Avian Who's Who

Birds of the World. Oliver L. Austin, Jr. Herbert S. Zim, Ed. Golden Press, New York, 1961. 320 pp. Illus. $17.50.

This is truly a spectacular coverage of the world of birds, written by an ornithologist of experience and high standing and illustrated by Arthur Singer, an artist of skill, imagination, and a fine sense of composition. The book's large size (10¼ by 13½ inches) gives the artist an enviable opportunity to maintain the size of his bird images in arrangements that show the wide spread of color, shape, and pose within each of the 150 families treated in the text.

The text is obviously intended for the layman, and the author succeeds in evading technical terms and yet defines the different families accurately. He has also shown good judgment in selecting the more interesting and more colorful examples to represent each family and subfamily and in presenting the more interesting facts of their distribution, relationships, and life histories, a sort of "who's who" in the bird world.

As might be expected when an artist has had to use museum specimens rather than living birds as models for some of his birds, a few illustrations are less accurate than others. The head of the ruffed grouse (page 88) seems too small for the body, while the wings of the flicker (page 192) and of the wall creeper (page 238) seem too large; and the bills of the blue jay (page 225), the phoebe (page 208), the black vulture (page 72), and of Townsend's solitaire (page 251) are too small. The tarsal scales on the thrushes, especially the wood thrush and the blackbird (pages 252 and 253), are too prominent, while those of the catbird (page 249) are too inconspicuous. The legs of the California gull (page 130) should be gray instead of yellow, and the bill of the limpkin (page 106) never shows red. It is difficult to analyze satisfactorily the number and arrangement of the primaries and of the secondaries in such pictures as those of the flying osprey (page 82) or of the chimney swift (page 165), and the postures of the puffbirds (page 168) and of the manakins (page 206) would be more true to life if they were more erect like the flycatchers.

I noticed only two real mistakes: the common teal of Europe (page 68) is identified as the green-winged teal, and the shorebird (page 121) that looks like a purple sandpiper is labeled a knot. It is likewise outside my experience to see green grass lining and growing from the side of a barn swallow's nest, as shown on page 216. But these are all minor details compared with the overall picture of a very satisfactory book with wonderfully attractive illustrations.

ARTHUR A. ALLEN
Laboratory of Ornithology, Cornell University

Watson and Psychology

Behaviour. D. E. Broadbent. Basic Books, New York, 1961. 215 pp. $4.50.

D. E. Broadbent, director of the Applied Psychology Unit of the Medical Research Council at Cambridge, England, here gives a British psychologist's favorable view of what has been largely an American development: behaviorism, following the lead of John B. Watson. The book is addressed to an audience of nonpsychologists who may be uninformed about behaviorism, or who, having heard about it, may be offended by it. It will add little in a substantive way to the knowledge of those who have had an introductory course in psychology in an American university, though if that course was not recent it will provide a pleasant way in which to bring that knowledge up-to-date. Written pleasantly without tables or footnotes or other trappings of scholarship, the book is at the same time sophisticated and critical; while it makes a favorable case for behaviorism, it is written without polemic.

The argument is essentially that behaviorism has taught us to take an objective view toward the problems of psychology and that this is the only basis for sound knowledge. The argument is sustained through a review of experiments done primarily with animals, and includes the theoretical contributions of Hull, Skinner, and Hebb. Just as the understanding of mechanics helps us to know how our limbs and joints operate, so a mechanical understanding of information-processing may help us comprehend our intellectual activities. There is nothing degrading about comparing a brain and a computer.

For the person already abreast of contemporary psychology, the most interesting chapter is the final one in which the author looks ahead and finds the criticisms that behaviorism must answer: its neglect of natural behavior, its premature formalization, the absence of appropriate physiology, and the weakness of describing unobservables.

The book can be recommended as a thoughtful and readable introduction to the behaviorist approach. The suggestions for further reading at the end will permit the interested reader to find the sources so casually introduced into the text.

ERNEST R. HILGARD
Department of Psychology, Stanford University

Tumors and Viruses

Oncogenic Viruses. Ludwik Gross. Pergamon, New York, 1961. xi + 391 pp. Illus. $12.

This volume presents the results of a commendable effort to bring together in a single monograph much of the available, published information about tumors of animals which appear to be induced by viral agents. The impressive quantity of material reviewed is assembled largely as it relates to various types of tumors that occur in certain animal species which have been much studied.

The extensive data presented and the necessarily condensed comments on them are arranged in many sections, frequently only a paragraph or two in length, with succinct and direct subject headings. This helpful arrangement is, however, not reflected in the subject index, which is less full and comprehensive than it might be. The extensive and fully documented list of references, which follows each chapter, identifies most of the pertinent papers that have appeared in various languages; these are in themselves of large usefulness.

The volume is written in an easily comprehended and straightforward style that is readily readable and informative. Specific details and experimental results in large numbers are included, and at times selected experimental techniques are presented. The early history of the discovery of most of the agents considered is presented, and a number of excellent photographs