

the three tracheal gills at the posterior end of the body (1).

4. *The Fat Bodies*: These organs, so well developed and characteristic of insects, are prominent and unmistakable in paired position along the two sides of the longitudinal body axis lateral to the heart (4).

5. *The Compound Eyes*: The many-faceted compound eyes (8) are typical of specialized insects.

6. *The Wing Buds*: Two pairs of wing buds (5) typical of the larval stages in direct metamorphosis.

7. *Striated Muscles*: With proper light and focus, cross striations of leg musculature are clearly visible (7).

Wherever used in high school and college classes, the living damsel fly nymph has met with an enthusiastic reception by students and instructors alike. The added appreciation of the insect type implemented by the use of this material pays a rich dividend for the time and effort involved in the collection and handling of the material.

Books

MAVOR, JAMES WATT. *General Biology*. 4th ed. The Macmillan Company, New York. xii + 875 pp. illus. 1952. \$5.75.

The new edition follows the same general plan of organization as that of previous editions. There has been some rearrangement of certain chapters, and others have been rewritten to bring them up to date. The chapter dealing with *chemical principles* has been moved from Part I to the Appendix. The chapter pertaining to the *cell* has been rewritten. The treatment of photosynthesis has been improved. The discussions on *viruses* and *antibiotics* are timely.

In Part III, the significance of *parasitism* is emphasized. The treatment of the "human side" of insects has been extended. To the *Anthropod mind* has been added a discussion on the *language* of the bees—an account of the work of Von Frisch on the behavior of bees.

In Part IV, there is presented considerable tabular material on vitamins, enzymes, and hormones. The metabolism of carbohydrates, fat, and proteins is adequately treated. Here, as in other sections of the book, the practical side of biology is emphasized. In Part V, Professor Mavor presents a more adequate treatment of the physical basis of hered-

ity, Mendelian principles, linkage, crossing over, mutations, and chromosomal aberrations than most elementary textbooks in biology. The writer would have appreciated a discussion by Professor Mavor on the action of genes.

The appendix consists of three parts: 1. A synoptic table of the plant and animal kingdoms. Etymology and pronunciation of the scientific names together with brief characteristics and examples are given. 2. References and background material in chemistry as a basis for understanding biology, and 3. A glossary of biological terms. There are fifteen pages of definitions, etymology and pronunciations of biological terms. An extensive list of commonly used prefixes, suffixes, and combining word forms are included.

There are several new illustrations in the fourth edition, and the book is of a more attractive format than previous editions. The book continues to be a compendium of biological facts, and is an extensive source book of practical information for students of biology.

The manual has been revised to conform to the new fourth edition of *General Biology*. It consists of thirty units. To the thirty-six diagrammatic figures have been added several full-page halftone plates which improve the appearance and usefulness of the manual. Materials required for the various laboratory units and a list of sources of biology equipment and materials are given. The manual consists of 333 pages. It is priced at \$3.50.

J. A. TRENT,
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ROYLE, HOWARD A. *Laboratory Exercises in Genetics*. Burgess Publishing Company, Minneapolis. iv + 53 pp. Paper, spiral binding. 1950. \$1.50.

This is a concisely written guide for the laboratory part of an introductory course in genetics. It is adapted for use with any modern textbook of genetics. The exercises listed are more than ample for the usual semester's course, thus permitting some choice. There are three parts:

I. Mitosis, meiosis, life cycles of spermatophytes, and early development of animals.

II. *Drosophila*: its description, culturing, and experimental breeding (7 exercises on the last).

III. Human heredity: taste test, blood groups, and blood types.

Among several appendices there is one on the application of the Chi Square test, with a reproduction of Fisher's table.

The book is attractively lithographed on paper

of good quality. The pages measure $5\frac{1}{8}'' \times 8\frac{3}{8}''$. Instructors planning a laboratory course in genetics will wish to examine this manual.

EDWARD C. COLIN,
Chicago Teachers College,
Chicago, Illinois

VINAL, WILLIAM G. *The Outdoor Schoolroom for Outdoor Living.* Published by the author, R. F. D. Vinehall, Cohasset, Massachusetts. 70 pp. 1952. \$1.00.

This interesting and different little book by "Cap'n Bill" Vinal brings together an amazing amount of information, activity material and philosophy. The author is not only a professor of Nature Education at Boston University, a widely known lecturer and consultant in nature work, but also the director of the Boston University Workshop in Outdoor Education. He develops the thesis that wherever interested teachers and students gather "in the fields, in the woods, by the water, there is the school." In line with this thesis, there are presented such things as a lengthy list of projects for outdoor schoolrooms, making a base map, a testing hike, and a plan for neighborhood cooperation. There is unfortunately neither a table of contents nor an index, a rather serious handicap in view of the stimulating contents of the book.

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Biology Laboratories

By "The Old Fossil"

At Wells High, Chicago

CHICAGO HERPETOLOGICAL CLUB had "The Old Fossil" as their speaker for a recent meeting. His subject was "Interesting Facts About the Lower Terrestrial Vertebrates." This included two written articles of his one titled: "Thirteen Snake Superstitutions—True If" and another "Reptile Facts." TOF found out that his presence was desired not so much for the dissertation on reptiles as it was to serve as a moderator to aid them in determining the feasibility of a field trip for the search of reptiles. TOF, having been president of the Chicago Biology Round Table a few years ago, sponsored a few trips; one involved several hundred people. He took his cue and found that a reptile trip should be conducted at night.

In case you have any ideas on field trips send them in and I will pass the information on to their sponsor. If you desire a copy of either of the articles mentioned I might be able to find you one and send it to you.

REPTILES AS PETS seemed to be common among the members. Most of them maintain specimens in their homes. One boy from a south side high school was describing his pet rattlesnake to me. This was about three feet long. Another boy interrupted the first to describe his pet rattler. His made a pygmy out of the first. The second boy's comment—"and I was looking in his mouth this week and I could not see, . . . could you tell me about that?" "What reptiles do you maintain?" "Where do you collect?" Gosh!

FLOWER POTS of the ordinary red clay variety come in sizes up to twelve inches inside diameter. The smaller sizes have half inch gradations; the larger pots increase one inch to the next size. The outside diameter and the height are equal. There is a shallow type known as a "pan." The pans are two-thirds the height of the ordinary pot. They are used for potting azaleas and similar plants. These are called "azalea pans." "Bulb pans" are one-half the depth of the ordinary pot. These are used for ferns and bulbs. There is also the clay saucer. Both pans and saucers are made of the red baked clay as is our original pot. We are using some of the twelve-inch pots to suspend from the ceiling of the greenhouse with ferns in them. A circle of number nine wire fitted under the collar of the pot has three suspension wires attached to it. This serves as a cradle for the arrangement.