

# to the editor

## Plastic litter

The article "This plastic will self-destruct" (SN: 8/7/71, p. 92) is thorough, factual, thought-provoking and I think renders a definite service by calling attention to the confusion over the extent of the litter problem and disagreement as to the best solution.

There is a serious error in the article which has to do with the extent of the problem and therefore will affect the choice of solutions. Your statement that "durable plastics comprise a large portion of offensive litter and up to 20 percent of disposable solids" is not in agreement with the most recent and authoritative studies of the problem. The Highway Research Board of the National Research Council, National Academy of Sciences reported in 1969 the results of a 29-state study showing that litter was composed of paper (59.5 percent), metal cans (16.3 percent), glass (5.9 percent) and plastics (5.8 percent). Arthur D. Little, Inc., which has made refuse studies for several agencies of the U.S. Government, reported at the 1970 National Incinerator Conference that the latest studies showed that plastics comprise an average of only 1.3 percent by weight of the total waste refuse delivered to municipal incinerators. Other studies have indicated a maximum of 2 percent.

One sentence, however, doesn't alter the effect much: it was still a very good story.

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President

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## Substantial contribution

Congratulations both on your reporting of Skinner's new book, *Beyond Freedom and Dignity* (SN: 8/7/71, p. 96), and on your presentation of the pro and con reaction to the Skinner thesis (SN: 9/4/71, p. 134). Whether the expressed viewpoints favored or opposed either the concept or the reporting, they represented to me something highly useful, healthy, and worthwhile. It seems to me that Skinner, SCIENCE NEWS, and those who have taken the time to think out and express their viewpoints each has made a substantial contribution to our understanding of life and of each other.

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# books OF THE WEEK

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**NITRATION AND AROMATIC REACTIVITY**—J. G. Hoggett and others—Cambridge Univ. Press, 1971, 246 p., diagrams, tables, \$16. Monograph presents a summary of the present understanding of the nitration process, discusses the various types of nitrating systems, and examines the mechanism of substitution.

**POST-PARTUM FAMILY PLANNING: A Report on the International Program**—Gerald I. Zatz, M.D., Ed.—McGraw-Hill, 1971, 477 p., graphs, tables, \$15. The subject of this report is a two-year analytical study of post-delivery programs administered by hospitals in the U.S. and abroad.

**POWER GENERATION AND ENVIRONMENTAL CHANGE**—David A. Berkowitz and Arthur M. Squires—M.I.T. Press, 1971, 440 p., photographs, diagrams, \$16.95. Symposium papers of the Committee on Environmental Alteration, AAAS, 1969. Deals with the bases for federal guidelines and reviews the technology for control.

**PROPAGATING HOUSE PLANTS**—Arno and Irene Nehring—Hearthside Press, 1971, 292 p., color plates, photographs, drawings by Charlotte E. Bowden, \$6.95. Practical horticultural advice on multiplying plants indoors, the various methods of propagation, aids in growing healthy plants, and dictionary of favorite houseplants.

**PYROGENS AND FEVER: Ciba Foundation Symposium**—G. E. W. Wolstenholme and Joan Birch, Eds.—Churchill (Williams & Wilkins), 1971, 232 p., illus., \$11.50. Subjects discussed include the role of leukocytes in fever, the mechanism of action of pyrogens, and significant immunological features of bacterial endotoxins.

**SCIENCE TRAVEL GUIDE**—Fred W. Decker—O.S.U. Bk. Stores, 1971, 110 p., maps, paper, \$1.95. A guide to the spectacular as well as lesser known science museums, technological exhibits and landmarks in Europe and the U.S.; describes collections and includes local maps that show how to get there.

**STRATIGRAPHIC ANALYSIS OF A DEEP ICE CORE FROM GREENLAND**—Chester C. Langway, Jr.—Geological Soc. of Am., 1970, 186 p., photographs, diagrams, map, paper, \$5.50. Describes field procedures, discusses macroscopic stratigraphy and criteria, presents detailed stratigraphic studies, and oxygen isotope, chemical composition and cosmic dust studies of ice cores.

**THE SURGICAL CONTROL OF BEHAVIOR: A Symposium**—Arthur Winter, M.D., Ed.—Thomas C. C., 1971, 90 p., illus., \$8. Monograph considers the utilization, methods of preference, and results and complications of unilateral and bilateral lobotomy and electrode implants applied when other methods of medical therapy fail to bring relief.

## TEXTBOOKS

**THE ANTECEDENTS OF MAN: An Introduction to the Evolution of the Primates**—W. E. Le Gros Clark—Quadrangle Bks., 1971, rev. 3rd ed., 394 p., drawings, \$8.95. Revised text incorporates the last decade's significant observations and discoveries bearing on the problem of human ancestry, as well as clarification of taxonomy and phylogeny, including nomenclatural changes.

**CLIMATE AND WEATHER**—John A. Day and Gilbert L. Sternes—Addison-Wesley, 1971, 407 p., photographs, diagrams, maps, \$10.75. Textbook for non-science majors, using the subject of meteorology as a means of fulfilling their academic requirement, while laying the foundations for a continued scientific appreciation of weather phenomena.

**ECOLOGICAL GENETICS**—E. B. Ford—Chapman (Barnes & Noble), 1971, 3rd ed., 410 p., 18 plates, diagrams, \$16. Intended for advanced undergraduates and research workers, describes the experimental study of evolution and adaptation carried out by means of combined field work and laboratory genetics, illustrates the principles developed by examples from both zoology and botany.

**ESSENTIALS OF MEDICAL GENETICS**—Charles G. Crispens, Jr., foreword by John L. Fuller—Harper & Row, Medical Dept., 1971, 213 p., illus., \$9.95. Text for short course designed to give the busy medical student a sound basis for relating genetics to the remainder of his curriculum.

**FUNDAMENTAL CHEMICAL EQUILIBRIA: Nonionic—Ionic**—Kelso B. Morris—Gordon & Breach, 1971, 110 p., diagrams, \$12.50. Introduces the student to thermodynamics in relation to equilibrium processes, acid-base equilibria in aqueous solutions, solubility and precipitation, and oxidation-reduction equilibria and voltaic cells.

**FUNDAMENTALS OF ECOLOGY**—Eugene P. Odum—Saunders, 1971, 3rd ed., 574 p., photographs, diagrams, \$11.75. Revised text is structured to offer three books in one: review of the basic ecological principles and concepts, the habitat approach as reference for specific field or laboratory work, and comprehensive treatment of applications and technology.

**INTRODUCTION TO THE STUDY OF ANIMAL POPULATIONS**—H. G. Andrewartha—Univ. of Chicago Press, 1971, 2nd ed., 283 p., diagrams, \$7.50. Text for undergraduate course in population ecology, emphasizes behavioral adaptations to environment as well as evolution theory.

**PHLOEM TRANSPORT IN PLANTS**—Alden S. Crafts and Carl E. Crisp—Freeman, 1971, 481 p., photographs, diagrams, tables, \$12.50. Definitive work for professionals, also suitable for use in advanced courses in plant physiology.

**A PRIMER OF POPULATION BIOLOGY**—Edward O. Wilson and William H. Bossert—Sinauer Associates, 1971, 192 p., diagrams, paper, \$3.95. Presents the fundamentals for understanding evolutionary biology, stresses mathematical model building, measurement techniques, and problem solving in dealing with population genetics, ecology, and species equilibrium theory.

**STATES, WAVES AND PHOTONS: A Modern Introduction to Light**—Joseph W. Simmons and Mark J. Guttman—Addison-Wesley, 1971, 279 p., illus., \$9.50. An introduction to the photon as a quantum mechanical system, designed for an upper-level course in optics requiring adequate mathematical background.

**THERMODYNAMICS: Principles and Applications**—Frank C. Andrews—Wiley-Interscience, 1971, 288 p., diagrams, \$9.95. Text presents a treatment of thermodynamics that follows the usual introductory courses in chemistry, calculus and physics.

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