LETTERS
 Nuclear Arms Buildup; G. Alcaino and W. Liller; ACDA Staffing:
H. F. Cooper, Jr.; Supplemental Teachers of Science and Mathematics;
J. C. Stanley and W. G. Durden; F. J. Rutherford

EDITORIAL
 Large-Scale Extinctions

ARTICLES
 The Developing Technology of Gas Separating Membranes: J. M. S. Henis and
M. K. Tripodi

 Radiation Exposures in Utah from Nevada Nuclear Tests: H. L. Beck and
F. W. Krey

 Retrieval of Information from Long-Term Memory: J. R. Anderson

NEWS AND COMMENT
 Coping with Fraud: The Darsee Case

Wastes Seep Round the Law

White House Names New EPA Chief

Revisions in Cancer Policy

Briefing: Hit Lists Claim a Victim at EPA; Burford Ignored Advice on DOE
Reactor; Industry Sets Conditions for Funding Clinch River

RESEARCH NEWS
 The Race to Predict Next Week’s Weather

Plants’ Resistance to Herbicide Pinpointed

IBM Images Surfaces by Electron Tunneling

ANNUAL MEETING
 Preconvention Program; Schedule of Contributed Papers; Meeting Information;
Map of Downtown Detroit; Tours; AAAS Science Film Festival; Travel
Information; Advance Registration and Hotel Reservation Forms

BOARD OF DIRECTORS

D. ALLAN BROMLEY
Retiring President, Chairman

E. MARGARET BURIDGE
President

ANNA J. HARRISON
President-Elect

LAWRENCE BOGORAD
EDWARD E. DAVID, JR.

NANCIE L. GONZALEZ
DAVID A. HAMBURG

HAIRMEN AND
SECRETARIES OF
AAS SECTIONS

MATHEMATICS (A)
Fel E. Bowler
Lynn Arthur Steen

PHYSICS (B)
Donald N. Langenberg
Rolf M. Sinclair

SOCIAL, ECONOMIC, AND POLITICAL SCIENCES (K)
Thomas C. Scheiring
David L. Sils

DENTISTRY (R)
Paul Goldhaber
Harold M. Fullmer

PHARMACEUTICAL SCIENCES (S)
Louis A. Luzzi
Robert A. Wiley

HISTORY AND PHILOSOPHY OF SCIENCE (L) ENGINEERING (M)
Erwin N. Hewet
David L. Hull

INFORMATION, COMPUTING, AND COMMUNICATION (T)
Merlyn C. Bracken

MUSICAL AMERICA (O)

IVISIONS
 ARCTIC DIVISION

PACIFIC DIVISION

SOUTHWESTERN AND ROCKY MOUNTAIN DIV

Arthur M. Pearson
President

Gunter E. Weller
Executive Secretary

Herbert Baker
President

Alan E. LeVot
Executive Director

Klaus D. Timmerhaus
President

M. Michelle Bald
Executive Office

Science is published weekly on Friday, by the American Association for the Advancement of Science, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005. Second-class postage (publication No. 484460) paid at Washington, D.C., and at an additional entry. New with The Scientific Monthly's Copyright © 1983 by the American Association for the Advancement of Science. Domestic individual membership and subscription (1 issue): $25; Domestic institutional subscription (1 issue): $50. Foreign postage extra: Canada $24, other (surface mail) $7, air-service via Amsterdam $65. First class, airmail, school-year, and student rates on request. Single copies $2.50 ($5 by mail); back issues $3 ($3.50 by mail); biotechnology issue, $5 ($5.50 by mail); storage rates on request. Change of address: allow 6 weeks, giving old and new addresses and seven-digit account number. Authorization to photocopy material for internal or personal use under certain circumstances not falling within the fair use provisions of the Copyright Act is granted by AAAS to libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of $1 per copy plus $0.10 per page is paid directly to CCC, 21 Congress Street, Salem, Massachusetts 01970. The identification code for Science is 0036-8075/83 $1 + 10.45.
BOOK REVIEWS

Present and Past in Middle Life, reviewed by P. B. Baltes and E. A. Skinner; A History of Platinum and Its Allied Metals, R. P. Multhauf; Proceedings of the Seventeenth Rencontre de Moriond, G. Kane; Substance P in the Nervous System, L. Jan; Books Received ........................................... 62

REPORTS

The Separation of Madagascar and Africa: P. D. Rabinowitz, M. F. Coffin, D. Falvey ................................................................. 67
Fragile Sites in Chromosomes: Possible Model for the Study of Spontaneous Chromosome Breakage: P. B. Jacky, B. Beek, G. R. Sutherland .............. 69
Myoglobin Diffusion in Bovine Heart Muscle: D. J. Livingston, G. N. La Mar, W. D. Brown .......................................................... 71
Blood Cell Surface Changes in Drosophila Mutants with Melanotic Tumors: T. M. Rizki and R. M. Rizki ........................................ 73
Plant Chimeras Used to Establish de novo Origin of Shoots: R. Norris, R. H. Smith, K. C. Vaughn ................................................. 75
Insulin-Like Growth Factors: A Role in Growth Hormone Negative Feedback and Body Weight Regulation via Brain: G. S. Tannenbaum, H. J. Guyda, B. I. Posner .................................................. 77
Trypsin Inhibition by Tapeworms: Antienzyme Secretion or pH Adjustment?: G. L. Uglen and J. J. Just .............................................. 79
Normalization of Depressed Heart Function in Rats by Ribose: H.-G. Zimmer .... 81
Adenylate Cyclase Activation Shifts the Phase of a Circadian Pacemaker: A. Eskin and J. S. Takahashi ............................................. 82
Bidirectional Transmission at the Rectifying Electrotonic Synapse: A Voltage-Dependent Process: C. Giaume and H. Korn ......................... 84
Mechanical Action of the Intercostal Muscles on the Ribs: A. De Troyer, S. Kelly, W. A. Zin .......................................................... 87
Tumor Promotion by Phorbol Esters in Skin: Evidence for a Memory Effect: G. Fürstenberger, B. Sorg, F. Marks ........................................ 89
Morphological Basis of Long-Term Habituation and Sensitization in Aplysia: C. H. Bailey and M. Chen ............................................. 91
Selection, Outbreeding Depression, and the Sex Ratio of Scale Insects: D. N. Alstad and G. F. Edmunds, Jr. ........................................ 93
Early Morning Insomnia with Rapidly Eliminated Benzodiazepines: A. Kales et al. ................................................................. 95
Shadows of Thought: Shifting Lateralization of Human Brain Electrical Patterns During Brief Visuomotor Task: A. S. Gevins et al. ......................... 97
A Functional Role for an Opiate System in Snail Thermal Behavior: M. Kavaliers, M. Hirst, G. C. Teskey ........................................ 99
Mechanical Measurement of Red Cell Membrane Thickness: R. M. Hochmuth et al. ......................................................... 101

COVER

Artist's conception of Renaissance Center, Detroit, Michigan, site of the AAAS Annual Meeting, 26–31 May 1983. See page 45 for information about the program. [Steve Shepherd, Gaithersburg, Maryland]