

careless misprints. Lower case and capitals are used indiscriminately for the velocity of light (pp. 15, 16, 21, 31, 35, 38, 75, and 98); formula (18-19) should contain the factor  $v_2/v_1$  and not  $v^2/v$ ; and the lines immediately preceding formulas (26-4) and (26-5) are grammatically unintelligible.

It may seem paradoxical to say, after raising these objections, that I found the book very interesting and stimulating. I recommend it unreservedly to those who already have some knowledge of relativity and particularly to persons who, like myself, teach general relativity to graduate students in physics. Such readers will discover, as I did, why their students have the ideas that they do have about relativity!

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## Traditional Statistical Methods

**Statistical Inference.** vols. 1 and 2. vol.

1, *A Non-Mathematical Exposition of the Theory of Statistics* [678 pp.; rev. ed. of *Introduction to Statistical Inference* (1957)]; vol. 2, *The Multiple Regression and Its Ramifications* [589 pp.], Jerome C. R. Li. Edwards, Ann Arbor, Mich., 1964. Illus. \$10 each vol.

This is a large, but not particularly expensive, exposition of the traditional statistical methods on a nontheoretical level. Volume 1 is very nonmathematical and covers such topics as descriptive statistics, "test of hypothesis," one- and two-sample *t*-tests, the *F*-test, confidence intervals, one-way analysis of variance, randomized blocks, linear regression, factorial experiments, analysis of covariance, binomial and multinomial sampling, transformations, and some distribution-free methods. It has an adequate selection of the standard tables. It uses sampling experiments to demonstrate the properties of many of the standard distributions. It uses 1.75 inches of a page to prove that  $\sum(y - \bar{y}) = 0$ . Volume 2, on the other hand, starts a 39-page chapter in which the author expounds the techniques useful for a matrix exposition of multiple regression, and subsequently uses these techniques for curvilinear regression, unbalanced two-way analysis of variance, and the like. The treatment of

such topics as confounding and fractional replication is probably too brief even to convey the ideas of these techniques.

The style is at times somewhat quaint—for example, "Mergence of factorial experiment and analysis of covariance causes a conflict in notations" (p. 430); Section 31.10 is headed "Advantages of Response Surface," and "In order to use u-test" (p. 64). Section 23.4, "Logarithmic Transformation," begins with "The logarithmic transformation, like the square root transformation, is used on the data which consist of counts," which I interpret, perhaps mistakenly, to be an implied recommendation for such a procedure.

There are a number of similar texts available, and they have their relative strengths and weaknesses. Li's main strength is undoubtedly the enormously detailed exposition of multiple regression and its application to analysis of variance. Weaknesses include a rather light treatment of distribution-free methods, in effect dealing only with the sign and median tests, and omitting the various rank tests. The mixed model in two-way analysis of variance is omitted. There is no probability theory.

Each chapter is well supplied with numerical exercises (with answers), which frequently deal with real data from real problems.

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## Biology Laboratory Guide

**Practical Biology.** C. Dodds and J. B.

Hurn. Arnold, London; St. Martin's Press, New York, 1965. 112 pp. Illus. \$3.

This is a laboratory guide for use in secondary school biology courses. The authors have "aimed at developing the powers of observation, using the three fundamental techniques of biology; dissection, microscopy and simple experiments with living organisms." To this end the manual is divided into a section of 44 double-column pages on zoology, which covers in systematic and comprehensive fashion the animal kingdom, with some attention also to development and to cells and tissues. There follows a 26-page equally comprehensive section on botany. The final section (24 pages)

is concerned with experiments on irritability, movement, nutrition, respiration, excretion, and growth and reproduction.

The approach to the observation of plants and animals is carefully and systematically developed to provide a rich and extensive experience in biology for the secondary school student. The number of forms covered is far more than can be accommodated in the average high school biology course, but this manual seems to be ideal for use with the new AIBS biology courses, particularly since the section on experiments is not only comprehensive but well designed for the use of simple apparatus for effective investigation of living phenomena. This is an excellent way to introduce the student to the scientific method.

The manual is profusely illustrated with good three-dimensional drawings. Interlaced with the directions throughout there is sufficient discussion of the interrelation of structure and function to interest and challenge the student. This, in brief, is a very useable "practical biology."

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## New Books

### Biological and Medical Sciences

**The Action of Neuroleptic Drugs.** A psychiatric, neurologic, and pharmacological investigation. Hans-J. Haase and Paul A. J. Janssen. Year Book Medical Publishers, Chicago, 1965. 182 pp. Illus. \$7.75.

**Acute Problems in Resuscitation and Hypothermia.** Proceedings of a symposium (Moscow), September 1964. V. A. Negovskii, Ed. Translated from the Russian edition (Moscow, 1964) by Basil Haigh. Consultants Bureau, New York, 1965. 99 pp. Paper, \$15.

**Adaptive Growth.** Richard J. Goss. Logos Press, London; Academic Press, New York, 1965. 360 pp. Illus. \$12.

**Adrenal Steroids and Disease.** Cuthbert L. Cope. Lippincott, Philadelphia, 1965. 839 pp. Illus. \$24.

**Antimicrobial Agents and Chemotherapy, 1964.** Proceedings, Fourth Inter-science Conference (New York), October 1964. J. C. Sylvester, Ed. American Soc. for Microbiology, Ann Arbor, Mich., 1965. 803 pp. Illus. \$15. One-hundred and thirty-six papers.

**Annual Review of Medicine.** vol. 16. Arthur C. DeGraff and William P. Creger, Eds. Annual Reviews, Palo Alto, Calif., 1965. 481 pp. \$8.50. Twenty-four papers.

(Continued on page 480)