

# to the editor

## 'The Great Bird theory'

Your summary of my paper on crocs and birds (SN: 6/17/72, p. 393) seems very fair and accurate. I suppose a purist could perhaps complain about the heading "Crocodiles from birds?" but I am in no position to complain, as the beast *Sphenosuchus* is generally known among my family and colleagues as "the flying croc."

One of the great strengths of what I privately call "The Great Bird Theory" is that it continually goes on to provide new insights into and points of attack on a whole range of functional-anatomical and evolutionary problems connected with the archosaur-bird group. Within the last two or three weeks, for example, I believe I have arrived at a more correct appreciation of the reasons for the emergence of the two fundamentally different types of dinosaur pelvis. With the advantages of hindsight, one can see that Al Romer relied too much on the alligator for his restoration of the pelvic muscles of dinosaurs, in particular *Tyrannosaurus*. He would have done better to have used a lizard such as *Varanus*. However, it is too easy to be wise after the event, and where would we all be without the great work done by Romer on reptilian musculature?

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## Clean air vs. good mileage

This is further to the letter you recently published from Senator Muskie (SN: 6/10/72, p. 371). I have been connected with the engine business for 25 years.

It's about time some consideration was given to the plight of the millions of consumers who have to pay the bills for the extremely poor gas mileage created by the unrealistic requirements sponsored by the Nader gang. We are being ruled by emission standards geared to an idling engine which, in turn, have ruined the over-the-road fuel consumption. I recently took a 1972 model and by altering its timing and carburetor jetting to "old fashioned" standards lowered the highway fuel consumption from 10.5 miles per gallon to 15. Had it been possible to raise the compression ratio, 16 or 17 might have been reached. Unfortunately, the average motorist isn't able to help himself and thereby stop this frightful waste of fuel.

I think this whole problem has been attacked in the wrong manner. Given present technology, the simple answer would be to give up gasoline carburetion and go diesel.

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**THE BLACK TIDE: The Santa Barbara Oil Spill and Its Consequences**—Robert Easton, introd. by Ross Macdonald—Delacorte Press, 1972, 336 p., photographs, map, \$10. Gives a full account of the 1969 eruption of the oil well in the state tidelands southeast of Santa Barbara, of the disaster's ecological effects, and the action it triggered among citizenry, government and industry.

**BRAIN MECHANISMS AND MIND**—Keith Oatley—Dutton, 1972, 216 p., 180 illus. \$7.95. Introduces the ideas and concepts in a field of research that includes neurophysiology, the experimental psychology of animals and men, linguistics and artificial intelligence.

**THE CITY AS A SCHOOLHOUSE: The Story of the Parkway Program**—Donald William Cox—Judson Press, 192 p., photographs, \$6.95. Based on interviews with leading persons involved in the founding of this Philadelphia high school, the first of its kind to be established within U.S. public school system.

**THE CONDUCT OF SCIENCE**—Michael W. Friedlander—Prentice-Hall, 1972, 170 p., \$8.95; paper, \$3.95. An introduction to the methods and inner workings of scientific research, explores the ways in which scientific decisions are reached, and the many ways in which they affect society.

**CRISIS IN WATERTOWN: The Polarization of an American Community**—Lynn Eden—Univ. of Mich. Press, 1972, 218 p., \$6.95. Based on taped record of a student's summer project, represents a concrete study in the field of sociology through talking with people in a small Wisconsin town about a dramatic event in the community's life—the firing of a young minister two years before.

**DESTINATION MARS**—Martin Caidin—Doubleday, 1972, 295 p., photographs, \$7.95. Presents the recent history of the study of Mars via deep-space exploration, including the Mariner 9 probe, with both technical detail and the readability of a scientific detective story.

**THE EXPLODING UNIVERSITY**—Christopher Driver—Bobbs-Merrill, 1972, 377 p., \$12.50. Informative reportage giving historical reflections and contemporary impressions of some of the world's leading campuses from

Bologna to Tokyo, from Harvard and Berkeley to Oxford and Manchester.

**FEEDING THE WORLD OF THE FUTURE**—Hal Hellman—Evans (Lippincott), 1972, 224 p., photographs, \$4.95. In readable form presents a round-up summary of human food requirements and tells what agricultural research, genetic engineering, the enriched-food industry and special laboratories are doing about it.

**FOOD THEORY AND APPLICATIONS**—Pauline C. Paul and Helen H. Palmer, Eds.—Wiley, 1972, 797 p., illus., \$14.95. Deals with the complex chemical-physical changes which result from preparing and processing the wide spectrum of chemical materials comprising food today, from basic principles and control of browning reactions to sensory methods in food-quality assessment.

**FREQUENCY STANDARDS AND CLOCKS: A Tutorial Introduction**—Helmut Hellwig—NBS Tech. Note 616 (GPO), 1972, 67 p., diagrams, paper, 70 cents. Explains basic concepts in non-mathematical terms, describes quartz crystal and atomic resonance devices, and compares currently available frequency standards for their suitability as laboratory and field standards.

**THE GREAT DRUG DECEPTION: The Shocking Story of MER/29 and the Folks Who Gave You Thalidamide**—Ralph Adam Fine—Stein & Day, 1972, 208 p., illus., \$7.95. By profession an appellate attorney, the author reports on the development and sale of the anti-cholesterol drug known as MER/29, and its aftermath as reflected in judicial proceedings and Congressional investigations.

**THE LIGHTNING BOOK**—Peter E. Viemeister—MIT Press, 1972, 316 p., 53 plates, diagrams by Read Viemeister, paper, \$1.95. Reprint (1961), explains the nature of lightning and includes practical advice on protection that can reduce property loss and save lives.

**MAN IN THE LIVING ENVIRONMENT: Report of the Workshop on Global Ecological Problems, 1971**—Robert F. Inger and others—Univ. of Wis. Press, 1972, 288 p., diagrams, maps, \$12.50; paper, \$2.50. The work of a group of 50 scientists, represents the major findings and recommendations, transmitting the ecologist's view to the 1972 U.N. Conference on the Human Environment.

**THE NATURE OF MATTER**—Otto R. Frisch—Dutton, 1972, 216 p., 117 photographs and diagrams, \$7.95. The man who invented the phrase "nuclear fission," here describes in simple terms the atomic theory of matter, showing how far the classical idea of elementary atoms holds good and at what point modern theories of sub-atomic structure needed to be introduced in order to reveal a whole new world of hitherto unknown particles.

**PESTICIDE CHEMISTRY, Vol. II: Insecticide Resistance, Synergism, Enzyme Induction** Vol. III: Chemical Releasers in Insects—A. S. Tahori, Ed.—Gordon & Breach, 1972, 302 p., 227 p., diagrams, tables, \$12.50 each. Proceedings of the Second International Congress of Pesticide Chemistry, held in Israel in 1971.

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