ance of one sex, and in the ultimate production by that means of a male heir to Hirohito, the author did not refer to the less favorable results obtained by other workers.

In several chapters, the author names and briefly discusses many human hereditary anomalies and nonabnormal traits. These include body-build and anatomical characteristics and defects, blood diseases, metabolic defects, nervous and mental disorders, diatheses, and talent and character. Baldness is explained as a sex-influenced trait due to a one-gene difference, but the author's use of different symbols for males and females may be disturbing to the general reader. The inheritance of the blood groups and types and their use in determining parentage are explained rather completely. The author refers to and explains the three theories of inheritance of the AB groups—that is, as multiple alleles, two pairs of genes with independent assortment, and two pairs of linked genes.

In a concluding chapter on eugenics the author discusses the erroneous belief that eugenics and sterilization are synonymous, the blame being placed upon the mock modesty of the Anglo-Saxons. He cites the many methods which have been followed or suggested in the practice of negative and positive eugenics. The author specifies those methods which some persons cannot accept because of religious or other beliefs and mentions others, such as premarital examinations and studies of family histories with suggested celibacy or continence, which might be followed. The use of genetic analysis to help guide a person into proper marriage is a method of eugenics which should be emphasized more.

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***Vertebrate paleontology.*** (2nd Ed.) Alfred Sherwood Romer. Chicago: Univ. Chicago Press, 1945. Pp. ix + 687. (Illustrated.) $7.50.

The publication of the second edition of *Vertebrate paleontology* will be universally welcomed by students of vertebrate evolution and especially by those of the English-speaking countries. The first edition of this excellent textbook filled a long-felt need and established for itself a solid reputation during the twelve years that have elapsed since its first appearance. It can be confidently expected that the new edition will continue the good record of this book.

The new edition is larger than the first edition, there being 687 pages in this book as compared with 491 pages in the earlier one. This increase is the result, in part, of new discoveries and new research in paleontology and, in part, of the inclusion of three new chapters on the history of the vertebrates—an innovation that will add appreciably to the value of the volume. These additions of subject matter naturally have resulted in a considerable amount of rearrangement in the text, so that in numerous places the new edition is quite different from the earlier book. Moreover, those portions of the earlier text that have been affected by new discoveries and new research have been accordingly rewritten and modified.

Needless to say, changes in details are numerous and only a few of the most outstanding points can be mentioned here. For instance, there is a new chapter on the placoderm fishes, and one each on the synaptosaurian and lepidosaurian reptiles. The Placodermi are made an inclusive group, containing the acanthodian fishes. The presentation of the teleosts has been expanded to emphasize their position as the dominant fishes of post-Cretaceous times. The Seymouriamorpha are considered as amphibians rather than as stem reptiles, following evidence brought forward in recent years by Russian authorities, while the mesosaurs are discussed along with the synapsid reptiles. Finally, the most mammal-like of the reptiles are treated as a separate order, the Ictidosauria.

Among the mammals, the Dermoptera are reduced to a suborder of the insectivores, while the miacids are placed in the fissipede carnivores, rather than in the creodonts as formerly. An interesting difference between the new edition and the old one is the placing of the primates immediately following the insectivores, the position of their natural relationships, rather than at the end of the book as the "culmination" of vertebrate evolution. In this regard it might be remarked that the tree shrews are considered as primitive primates rather than as insectivores—a reflection of the trend of opinion among modern mammalogists. The discussions of the Cenozoic mammals of South America have been amplified and revised in accord with the work done in recent years by certain North American students of these animals. Studies on the ungulates by various authorities in recent years have resulted in a revision of the treatment of these mammals in the text, while the lagomorphs are now made a separate order of mammals, as is generally recognized by modern mammalogists.

These changes and many more have been made with a thoroughness and a balance of judgment characteristic of Dr. Romer's very comprehensive knowledge of the vertebrates. Many new figures have been added to accompany the changes and expansion in the text. Of particular importance are the phylogenies, all of which have been revised and redrawn for the new edition. Even with the added new figures and the revised phylogenies, however, the bulk of the illustrations have been taken over from the earlier edition.

The classification at the end of the book is greatly expanded and changed (some of the changes have been indicated in the foregoing discussion) to include practically all genera of vertebrates occurring as fossils. This section of the book will prove to be extraordinarily useful to students working in fields of vertebrate studies.

The book is brought out in a new format conformable with other textbooks of the University of Chicago Series. This is particularly apparent in the new typeface and the cover. It is unfortunate, with an attractive and modern format, that wartime conditions resulted in the printing of this book on an inferior grade of paper. Because of this, the effectiveness of some of the figures is reduced, and the bad results of these economics are especially apparent in the index, which is rather difficult to read. Also, the price of the book is unfortunately high, and this may discourage some people, especially students,

who have a real need for it from buying it. But these are minor criticisms which can in no way be leveled at the author. All in all, this book is a masterpiece of thorough and comprehensive scholarship that every student of vertebrate evolution will want to own.

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***Textbook of bacteriology.*** **(14th ed., rev.) Edwin O. Jordan and William Burrows. Philadelphia: W. B. Saunders, 1945. Pp. xvii + 909. (Illustrated.) $7.00.**

In preparing the fourteenth edition of this textbook the author continued the process of rewriting begun in the preceding edition and has achieved a considerable degree of transformation of the book into a text for medical students, both by the general emphasis on medical phases of the subject throughout and, more specifically, by introducing the discussion of the methods of bacteriological diagnosis, so conspicuously absent in the preceding editions. The omission from the previous edition of such important topics as antibiotics or iso-antibodies has been corrected, although in the presentation of the latter subject the significance of the important antigenic components of human erythrocytes other than the three major type-antigens is not discussed.

The organization of the material has been greatly improved in many instances through the adoption of a more logical sequence. Thus, for instance, the cholera vibrio is now discussed in connection with enteric organisms instead of having been placed with spirochetes. However, this process of organization was not followed in Chapter 26 or in the instance of venereal diseases, where gonorrhea is discussed on page 350, chancroid on page 473, syphilis on page 681, lymphogranuloma on page 823, and granuloma is mentioned only in the footnote on page 824.

Considering the limited space available, the new chapters covering the subject of medical mycology and medical parasitology, respectively, are excellent. Descriptions of organisms are clear and concise, yet they include most of the recent material in these fields.

The format of the book is commendable, the index is good, and the illustrations are unusually well reproduced.

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***Russian-English scientific-technical dictionary.*** **A. Bray. (Ed.) New York: International Universities Press, 1945. Pp. xvi + 551.**

The publication of this dictionary fills an urgent need of readers and translators of Russian scientific and technical material. Despite increasing interest in Russian scientific literature in recent years, access to it has been impeded by the absence of a general Russian-English technical dictionary. The Russian-speaking reader of English material has been very fortunate in having a plentiful supply of dictionaries to meet his needs. The English-speaking reader, however, has had to guess the possible meaning of a word from the context and then check his guess against English-Russian technical dictionaries. Bray's new dictionary is a belated acknowledgment of the importance of scientific and technical work in the USSR, even though it ignores the critical fields of medicine and biology.

The present volume, containing 20,000–25,000 terms, is not as complete as the companion *English-Russian technical dictionary*, a 60,000–65,000-term volume released by the same publisher in 1941. This may be explained in part by the fact that the Russian technical vocabulary does not contain as many synonyms as does the English. However, some of the Russian terms which appear as equivalents of English terms in the older volume do not appear in the Russian-English work. The present volume does have a complete bibliography of sources and references, a matter which was omitted in the previous work.

The reviewer made a random selection of fifty Russian radio and engineering terms and of twenty-five Russian textile terms from a list of terms which had caused him difficulty in the past year. Almost all of the radio and engineering terms were found in this book. About half of the textile terms were found, although they were unusual and not particularly important. In general, the coverage of terms of the physical sciences and technology is sufficiently complete to meet all reasonable needs and sufficiently up to date to include "bazooka" and "radar."

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***Coasts, waves and weather for navigators.*** **John Q. Stewart. Boston: Ginn, 1945. Pp. vii + 348. (Illustrated.) $3.75.**

Stewart's book is divided into three parts: "Coast lines, terrain and routes"; "Oceanography for navigators"; and "Meteorology for navigators." The first part should be of particular value to air and sea navigators and to the interested traveler. A general classification and description of coast lines is followed by chapters containing numerous quotations from the "Pilots" and the "Sailing directions" published by the Hydrographic Office. These chapters are profusely illustrated by aerial and ground photographs which clarify the features emphasized by the author. The reader ought to have a fairly good knowledge of general geography in order fully to enjoy the descriptions, because the examples are selected from all parts of the world and the author takes the reader from Peru to the coast of Maine and back to Patagonia without stopping for breath. The plan followed serves, however, to bring out the similarities in the character of coast lines within widely separated regions.

The part on oceanography represents a welcome addition to popular scientific literature, because few texts contain much information about the character of the ocean waters, the tides, and the ocean currents. The chapters on tides should be particularly helpful to the navigator who wants more information as to the contents of tide tables and the character of the tides. The section on ocean waves will need some modification when the results of studies conducted during the war become avail-