the Woods Hole Oceanographic Institution has devoted a great deal of effort to the study of the Gulf Stream, and it is most fitting that this book should be written by a member of its staff.

For the oceanographer, the volume represents a valuable synthesis of information and theories; and for the worker in other fields, particularly those in the physical sciences, it will provide insight into some of the complex but poorly understood phenomena of the ocean. With this book at hand the future studies of the Gulf Stream and of oceanic circulation in general should move forward at an accelerated pace.

In an otherwise excellent work it is unfortunate that the author did not give more attention to the illustrations. This is particularly true in the descriptive sections where the illustrations have generally been copied from the original sources without regard to map projections, areas covered, scales, or units. Oceanographers are accustomed to this confusion, but other readers will have to examine the illustrations with caution.

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The Vertebrate Story. Alfred S. Romer. (a revised and enlarged edition of *Man and the Vertebrates*). University of Chicago Press, Chicago, Ill., 1959. vii + 437 pp. Illus. $7.

This is a fourth edition of the well-known book *Man and the Vertebrates*, with a new Hollywood title, more natural history, and less human anatomy. Though the changes are important ones, the purposes of the book remain the same. It is a taxonomic review of the vertebrates, including man, with enough anatomy and physiology to form a good picture of the kinds of lives led by the various groups and put together as an account of their evolution. The illustrations are clearer and more plentiful than they were in the last edition (1941), and the format of the book is considerably improved.

In the earlier book, man and the rest of the vertebrates were given about equal shares, but in the new one the division is about one to three. A large section on human anatomy has been omitted in favor of a more extensive treatment of the lower groups of vertebrates. The old 30-page chapter on frog anatomy remains, but there are now 15 more pages on teleosts, 36 more on reptiles, 12 more on birds, and one finds new or revised paragraphs all through the book. Human ancestry and human races take up the last hundred pages. The section on human origins has been slightly enlarged, and Piltdown man has been changed from a problem to a hoax, but this edition was apparently in the works too soon to permit the new Oreopithecus material to be included.

Other areas of great current interest seem to have been systematically avoided. Jaymoytius is not in the book, and the Ichthyostegalia are not discussed. The lungfishes are still "close to the ancestry of land animals," and are put in the same class with crossopterygian fishes, though Romer has changed his earlier name for this grouping from Choanichthyes to Sarcopterygii. *Latimeria* gets an extra paragraph in this edition, but, unfortunately it also picks up an extra lung. Vexing questions of the relationship of classes and subclasses of ancient fishes, and of the origins of amphibian groups, are bypassed.

This avoidance of technicality and controversy at least favors the maintenance of a storybook tone. Romer's genial, conversational style comes out best of all in the new sections. His animals, even his fossils, come alive. There are stimulating samples of his recent speculations on such subjects as the origin of vertebrates (probably from sessile filter-feeders related to echinoderms), the origin of the terrestrial habit (the amniote egg came ashore first), and "Gondwanaland" (who knows, why not?). This certainly remains a text to be preferred for an elementary course on the biology of vertebrates, or for painless self-education.

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New Books

Hunger and Food. Special edition of *Science and Mankind.* Josue de Castro, Ed. World Federation of Scientific Workers, London, 1959. 123 pp. 10s.

Industrial Fatty Acids and Their Applications. E. Scott Pattison. Reinhold, New York; Chapman & Hall, London, 1959. 236 pp. $7.

Introduction to Human Anatomy. Carl C. Francis. Mosby, St. Louis, ed. 3, 1959. 548 pp. $5.75.

The Journals of Daniel Noble Johnson (1822–1863). "Journal of a cruise on the Brazils on Board of the U.S. Ship *Delaware,* 1841–1842" and "Notes by the way while on board the U.S. Schooner *Enterprise.*" Misc. Collections, vol. 136, No. 2. Mendel L. Peterson, Ed. Smithsonian Institution, Washington, D.C., 1959. 268 pp.

Knowing Your Trees. 1955 edition. G. H. Collingwood and Warren D. Brush. American Forestry Assoc., Washington, D.C., 1955. Approximately 850 illustrations showing typical trees and their leaves, bark, flowers, and fruits.

Linguistic and Engineering Studies in the Automatic Translation of Scientific Russian into English. Technical report, prepared for the Intelligence Laboratory, Rome Air Development Center. ASTIA Document No. AD-148992. Erwin Reifler. Univ. of Washington Press, Seattle, 1959. $10. (not paged)

The Lost Divisions. Eli Ginzberg, James K. Anderson, Sol W. Ginsburg, John L. Herma. Columbia Univ. Press, New York, 1959. 245 pp. $6.

Magnetic Amplifier Engineering. George M. Attura. McGraw-Hill, New York, 1959. 234 pp. $7.50.

Méthodes mathématiques de la mécanique statistique. A. Blanc-Lapierre, P. Casal, A. Tortrat. Masson, Paris, 1959. 190 pp. F. 3800.

Modern Transistor Circuits. John M. Carroll. McGraw-Hill, New York, 1959. 280 pp. $8.50.

Natural Selection and Heredity. P. M. Sheppard. Philosophical Library, New York, 1959. 212 pp. $6.

The New World of Math. George A. W. Boehm and the editors of *Fortune.* Dial Press, New York, 1959. 128 pp. $2.50.

Nucleonics Fundamentals. David B. Hoisington. McGraw-Hill, New York, 1959. 422 pp. $9.50.

Our Atmosphere. Theo Loebsack. Translated from the German by E. L. and D. Rewald. Pantheon, New York, 1959. 256 pp. $5.

Patterns of Performance. Eli Ginzberg, James K. Anderson, Sol W. Ginsburg, John L. Herma. Columbia Univ. Press, New York, 1959. 359 pp. $6.

Plane Trigonometry. Raymond W. Brink. Appleton-Century-Crofts, New York, ed. 3, 1959. 350 pp. $4.

Plants and Environment. A textbook of plant autecology. R. F. Daubenmire. Wiley, New York; Chapman & Hall, London, ed. 2, 1959. 433 pp. $6.95.

Power Unlimited. The story of power —from windmill to nuclear energy. Abraham and Rebecca B. Marcus. Prentice-Hall, Englewood Cliffs, N.J., 1959. 160 pp. $3.50.

Principles of Self-Damage. Edmund Bergler. Philosophical Library, New York, 1959. 483 pp. $6.

Psychoanalysis, Scientific Method and Philosophy. A symposium. Sidney Hood, Ed. New York Univ. Press, New York, 1959. 383 pp. $5.

Radiation Biology and Cancer. Published for the University of Texas M. D. Anderson Hospital and Tumor Institute. Univ. of Texas Press, Austin, 1959. 501 pp. $8.50. This collection of papers, presented at the twelfth annual symposium on fundamental cancer research, is divided into the following sections: "Fundamental radiobiology"; "Radiological applications"; "Radiation effects on the hematopoietic system"; "Induction of neoplasia by ultraviolet light"; "Induction of neoplasia by ionizing radiations"; "Radiation biology and cancer"; and "Medical applications of radiation." The Bertner Foundation lecture, "Radiation neoplasia and endocrine systems" by Jacob Furth, is included in this volume.

Railroad Transportation and Public Policy. James C. Nelson. Brookings Institution, Washington, D.C., 1959. 520 pp. $7.50.

Researches in Geochemistry. Philip H. Abelson, Ed. Wiley, New York; Chapman & Hall, London, 1959. 521 pp. $11.