

Books

DOBZHANSKY, THEODOSIUS. *Genetics and the Origin of Species*. Second edition. Columbia University Press, New York. xviii + 446 pp. 1941. \$4.25.

To most living biologists evolution as a *fact* is no longer regarded as debatable. All agree, however, that much remains to be learned about the *process* of evolution. This book is a very successful attempt to fit the great contributions of genetics, made during the past forty years, into an explanation of the mechanics of species formation. *Genetics and the Origin of Species* impresses the reviewer as the best book on evolution since Darwin's *Origin of Species*, and it may in fact be regarded as a supplement to that classic. The author, a leading contributor to research in this field, is a master of his subject; moreover, his skill as a writer of beautiful and concise English enables him, like Darwin, to make clear and interesting a difficult topic.

Dobzhansky is a leader in a group of biologists classed by some as neo-Darwinians, but, although he regards the theory of natural selection as of high validity, he clearly recognizes its limitations: species formation is regarded as a resultant of a complex interplay of factors, the pattern of which may vary from species to species. The aim of the author is to fairly evaluate these factors. Logic and sound judgment are evident throughout the book.

The chapter headings are: Organic Diversity; Gene Mutation; Mutation as a Basis for Racial and Specific Differences; Chromosomal Changes; Variation in Natural Populations; Selection; Polyploidy; Isolating Mechanisms; Hybrid Sterility; Patterns of Evolution; Species as Natural Units.

This work, unlike Darwin's, is fully documented, with a literature list of 45 pages. There is an adequate index. As a text for a course in evolution and as a reference book for the biologist the first edition deservedly met with high favor. The second edition has been enlarged and improved.

E. C. C.

HOOGSTRAAL, HARRY. *Insects and Their Stories*. Thomas Y. Crowell Co., New York. 144 pp. 1941. \$2.00.

Mr. Hoogstraal has prepared a fine reference on insects, and there are excellent full page pictures in black and white by Melvin Martinson of each insect described. The 144 large pages $9\frac{1}{2} \times 7\frac{1}{2}$ describe the life history and give interesting facts about forty-six insects that are common in our northern states.

The book is divided into five sections: 1. Introduction, 2. Insects of the House, describing three insects, 3. Insects of the Garden, twenty-nine insects, 4. Insects of the Trees and Woods, eight insects, and 5. Insects In or near the Water, six insects. There is a good index.

This book would be a desirable one for Nature Study, Biology, and Entomology reference libraries.

M. A. RUSSELL.

CURTIS, CARLTON C. *A Guide to the Trees*. Greenberg Publishers, New York. 201 pp. 1941. \$1.50.

The first few pages of the book give a general key to the trees of northern United States east of the Rockies. Leaves are used as the main basis of the key. The remainder of the book gives keys to the species, and descriptions of each species. Most of these descriptions are accompanied by drawings of the leaf, flower, and fruit.

The book seems to be written mainly for the layman or the young person, the language is very simple and very few technical terms are used. The few terms that must be used are well explained in a section given to definitions. The reading matter is clear, concise, and easily read. An index gives both scientific and common names.

Physically, the book is of such a size that it can be carried on field trips. The paper and binding is of a nature that it should stand the treatment given a book on such trips. It would be very valuable either in the field or in the classroom.

H.A.S.

MACY, RALPH W., and SHEPARD, HAROLD H. *Butterflies: A handbook of the Butterflies of the United States, Complete for the Region North of the Potomac and Ohio Rivers and East of the Dakotas*. University of Minnesota Press, Minneapolis. 7 + 247 pp. 1941. \$3.50.

Although intended primarily as a guide for proper identification, this book should stimulate observations and research in life histories and behavior as well. In the preliminary section there are thirty-five pages of general information about butterflies, in addition to the discussion and references for each species.

The authors outline points which should be recorded by observers who wish to contribute valuable facts on butterfly migration. And among other topics they discuss sense organs, color discrimination, and that strange process by which contact of butterfly wings to a photographic plate produces a latent image simi-

lar to that made by the usual exposure methods except that the light and dark areas are just reversed.

While such topics are interesting reading, their chief value is that they suggest class activities for field and laboratory. The book may at first appear difficult to a beginner because only twenty-nine of the 162 species are included in the fine color photographs. But the completeness of the keys should make it a standard identification guide throughout the area treated.

RICHARD F. TRUMP
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Keokuk, Iowa.

WORTHINGTON, CATHERINE. *Upper and Lower Extremity and Innervation Charts*. Stanford University Press, Stanford University. 8 plates, 2 charts. 1941. \$0.35.

These diagrams and charts will be helpful where human anatomy is offered to groups other than medical students, especially in various aspects of physical education including kinesiology and physical therapy techniques. The double page (folded) charts treat, respectively, the nerves from the brachial and pelvic plexi. Diagrams of

museles of the appendages are outlines only with origins and insertions shown as solid black areas against the outlines of skeletal elements. The sheets are perforated for insertion into a student's standard sized notebook.

JAMES M. SANDERS,
Chicago Teachers College.

STEVENSON, ELMO N. *Nature Games Book*. Greenberg Publishers, New York. 208 pp. 1941. \$2.00.

This handbook will be found useful by teachers, camp counselors, scout leaders, and others who are charged with directing the recreation of children. The hundreds of games described are selected primarily for students of elementary grades, although some of them are adapted to high school boys and girls. The games are classified into those about animals, birds, flowers, leaves, special senses, stars, trails, trees, and miscellaneous. Many of them are illustrated with photographs. There is a bibliography and an index. The pocket-size and flexible, water-proof binding make this book practical for field work.

E.C.C.

Biology Teaching in the United States: Community Backgrounds and School Organizations: Data from a Questionnaire

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A fifth segment of the results obtained from a questionnaire circulated by the Committee on the Teaching of Biological Science is presented in the following pages. Other segments of this report have been published in *THE AMERICAN BIOLOGY TEACHER*.

COMMUNITY BACKGROUND

Distribution of replies. The 2,910 replies received in response to this part of the inquiry were classified according

to types of communities, as shown in Table 1.

TABLE 1

Types of communities represented in replies

Type of community	Numbers	Percentages
Rural (less than 2,000)	1,009	34.7
Towns (2,000-10,000)	761	26.2
Small cities (10,000-100,000)	575	19.5
Large cities (over 100,000) ...	565	19.1

Replies from public schools of 9 "spe-