LETTERS

EDITORIAL
Differing Values in Academia and Industry

ARTICLES
Forecasting Southern California Earthquakes: C. B. Raleigh et al.
Regulation of Circadian Rhythmicity: J. S. Takahashi and M. Zatz
Repopulating the Countryside: A 1980 Census Trend: L. Long and D. DeAre
Education, Science, and National Economic Competitiveness: J. R. Opel

NEWS AND COMMENT
Air Pollution Clouds U.S.-Canadian Relations
Toying with the Truth to Win a Nobel
Stanford Doctors Try Consulting Inc.
Briefing: Another Setback for Clinch River; India–U.S. Deal Falters; HUD’s Orphan: Research on Lead Poisoning

RESEARCH NEWS
How the Brain Controls Birdsong
Particle Theorists in a Quandary
A Sanguine Future for Biomaterials

BOOK REVIEWS
Ancient Mesoamerica, reviewed by D. A. Freidel; The Primates of Madagascar,
M. Cartmill; The Monocotyledons, M. J. Donoghue; Mitochondria, J. N. Siedow .......................................................-.. 1131

REPORTS

Acceleration of Uranium at the Bevalac: J. R. Alonso et al. .......................................................... 1135


Studies of Relativistic Uranium Nuclei with Dielectric Track Detectors: S. P. Ahlen, G. Tarlé, P. B. Price .......................................................... 1139

Nitrogen Fixation in the Marine Environment: D. G. Capone and E. J. Carpenter .......................... 1140

Late Quaternary Zonation of Vegetation in the Eastern Grand Canyon: K. Cole .............. 1142

High Efficiency Latency and Activation of Herpes Simplex Virus in Human Cells: B. L. Wigdahl et al. .......................................................... 1145

Cell-Free Circularization of Viroid Progeny RNA by an RNA Ligase from Wheat Germ: A. D. Branch et al. .......................................................... 1147

Induction of Melanized Cells from a Goldfish Erythrophoroma: Isolation of Pigment Translocation Variants: J. Matsumoto et al. ................. 1149

Quantitative Autoradiographic Mapping of Herpes Simplex Virus Encephalitis with a Radiolabeled Antiviral Drug: Y. Saito et al. .................. 1151

Type II Collagen Autoimmunity in Otosclerosis and Meniere's Disease: T. J. Yoo et al. ........... 1153

Quantitative Electron Microscopic Autoradiography of Insulin, Glucagon, and Somatostatin Binding Sites on Islets: Y. C. Patel, M. Amherdt, L. Orci .................................................. 1155

Stereoselective Antagonism of Phencyclidine's Discriminative Properties by Adenosine Receptor Agonists: R. G. Browne and W. M. Welch ........... 1157

Female Control of Male Reproductive Function in a Mexican Snake: W. R. Garstka and D. Crews .......... 1159

Precipitated Withdrawal by a Benzodiazepine Receptor Antagonist (Ro 15-1788) After 7 Days of Diazepam: S. E. Lukas and R. R. Griffiths ........ 1161

Mammalian Tyrosinase Catalyzes Three Reactions in the Biosynthesis of Melanin: A. Körner and J. Pawelek .......................................................... 1163

CODING

SHEILA E. WRONAL HARRIET ZUCKERMAN WILIAM T. GOLDEN TREASURER WILIAM D. CAREY EXECUTIVE OFFICE

D GEOGRAPHY (E)

BIOLOGICAL SCIENCES (O)

ANTHROPOLOGY (H)

Carl Gans

Water Chaven

Industrial Sciences (P)

Eugene J. Rice

EUGENICS (N)

Agriculture (D)

Eugenics (D)

INSTITUTIONAL AND HISTORICAL SCIENCES (N)

Duane Ackerman

F.L. Wilson

ATMOSPHERIC AND HYDROSPHERIC SCIENCES (G)

Frederick Sanders

Southwestern Research Institute

GENERAL (X)

Glenn R. Hiest

Daniel Albert

Advisory Committee

Si Fred Singer

Association for the Advancement of Science was founded in 1849 and incorporated in 1874. Its objects are work of scientists, to facilitate cooperation among them, to foster scientific freedom and responsibility, effectiveness of science in the promotion of human welfare, and to increase public understanding and the importance and promise of the methods of science in human progress.

COVER

Solution sculpture in the Redwall limestone of the Grand Canyon, Arizona. Changes in ground water flow have produced many dry caves in this substrate which are excellent for the preservation of organic Pleistocene fossils such as packrat middens. Twenty-six of 53 fossil middens from the eastern Grand Canyon were collected from caves in this substrate. See page 1142. [Kenneth Cole, Department of Geosciences, University of Arizona, Tucson 85721]