they are under extensive and enthusiastic development.

Perhaps the most novel of the papers presented is one on psychoanalytic processes in management, relating individual management thought and behavior patterns to the business policies of several firms. This approach may well prove to be a major tool in the investigation of outstanding problems in decision theory. The problems themselves are illustrated by the perversely nonoptimal behavior of the subjects in an experimental investigation of non-zero-sum two-person games. Other studies include more conventional applications of operations research techniques, but the topics themselves suggest some of the fascination of management problems. These range from a study of the problems of a small farmer to the role of scientific management in promoting the growth of underdeveloped countries. Beside these, there

are others on applications of control theory, queuing theory, linear and non-linear programming, and inventory theory.

In summary, management science is still in a transient phase in which the profitable lines of investigation are not entirely distinguished from the unprofitable ones. This initial exuberance will pass in time, but one hopes that not too much time will be taken up with such meaningless questions (this one raised by a past president of TIMS) as whether management sciences are part of the natural or the social sciences.

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The Orion Book of the Sun. Étienne Lalou (translated from *Le Soleil*). 110 pp. **The Orion Book of Time.** François le Lionnais (translated from *Le Temps*). 110 pp. **The Orion Book of the Sky.** Jean-Claude Pecker (translated from *Le Ciel*). 113 pp. Orion Press, New York, 1960 (all translations by William D. O'Gorman, Jr.). Illus. \$6.95 each.

The magic borderland between the sciences and the visual arts has remained curiously unexploited. One would have thought that the growing tips of man's intellectual and artistic creativities would have fused more frequently. In spite of the publication in portfolios of several collections illustrating "science in art" and "art in science" as well as an embarrassment caused by the exploitation of Madison Avenue art in scientific advertising, all efforts seem to pale into rather unbeautiful science, or into rather unscientific art, when compared with this new series of books, published originally in French but now translated into English.

Each book takes its stated topic and discourses upon it with an unusually lively range of perspectives. The sun is seen in a child's painting, in pagan rites, classical learning, medieval miniatures, and glowing brass orreries, and in an architectonic solar furnace. Time takes its shape from fossils and allegory, sundials, delicately jeweled clockworks, and the rhythmic flapping of a bird's wings. We look at the sky through the eyes of aborigines and Egyptians, Christians and Moslems, contrasting the inner sight of Hieronymus Bosch and Joan Miro with the

gulping objectivity of Galileo and Mount Palomar.

For the scintillating beauty and brilliant quality of their color prints and line illustrations, these books raise the standards of the field by a whole order of magnitude. Nothing like them has been seen before, and the effect of the books, at least on this visual-thinking reviewer, has been so intense and traumatic that I must strongly recommend that all other scientists who are in the category that James Clerk Maxwell once described as "visible-image worshippers" obtain these books and repeat the experience for themselves.

The pictures are, after all, the main part of these books, and all else around them must seem relatively insignificant. It would be fine glory if the text of the book and its production, apart from the art work, were similarly praiseworthy. Alas, such is not the case. The original texts may have been good, in that poetic, philosophic, grand style of writing that is so peculiarly French. The English version, however, appears stilted and somewhat amateurish, replete with Gallicisms and unworthy to its purpose. A few direct errors of historic or scientific expertise also exist, and some of the illustrations seem to be wrongly described. The latter point is made much more difficult by the unscholarly method of citing only photographic credits and descriptive captions for these magnificent pictures; in many cases this makes it quite impossible to learn *exactly* where an illustration came from and what it represents.

Although in most features of design and production the book is impeccable, its format is slightly inconvenient; but this seems to be imposed by the size of the pictures and may be forgiven the editors. In all, the art work, especially that of the color photographs, is so magnificently reproduced that the faults of the texts, the shapes of the books, and the relatively high price can hardly matter. I hope that perhaps sometime in the future Orion Press can be prevailed upon to collect the most striking pictures and reproduce a big book full of them, perhaps with short captions instead of a text, and with a list of sources for those whose curiosity might tempt them to find out how so much beautiful art came out of and into science.

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Motion and Relativity (Polish Academy of Sciences, Physical Monographs). Leopold Infeld and Jerzy Pełnański. Pergamon, New York; Państwowe Wydawnictwo Naukowe, Warsaw, Poland, 1961. 229 pp. Illus. \$7.50.

The senior author of this monograph is Leopold Infeld, coauthor of the famous paper by A. Einstein, L. Infeld, and B. Hoffmann [*Annals of Mathematics* **39**, 65 (1938)], which heralded the modern theory of the ponderomotive laws in the general theory of relativity. For the nonspecialist it might be remarked that modern field theories, such as Maxwell's theory of the electromagnetic field, generally contain two entirely different kinds of dynamical laws, the field equations proper and the ponderomotive laws. The field equations proper describe the development of the field, both in terms of the distribution of its sources (such as the electric charges and currents) and in terms of its internal dynamics. The ponderomotive laws, or the equations of motion, delineate the forces that a particle experiences by being immersed in the field. Of all known field theories, the general theory of relativity alone establishes a logical interdependence of these two kinds of law, in that the field equations cannot be solved unless the sources of the field, constituting the ponderable matter, satisfy the equations of motion.

Because of the considerable complexity of the mathematics of general relativity, the pioneer paper by Einstein, Infeld, and Hoffmann involved such a body of arithmetic that the published version presented the formal work only in outline and referred the reader to a more extensive documentation deposited in the library of the Institute for Advanced Study (Princeton, New Jersey). Subsequent analysis of the underlying mathematical and physical concepts led to a gradual reduction in the amount of labor required and, with this simplification, to the possibility of penetrating more deeply. The present book gives a lucid review of the present stage of the theory of motion.

Some of the treatments given appear controversial, in particular the discussion of radiation in chapter 4. Nevertheless, this excellent presentation by acknowledged authorities will be of great value to all who work in the field.

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Industrial Research Laboratories of the United States. Publication No. 844. Compiled by John H. Gribbin and Sue Singer Krogfus. National Academy of Sciences—National Research Council, Washington, D.C., ed. 11, 1961. x + 698 pp. \$12.

A compilation listing 5420 nongovernmental laboratories devoted to fundamental and applied research. The information, gathered in late 1959 and early 1960, was verified between May and July 1960. Emphasis was placed on listing subsidiaries under parent firms. This edition includes a useful 20,000-entry name index of personnel. The entries, arranged alphabetically, supply the following information: mailing address; name of the president; research staff—name of the director (usually) and the number and type of staff employed; and research areas.

Viscoelastic Properties of Polymers. John D. Ferry. Wiley, New York, 1961. xx + 482 pp. Illus. \$15.

This volume is the latest of three or four important works, devoted in whole or in large part to the viscoelastic properties of polymers, to be published in the United States during the past 12 months. In writing this book, Ferry set for himself four goals: assembling in one place of the informational tools needed by workers in the field to make measurements and interpret data; the straightforward exposition of the concepts of viscoelasticity from the ground up, for the benefit of beginners in the field; the delineation of areas requiring further theoretical and experimental work; and finally, the illustration of applications of viscoelastic functions and the reduced-variable technique to technological situations. This program is not necessarily as diversified and, perhaps, overambitious as it might seem, for these goals are not unrelated. For example, one could not get very far toward the second objective without accomplishing the first.

It will not surprise his colleagues to find that John Ferry develops his subject with a logical rigor that approaches the proverbial Lagrangian elegance about as closely as could any treatment of viscoelasticity, for the subject is still in its adolescence. Although it is logically coherent, this work is not a compilation of all work that has been done

on the viscoelastic properties of polymers, nor is it a stringing together of chapters on nonsequential, specialized subjects. Perhaps because he wished to adhere closely to this tone of coherence, the author has been selective. This has resulted in what some might consider important omissions. For example, there is only an allusion to the Eyring-Tobolsky reaction-rate theory of viscoelastic deformation, and there is no reference whatever to the James-Guth theory of rubber-like elasticity.

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Digital Computers and Nuclear Reactor Calculations. Ward C. Sangren. Wiley, New York, 1960. xi + 208 pp. \$8.50.

The past two decades have seen the birth and rapid parallel development of both high-speed digital computers and nuclear reactors. During the past decade it has become standard procedure to use digital computers for the solution of problems arising in nearly every phase of nuclear reactor design and application. A significant proportion of the available time on our largest and fastest digital computers is devoted specifically to calculations in these areas. Ward Sangren has long been associated with the application of digital computers to nuclear reactor calculations and thus is eminently qualified to write in this field. He states that a primary objective of his book is "to present the nuclear engineer or scientist with an introduction to high speed nuclear reactor calculations." The topics covered range over a broad field. Chapter headings include "Digital computers," "Programming," "Numerical analysis," "A code for fission product poisoning," "Diffusion and age diffusion calculations," "Transport equation—Monte Carlo," and "Additional reactor calculations." Each chapter is self-contained and can be read independently of the others.

The introduction reviews briefly the history of nuclear reactor and digital computer developments. Then surveys are given of the problems involved in building nuclear reactors and in solving problems on digital computers. Two chapters are devoted to a general description of digital computers and the preparation of computer programs. There is a chapter on the language and

methods of numerical analysis. As a transition to the last chapters, concerned with nuclear reactor calculations, there is a chapter which describes the various steps involved in setting up and solving a particular problem on a digital computer.

Because the range of subjects covered is so broad and the fields involved are developing so rapidly, Sangren has been able to give only a brief introduction to any specific topic.

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New Books

Biological and Medical Sciences

Advances in Food Research. vol. 10. C. O. Chinchester, E. M. Mrak, and G. F. Stewart, Eds. Academic Press, New York, 1960. 501 pp. \$13.

Advances in Veterinary Science. vol. 6. C. A. Brandley and E. L. Jungherr, Eds. Academic Press, New York, 1960. 393 pp. Illus. \$12.

Advances in Virus Research. vol. 7. Kenneth M. Smith and Max A. Lauffer, Eds. Academic Press, New York, 1960. 406 pp. \$10.

The Amazing World of Medicine. Helen Wright and Samuel Rapport. Harper, New York, 1961. 311 pp. \$3.50.

Animal Husbandry Heresies. Allan Fraser. Crosby Lockwood, London, 1960. 200 pp.

Animal Parasites in Man. N. H. Swelengrebel and M. M. Serman. Van Nostrand, Princeton, N.J., 1961. 662 pp. Illus. \$12.

Annual Review of Entomology. vol. 6. Edward A. Steinhaus and Ray F. Smith, Eds. Annual Reviews, Palo Alto, Calif., 1961. 478 pp. \$7.

Bacterial Plant Pathogens. C. Stapp. Translated by A. Schoenfeld. Oxford Univ. Press, New York, 1961. (Translated from *Pflanzenpathogen Bakterien*, Parey, Berlin, 1958.) 320 pp. Illus. \$6.75.

Bailliere's Atlas of Female Anatomy. Revised by Katharine F. Armstrong. Bailliere, Tindall and Cox, London; Williams and Wilkins, Baltimore, Md., ed. 6, 1960. 30 pp. + plates. \$3.50.

Biochemistry for Medical Students. William Veale Thorpe. Churchill, London; Little, Brown, Boston, Mass., ed. 7, 1960. 560 pp. Illus. \$9.

Biological Degradation of Cellulose. J. A. Gascoigne and Margaret M. Gascoigne. Butterworths, Washington, D.C., 1960. 270 pp. Illus. \$8.

Carcinogenesis. I. Hieger. Academic Press, New York, 1961. 149 pp. \$5.

Cell and Tissue Culture. John Paul. Williams and Wilkins, Baltimore, Md., 1960. 323 pp. Illus. \$7.50.

Clinical Pharmacology. D. R. Laurence and R. Moulton. Little, Brown, Boston, Mass., 1960. 498 pp. \$10.