LETTERS
NIH Budget: H. A. Waxman; Geophagical Clay: Medicinal Effects: A. M. Behbehani; Experiment and Theory: J. R. McNesby; W.A. Goddard III .................................................. 130

EDITORIAL
Oceanography from Space: R. Revelle .................................................. 133

ARTICLES
Microbial Degradation of Halogenated Compounds: D. Ghosal et al. ............. 135
Neurobiological Bases of Rhythmic Motor Acts in Vertebrates: S. Grillner .... 143
Molecular Cloning of the Complementary DNA for Human Tumor Necrosis Factor: A. M. Wang et al. .................................................. 149

NEWS AND COMMENT
A New Soviet Missile Angers the White House ........................................ 155
Japan and the Economics of Invention .................................................. 157
Europe Mirrors U.S. Debate on Car Exhaust .......................................... 159
Briefing: Biomedical Delegation Lobbies White House; Watson Fights Back; Reagan Names Space Commission; Servan-Schreiber Resigns from Computing Center; Prospects Brighten for Electron Accelerator .................................................. 160

RESEARCH NEWS
Making Antibodies Without the Antigens ............................................... 162
Nuclear Winter Won't Blow Away .................................................. 163
Plant Communities Resist Climatic Change ........................................... 165
A New Approach to Cystic Fibrosis .................................................. 167

AAAS News
Corporate Involvement Fuels Science Education Projects: J. Wrather; Women Scientists and Engineers Asked to Participate in United Nations Conference; Nomination of AAAS Fellows Invited; AAAS Insurance Program Participants Receive Premium; Dark Side of Science Available on Disk .............................. 169
BOOK REVIEWS

High Altitude and Man, reviewed by E. A. Phillipson; T. H. Huxley's Place in Natural Science, P. F. Rehbock; A Permanencia de Rodolpho von Ihering, M. J. Weitzman and S. H. Weitzman; Nest Building and Bird Behavior, H. B. Tordoff; Books Received ........................................ 171

REPORTS

Computerized Pattern Recognition: A New Technique for the Analysis of Chemical Communication: A. B. Smith, III et al. ................................. 175

Flight of Winter Moths Near 0°C: B. Heinrich and T. P. Mommsen .......... 177

Mammalian and Yeast ras Gene Products: Biological Function in Their Heterologous Systems: D. DeFeo-Jones et al. ...................................... 179

A Region of the Herpesvirus saimiri Genome Required for Oncogenicity: R. C. Desrosiers et al. .......................................................... 184

Hypomethylation of DNA from Benign and Malignant Human Colon Neoplasms: S. E. Goelz et al. ............................................. 187

Inhibition of Calcification of Bioprosthetic Heart Valves by Local Controlled-Release Diphosphonate: R. J. Levy et al. ............................... 190

Ocelli: A Celestial Compass in the Desert Ant Cataglyphis: K. Fent and R. Wehner ............................................................... 192


Synaptic Morphology and Differences in Sensitivity: R. D. Fields and M. H. Ellisman ................................................................. 197

Dynamic Modification of the Vestibulo-Ocular Reflex by the Nodulus and Uvula: W. Waepe, B. Cohen, T. Raphan ........................................... 199

Digestive Adaptations for Fueling the Cost of Endothermy: W. H. Karasov and J. M. Diamond ................................................................. 202

Herbicide Resistance and Cross-Resistance: Changes at Three Distinct Sites in the Herbicide-Binding Protein: J. M. Erickson et al. ......................... 204

PRODUCTS AND MATERIALS

Ion Meter; Mass Spectrometer; Gas Chromatograph; Image Analyzer; Amino Acid Analyzer; Literature .................................................................. 208

COVER

"Fur" (technically pile) on thorax of moth, Orthosia rubescens. Such fur allows noctuid winter moths to maintain thoracic temperatures above 30°C during flight at near freezing temperatures in late winter. It consists of modified scales (that color Lepidoptera wings), elongated to near 2 millimeters to serve as insulation. See page 177. [Bernd Heinrich, University of Vermont, Burlington 05405]