LETTERS

EDITORIAL
To Prune, Promote, and Preserve: E. E. David, Jr.

ARTICLES
Entropy in an Expanding Universe: S. Frautschi
The National Cancer Chemotherapy Program: E. Frei, III
The Role of Science in a New Era of Competition: G. A. Keyworth, II

NEWS AND COMMENT
A New Arthritis Institute Nears Approval
Mary Lasker's Latest Pet Project
Briefing: Hawaiian Milk Problems Stir Little Action; Guatemalan Doctor Set Free; Small Power Producers Look to Congress for Help
India–U.S. Wrangle Over Nuclear Fuel Ended
Science Helps Break the Ice
Did Success Spoil Ag Research?
Butler Leaving Institute on Aging

RESEARCH NEWS
New Disease Baffles Medical Community
CO₂-Climate Models Defended
Repeated DNA Still in Search of a Function

BOOK REVIEWS
Nonlinear Phenomena in Physics and Biology, reviewed by J. Cowan; Biology of Desert Invertebrates, C. N. Slobodchikoff; Chemiosmotic Proton
Circuits in Biological Membranes, D. B. Knaff; Spatial Representation and Behavior Across the Life Span, S. H. White; Bringing Aerodynamics to America, J. R. Goodstein; Books Received ........................................ 624


Fossil Birds from the Hawaiian Islands: Evidence for Wholesale Extinction by Man Before Western Contact: S. L. Olson and H. F. James ............ 633

Androgens Alter the Tuning of Electroreceptors: J. H. Meyer and H. H. Zakon .......... 635

Computer-Assisted Mapping of Pyroclastic Surges: M. C. Malin and M. F. Sheridan .................................................. 637

Venus: Global Surface Radar Reflectivity: G. H. Pettengill, P. G. Ford, S. Nozette ......................................................... 640

Cigarette Smoke Contains Anticoagulants Against Fibrin Aggregation and Factor XIIIa in Plasma: D. K. Galanakis et al. .......................... 642

Metabolism of 2,4',5-Trichlorobiphenyl by the Mercapturic Acid Pathway: J. E. Bakke, A. L. Bergman, G. L. Larsen .................................. 645

Natural and Synthetic Allatotoxins: Suicide Substrates for Juvenile Hormone Biosynthesis: W. S. Bowers et al. ................................. 647

Active Genes Are Sensitive to Deoxyribonuclease I During Metaphase: B. Gazit et al. ................................................................. 648

Spiking Local Interneurons Mediate Local Reflexes: M. Burrows and M. V. S. Siegler ................................................................. 650

Force-Sensitive Interneurons in the Spinal Cord of the Cat: C. L. Cleland, W. Z. Rymer, F. R. Edwards ........................................... 652

Spatial Learning as an Adaptation in Hummingbirds: S. Cole et al. ................................................................. 655

Sex Pheromone of the Winter Moth, a Geometrid with Unusually Low Temperature Precopulatory Responses: W. L. Roelofs et al. ............ 657

Sex and Handedness Differences in Cerebral Blood Flow During Rest and Cognitive Activity: R. C. Gur et al. ........................................ 659

Destruction of Noradrenergic Neurons in Rabbit Brainstem Elevates Plasma Vasopressin, Causing Hypertension: W. W. Blessing, A. F. Sved, D. J. Reis ................................. 661

Localization of an Elevated Sound Source by the Green Tree Frog: H. C. Gerhardt and J. Rheinlaender ........................................ 663

Covers

Full moon over the Great Selima Sand Sheet, northern Sudan, illuminated by dawn's light. Test pits and surficial archeology reveal the sand sheet to be underlain by stratified Quaternary alluvium as well as aeolian sand and paleosols of at least three ages. See page 629. [Vance Haynes, University of Arizona, Tucson 85721]