

---

---

# SCIENCE

Index to Volume 181

July–September 1973

**Editorial Board**

ALFRED BROWN  
JAMES F. CROW  
H. S. GUTOWSKY  
ARTHUR D. HASLER  
SEYMOUR S. KETY  
RUDOLF KOMPNER  
DANIEL KOSHLAND, JR.

GARDNER LINDZEY  
FRANK PRESS  
FRANK W. PUTNAM  
MAXINE SINGER  
RAYMOND H. THOMPSON  
EDWARD O. WILSON  
GORDON WOLMAN

**Editorial Staff**

WILLIAM BEVAN  
*Publisher*

HANS NUSSBAUM  
*Business Manager*

PHILIP H. ABELSON  
*Editor*

EARL J. SCHERAGO, *Advertising Director*

**Published by the**

**American Association for the Advancement of Science**

**1515 Massachusetts Avenue, NW, Washington, D.C. 20005**

**Printed in Washington, D.C., by McCall Printing Company, Mid-Atlantic Division**

**Copyright 1973 by the American Association for the Advancement of Science**

---

---

| No.  | Date of Issue | Pages   | No.  | Date of Issue | Pages     |
|------|---------------|---------|------|---------------|-----------|
| 4094 | 6 July        | 1-92    | 4101 | 24 August     | 693-792   |
| 4095 | 13 July       | 93-208  | 4102 | 31 August     | 793-884   |
| 4096 | 20 July       | 209-292 | 4103 | 7 September   | 885-968   |
| 4097 | 27 July       | 293-384 | 4104 | 14 September  | 969-1100  |
| 4098 | 3 August      | 385-476 | 4105 | 21 September  | 1101-1192 |
| 4099 | 10 August     | 477-600 | 4106 | 28 September  | 1193-1208 |
| 4100 | 17 August     | 601-692 |      |               |           |

Names of authors of books reviewed are printed in SMALL CAPITALS.

## A

- AAAS elections, 1973 (*editorial*), W. Bevan, 801
- Abelson, P. H. (*editorials*): An era of global scarcity, 303; Science and Man in the Americas, 221
- Abrahamsen, N. *See* Stephenson, C. B., *et al.*
- Academic freedom (*letter*), G. Dahlgren, 109
- N-Acetyl- $\beta$ -hexosaminidase: role in the degradation of glycosaminoglycans, J. N. Thompson *et al.*, 866
- ADAMS, R. MC C., and H. J. NISSEN, The Uruk countryside, *book review of*, 150
- Adcock, E. W., III, *et al.*: Human chorionic gonadotropin: its possible role in maternal lymphocyte suppression, 845
- Adelman, M. A.: *book review of* The energy crisis, 151
- ADIE, R. J. (Ed.), Antarctic geology and geophysics, *book review of*, 647
- Adler, K. *See* Taylor, D. H.
- Adler, N. T. *See* Konishi, M., *et al.*
- Adolase catalysis: single base-mediated proton activation, H. P. Meloche and J. P. Glukser, 350
- Adolescent marihuana use: role of parents and peers, D. Kandel, 1067
- Aerosols and atmospheric chemistry, G. M. MIDY (Ed.), *book review by* V. A. Mohnen, 837
- Aftershocks and intensity of the Managua earthquake of 23 December 1972, T. Matumoto and G. Latham, 545
- Aggarwal, Y. P. *See* Scholz, C. H., *et al.*
- AGIN, D. P. (Ed.), Perspectives in membrane biophysics, *book review of*, 539
- Agricultural research (*editorial*), P. E. Waggoner, 499
- Agriculture, research, and shortages of funds and food (*editorial*), E. Epstein, 997
- Albert, A. E. *See* Walker, D. L., *et al.*
- Albrecht, F., *et al.*: Stable limit cycles in prey-predator populations, 1073
- Albro, P. W. *See* Bennett, H. S.
- Albuquerque, E. X. *See* Kuba, K., *et al.*
- Allard, R. W. *See* Clegg, M. T.
- Allerhand, A. *See* Williams, E., *et al.*
- Allison, T., *et al.*: Somatic evoked response recording: an adequate test of deafferentation?, 187
- Alloway, T. M., *et al.*: Hibernation: effects on memory or performance?, 86
- Alpern, H. P. *See* Hu, J. W., *et al.*
- Al-Rawi, N. Y. *See* Bakir, F., *et al.*
- Amborski, R. L., and J. C. Glorioso: The frog revisited (*letter*), 495
- Amherdt, M. *See* Orci, L., *et al.*
- Amin-Zaki, L. *See* Bakir, F., *et al.*
- Analysis of leaf development, R. MAKSYMOWYCH, *book review by* T. Stonier, 648
- Anderegg, B. N. *See* Lichtenstein, E. P., *et al.*
- Anderson, W. A. *See* Economou, T. E., *et al.*
- Anfinsen, C. B.: Principles that govern the folding of protein chains, 223
- Angell, C. A. *See* Rasmussen, D. H., *et al.*
- Animal Welfare Regulations (*letter*), G. A. Bingham, 7
- Anlezark, G. M., *et al.*: Impaired learning and decreased cortical norepinephrine after bilateral locus coeruleus lesions, 682
- Anomalous heat capacities of supercooled water and heavy water, D. H. Rasmussen *et al.*, 342
- Another scientist in Congress (*letter*), L. White, Jr., 112
- Antarctic geology and geophysics, R. J. ADIE (Ed.), *book review by* J. R. Heitzler, 647
- Antibody to HSV-2 induced tumor specific antigens in serums from patients with cervical carcinoma, L. Aurelian *et al.*, 161
- $\alpha_1$ -Antitrypsin deficiency: a variant with no detectable  $\alpha_1$ -antitrypsin, R. C. Talamo *et al.*, 70
- Apollo 14 and Apollo 16 heavy-particle dosimetry experiments, R. L. Fleischer *et al.*, 436
- Approval of new drugs (*letters*), S. Peltzman and H. Wiener, 110
- Arnott, S., and P. J. Bond: Triple stranded polynucleotide helix containing only purine bases, 68
- Artifacts or geofacts? (*letter*), F. Brewer, 1202
- Ashcroft, N. W.: *book review of* Introduction to the theory of liquid metals and Liquid metals, 538
- Aspinall, W. P., *et al.*: Eruption of Soufrière Volcano on St. Vincent Island, 1971-1972, 117
- Atlas of palaeobiogeography, A. HALLAM, *book review by* T. J. M. Schopf, 431

- August, C. S. *See* Adcock, E. W., III, *et al.*
- Aurelian, L., *et al.*: Antibody to HSV-2 induced tumor specific antigens in serums from patients with cervical carcinoma, 161
- Austin, R. H., *et al.*: Dynamics of carbon monoxide binding by heme proteins, 541
- Avers, C. J. *See* Hoffmann, H.
- Aversive maternal control, A. B. HEILBRUN, JR., *book review by* M. J. Goldstein, 1240

## B

- Bacterial plasmids (*meeting report*), D. R. Helinski *et al.*, 471
- Bailey, D. W. *See* Swank, R. T.
- Bailey, W. J. *See* Eppley, R. M.
- Baines, G. B. K. *See* Maragos, J. E., *et al.*
- Baker, F. H., and T. O. Perry: Future food supply (*letters*), 109
- Bakir, F., *et al.*: Methylmercury poisoning in Iraq, 230
- Balintfy, J. L.: Mathematical modeling and human nutrition, 581
- Bandy, O. L., and L. Marincovich, Jr.: Rates of late Cenozoic uplift, Baldwin Hills, Los Angeles, California, 653
- Banks, S. P., and T. C. Johnson: Synthesis of RNA-polyadenylic acid by isolated brain nuclei, 1064
- BARBER, B., *et al.*, Research on human subjects, *book review of*, 255
- Bardeen, J.: Electron-phonon interactions and superconductivity, 1209
- Barfield, R. J. *See* Sachs, B. D., *et al.*
- Barnard, E. A. *See* Kuba, K., *et al.*
- Barro, G. *See* Taub, E., *et al.*
- Bartlett, F., and E. R. John: Equipotentiality quantified: the anatomical distribution of the engram, 764
- Bascom, W.: *book review of* Man beneath the sea, 337
- Bassett, W. A. *See* Hensley, W. K., *et al.*
- Bateson, P. P. G. *See* Horn, G., *et al.*
- Bateson, P. P. G., *et al.*: Imprinting: lasting effects on uracil incorporation into chick brain, 576
- Battaglia, F. C. *See* Adcock, E. W., III, *et al.*
- Baum, W. M., *et al.*: Behaviorism and feedback control (*letters*), 1114
- Baxter, C. F. *See* Shank, R. P., *et al.*
- Bayley, N. *See* Upchurch, M. L., *et al.*

- Beachey, E. H. *See* Katzman, R. L., *et al.*  
 Becattini, F. *See* Clark, L. C., Jr., *et al.*  
 Becker, C. *See* Clark, L. C., Jr., *et al.*  
 BEER, S. Z. (Ed.), *Liquid metals, book review of* 538  
 Beeson, K. *See* Austin, R. H., *et al.*  
 Behavior of free-ranging macaques after intraventricular 6-hydroxydopamine, D. E. Redmond, Jr., *et al.*, 1256  
 Behavioral development after forelimb deafferentation on day of birth in monkeys with and without blinding, E. Taub *et al.*, 959  
 Behaviorism and feedback control (*letters*), W. M. Baum *et al.*, 1114  
 Benemann, J. R.: Nitrogen fixation in termites, 164  
 Bennett, H. S., and P. W. Albro: PCB's in microscope immersion oil (*letter*), 990  
 Bentley, P. J.: Role of the skin in amphibian sodium metabolism, 686  
 Berg, C. A.: Energy conservation through effective utilization, 128  
 BERG, G. (Ed.), *Circumpolar problems, book review of*, 257  
 Berkland, J. O., and L. A. Raymond: Pleistocene glaciation in the Blue Ridge Province, southern Appalachian Mountains, North Carolina, 651  
 Berlin, K. D.: *book review of* Organic phosphorus compounds, 649  
 Bern, H. A., *et al.*: Long-term effects of perinatal hormone administration (*meeting report*), 189  
 Beroza, M. *See* Klun, J. A., *et al.*  
 Bertine, K. *See* Chow, T. J., *et al.*  
 Bevan, W.: AAAS elections, 1973 (*editorial*), 801  
 Beveridge, P. J. *See* Maragos, J. E., *et al.*  
 Beverley, K. I. *See* Regan, D.  
 BIBBY, C.: Scientist extraordinary, *book review of*, 47  
 Bindra, D., and E. R. John: Memory mechanisms in instrumental responding, 684  
 Bingham, G. A.: Animal Welfare Regulations (*letter*), 7  
 Binkley, C.: Energy efficiency (*letter*), 610  
 Binkley, S., *et al.*: Pineal enzymes: regulation of avian melatonin synthesis, 273  
 Biogenesis of mRNA: genetic regulation in mammalian cells, J. E. Darnell *et al.*, 1215  
 Biological proportions, A. L. Dahl, 469  
 Biology of trematodes, The, D. A. ERASMUS, *book review by* W. C. Campbell, 739  
 Biosynthesis of a vasotocin-like peptide in cell cultures from pineal glands of human fetuses, S. Pavel *et al.*, 1252  
 Birnbaum, H.: Japanese educational patterns in science and engineering, 1222  
 Black, J.: Comment on "Mechanical resonance spectra in human cancellous bone," 273  
 Black Monday's children, G. J. POWELL, *book review by* T. Duster, 46  
 Blackburn, T. R.: Information and the ecology of scholars, 1141  
 Blanford, G. E., Jr. *See* Monnin, M. M.  
 Blind technique, The (*letter*), M. A. Weinberger, 219  
 Bloom, A. L.: *book review of* An introduction to acoustical holography and Optical and acoustical holography, 1037  
 Blume, E. M. *See* Economou, T. E., *et al.*  
 Bodey, G. P. *See* Griggs, J. J.  
 Bond, P. J. *See* Arnott, S.  
 Bonner, J. T.: *book review of* Hierarchy theory, 647  
 Borden, D., *et al.*: Isozymic heterogeneity in *Tetrahymena* strains, 279  
 Borkoski, V. *See* Kallman, K. D., *et al.*  
 Borrelli, N. F. *See* Evans, D. L., *et al.*  
 Boudart, M. *See* Levy, R. B.  
 Bourne, H. R., *et al.*: Regulation of phosphodiesterase synthesis: requirement for cyclic adenosine monophosphate-dependent protein kinase, 952  
 Bowers, R.: Committee on Science and Public Policy (*letter*), 893  
 Boyer, C. B.: *book review of* The mathematical career of Pierre de Fermat (1601-1665), 152  
 Bracewell, R. N.: *book review of* The evolution of radio astronomy, 932  
 Brain calcium: role in temperature regulation, J. L. Hanegan and B. A. Williams, 663  
 Brainstem temperature affects gill ventilation in the California scorpionfish, L. L. Crawshaw *et al.*, 579  
 Brandon, F. B.: Purified antigen vaccines (*letter*), 495  
 Brazilian momentum, The (*letter*), L. R. Travassos, 391  
 Breast cancer: induction of differentiation by embryonic tissue, J. J. DeCosse *et al.*, 1057  
 BRECHER, E. M., *Licit and illicit drugs, book review of*, 335  
 Breermann, H.: *book review of* Stabilité structurelle et morphogénèse, 536  
 BRENDEN, B. B. *See* HILDEBRAND, B. P.  
 Bresnick, E. *See* Stoming, T. A.  
 Bretscher, M. S.: Membrane structure: some general principles, 622  
 Brewer, F.: Artifacts or geofacts? (*letter*), 1202  
 Bridge and barrier, D. WALKER (Ed.), *book review by* A. Keast, 934  
 Bright, H. S.: The university and R & D (*letter*), 301  
 Bruland, K. W. *See* Chow, T. J., *et al.*  
 Bruns, R. R., *et al.*: Cartilage collagen: a staggered substructure in reconstituted fibrils, 269  
 Brush, B. M. *See* Inman, D. L.  
 Buckman, M. T., and G. T. Peake: Osmolar control of prolactin secretion in man, 755  
 Bull, D. M., *et al.*: Immunity to colon cancer assessed by antigen-induced inhibition of mixed mononuclear cell migration, 957  
 Bullough, V. L.: Peer review appeal mechanism (*letter*), 610  
 Burgos, M. H. *See* Segal, S. J., *et al.*  
 Burke, W. F., *et al.*: Crystallization of NADP-specific isocitrate dehydrogenase, 59  
 Burnet, B., *et al.*: Phenocopies of pigmentary and behavioral effects of the yellow mutant in *Drosophila* induced by  $\alpha$ -dimethyltyrosine, 1059  
 Burnett, W. C. *See* Veeh, H. H., *et al.*  
 Byrne, K. J. *See* Hummel, H. E., *et al.*
- C**
- Cadmium: mode of occurrence in Illinois coals, H. J. Gluskoter and P. C. Lindahl, 264  
 Cagan, R. H.: Chemostimulatory protein: a new type of taste stimulus, 32  
 Calhoun, W. H.: Thinking metric (*letter*), 1201  
 Calico site: artifacts or geofacts?, V. Haynes, 305  
 CAMATINI, E. (Ed.), *Optical and acoustical holography, book review of*, 1037  
 Campbell, W. C.: *book review of* The biology of trematodes, 739  
 Campbell, W. J., and S. Martin: Oil and ice in the Arctic Ocean: possible large-scale interactions, 56  
 Capacitor electrode stimulates nerve or muscle without oxidation-reduction reactions, D. L. Guyton and F. T. Hambrecht, 74  
 Carbenes, M. JONES, JR., and R. A. MOSS (Eds.), *book review by* R. M. Magid, 435  
 CARDWELL, D. S. L., *Turning points in western technology, book review of*, 1035  
 Carnivores, The, F. R. EWER, *book review by* G. B. Schaller, 433  
 Carpenter, C. B. *See* Strom, T. B., *et al.*  
 Carr, R. A., and P. E. Wilkniss: Mercury in the Greenland ice sheet: further data, 843  
 Carter, J. L.: VLS (vapor-liquid-solid): newly discovered growth mechanism on the lunar surface?, 841  
 Carter, L. J. (*News and Comment*): Alaska pipeline, 326, 641; deepwater oil terminals, 825; France's nuclear tests, 251; military R & D and the Congress, 731; pesticides and environmentalists, 143; Sakharov's survival teeters on a delicate balance, 1228  
 Carter, M. *See* Fleischer, R. L., *et al.*  
 Cartilage collagen: a staggered substructure in reconstituted fibrils, R. R. Bruns *et al.*, 269  
 Carton, D. *See* Kint, J. A., *et al.*  
 Case, J. E., *et al.*: Gravitational evidence for a low-density mass beneath the Galápagos Islands, 1040  
 Case of Nina Strokata, The (*letter*), A. A. Zwarun, 300  
 Castenholz, R. W. *See* Wickstrom, C. E.  
 Catecholamine and dibutyl cyclic AMP effects on myosin adenosine triphosphatase in cultured rat heart cells, I. Harary *et al.*, 1061  
 Cell-mediated immune responses in vitro: interaction of thymus-derived cells during cytotoxic allograft responses in vitro, H. Wagner, 1170  
 Chapman, D. *See* Pagano, R. E., *et al.*  
 Chapman, O. L. *See* Klun, J. A., *et al.*  
 Chemistry of lunar basalts with very high alumina contents, N. J. Hubbard *et al.*, 339  
 Chemostimulatory protein: a new type of taste stimulus, R. H. Cagan, 32  
 Cherry, R. J. *See* Pagano, R. E., *et al.*  
 Chessin, H. *See* Passarelli, R. E., Jr., *et al.*  
 Chia, F.: Sand dollar: a weight belt for the juvenile, 73  
 Chlorinated urban water: a cause of dialysis-induced hemolytic anemia, J. W. Eaton *et al.*, 463  
 Chow, T. J., *et al.*: Lead pollution: records in southern California coastal sediments, 551  
 Christensen, N. L.: Fire and the nitrogen cycle in California chaparral, 66  
 Chromatographic separation of odorants by the nose: retention times measured across in vivo olfactory mucosa, M. M. Mozell and M. Jagodowicz, 1247  
 Churchill, F. B.: *book review of* History of genetics, 336  
 Cicchetti, C. J., *et al.*: Evaluating federal water projects: a critique of proposed standards, 723  
 Cintron, R. *See* Samuels, H. H., *et al.*  
 Circumpolar problems, G. BERG (Ed.), *book review by* J. W. VanStone, 257  
 Clarification of the chemical status of the pink bollworm sex pheromone, H. E. Hummel *et al.*, 873  
 Clark, C. W.: The economics of overexploitation, 630  
 Clark, L. C., Jr., *et al.*: Perfluorocarbons having a short dwell time in the liver, 680  
 CLARKE, D. L. (Ed.), *Models in archaeology, book review of*, 933  
 Clarkson, T. W. *See* Bakir, F., *et al.*  
 Clegg, M. T., and R. W. Allard: Viability versus fecundity selection in the slender wild oat, *Avena barbata* L., 667  
 Clepper, H.: A notable anniversary (*editorial*), 703  
 Climatic change on Mars, C. Sagan *et al.*, 1045  
 Clinical psychopharmacology in its 20th year, G. E. Crane, 124  
 Coastal challenge, The, D. L. Inman and B. M. Brush, 20  
 Cobb, J. C.: Technology assessment and the university (*letter*), 495  
 Cochran, W. W. *See* Swenson, G. W., Jr.  
 Cockburn, T. A.: Death and disease in ancient Egypt (*meeting report*), 470

- Cody, G. D., *et al.*: University-industry interaction (*letters*), 800
- Cody, V., and W. L. Daux: Distal conformation of the thyroid hormone 3,5,3'-triiodo-L-thyronine, 757
- Cohen, D. *See* Clark, L. C., Jr., *et al.*
- Cohen, G. *See* Heikkilä, R.
- COHEN, J. O. (Ed.), *The staphylococci*, book review of 434
- Cohen, S. A., and G. D. Fischbach: Regulation of muscle acetylcholine sensitivity by muscle activity in cell culture, 76
- Cohen, S. N. *See* Helinski, D. R., *et al.*
- Cohn, R. *See* Allison, T., *et al.*
- Coleman, T. G.: Data on rat colonies (*letter*), 391
- COLINVAUX, P. A., Introduction to ecology, book review of, 1238
- Collagen-induced platelet aggregation: involvement of an active glycopeptide fragment ( $\alpha$ 1-CB5), R. L. Katzman *et al.*, 670
- Collard, W., *et al.*: Virus-free adenocarcinoma of the frog (summer phase tumor) transcribes Lucké tumor herpesvirus-specific RNA, 448
- Collected works of Leo Szilard, The, B. T. GELD *et al.* (Eds.), book review by D. Hawkins, 1036
- COLLIER, B. D., *et al.*, Dynamic ecology, book review of, 1238
- Comar, C. L.: Radiation standards (*letter*), 611
- Comment on "Mechanical resonance spectra in human cancellous bone," J. Black, 273
- Committee on Science and Public Policy (*letter*), R. Bowers, 893
- Common mechanism for repellents and attractants in bacterial chemotaxis, N. Tsang *et al.*, 60
- Compton, W. D. *See* Cody, G. D., *et al.*
- Computing in transition (*editorial*), M. Greenberger, 1207
- Comstock, G. M. *See* Fleischer, R. L., *et al.*
- Connolly, K. *See* Burnet, B., *et al.*
- Contemporary phosphorites on the continental margin of Peru, H. H. Veeh *et al.*, 844
- Control circuits for determination and transdetermination, S. A. Kauffman, 310
- Cooper, L. N.: Microscopic quantum interference in the theory of superconductivity, 908
- Copeland, T. *See* Oroszlan, S., *et al.*
- Cordes, E. H. *See* Williams, E., *et al.*
- Correct formulas (*letters*), M. Parvin and P. A. Samuelson, 995
- Corso, J. F., and D. A. Norman: Neural quantum controversy in sensory psychology, 467
- Cosenza, H. *See* Rowley, D. A., *et al.*
- Cosmic x-ray sources: a progress report, H. Friedman, 395
- Cost of environmental quality (*letter*), G. H. Davis, 610
- Cotman, C. W. *See* Levy, W. B., *et al.*
- COUNCE, S. J., and C. H. WADDINGTON (Eds.), *Developmental systems: insects*, book review of, 649
- Counselman, C. C., III, *et al.*: Precision selenodesy via differential interferometry, 772
- Cover pictures: albatross (7 Sept.); bee sting (20 July); California sea lions (21 Sept.); dolphins (24 Aug.); eelgrass doll (27 July); eruption of Soufrière Volcano (13 July); head of an Egyptian mummy (3 Aug.); moon cartoon (17 Aug.); optical effects after artificial cloud seeding (14 Sept.); rats and maternal deprivation (10 Aug.); sand dune (6 July); stone decay in the Rhein-Ruhr (31 Aug.); tattooed female monkey (28 Sept.)
- COX, G. W. *See* COLLIER, B. D., *et al.*
- Cox, S. *See* Adcock, E. W., III, *et al.*
- Crabbe, J. C. *See* Hu, J. W., *et al.*
- Crane, G. E.: Clinical psychopharmacology in its 20th year, 124
- Crawshaw, L. I., *et al.*: Brainstem temperature affects gill ventilation in the California scorpionfish, 579
- Criswell, H. E. *See* Irwin, D. A., *et al.*
- Crocker, J. F. S.: Human embryonic kidneys in organ culture: abnormalities of development induced by decreased potassium, 1178
- Crofford, M., and A. A. Smith: Growth retardation in young mice treated with *dl*-methadone, 947
- Cross-national comparison of population density, A. T. Day and L. H. Day, 1016
- Crow, T. J. *See* Anlezark, G. M., *et al.*
- Crystallization of NADP-specific isocitrate dehydrogenase, W. F. Burke *et al.*, 59
- Culliton, B. J. (*News and Comment*): American Medical Association meeting, 249; biomedical research, 828, 921; health and federal public relations, 324; Health, Education, and Welfare restored funds may be buried by regulation, 141; heart plan calls for "professorships," 924; scientists probe Russian viruses, 40; training grants at National Institutes of Health are back, 325
- Curvature as a feature of pattern vision, L. A. Riggs, 1070
- Cyclic adenosine monophosphate, metabolites, and phosphorylase in neural tissue: a comparison of methods of fixation, W. D. Lust *et al.*, 280
- Cytomegalovirus: conversion of nonpermissive cells to a permissive state for virus replication, S. St. Jeor and F. Rapp, 1060

## D

- Dacheux, R. F. *See* Miller, R. F.
- Dacremont, G. *See* Kint, J. A., *et al.*
- Dahl, A. L.: Biological proportions, 469
- Dahlgren, G.: Academic freedom (*letter*), 109
- Damulji, S. F. *See* Bakir, F., *et al.*
- Darnell, J. E., *et al.*: Biogenesis of mRNA: genetic regulation in mammalian cells, 1215
- Data on rat colonies (*letter*), T. G. Coleman, 391
- Davies, M. E.: book review of *The Russian space bluff*, 150
- Davis, G. H.: Cost of environmental quality (*letter*), 610
- Davis, H. J. *See* Aurelian, L., *et al.*
- Davis, R. K. *See* Cicchetti, C. J., *et al.*
- Dawson, W. W., and J. M. Perez: Unusual retinal cells in the dolphin eye, 747
- Day, A. T., and L. H. Day: Cross-national comparison of population density, 1016
- Day, L. H. *See* Day, A. T.
- Dean, A. C., and R. C. Dean: Women in the job market (*letter*), 990
- Dean, R. C. *See* Dean, A. C.
- Death and disease in ancient Egypt (*meeting report*), T. A. Cockburn, 470
- Deaux, E.: Thirst satiation and the temperature of ingested water, 1166
- DeCosse, J. J., *et al.*: Breast cancer: induction of differentiation by embryonic tissue, 1057
- Deep-sea species diversity: decreased gastropod diversity at abyssal depths, M. A. Rex, 1051
- Deformation and fracture of high polymers (*meeting report*), H. H. Kausch *et al.*, 961
- Degens, E. T. *See* Deuser, W. G., *et al.*
- Degrugillier, M. E. *See* Leopold, R. A.
- Delayed publication (*letter*), T. Feininger, 8
- DeLong, R. L., *et al.*: Premature births in California sea lions: association with high organochlorine pollutant residue levels, 1168
- DeLuca, H. F. *See* Tanaka, Y., *et al.*
- Dement, W. C. *See* Guilleminault, C., *et al.*
- Deshmukh, K. *See* Nimni, M.
- DE SOETE, D., *et al.*, Neutron activation analysis, book review of, 153
- Detection of charged particles by polymer grafting, M. M. Monnin and G. E. Blanford, Jr., 743
- Deuser, W. G., *et al.*: Methane in Lake Kivu: new data bearing on its origin, 51
- DeVault, D.: A new metric system (*letter*), 392
- Developmental systems: insects, S. J. COUNCE and C. H. WADDINGTON (Eds.), book review by G. Schubiger, 649
- Dhahir, H. I. *See* Bakir, F., *et al.*
- Diehn, B.: Phototaxis and sensory transduction in *Euglena*, 1009
- Differences in collagen metabolism between normal and osteoarthritic human articular cartilage, M. Nimni and K. Deshmukh, 751
- Diisopropylfluorophosphate: suppression of ionic conductance of the cholinergic receptor, K. Kuba *et al.*, 853
- DIMBLEBY, G. W. *See* UCKO, P. J., *et al.*
- Dion, S. *See* Bourne, H. R., *et al.*
- Dirks, S. J. *See* Ford, J. M., *et al.*
- Disparity detectors in human depth perception: evidence for directional selectivity, D. Regan and K. I. Beverley, 877
- Distal conformation of the thyroid hormone 3,5,3'-triiodo-L-thyronine, V. Cody and W. L. Daux, 757
- Djerassi, C.: Research impact statements (*editorial*), 115
- DNA hybrid molecules (*letter*), M. Singer and D. Soll, 1114
- Doherty, R. A. *See* Bakir, F., *et al.*
- DOLE, M. (Ed.), *The radiation chemistry of macromolecules*, book review of, 338
- DONALDSON, W. *See* TULVING, E.
- L-Dopa in legume seeds: a chemical barrier to insect attack: S. S. Rehr *et al.*, 81
- Dopamine- $\beta$ -hydroxylase deficits in the brains of schizophrenic patients, C. D. Wise and L. Stein, 344
- Dorcescu, M. *See* Pavel, S., *et al.*
- Dorfman, A. *See* Thompson, J. N., *et al.*
- Dorman, J. *See* Nakamura, Y., *et al.*
- Douglass, C. B. *See* Whitehead, D. R., *et al.*
- Douglass, C. D., and J. C. James: Support of new principal investigators by NIH: 1966 to 1972, 241
- Dowty, B., *et al.*: Reactions of singlet oxygen with pine pollen, 669
- Daux, W. L. *See* Cody, V.
- Dubois, R. S. *See* Evans, G. W., *et al.*
- Duncan, J. R. *See* Hsu, F. S., *et al.*
- DuPont, R. L., and M. H. Greene: The dynamics of a heroin addiction epidemic, 716
- Duster, T.: book review of *Black Monday's children*, 46
- Duvick, D. N. *See* Upchurch, M. L., *et al.*
- Dynamic ecology, B. D. COLLIER *et al.*, book review by G. H. Orians, 1238
- Dynamics of a heroin addiction epidemic, The, R. L. DuPont and M. H. Greene, 716
- Dynamics of carbon monoxide binding by heme proteins, R. H. Austin *et al.*, 541

## E

- Early hominid posture and locomotion, J. T. ROBINSON, book review by H. M. McHenry, 738
- Earthquake prediction: a physical basis, C. H. Scholz *et al.*, 803
- Earthquake waves and the geomagnetic dynamo, D. J. Mullan, 553
- The earth's mantle: evidence of a non-

- Newtonian flow, R. L. Post, Jr., and D. T. Griggs, 1242
- Eaton, J. W., *et al.*: Chlorinated urban water: a cause of dialysis-induced hemolytic anemia, 463
- EATON, R. L. (Ed.), *The world's cats, book review of*, 1159
- Ecology, E. RICKLEFS, *book review by* G. H. Orians, 1238
- Ecology: an evolutionary approach, J. M. EMLEN, *book review by* G. H. Orians, 1238
- Ecology: the experimental analysis of distribution and abundance, C. J. KREBS, *book review by* G. H. Orians, 1238
- Economics of overexploitation, The, C. W. Clark, 630
- Economou, T. E., *et al.*: Heavy elements in surface materials: determination by alpha particle scattering, 156
- Eddy, N. B., and E. L. May: The search for a better analgesic, 407
- Edelson, E. (*News and Comment*): AAAS in Mexico, 248
- Editorials*: AAAS elections, 1973, 801; Agricultural research, 499; Agriculture, research, and shortages of funds and food, 997; Computing in transition, 1207; An era of global scarcity, 303; Faulty engineers or neglected experts?, 11; Freedom of oceanic research, 393; A notable anniversary, 703; Public views of scientists, 1123; Relevance—there and here, 613; Research impact statements, 115; Science and Man in the Americas, 221; University or knowledge factory?, 897
- Eelgrass (*Zostera marina* L.) in the Gulf of California: discovery of its nutritional value by the Seri Indians, R. Felger and M. B. Moser, 355
- Eisenberg, R. S.: *book review of* Perspectives in membrane biophysics, 539
- Eisenstien, L. *See* Austin, R. H., *et al.*
- Eldridge, F. L. *See* Guilleminault, C., *et al.*
- Electron-phonon interactions and superconductivity, J. Bardeen, 1209
- Elveback, L. R. *See* Weinshilboum, R. M., *et al.*
- Emery, A. R.: Sediments of deep Canadian shield lakes: observations of gross structure and biological significance, 655
- EMLEN, J. M., *Ecology: an evolutionary approach, book review of*, 1238
- Emsley, M. G.: Survey of academic job applicants (*letter*), 496
- Enarson, H. L.: University or knowledge factory? (*editorial*), 897
- Energy conservation through effective utilization, C. A. Berg, 128
- Energy crisis, The, L. ROCKS and R. P. RUNYON, *book review by* M. A. Adelman, 151
- Energy efficiency (*letter*), C. Binkley, 610
- Energy expenditure in animal locomotion, A. Gold, 275
- Engberg, L. A. *See* Gamzu, E. R., *et al.*
- Enhanced protein adsorption at the solid-solution interface: dependence on surface charge, J. S. Mattson and C. A. Smith, 1055
- Entrainment of the body temperature rhythm in rats: effect of color and intensity of environmental light, R. A. McGuire *et al.*, 956
- Environmental impact: controlling the overall level, W. E. Westman and R. M. Gifford, 819
- EPHRUSSI, B., Hybridization of somatic cells, *book review of*, 433
- 12,13-Epoxy- $\Delta^8$ -trichothecenes as the probable mycotoxins responsible for stachybotryotoxicosis, R. M. Eppley and W. J. Bailey, 758
- Eppley, R. M., and W. J. Bailey: 12,13-Epoxy- $\Delta^8$ -trichothecenes as the probable mycotoxins responsible for stachybotryotoxicosis, 758
- Epstein, E.: Agriculture, research, and shortages of funds and food (*editorial*), 997
- Equatorial jet in the Indian Ocean, An, K. Wyrki, 262
- Equipotentiality quantified: the anatomical distribution of the engram, F. Bartlett and E. R. John, 764
- Era of global scarcity, An (*editorial*), P. H. Abelson, 303
- ERASMUS, D. A., The biology of trematodes, *book review of*, 739
- Erickson, R. O.: Tubular packing of spheres in biological fine structure, 705
- Errata*: for P. K. Gessner [180, 569 (1973)], 252; for R. Gillette [180, 1152, 1263 (1973)], 252; for E. D. Kendley *et al.* [180, 1050 (1973)], 252; for J. Miller (20 July, p. 246), 472
- Eruption of Soufrière Volcano on St. Vincent Island, 1971–1972, W. P. Aspinall *et al.*, 117
- Esterase, malate, and lactate dehydrogenases activity in murine neuroblastoma, R. Prasad *et al.*, 450
- Estes, J. D. *See* Officer, J. E., *et al.*
- Etzioni, A.: Faulty engineers or neglected experts? (*editorial*), 11; ——— and C. Z. Nunn: Public views of scientists (*editorial*), 1123
- Evaluating federal water projects: a critique of proposed standards, C. J. Cicchetti *et al.*, 723.
- Evans, D. L., *et al.*: Short-range order and crystallinity?, 774
- Evans, G. W., *et al.*: Wilson's disease: identification of an abnormal copper-binding protein, 1175
- Evidence for fetal antigen in human sarcoma, B. Mukherji and Y. Hirshaut, 440
- Evoked potential correlates of signal recognition between and within modalities, J. M. Ford *et al.*, 465
- Evolution of radio astronomy, The, J. S. HEY, *book review by* R. N. Bracewell, 932
- Ewer, R. F.: *book review of* The world's cats, 1159
- EWER, R. F., The carnivores, *book review of*, 433
- Ewing, M. *See* Nakamura, Y., *et al.*
- Exocytosis-endocytosis coupling in the pancreatic beta cell, L. Orci *et al.*, 561
- Experience and plasticity in the central nervous system, G. Horn *et al.*, 506
- Eye-tracking patterns in schizophrenia, P. S. Holzman *et al.*, 179

## F

- FABER, T. E., Introduction to the theory of liquid metals, *book review of*, 538
- Fabricant, C. G., *et al.*: Virus-induced cholesterol crystals, 566
- Failure of limiting antigen doses to selectively stimulate high-avidity memory cells, D. Segre and M. Segre, 851
- Fan, F. F. *See* Smith, J. C., Jr., *et al.*
- Farley, B. *See* Harary, I., *et al.*
- Faulty engineers or neglected experts? (*editorial*), A. Etzioni, 11
- Faunal provinces in space and time, F. A. MIDDLEMISS *et al.* (Eds.), *book review by* T. J. M. Schopf, 431
- Feeny, P. P. *See* Rehr, S. S., *et al.*
- Feininger, T.: Delayed publication (*letter*), 8
- Felger, R., and M. B. Moser: Eelgrass (*Zostera marina* L.) in the Gulf of California: discovery of its nutritional value by the Seri Indians, 355
- Feline leukemia and RD-114 virus group-specific proteins: comparison of amino terminal sequence, S. Oroszlan *et al.*, 454
- Ferguson, G. A. *See* Evans, D. L., *et al.*
- FEYNMAN, R. P., Statistical mechanics, *book review of*, 257

- Fire and the nitrogen cycle in California chaparral, N. L. Christensen, 66
- Fischbach, G. D. *See* Cohen, S. A.
- Fitch, F. W. *See* Rowley, D. A., *et al.*
- Fleischer, R. L., *et al.*: Apollo 14 and Apollo 16 heavy-particle dosimetry experiments, 436
- Fontanilla, E. *See* Officer, J. E., *et al.*
- Ford, J. M., *et al.*: Evoked potential correlates of signal recognition between and within modalities, 465
- Forst, W.: Taxation and energy conservation (*letter*), 112
- Fourth Lunar Science Conference, Lunar Sample Analysis Planning Team, 615
- Frank, H. *See* Tanaka, Y., *et al.*
- Frauenfelder, H. *See* Austin, R. H., *et al.*
- Freedom of oceanic research (*editorial*), R. Revelle, 393
- Freeman, A. M., III. *See* Hagevick, G., *et al.*
- Frey, A. H., and R. Messenger, Jr.: Human perception of illumination with pulsed ultrahigh-frequency electromagnetic energy, 358
- Friedman, H.: Cosmic x-ray sources: a progress report, 395
- Frog revisited, The (*letter*), R. L. Amborski and J. C. Glorioso, 495
- Fry, G. L. *See* Lewis, L. J., *et al.*
- Fudge, J. W., and W. E. Penk: Methadone treatment and drug experimentation (*letter*), 702
- FUNATSU, M., *et al.* (Eds.), Proteins, *book review of*, 838
- Fundamental and applied research in agriculture, R. Levins, 523
- Future food supply (*letters*), F. H. Baker and T. O. Perry, 109
- Future of the Americas, The, S. M. Linowitz, 916

## G

- Gamzu, E. R., *et al.*: Pitfalls of organismic concepts: "learned laziness?", 367
- Gardner, M. B. *See* Officer, J. E., *et al.*
- Garey, W. F. *See* Crawshaw, L. I., *et al.*
- Garovoy, M. R. *See* Strom, T. B., *et al.*
- Garrett, R. H.: *book review of* The inorganic chemistry of biological processes, 1037
- Gas chromatographic assay of epoxide hydrolase activity with 3-methylcholanthrene-11,12-oxide, T. A. Stoming and E. Bresnick, 951
- Gasser, D. L. *See* Wachtel, S. S., *et al.*
- Gasser, D. L., *et al.*: Genetic control of susceptibility to experimental allergic encephalomyelitis in rats, 872
- Gast, P. W. *See* Hubbard, N. J., *et al.*
- Gaston, L. K. *See* Hummel, H. E., *et al.*
- Gatzke, H. *See* Albrecht, F., *et al.*
- GELD, B. T., *et al.* (Eds.), The collected works of Leo Szilard, *book review of*, 1036
- General ecology, S. J. MC NAUGHTON, and L. L. WOLF, *book review by* G. H. Orians, 1238
- Genetic control of gonadotrop differentiation in the platyfish, *Xiphophorus maculatus* (Poeciliidae), K. D. Kallman *et al.*, 678
- Genetic control of susceptibility to experimental allergic encephalomyelitis in rats, D. L. Gasser *et al.*, 872
- Genital sensory field, M. Konishi *et al.*, 365
- George, C. J., and D. Smiley: Inspiration (*letter*), 701
- Ghinea, E. *See* Pavel, S., *et al.*
- Gibbs, E. L.: Healthier frogs (*letter*), 1201
- Gibbs, E. L., *et al.*: Still specifications (*letters*), 298
- Gierasch, P. J. *See* Sagan, C., *et al.*
- Gifford, R. M. *See* Westman, W. E.
- GIJBELS, R. *See* DE SOETE, D., *et al.*

- Gilbert, J. J.: Induction and ecological significance of gigantism in the rotifer *Asplanchna sieboldi*, 63
- Gilden, R. V. *See* Oroszlan, S., *et al.*
- Gillespie, J. H. *See* Fabricant, C. G., *et al.*
- Gillette, R. (*News and Comment*): American Chemical Society and a united front for science, 332; Anders to the Atomic Energy Commission, 426; energy policy, phase II, 140; health of U.S. science, 1150; Latin America and imported technology, 41; National Aeronautics and Space Administration inches out of segregated tracking station, 331; nonnuclear energy R & D, 1233; oceanographers and fun, 926; radiation spill at Hanford, 728; strip-mining and House and Senate debate, 524; water scarcity may limit use of western coal, 525. *See also* Hammond, A. L.
- Gilmartin, W. G. *See* DeLong, R. L., *et al.*
- Glorioso, J. C. *See* Amborski, R. L.
- Glucose naturally labeled with carbon-13: use for metabolic studies in man, M. Lacroix *et al.*, 445
- Glusker, J. P. *See* Meloche, H. P.
- Gluskoter, H. J., and P. C. Lindahl: Cadmium: mode of occurrence in Illinois coals, 264
- Glutamate uptake by the isolated toad brain, R. P. Shank *et al.*, 860
- Goff, W. R. *See* Allison, T., *et al.*
- Gold, A.: Energy expenditure in animal locomotion, 275
- Goldberg, E.: Infertility in female rabbits immunized with lactate dehydrogenase X, 458
- Goldberg, E. D. *See* Chow, T. J., *et al.*
- Goldhaber, S. Z. (*News and Comment*): medical education at Harvard, 1027; medical education at Yale, 1029
- Goldstein, M. J.: *book review* of Aversive maternal control, 1240
- Gómez-Pompa, A. *See* Short, L. L., *et al.*
- Gonatas, N. K. *See* Gasser, D. L., *et al.*
- GOODMAN, M. W. *See* PENZIAS, W.
- Gorski, R. A. *See* Bern, H. A., *et al.*
- Gossens, C. L. *See* DeCosse, J. J., *et al.*
- Gottschalk, E., and R. Wilson: Pollution taxation (*letters*), 1202
- Gould, S. J.: *book review* of Scientist extraordinary, 47
- Gravitational evidence for a low-density mass beneath the Galápagos Islands, J. E. Case *et al.*, 1040
- Green, B. R.: Women job applicants (*letter*), 496
- Green, D. E.: Mechanism of energy transduction in biological systems: New York Academy of Sciences conference (*meeting report*), 583
- Green, M. *See* Collard, W., *et al.*
- Green, P. B.: *book review* of Patterns in plant development, 1160
- Greenberg, J. R., *et al.*: Serious contaminant in "ultra pure" grades of sucrose, 186
- Greenberger, M.: Computing in transition (*editorial*), 1207
- Greene, M. H. *See* DuPont, R. L.
- Greenway, A. P. *See* Anlezark, G. M., *et al.*
- Griffin, G. W. *See* Dowty, B., *et al.*
- Griggs, D. T. *See* Post, R. L., Jr.
- Griggs, J. J., and G. P. Bodey: Jewish scientists (*letters*), 391
- Griggs, K.: Toxic metal fumes from mantle-type camp lanterns, 842
- Gross, J. *See* Bruns, R. R., *et al.*
- Growth retardation in young mice treated with dl-methadone, M. Crofford and A. A. Smith, 947
- Grundbacher, F. J.: Lectins in precipitin reactions with soluble H substance of human saliva and serum, 461
- Grynbaum, A. *See* Marks, N., *et al.*
- Guevara, S. *See* Short, L. L., *et al.*
- Guilleminault, C., *et al.*: Insomnia with sleep apnea: a new syndrome, 856
- Gunsalus, I. C. *See* Austin, R. H., *et al.*
- Güven, N.: Montmorillonite: electron-optical observations, 1049
- Guyton, D. L., and F. T. Hambrecht: Capacitor electrode stimulates nerve or muscle without oxidation-reduction reactions, 74

## H

- Haddad, G. M. *See* Steinman, R. M., *et al.*
- Hagevick, G., *et al.*: Pollution control (*letters*), 10
- HALLAM, A., Atlas of palaeobiogeography, *book review* of, 431
- Halsted, J. A. *See* Smith, J. C., Jr., *et al.*
- Hambrecht, F. T. *See* Guyton, D. L.
- Hambidge, K. M. *See* Evans, G. W., *et al.*
- Hamilton, J. A. *See* Williams, E., *et al.*
- Hammell, H. T. *See* Crawshaw, L. I., *et al.*
- Hammond, A. L. (*Research News*): deep sea drilling, 428; hurricane prediction and control, 643; mathematical groups, 146; sporadic groups, 146; weather and climate modification, 644
- and R. Gillette (*News and Comment*): federal energy policy, 827
- Handschuh, G. J. *See* McConnell, D., *et al.*
- Hanegan, J. L., and B. A. Williams: Brain calcium: role in temperature regulation, 663
- Hanke, S. H. *See* Cicchetti, C. J., *et al.*
- Hansen, G. *See* Gamzu, E. R., *et al.*
- Harary, I., *et al.*: Catecholamine and dibutyryl cyclic AMP effects on myosin adenosine triphosphatase in cultured rat heart cells, 1061
- Harbottle, G.: *book review* of Neutron activation analysis, 153
- Hardy, A. *See* Fleischer, R. L., *et al.*
- Harms, P. G., *et al.*: Prostaglandin involvement in hypothalamic control of gonadotropin and prolactin release, 760
- Harrison, B. *See* Burnet, B., *et al.*
- Hart, H. R., Jr. *See* Fleischer, R. L., *et al.*
- Hartmann, E. *See* Schildkraut, J. J., *et al.*
- Hartree, E. F.: Invading the unknown (*letter*), 990
- Harvey, G. R. *See* Deuser, W. G., *et al.*
- Hassell, J. A. *See* Kausch, H. H., *et al.*
- Hauptfeld, V., *et al.*: Serological identification of an Ir-region product, 167
- Haveman, R. H. *See* Cicchetti, C. J., *et al.*
- Hawkins, D.: *book review* of The collected works of Leo Szilard, 1036
- Hayeman, R. H. *See* Hagevick, G., *et al.*
- Hayes, J. R.: *book review* of Organization of memory, 740
- Haynes, V.: The Calico site: artifacts or geofacts?, 305
- Hazards of chemical carcinogens and mutagens (*letter*), A. H. Sparrow, 700
- Health and technology (*letters*), M. G. Marmot *et al.*, 1204
- Healthier frogs (*letter*), E. L. Gibbs, 1201
- Heavy elements in surface materials: determination by alpha particle scattering, T. E. Economou *et al.*, 156
- Heikkila, R., and G. Cohen: 6-Hydroxydopamine: evidence for superoxide radical as an oxidative intermediate, 456
- HEILBRUN, A. H., JR., Aversive maternal control, *book review* of, 1240
- Heitzler, J. R.: *book review* of Antarctic geology and geophysics, 647
- Helinski, D. R., *et al.*: Bacterial plasmids (*meeting report*), 471
- Helms, R. A. *See* Bull, D. M., *et al.*
- HENDERSON, J. F., Regulation of purine biosynthesis, *book review* of, 337
- Hensley, W. K., *et al.*: Pressure dependence of the radioactive decay constant of beryllium-7, 1164
- Hetzler, B. E. *See* Rosenfeld, J. P.
- HEY, J. S., The evolution of radio astronomy, *book review* of, 932
- Hibernation: effects on memory or performance?, T. M. Alloway *et al.*, 86
- Hickman, K. *See* Gibbs, E. L., *et al.*
- HIDY, G. M. (Ed.), Aerosols and atmospheric chemistry, *book review* of, 837
- Hierarchy theory, H. H. PATTEE (Ed.), *book review* by J. T. Bonner, 647
- Highway salting (*letter*), D. S. Yeaple, 113
- HILDEBRAND, B. P., and B. B. BRENDEN, An introduction to acoustical holography, *book review* of, 1037
- Hill, C. A.: Huntite flowstone in Carlsbad Caverns, New Mexico, 158
- Hinrichs, R. L. *See* Redmond, D. E., Jr., *et al.*
- Hinteregger, H. F. *See* Counselman, C. C., III, *et al.*
- HIROMI, K. *See* FUNATSU, M., *et al.*
- Hirshaut, Y. *See* Mukherji, B.
- History of genetics, H. STUBBE, *book review* by F. B. Churchill, 336
- Hoak, J. C. *See* Lewis, L. J., *et al.*
- Hobbs, P. V., and L. F. Radke: Redistribution of snowfall across a mountain range by artificial seeding: a case study, 1043
- Hoffmann, H. P., and C. J. Avers: Mitochondrion of yeast: ultrastructural evidence for one giant, branched organelle per cell, 749
- Holden, C. (*News and Comment*): Aspin is bee in brass's bonnet, 424; biologists need work, 831; Clinical psychologists seek professional autonomy, 1147; fire program, 735; Herstein and the perils of expounding meritocracy, 36; medical school teachers will learn about politics, 328; mental health and innovative psychiatrist, 638; radio telescope funds, 142; Schmidt takes on Food and Drug Administration, 526; Train moves to Environmental Protection Agency, 526
- Hollinger, J. P., and R. A. Mennella: Oil spills: measurements of their distribution and volumes by multifrequency microwave radiometry, 54
- Holzman, N. *See* Routtenberg, A.
- Holzman, P. S., *et al.*: Eye-tracking patterns in schizophrenia, 179
- Homogeneous catalysis, C. A. Tolman and J. P. Jesson, 501
- Hoof, C. *See* Kint, J. A., *et al.*
- Hoover, F. *See* Harary, I., *et al.*
- Hormonal regulation of plant growth and morphogenesis (*meeting report*), J. G. Torrey, 1075
- Horn, G. *See* Bateson, P. P. G., *et al.*
- Horn, G., *et al.*: Experience and plasticity in the central nervous system, 506
- HOSTE, J. *See* DE SOETE, D., *et al.*
- Houk, J. C. *See* Nichols, T. R.
- Howard, K. A. *See* Case, J. E., *et al.*
- Howard, R. A. *See* Sundqvist, H., *et al.*
- Hsu, F. S., *et al.*: Lead inclusion bodies in osteoclasts, 447
- Hu, J. W., *et al.*: Strychnine and memory process, 363
- Hubbard, N. J., *et al.*: Chemistry of lunar basalts with very high alumina contents, 339
- Huebner, R. J. *See* Peters, R. L., *et al.*
- Hughes, D. W. *See* Holzman, P. S., *et al.*
- HUGHES, M. N., The inorganic chemistry of biological processes, *book review* of, 1037
- HUGHES, N. F. (Ed.), Organisms and continents through time, *book review* of, 431
- Huizenga, J. R. *See* Hensley, W. K., *et al.*
- Human chorionic gonadotropin: its possible role in maternal lymphocyte suppression, E. W. Adcock III *et al.*, 845
- Human embryonic kidneys in organ culture: abnormalities of development induced by decreased potassium, J. F. S. Crocker, 1178
- Human papovavirus (JC): induction of brain tumors in hamsters, D. L. Walker *et al.*, 674

- Human perception of illumination with pulsed ultrahigh-frequency electromagnetic energy, A. H. Frey and R. Mes-senger, Jr., 356
- Hume, D. N. *See* Sayles, F. L., *et al.*
- Hummel, D. D. *See* Thomas, H., *et al.*
- Hummel, H. E., *et al.*: Clarification of the chemical status of the pink bollworm sex pheromone, 873
- Hunt, R. C.: *book review* of Male dominance and female autonomy, 741
- Huntite flowstone in Carlsbad Caverns, New Mexico, C. A. Hill, 158
- Hurricane prediction: progress and problem areas, R. H. Simpson, 899
- Hurricane seeding analysis, H. Sundqvist *et al.*, 1072
- Hutchison, J. *See* Konishi, M., *et al.*
- Hybridization of somatic cells, B. EPHRUSSI, *book review* by G. Marin, 433
- 6-Hydroxydopamine: evidence for superoxide radical as an oxidative intermediate, R. E. Heikkilä and G. Cohen, 456
- Hyperinnervation of skeletal muscle fibers: dependence on muscle activity, J. K. S. Jansen *et al.*, 559

## I

- Ice nucleation by solid solutions of silver-copper iodide, R. E. Passarelli, Jr., *et al.*, 549
- Ige, R. O. *See* Segal, S. J., *et al.*
- IMAHORI, K. *See* FUNATSU, M., *et al.*
- Imle, E. P. *See* Short, L. L., *et al.*
- Immunity to color cancer assessed by antigen-induced inhibition of mixed mononuclear cell migration, D. M. Bull *et al.*, 957
- Impaired learning and decreased cortical norepinephrine after bilateral locus coeruleus lesions, G. M. Anlezark *et al.*, 682
- Imprinting: lasting effects on uracil incorporation into chick brain, P. P. G. Bateson *et al.*, 576
- Induction and ecological significance of gigantism in the rotifer *Asplanchna sieboldi*, J. J. Gilbert, 63
- Induction of mating behavior in rats by luteinizing hormone-releasing factor, R. L. Moss and S. M. McCann, 177
- Infertility in female rabbits immunized with lactate dehydrogenase X, E. Goldberg, 458
- Information and the ecology of scholars, T. R. Blackburn, 1141
- Information processing in the retina: importance of chloride ions, R. F. Miller and R. F. Dacheux, 266
- Infusion of 2-deoxy-D-glucose into the hepatic-portal system causes eating: evidence for peripheral glucoreceptors, D. Novin *et al.*, 858
- Ingle, D.: Two visual systems in the frog, 1053
- Inherited renal cysts in rats, S. Solomon, 451
- Inman, D. L., and B. M. Brush: The coastal challenge, 20
- Inorganic chemistry of biological processes, The, M. N. HUGHES, *book review* by R. H. Garrett, 1037
- Insect and mite nutrition, J. G. RODRIGUEZ (Ed.), *book review* by H. F. van Emden, 1036
- Insect sex pheromones: minor amount of opposite geometrical isomer critical to attraction, J. A. Klun *et al.*, 661
- Insecticide inhibition of 5  $\alpha$ -dihydrotestosterone binding in the rat ventral prostate, A. E. Wakeling and W. J. Visek, 659
- In situ sampler for marine sedimentary pore waters: evidence for potassium depletion and calcium enrichment, F. L. Sayles *et al.*, 154
- Insomnia with sleep apnea: a new syndrome, C. Guillemainault *et al.*, 856
- Inspiration (*letter*), C. J. George and D. Smiley, 701
- Intestinal calcium transport: stimulation by low phosphorus diets, Y. Tanaka *et al.*, 564
- Introduction to acoustical holography, An, B. P. HILDEBRAND and B. B. BRENDEN, *book review* by A. L. Bloom, 1037
- Introduction to ecology, P. A. COLIVAUX, *book review* by G. H. Orians, 1238
- Introduction to the theory of liquid metals, T. E. FABER, *book review* by N. W. Ashcroft, 538
- Invading the unknown (*letter*), E. F. Hartree, 990
- Irwin, D. A., *et al.*: Spontaneous whole brain slow potential changes during recovery from experimental neurosurgery, 1176
- Isolation of a neurotropic type C virus, J. E. Officer *et al.*, 945
- Isozymic heterogeneity in *Tetrahymena* strains, D. Borden *et al.*, 279

## J

- Jacob, H. S. *See* Eaton, J. W., *et al.*
- Jackson, A. W.: *book review* of The staphylococci, 434
- Jaffee, R. I. *See* Kausch, H. H., *et al.*
- Jagodowicz, M. *See* Mozell, M. M.
- Jain, M. K. *See* Williams, E., *et al.*
- Jakniunas, A. *See* Allison, T., *et al.*
- James, J. C. *See* Douglass, C. D.
- Jamison, W. *See* Thomas, H., *et al.*
- Jansen, J. K. S., *et al.*: Hyperinnervation of skeletal muscle fibers: dependence on muscle activity, 559
- Janzen, D. H. *See* Rehr, S. S., *et al.*
- Japanese educational patterns in science and engineering, H. Birnbaum, 1222
- Jelinek, W. R. *See* Darnell, J. E., *et al.*
- Jesson, J. P. *See* Tolman, C. A.
- Jewish scientists (*letters*), J. J. Griggs and G. P. Bodey, 391
- John, E. R. *See* Bartlett, F. *See also* Bindra, D.
- JOHNSON, A. W. *See* COLLIER, B. D., *et al.*
- Johnson, T. C. *See* Banks, S. P.
- JONES, M., JR., and R. A. MOSS (Eds.), Carbenes, *book review* of, 435
- Jones, R. T.: *book review* of Licit and illicit drugs, 335
- Jukes, T. H.: Trees (*letter*), 220
- Juvenile hormone analogs: a possible case of mistaken identity?, M. Slade and C. F. Wilkinson, 672

## K

- Kaae, R. S. *See* Hummel, H. E., *et al.*
- Kakolewski, J. W. *See* Irwin, D. A., *et al.*
- Kallman, K. D., *et al.*: Genetic control of gonadotrop differentiation in the platyfish, *Xiphophorus maculatus* (Poeciliidae), 678
- Kandel, D.: Adolescent marihuana use: role of parents and peers, 1067
- Kang, A. H. *See* Katzman, R. L., *et al.*
- Kaplan, S. *See* Clark, L. C., Jr., *et al.*
- Karle, J. *See* Evans, D. L., *et al.*
- Katzman, R. L., *et al.*: Collagen-induced platelet aggregation: involvement of an active glycopeptide fragment ( $\alpha$ 1-CB5), 670
- Kauffman, S. A.: Control circuits for de-termination and transdetermination, 310
- Kausch, H. H., *et al.*: Deformation and fracture of high polymers (*meeting report*), 961
- Kawashima, S. *See* Bern, H. A., *et al.*
- Kayser, W. *See* Gibbs, E. L., *et al.*
- Keast, A.: *book review* of Bridge and barrier, 934
- Keefer, L. K., and P. P. Roller: N-Nitrosation by nitrite ion in neutral and basic medium, 1245
- Keeler, B. A. *See* Schildkraut, J. J., *et al.*

- Keller, W. D.: *book review* of Stone, 838
- Kelley, D. E. *See* Greenberg, J. R., *et al.*
- Kelley, P. R. *See* Taunton-Rigby, A., *et al.*
- Kelloff, G. J. *See* Peters, R. L., *et al.*
- Khalidi, A. *See* Bakir, F., *et al.*
- Kimbrough, R. D.: Malignant tumors in monkeys (*letter*), 995
- Kinetosomes in insect epidermal cells and their orientation with respect to cell symmetry and intercellular patterning, J. M. Whitten, 1066
- King, R. W. *See* Counselman, C. C., III, *et al.*
- Kint, J. A., *et al.*: Mucopolysaccharidosis: secondarily induced abnormal distribution of lysosomal isoenzymes, 352
- Kjellstrand, C-M. *See* Eaton, J. W., *et al.*
- Kleiber, M. *See* Strunk, T. H., *et al.*
- Klein, D. *See* Hauptfeld, V., *et al.*
- Klein, D. C. *See* Binkley, S., *et al.*
- Klein, J. *See* Hauptfeld, V., *et al.*
- Kling, A. *See* Redmond, D. E., Jr., *et al.*
- Klingebiel, U. I. *See* Plimmer, J. R.
- Klun, J. A., *et al.*: Insect sex pheromones: minor amount of opposite geometrical isomer critical to attraction, 661
- Knox, W. T.: Systems for technological information transfer, 415
- Köhler, H. *See* Rowley, D. A., *et al.*
- Koide, M. *See* Chow, T. J., *et al.*
- Kolpin, C. F. *See* Eaton, J. W., *et al.*
- Komisaruk, B. R. *See* Konishi, M., *et al.*
- Konishi, M., *et al.*: Genital sensory field, 365
- Konnert, J. H. *See* Evans, D. L., *et al.*
- Kopell, B. S. *See* Ford, J. M., *et al.*
- Kornacker, K.: *book review* of Thermodynamic aspects of developmental biology, 1159
- Koshland, D. E., Jr. *See* Tsang, N., *et al.*
- KOSOLAPOFF, G. M., and L. MAIER (Eds.), Organic phosphorus compounds, *book review* of, 649
- KREBS, C. J., Ecology: the experimental analysis of distribution and abundance, *book review* of, 1238
- Krieger, M. S. *See* Sachs, B. D., *et al.*
- Krook, L. *See* Fabricant, C. G., *et al. See also* Hsu, F. S., *et al.*
- Kuba, K., *et al.*: Diisopropylfluorophosphate: suppression of ionic conductance of the cholinergic receptor, 853
- Kuzma, J. F. *See* DeCosse, J. J., *et al.*

## L

- Lacroix, M., *et al.*: Glucose naturally labeled with carbon-13: use for metabolic studies in man, 445
- Lajtha, A. *See* Marks, N., *et al.*
- LALLY, J. J. *See* BARBER, B., *et al.*
- Lammlein, D. *See* Nakamura, Y., *et al.*
- Langley, C. E. *See* Takama, R. C., *et al.*
- Large-scale variations in the obliquity of Mars, W. R. Ward, 260
- Laseter, J. L. *See* Dowty, B., *et al.*
- Late glacial and postglacial productivity changes in a New England pond, D. R. Whitehead *et al.*, 744
- Latham, G. *See* Matumoto, T. *See also* Nakamura, Y., *et al.*
- Layton, E.: *book review* of Turning points in western technology, 1035
- Lead inclusion bodies in osteoclasts, F. S. Hsu *et al.*, 447
- Lead pollution: records in southern California coastal sediments, T. J. Chow *et al.*, 551
- Lectins in precipitin reactions with soluble H substance of human saliva and serum, F. J. Grundbacher, 461
- Lefebvre, P. *See* Lacroix, M., *et al.*
- Leibach, J. R. *See* Bull, D. M., *et al.*
- Leibo, S. P. *See* Uphoff, D. E., *et al.*
- Leiter, J. *See* McCann, D. B.
- Leopold, R. A., and M. E. Degrugillier: Sperm penetration of housefly eggs: evidence for involvement of a female accessory secretion, 555

- Lester, D.: The price of books (*letter*), 220
- Levins, R.: Fundamental and applied research in agriculture, 523
- Levy, R. B., and M. Boudart: Platinum-like behavior of tungsten carbide in surface catalysis, 547
- Levy, W. B., *et al.*: Stimulus-coupled secretion of  $\gamma$ -aminobutyric acid from rat brain synaptosomes, 676
- Lewis, L. J., *et al.*: Replication of human endothelial cells in culture, 453
- Liang, T. T. *See* Lichtenstein, E. P., *et al.*
- Lichtenstein, E. P., *et al.*: Synergism of insecticides by herbicides, 847
- Licit and illicit drugs, E. M. BRECHER, *book review* by R. T. Jones, 335
- Lieber, M. M., *et al.*: Superinduction of endogenous type C virus by 5-bromodeoxyuridine from transformed mouse clones, 443
- Lindahl, P. C. *See* Gluskoter, H. J.
- Ling, G. N., and M. M. Ochsenfeld: Mobility of potassium ion in frog muscle cells, both living and dead, 78
- Linowitz, S. M.: The future of the Americas, 916
- Liquid metals, S. Z. BEER (Ed.), *book review* by N. W. Ashcroft, 538
- Livingston, D. M. *See* Lieber, M. M., *et al.*
- Lømo, T. *See* Jansen, J. K. S., *et al.*
- Long-term effects of perinatal hormone administration (*meeting report*), H. A. Bern *et al.*, 189
- Lopez-Habib, G. *See* Lacroix, M., *et al.*
- Loverde, A. W. *See* O'Brien, J. S., *et al.*
- Lunar Sample Analysis Planning Team: Fourth Lunar Science Conference, 615
- Lust, W. D., *et al.*: Cyclic adenosine monophosphate, metabolites, and phosphorylase in neural tissue: a comparison of methods of fixation, 280
- Luyckx, A. *See* Lacroix, M., *et al.*
- Lysergic acid diethylamide: radioimmunoassay, A. Taunton-Rigby *et al.*, 165

## M

- Maas, J. W. *See* Redmond, D. E., Jr., *et al.*
- Maca, R. D. *See* Lewis, L. J., *et al.*
- MacBride, S. E. *See* Binkley, S., *et al.*
- MacKenzie, A. P. *See* Rasmussen, D. H., *et al.*
- Macnab, R. *See* Tsang, N., *et al.*
- Maffly, R. *See* Taylor, A., *et al.*
- Magasanik, B.: *book review* of Regulation of purine biosynthesis, 337
- Magid, R. M.: *book review* of Carbenes, 435
- MAHONEY, M. S.: The mathematical career of Pierre de Fermat (1601-1665), *book review* of, 152
- MAIER, L. *See* KOSOLAPOFF, G. M.
- MAKARUSHKA, J. L. *See* BARBER, B., *et al.*
- Makino, S. *See* Talamo, R. C., *et al.*
- MAKSYMOWYCH, R.: Analysis of leaf development, *book review* of, 648
- Malaisse-Lagae, F. *See* Orci, L., *et al.*
- Male dominance and female autonomy, A. SCHLEGEL, *book review* by R. C. Hunt, 741
- Male specific antigen: homology in mice and rats, W. K. Silvers and S.-L. Yang, 570
- Male-specific antigen: modification of potency by the H-2 locus in mice, S. S. Wachtel *et al.*, 862
- Malignant tumors in monkeys (*letters*), R. D. Kimbrough, 995
- Malmstrom, V. H.: Origin of the Mesamerican 260-day calendar, 939
- Mamelak, M. *See* Taylor, A., *et al.*
- Man beneath the sea, W. PENZIAS and M. W. GOODMAN, *book review* by W. Bascom, 337
- Man, settlement and urbanism, P. J. UCKO *et al.* (Eds.), *book review* by J. R. Parsons, 646
- Mangelsdorf, P. C., Jr. *See* Sayles, F. L., *et al.*
- Maragos, J. E., *et al.*: Tropical cyclone Bebe creates a new land formation on Funafuti Atol, 1161
- Marcus, M. M. *See* Schafer, E. W. P.
- Marcus, R. L. *See* Aurelian, L., *et al.*
- Marin, G.: *book review* of Hybridization of somatic cells, 433
- Marincovich, L., Jr. *See* Bandy, O. L.
- Marks, N., *et al.*: Pentapeptide (pepstatin) inhibition of brain acid proteinase, 949
- Marmot, M. G., *et al.*: Health and technology, (*letters*), 1204
- Marsh, R. F. *See* Walker, D. L., *et al.*
- Marshall, G. *See* Zimbardo, P. G., *et al.*
- Marshall, V. P. *See* Austin, R. H., *et al.*
- Martin, S. *See* Campbell, W. J.
- Marx, J. L. (*Research News*): insect control, 736, 833; microtubules as versatile organelles, 1236; primate shortage?, 334; slow viruses, 44
- Maslach, C. *See* Zimbardo, P. G., *et al.*
- Mason, S. G. *See* Okagawa, A.
- Matalon, R. *See* Thompson, J. N., *et al.*
- Maternal influences on mouse embryos and preservation of mutant strains by freezing, D. E. Uphoff *et al.*, 287
- Mathematical career of Pierre de Fermat (1601-1665), The, M. S. MAHONEY, *book review* by C. B. Boyer, 152
- Mathematical modeling and human nutrition, J. L. Balintfy, 581
- Matheson, J. E. *See* Sundqvist, H., *et al.*
- Mattes, K. C. *See* Klun, J. A., *et al.*
- Matthews, D. E. *See* Stein, G. S.
- Mattson, J. A., and C. A. Smith: Enhanced protein adsorption at the solid-solution interface: dependence on surface charge, 1055
- Matumoto, T., and G. Latham: After-shocks and intensity of the Managua earthquake of 23 December 1972, 545
- Matwiyoff, N. A., and D. G. Ott: Stable isotope tracers in the life sciences and medicine, 1125
- Maugh, T. H., II (*News and Comment*): union for industrial scientists?, 1030; (*Research News*): coffee and heart disease, 534; molecular biology, 1235; tissue cultures and transplantation, 929; trace elements and their effects on man, 253
- MAVRIDÈS, S.: L'univers relativiste, *book review* of, 1038
- May, E. L. *See* Eddy, N. B.
- May, R. M. *See* Albrecht, F., *et al.*
- MAY, R. M.: Stability and complexity in model ecosystems, *book review* of, 1157
- Mazur, P. *See* Uphoff, D. E., *et al.*
- McCann, S. M. *See* Harms, P. G., *et al.*
- See also* Moss, R. L.
- McCarn, D. B., and J. Leiter: On-line services in medicine and beyond, 318
- McConnell, D., *et al.*: Precipitation of phosphates in a primeval sea, 581
- McDaniel, E. G. *See* Smith, J. C., Jr., *et al.*
- MC ELHINNY, M. W.: Palaeomagnetism and plate tectonics, *book review* of, 538
- McGuire, R. A., *et al.*: Entrainment of the body temperature rhythm in rats: effect of color and intensity of environmental light, 956
- McHenry, H. M.: *book review* of Early hominid posture and locomotion, 738
- McNamara, M. C. *See* Alloway, T. M., *et al.*
- MC NAUGHTON, S. J., and L. L. WOLF: General ecology, *book review* of, 1238
- Mechanic, D.: *book review* of Research on human subjects, 255
- Mechanical resonance spectra in human cancellous bone, J. W. Pugh *et al.*, 271
- Mechanism of energy transduction in biological systems: New York Academy of Sciences conference (*meeting report*), D. E. Green, 583
- Meeting Reports: Bacterial plasmids, 471; Death and disease in ancient Egypt, 470; Deformation and fracture of high polymers, 961; Hormonal regulation of plant growth and morphogenesis, 1705; Long-term effects of perinatal hormone administration, 189; Mechanism of energy transduction in biological systems: New York Academy of Sciences conference, 583; Prostaglandins, 370
- MELCHIOR, P., and S. YUMI (Eds.), Rotation of the earth, *book review* of, 836
- Meloche, H. P., and J. P. Glusker: Adolase catalysis: single base-mediated proton activation, 350
- Membrane-associated particles: increase at sites of pinocytosis demonstrated by freeze-etching, L. Orci and A. Perrelet, 868
- Membrane structure: some general principles, M. S. Bretscher, 622
- Memory disruption by electrical stimulation of substantia nigra, pars compacta, A. Routtenberg and N. Holzman, 83
- Memory mechanisms in instrumental responding, D. Bindra and E. R. John, 684
- Mennella, R. A. *See* Hollinger, J. P.
- Mercury in the Greenland ice sheet: further data, R. A. Carr and P. E. Wilk-niss, 843
- Mermin, N. D.: *book review* of Statistical mechanics, 257
- Merrill, J. P. *See* Strom, T. B., *et al.*
- Meschia, G. *See* Adcock, E. W., III, *et al.*
- Messenger, R., Jr., *See* Frey, A. H.
- Methadone treatment and drug experimentation (*letter*), J. W. Fudge and W. E. Penk, 702
- Methane in Lake Kivu: new data bearing on its origin, W. G. Deuser *et al.*, 51
- Methylmercury as percentage of total mercury in flesh and viscera of salmon and sea trout of various ages, G. Westö, 567
- Methylmercury poisoning in Iraq, F. Bakir *et al.*, 230
- Metz, W. D. (*Research News*): cosmology and the first large radio red shift, 1155; Kohoutek, the Christmas comet, 333; phase changes, universal theory of critical phenomena, 147; quasars, 1154; television-type sensors for astronomy, 930
- Meyerhoff, A. A.: Scientist in the Senate (*letter*), 994
- MHPG excretion in depressive disorders: relation to clinical subtypes and desynchronized sleep, J. J. Schildkraut *et al.*, 762
- Microscopic quantum interference in the theory of superconductivity, L. N. Cooper, 908
- Microtubule function in immune and non-immune lymphocyte-mediated cytotoxicity, T. B. Strom *et al.*, 171
- MIDDLEMISS, F. A., *et al.* (Eds.), Faunal provinces in space and time, *book review* of, 431
- Miller, A. L. *See* O'Brien, J. S., *et al.*
- Miller, J. (*News and Comment*): Psychiatrists reluctant to analyze selves, 246; *erratum*, 472
- MILLER, P. C. *See* COLLIER, B. D., *et al.*
- Miller, R. F., and R. F. Dacheux: Information processing in the retina: importance of chloride ions, 266
- Miniature eye movement, R. M. Steinman *et al.*, 810
- Mitochondrion of yeast: ultrastructural evidence for one giant, branched organelle per cell, H.-P. Hoffmann and C. J. Avers, 749
- Mizell, M. *See* Collard, W., *et al.*
- Mobility of potassium ion in frog muscle cells, both living and dead, G. N. Ling and M. M. Ochsenfeld, 78
- Models in archaeology, D. L. CLARKE (Ed.), *book review* by A. C. Spaulding, 933

- Mohnen, V. A.: *book review* of Aerosols and atmospheric chemistry, 837  
 Molloy, G. R. *See* Darnell, J. E., *et al.*  
 Molnia, B. F.: Plastic sandbags (*letter*), 990  
 Monnin, M. M., and G. E. Blanford, Jr.: Detection of charged particles by polymer grafting, 743  
 Montmorillonite: electron-optical observations, N. Güven, 1049  
 Morris, R.: Welfare reform 1973: the social services dimension, 515  
 Moser, M. B. *See* Felger, R.  
 Mosora, F. *See* Lacroix, M., *et al.*  
 MOSS, R. A. *See* JONES, M., JR.  
 Moss, R. L., and S. M. McCann: Induction of mating behavior in rats by luteinizing hormone-releasing factor, 177  
 Mouse immunoglobulin kappa chain MPC 11: extra amino-terminal residues, G. P. Smith, 941  
 Mozell, M. M., and M. Jagodowicz: Chromatographic separation of odorants by the nose: retention times measured across in vivo olfactory mucosa, 1247  
 Mucopolysaccharidosis: secondarily induced abnormal distribution of lysosomal isoenzymes, J. A. Kint *et al.*, 352  
 Mukherji, B., and Y. Hirshaut: Evidence for fetal antigen in human sarcoma, 440  
 Mullan, D. J.: Earthquake waves and the geomagnetic dynamo, 553  
 Murine C-type RNA virus from spontaneous neoplasms: in vitro host range and oncogenic potential, R. L. Peters *et al.*, 665  
 Murtadha, M. *See* Bakir, F., *et al.*

## N

- Nakamura, Y., *et al.*: New seismic data on the state of the deep lunar interior, 49  
 Namias, J.: Response of the equatorial countercurrent to the subtropical atmosphere, 1244  
 Nanney, D. L. *See* Borden, D., *et al.*  
 NARITA, K. *See* FUNATSU, M., *et al.*  
 Natural abundance carbon-13 nuclear magnetic resonance spectra of the canine sciatic nerve, E. Williams *et al.*, 869  
 Nature conservation in the Pacific, *book review* by P. Q. Tomich, 1240  
 Naughton, M. A. *See* Adcock, E. W., III, *et al.*  
 Neural quantum controversy in sensory psychology, J. F. Corso and D. A. Norman, 467  
 Neutron activation analysis, D. DE SOETE *et al.*, *book review* by G. Harbottle, 153  
 New metric system, A (*letter*), D. DeVault, 392  
 New seismic data on the state of the deep lunar interior, Y. Nakamura *et al.*, 49  
 NEWALL, G. *See* MIDDLEMASS, F. A., *et al.*  
 Newlin, C. M. *See* Gasser, D. L., *et al.*  
 News and Comment: AAAS in Mexico, 248; Air Force will not sell Agent Orange, 734; Alaska pipeline, 326, 641; American Chemical Society and a united front for science?, 332; American Medical Association meeting, 249; Anders to the Atomic Energy Commission, 426; Aspin is bee in the brass's bonnet, 424; auto pollution, 732; biologists need work, 831; biomedical research, 828, 921; British Council for Science and Society, 420; clinical psychologists seek professional autonomy, 1147; Congress and the Executive expand adversary relationship, 1152; conversation with Eugene Wigner, 527; deepwater oil terminals, 825; energy policy, phase II, 140; environmental precedent for Nixon tapes case, 1031; federal energy policy, 827; fire program, 735; foreign scientists in the United States, 832; Fort Detrick and new leadership, 328; France's nuclear tests, 251; health and federal public relations, 324; Health, Education, and Welfare restored funds may be buried by regulation, 141; health of U.S. science, 1150; heart plan calls for "professorships," 924; Herrnstein and the perils of expounding meritocracy, 36; insect viruses, 925; Institute of Medicine elects new members, 330; Latin America and imported technology, 41; Law of the Sea meeting, 1024; medical education at Harvard, 1027; medical education at Yale, 1029; medical evaluation, 1023; medical school teachers will learn about politics, 328; Medvedev's citizenship revoked, 734; mental health and innovative psychiatrist, 638; military R & D and the Congress, 731; National Academy of Sciences' response to Sakharov harassment, 1148, 1231; National Aeronautics and Space Administration inches out of segregated tracking station, 331; National Oceanic and Atmospheric Administration budget, 830; *New York Times* information retrieval system, 640; Nixon-Brezhnev summit, 38, 39; nonnuclear energy R & D, 1234; oceanographers and fun, 926; Office of Science and Technology is dead, 140; Office of Technology Assessment funds up against the wall, 928; radiation spill at Hanford, 728; RANN's priorities shifted, 927; research systems in five small countries studied by Organisation for Economic Cooperation and Development, 329; pesticides and environmentalists, 143; psychiatrists reluctant to analyze selves, 246; *erratum*, 472; psychical research, 138; radio telescope funds, 142; Sakharov's survival in delicate balance, 1228; Sawhill as science budget czar, 426; Schmidt takes on Food and Drug Administration, 526; Science and Astronautics Committee in new orbit, 422; Stever urged to counsel President actively, 421; science writing prize, 247; scientists also on "enemy list," 144; scientists probe Russian viruses, 40; strip-mining and House and Senate debate, 524; Train moves to Environmental Protection Agency, 526; training grants at National Institutes of Health are back, 325; union for industrial scientists?, 1030; water scarcity may limit use of western coal, 525; Wiesner and White House foes, 244; world food situation, 634  
 Ney, E. P. *See* Sparrow, J. G.  
 Nichols, T. R., and J. C. Houk: Reflex compensation for variations in the mechanical properties of a muscle, 182  
 Nicolaysen, K. *See* Jansen, J. K. S., *et al.*  
 Nimni, M., and K. Deshmukh: Differences in collagen metabolism between normal and osteoarthritic human articular cartilage, 751  
 NISSEN, H. J. *See* ADAMS, R. MCC.  
 Nitrogen fixation in termites, J. R. Benemann, 164  
 N-Nitrosation by nitrite ion in neutral and basic medium, L. K. Keefer and P. P. Roller, 1245  
 Nonhistone chromosomal protein synthesis: utilization of preexisting and newly transcribed messenger RNA's, G. S. Stein and D. E. Matthews, 71  
 Norman, D. A. *See* Corso, J. F.  
 North, D. W. *See* Sundqvist, H., *et al.*  
 Notable anniversary, A (*editorial*), H. Clepper, 703  
 Novin, D., *et al.*: Infusion of 2-deoxy-D-glucose into the hepatic-portal system causes eating: evidence for peripheral glucoreceptors, 858  
 Nunn, C. Z. *See* Etzioni, A.

## O

- Objective assessment of hypnotically induced time distortion, P. G. Zimbardo *et al.*, 282  
 Objectives of agricultural research (*letters*), M. L. Upchurch *et al.*, 216  
 O'Brien, J. S., *et al.*: Sanfilippo disease type B: enzyme replacement and metabolic correction in cultured fibroblasts, 753  
 Obrock, V. *See* Clark, L. C., Jr., *et al.*  
 Observation is insufficient for discovering that the surface of still water is invariably horizontal, H. Thomas *et al.*, 173  
 Ochs, S. *See* Williams, E., *et al.*  
 Ochsenfeld, M. M. *See* Ling, G. N.  
 Oesterling, J. F., and L. A. Spano: Waste paper used for the cleanup of oil spills, 775  
 Officer, J. E., *et al.*: Isolation of a neurotropic type C virus, 945  
 Oil and ice in the Arctic Ocean: possible large-scale interactions, W. J. Campbell and S. Martin, 56  
 Oil spills: measurements of their distributions and volumes by multifrequency microwave radiometry, J. P. Hollinger and R. A. Mennella, 54  
 Ojeda, S. R. *See* Harms, P. G., *et al.*  
 Okagawa, A., and S. G. Mason: Suspensions: fluids with fading memories, 159  
 O'Leary, B.: Realistic space goals (*letter*), 10  
 On-line services in medicine and beyond, D. B. McCarn and J. Leiter, 318  
 Operant-controlled evoked responses: discrimination of conditioned and normally occurring components, J. P. Rosenfeld and B. E. Hetzler, 767  
 Optical and acoustical holography, E. CAMATINI (Ed.), *book review* by A. L. Bloom, 1037  
 Orci, L., *et al.*: Exocytosis-endocytosis coupling in the pancreatic beta cell, 561  
 Orci, L., and A. Perrelet: Membrane-associated particles: increase at sites of pinocytosis demonstrated by freeze-etching, 868  
 Organic phosphorus compounds, G. M. KOSOLAPOFF and L. MAIER (Eds.), *book review* by K. D. Berlin, 649  
 Organisms and continents through time, N. F. HUGHES (Ed.), *book review* by T. J. M. Schopf, 431  
 Organization of memory, E. TULVING and W. DONALDSON (Eds.), *book review* by J. R. Hayes, 740  
 Orgel, L. E. *See* McConnell, D., *et al.*  
 Orians, G. H.: *book review* of Dynamic ecology, Ecology, Ecology: an evolutionary approach, Ecology: the experimental analysis of distribution and abundance, General ecology, Introduction to ecology, 1238  
 Orientation of the pyramids (*letters*), C. B. Stephenson *et al.*, 7  
 Origin of the Mesoamerican 260-day calendar, V. H. Malmstrom, 939  
 Orne, M. T. *See* Paskewitz, D. A.  
 Oroszlan, S., *et al.*: Feline leukemia and RD-114 virus group-specific proteins: comparison of amino terminal sequence, 454  
 Orye, E. *See* Kint, J. A., *et al.*  
 Osmolar control of prolactin secretion in man, M. T. Buckman and G. T. Peake, 755  
 Ott, D. G. *See* Matwiyoff, N. A.

## P

- Padgett, B. L. *See* Walker, D. L., *et al.*  
 Pagano, R. E., *et al.*: Phase transitions and heterogeneity in lipid bilayers, 557  
 Palaeomagnetism and plate tectonics, M. W. MCELHINNY, *book review* by F. J. Vine, 538

- Palm, J. *See* Gasser, D. L., *et al.*  
Papoušek, M. *See* Schildkraut, J. J., *et al.*  
Parsons, J. R.: book review of Man, settlement and urbanism, 646  
Parvin, M., and P. A. Samuelson: Correct formulas (*letters*), 995  
Paskewitz, D. A., and M. T. Orne: Visual effects on alpha feedback training, 360  
Passarelli, R. E., Jr., *et al.*: Ice nucleation by solid solutions of silver-copper iodide, 549  
Passonneau, J. V. *See* Lust, W. D., *et al.*  
PATTEE, H. H. (Ed.), Hierarchy theory, book review of, 647  
Patterns in plant development, T. A. STEEVES and I. M. SUSSEX, book review by P. B. Green, 1160  
Paul, B. B., *et al.*: Peroxidase mediated antimicrobial activities of alveolar macrophage granules, 849  
Paul, I. L. *See* Pugh, J. W., *et al.*  
Pavel, S., *et al.*: Biosynthesis of a vasotocin-like peptide in cell cultures from pineal glands of human fetuses, 1252  
Pavlovian conditioning with heat reinforcement produces stimulus-directed pecking in chicks, E. A. Wasserman, 875  
Pawley, G. S. *See* Stephenson, C. B., *et al.*  
PCB formation (*letter*), J. R. Plimmer and U. I. Klingebiel, 994  
PCB's in microscope immersion oil (*letter*), H. S. Bennett and P. W. Albro, 990  
Peake, G. T. *See* Buckman, M. T.  
Peer review appeal mechanism (*letter*), V. L. Bullough, 610  
Peltzman, S., and H. Wiener: Approval of new drugs (*letters*), 110  
Penk, W. E. *See* Fudge, J. W.  
Pentapeptide (pepstatin) inhibition of brain acid proteinase, N. Marks *et al.*, 949  
PENZIAs, W., and M. W. GOODMAN, Man beneath the sea, book review of, 337  
Perez, J. M. *See* Dawson, W. W.  
Perfluorocarbons having a short dwell time in the liver, L. C. Clark, Jr., *et al.*, 680  
Peroxidase mediated antimicrobial activities of alveolar macrophage granules, B. B. Paul *et al.*, 849  
Perrelet, A. *See* Orci, L.  
Perrella, P. *See* Taub, E., *et al.*  
Perry, R. P. *See* Greenberg, J. R., *et al.*  
Perry, T. O. *See* Baker, F. H.  
Perspectives in membrane biophysics, D. P. AGIN (Ed.), book review by R. S. Eisenberg, 539  
Perspectives on linear heat transfer, T. H. Strunk *et al.*, 184  
Peters, E. N. *See* Marmot, M. G., *et al.*  
Peters, R. L., *et al.*: Murine C-type RNA virus from spontaneous neoplasms: in vitro host range and oncogenic potential, 665  
Petrescu-Holban, R. *See* Pavel, S., *et al.*  
Phase transitions and heterogeneity in lipid bilayers, R. E. Pagano *et al.*, 557  
Phenocopies of pigmentary and behavioral effects of the yellow mutant in *Drosophila* induced by  $\alpha$ -dimethyltyrosine, B. Burnet *et al.*, 1059  
Photoacoustic spectroscopy of biological materials, A. Rosencwaig, 657  
Phototaxis and sensory transduction in *Euglena*, B. Diehn, 1009  
Physics in the twentieth century, v. F. WEISSKOPF, book review by J. Ziman, 836  
Pinckney, E. R.: Safety and efficacy of new drugs (*letter*), 1205  
Pineal enzymes: regulation of avian melatonin synthesis, S. Binkley *et al.*, 273  
Pitfalls of organismic concepts: "learned laziness", E. R. Gamzu *et al.*, 367  
Plasma membranes: isolation from naturally fused and lysocleithin-treated muscle cells, M. Reporter and D. Raveed, 863  
Plastic sandbags (*letter*), B. F. Molnia, 990  
Platinum-like behavior of tungsten carbide in surface catalysis, R. B. Levy and M. Boudart, 547  
Plaut, S. M.: Testicular morphology in rats vasectomized as adults, 554  
Pleistocene glaciation in the Blue Ridge Province, southern Appalachian Mountains, North Carolina, J. O. Berkland and L. A. Raymond, 651  
Plimmer, J. R., and U. I. Klingebiel: PCB formation (*letter*), 994  
Point of View: anti-science—a misunderstanding, 327; new values for federal science?, 423  
Politzer, I. R. *See* Dowty, B., *et al.*  
Pollak, E. I. *See* Sachs, B. D., *et al.*  
Pollution control (*letters*), G. Hagevick *et al.*, 10  
Pollution taxation (*letters*), E. Gottschalk and R. Wilson, 1202  
Pond, W. G. *See* Hsu, F. S., *et al.*  
Pontus, M. *See* Lacroix, M., *et al.*  
Post, R. L., Jr., and D. T. Griggs: The earth's mantle: evidence of a non-Newtonian flow, 1242  
Postscript (*letter*), T. Simkin, 300  
POWELL, G. J., Black Monday's children, book review of, 46  
Powell, R. W., and Y. S. Touloukian: Thermal conductivities of the elements, 999  
Powers, W. T. *See* Baum, W. M., *et al.*  
Prasad, K. N. *See* Prasad, R., *et al.*  
Prasad, N. *See* Prasad, R., *et al.*  
Prasad, R., *et al.*: Esterase, malate, and lactate dehydrogenases activity in murine neuroblastoma, 450  
Precipitation of phosphates in a primeval sea, D. McConnell *et al.*  
Precision selenodesy via differential interferometry, C. C. Counselman III *et al.*, 772  
Predator-prey interactions in continuous culture, P. van den Ende, 562  
Premature births in California sea lions: association with high organochlorine pollutant residue levels, R. L. DeLong *et al.*, 1168  
Press, F. *See* Nakamura, Y., *et al.*  
Pressure dependence of the radioactive decay constant of beryllium-7, W. K. Hensley *et al.*, 1164  
Price of books, (*letter*), D. Lester, 220  
Principles that govern the folding of protein chains, C. B. Anfinsen, 223  
Proctor, L. R. *See* Holzman, P. S., *et al.*  
Progesterone-dependent messenger RNA: heterospecific activity in vivo, S. J. Segal *et al.*, 569  
Prophecy (*letter*), O. Shiffriss, 610  
Prostaglandin involvement in hypothalamic control of gonadotropin and prolactin release, P. G. Harms *et al.*, 760  
Prostaglandins (*meeting report*), J. R. Weeks, 370  
Proteins, M. FUNATSU *et al.* (Eds.), book review by F. Wold, 838  
Psychological literature (*letter*), G. Stevens, 301  
Public views of scientists (*editorial*), A. Etzioni and C. Z. Nunn, 1123  
Pugh, J. W., *et al.*: Mechanical resonance spectra in human cancellous bone, 271  
Purified antigen vaccines (*letter*), F. B. Brandon, 495
- R**
- Rabstein, L. S. *See* Peters, R. L., *et al.*  
Radar mapping of the moon: central peaks, C. A. Wood and S. H. Zisk, 364  
Radiation chemistry of macromolecules, The, M. DOLE (Ed.), book review by J. Silverman, 338  
Radiation standards (*letter*), C. L. Comar, 611  
Radin, E. L. *See* Pugh, J. W., *et al.*  
Radio noise from towns: measured from an airplane, G. W. Swenson, Jr., and W. W. Cochran, 543  
Radke, L. F. *See* Hobbs, P. V.  
Ralph, C. L. *See* Binkley, S., *et al.*  
Rand, W. M. *See* McGuire, R. A., *et al.*  
Randall, J. E.: Size of the great white shark (*Carcharodon*), 169  
Rapp, F. *See* St. Jeor, S.  
Rasmussen, D. H., *et al.*: Anomalous heat capacities of supercooled and heavy water, 342  
Rates of late cenozoic uplift, Baldwin Hills, Los Angeles, California, O. L. Bandy and L. Marinovich, Jr., 653  
Ravazzola, M. *See* Orci, L., *et al.*  
Raveed, D. *See* Reporter, M.  
RAWSON, P. F. *See* MIDDLEMASS, F. A., *et al.*  
Raymond, F. A. *See* Weinshilboum, R. M., *et al.*  
Raymond, L. A. *See* Berkland, J. O.  
Reactions of singlet oxygen with pine pollen, B. Dowty *et al.*, 669  
Realistic space goals (*letter*), B. O'Leary, 10  
Reaven, E. *See* Taylor, A., *et al.*  
Recombinant inbred lines: value in the genetic analysis of biochemical variants, R. T. Swank and D. W. Bailey, 1249  
Redburn, D. A. *See* Levy, W. B., *et al.*  
Redistribution of snowfall across a mountain range by artificial seeding: a case study, P. V. Hobbs and L. F. Radke, 1043  
Redmond, D. E., Jr., *et al.*: Behavior of free-ranging macaques after intraventricular 6-hydroxydopamine, 1256  
Reed, A. V.: Speed accuracy trade-off, in memory recognition, 574  
Reed, C. E. *See* Talamo, R. C., *et al.*  
Reese, H. W. *See* Baum, W. M., *et al.*  
Reeves, H. C. *See* Burke, W. F., *et al.*  
Reflex compensation for variations in the mechanical properties of a muscle, T. R. Nichols and J. C. Houk, 182  
Regan, D., and K. I. Beverley: Disparity detectors in human depth perception: evidence for directional selectivity, 877  
Regulation of muscle acetylcholine sensitivity by muscle activity in cell culture, S. A. Cohen and G. D. Fischbach, 76  
Regulation of phosphodiesterase synthesis: requirement for cyclic adenosine monophosphate-dependent protein kinase, H. R. Bourne *et al.*, 952  
Regulation of purine biosynthesis, J. F. HENDERSON, book review by B. Magasanik, 337  
Rehr, S. S., *et al.*: L-Dopa in legume seeds: a chemical barrier to insect attack, 81  
Relevance—there and here (*editorial*), H. A. Simon, 613  
Renold, A. E. *See* Orci, L., *et al.*  
Renshaw, A. *See* Fleischer, R. L., *et al.*  
Replication of human endothelial cells in culture, L. J. Lewis *et al.*, 453  
Reporter, M., and D. Raveed: Plasma membranes: isolation from naturally fused and lysocleithin-treated muscle cells, 863  
Research impact statements (*editorial*), C. Djerassi, 115  
Research News: coffee and heart disease, 534; cosmology and the first large radio red shift, 1155; deep sea drilling, 428; hurricane prediction and control, 643; insect control, 736, 833; Kohoutek, the Christmas comet, 333; mathematical groups, 146; microtubules, 1236; molecular biology, 1235; phase changes, universal theory of critical phenomena, 147; primate shortage?, 334; quasars, 1154; slow viruses, 44; sporadic groups, 146; television-type sensors for astronomy, 930; thin film optics, 1032; tissue cultures and transplantation, 929; trace elements and effects on man, 253; weather and climate modification, 644

- Research on human subjects, B. BARBER *et al.*, book review by D. Mechanic, 255
- Response of the equatorial countercurrent to the subtropical atmosphere, J. Namiyas, 1244
- Revelle, R.: Freedom of oceanic research (editorial), 393
- Rex, M. A.: Deep-sea species diversity: decreased gastropod diversity at abyssal depths, 1051
- Rezek, M. See Novin, D., *et al.*
- Rhodes, J. M. See Hubbard, N. J., *et al.*
- RICKLEFS, R. E., Ecology, book review of, 1238
- Riesdel, M. L. See Alloway, T. M., *et al.*
- Riggs, L. A.: Curvature as a feature of pattern vision, 1070
- Rissing, S. W. See Whitehead, D. R., *et al.*
- Ritzmann, R.: Snapping behavior of the shrimp *Alpheus californiensis*, 459
- Robinson, A. L. (Research News): thin film optics, 1032
- ROBINSON, J. T., Early hominid posture and locomotion, book review of, 738
- Rochester, H., Jr. See Whitehead, D. R., *et al.*
- ROCKS, L., and R. P. RUNYON, The energy crisis, book review of, 151
- RODRIGUEZ, J. G. (Ed.), Insect and mite nutrition, book review of, 1036
- Role of the skin in amphibian sodium metabolism, P. J. Bentley, 686
- Roller, P. P. See Keefer, L. K.
- Rongey, R. W. See Officer, J. E., *et al.*
- Rose, R. M. See Pugh, J. W., *et al.*
- Rose, S. P. R. See Bateson, P. P. G., *et al.* See also Horn, G., *et al.*
- Rosencwaig, A.: Photoacoustic spectroscopy of biological materials, 657
- Rosenfeld, J. P., and B. E. Hetzler: Operant-controlled evoked responses: discrimination of conditioned and normally occurring components, 767
- Rotation of the earth, P. MELCHIOR and S. YUMI (Eds.), book review by D. E. Smylie, 836
- Roth, W. T. See Ford, J. M., *et al.*
- Rouse, I.: book review of The Uruk countryside, 150
- Routtenberg, A. See Simpson, J. B.
- and N. Holzman: Memory disruption by electrical stimulation of substantia nigra, pars compacta, 83
- Rowley, D. A., *et al.*: Specific suppression of immune responses, 1133
- Roy, R. See Cody, G. D., *et al.*
- Rubin, M. See Deuser, W. G., *et al.*
- RUNYON, R. P. See ROCKS, L.
- Russian space bluff, The, L. VLADIMIROV, book review by M. E. Davies, 150
- Ryland, S. L. See Case, J. E., *et al.*

## S

- Sachs, B. D., *et al.*: Sexual behavior: normal male patterning in androgenized female rats, 770
- Safety and efficacy of new drugs (letter), E. R. Pinckney, 1205
- Sagan, C., *et al.*: Climatic change on Mars, 1045
- St. Jeor, S., and F. Rapp: Cytomegalovirus: conversion of nonpermissive cells to a permissive state for virus replication, 1060
- Samuels, H. H., *et al.*: Thyroid hormone action: a cell culture system responsive to physiological concentration of thyroid hormones, 1253
- Samuelson, P. A. See Parvin, M.
- Sand dollar: a weight belt for the juvenile, F. Chia, 73
- Sanfilippo disease type B: enzyme replacement and metabolic correction in cultured fibroblasts, J. S. O'Brien *et al.*, 753
- Saunders, D. S.: Thermoperiodic control of diapause in an insect: theory of internal coincidence, 358
- Sayles, F. L., *et al.*: In situ sampler for marine sedimentary pore waters: evidence for potassium depletion and calcium enrichment, 154
- Sbarra, A. J. See Paul, B. B., *et al.*
- Schafer, E. W. P., and M. M. Marcus: Self-stimulation alters human sensory brain responses, 175
- Schaller, G. B.: book review of The carnivores, 433
- Schildkraut, J. J., *et al.*: MHPG excretion in depressive disorders: relation to clinical subtypes and desynchronized sleep, 762
- SCHLEGEL, A., Male dominance and female autonomy, book review of, 741
- Schleusener, R. A., and S. M. Stigler: Weather modification (letters), 798
- Scholz, C. H., *et al.*: Earthquake prediction: a physical basis, 803
- Schopf, T. J. M.: book review of Atlas of palaeobiogeography, Faunal provinces in space and time, and Organisms and continents through time, 431
- Schreibman, M. P. See Kallman, K. D., *et al.*
- Schubiger, G.: book review of Developmental systems: insects, 649
- Schumann, B. See Aurelian, L., *et al.*
- Schwartz, B. See Gamzu, E. R., *et al.*
- Science and Man in the Americas (editorial), P. H. Abelson, 221
- Science, technology, and development: a new world outlook, G. T. Seaborg, 13
- Scientist extraordinary, C. BIBBY, book review by S. J. Gould, 47
- Scientist in the Senate (letter), A. A. Meyerhoff, 994
- Scott, C. D., See Marmot, M. G., *et al.*
- Scroll-shaped waves of chemical activity in three dimensions, A. T. Winfree, 937
- Seaborg, G. T.: Science, technology, and development: a new world outlook, 13
- Search for a better analgesic, The, N. B. Eddy and E. L. May, 407
- Seasonal changes in the learning and activity patterns of goldfish, V. E. Shashoua, 572
- Sediments of deep Canadian shield lakes: observations of gross structure and biological significance, A. R. Emery, 655
- Segal, J., *et al.*: Progesterone-dependent messenger RNA: heterospecific activity in vivo, 569
- Segre, D., and M. Segre: Failure of limiting antigen doses to selectively stimulate high-avidity memory cells, 851
- Segre, M. See Segre, D.
- Self-stimulation alters human sensory brain responses, E. W. P. Schafer and M. M. Marcus, 175
- Selvaraj, R. J. See Paul, B. B., *et al.*
- Serious contaminant in "ultra pure" grades of sucrose, J. R. Greenberg *et al.*, 186
- Serological identification of an Ir-region product, V. Hauptfeld *et al.*, 167
- Serum dopamine- $\beta$ -hydroxylase activity: sibling-sibling correlation, R. M. Weinshilboum *et al.*, 943
- Sexual behavior: normal male patterning in androgenized female rats, B. D. Sachs *et al.*, 770
- Shank, R. P., *et al.*: Glutamate uptake by the isolated toad brain, 860
- Shapiro, I. I. See Counselman, C. C., III, *et al.*
- Shapley, D. (News and Comment): Air Force will not sell Agent Orange, 734; auto pollution, 732; Brezhnev feasts and scientists fast, 38; Law of the Sea meeting, 1024; Medvedev's citizenship revoked, 734; National Oceanic and Atmospheric Administration budget, 830; Office of Technology Assessment funds up against the wall, 928; RANN's priorities shifted, 927; Sakharov and how National Academy stepped into crisis, 1231; Sawhill as Science budget czar, 426; scientists also on "enemy list," 144; Wiesner and White House foes, 244
- Shashoua, V. E.: Seasonal changes in the learning and activity patterns of goldfish, 572
- Sheehan, M. C. See Whitehead, D. R., *et al.*
- Shepherd, J. B. See Aspinall, W. P., *et al.*
- Sher, S. E. See Taunton-Rigby, A., *et al.*
- Shiffriss, O.: Prophecy (letter), 610
- Shively, J. N. See Hsu, F. S., *et al.*
- Shorey, H. H. See Hummel, H. E., *et al.*
- Short, L. L., *et al.*: Tropical rain forests (letters), 893
- Short-range order and crystallinity?, D. L. Evans *et al.*, 774
- Sigurdsson, H. See Aspinall, W. P., *et al.*
- Silk, J.: book review of L'univers relativiste, 1038
- Silverman, J.: book review of The radiation chemistry of macromolecules, 338
- Silvers, W. K. See Wachtel, S. S., *et al.*
- and S.-L. Yang: Male specific antigen: homology in mice and rats, 570
- Silverstein, R. M. See Hummel, H. E., *et al.*
- Simberloff, D.: book review of Stability and complexity in model ecosystems, 1157
- Simkin, T.: Postscript (letter), 300. See also Case, J. E., *et al.*
- Simon, H. A.: Relevance—there and here (editorial), 613
- Simpson, J. B., and A. Routtenberg: Subfornical organ: site of drinking elicitation by angiotensin II, 1172
- Simpson, J. G. See DeLong, R. L., *et al.*
- Simpson, R. H.: Hurricane prediction: progress and problem areas, 899
- Singer, M., and D. Soll: DNA hybrid molecules (letter), 1114
- Size of the great white shark (*Carcharodon*), J. E. Randall, 169
- Skavenski, A. A. See Steinman, R. M., *et al.*
- Slade, M., and C. F. Wilkinson: Juvenile hormone analogs: a possible case of mistaken identity?, 672
- Smiley, C. H. See Stephenson, C. B., *et al.*
- Smiley, D. See George, C. J.
- Smith, A. A. See Crofford, M.
- Smith, C. A. See Mattson, J. A.
- Smith, G. P.: Mouse immunoglobulin kappa chain MPC 11: extra amino-terminal residues, 941
- Smith, J. C. See Bakir, F., *et al.*
- Smith, J. C., Jr., *et al.*: Zinc: a trace element essential in vitamin A metabolism, 954
- Smylie, D. E.: book review of Rotation of the earth, 836
- Snapping behavior of the shrimp *Alpheus californiensis*, R. Ritzmann, 459
- Soll, D. See Singer, M.
- Solomon, S.: Inherited renal cysts in rats, 451
- Somatic evoked response recording: an adequate test of deafferentation?, T. Allison *et al.*, 187
- Sonnet, P. E. See Klun, J. A., *et al.*
- Soutar, A. See Chow, T. J., *et al.* See also Veeh, H. H., *et al.*
- Spahn, G. J. See Peters, R. L., *et al.*
- Spano, L. A. See Oesterling, J. F.
- Sparrow, A. H.: Hazards of chemical carcinogens and mutagens (letter), 700
- Sparrow, J. G., and E. P. Ney: Temporal constancy of zodiacal light, 438
- Spatial orientation by salamanders using plane-polarized light, D. H. Taylor and K. Adler, 285
- Spaulding, A. C.: book review of Models in archaeology, 933
- Specific suppression of immune responses, D. A. Rowley *et al.*, 1133
- Speed accuracy trade-off in recognition memory, A. V. Reed, 574
- Sperm penetration of housefly eggs: evidence for involvement of a female ac-

- cessory secretion, R. A. Leopold and M. E. Degrugillier, 555
- Spontaneous whole brain slow potential changes during recovery from experimental neurosurgery, D. A. Irwin *et al.*, 1176
- Stable isotope tracers in the life sciences and medicine, N. A. Matwiyoff and D. G. Ott, 1125
- Stable limit cycles in prey-predator populations, F. Albrecht *et al.*, 1073
- Stabilité structurelle et morphogénèse, R. THOM, *book review* by H. Bremermann, 536
- Stability and complexity in model ecosystems, R. M. MAY, *book review* by D. Simberloff, 1157
- Standards for carcinogens (*letter*), J. M. Stellman, 109
- Staphylococci, The, J. O. COHEN (Ed.), *book review* by A. W. Jackson, 434
- Stark, E. *See* Gibbs, E. L., *et al.*
- Statistical mechanics, R. P. FEYNMAN, *book review* by N. D. Mermin, 257
- STEEVES, T. A., and I. M. SUSSEX, Patterns in plant development, 1160
- Stein, G. S., and D. E. Matthews: Non-histone chromosomal protein synthesis: utilization of preexisting and newly transcribed messenger RNA's, 71
- Stein, L. *See* Wise, C. D.
- Steinman, R. M., *et al.*: Miniature eye movement, 810
- Stellman, J. M.: Standards for carcinogens (*letter*), 109
- Stephenson, C. B., *et al.*: Orientation of the pyramids (*letters*), 7
- Stereoscopic vision: cortical limitations and a disparity scaling effect, C. W. Tyler, 276
- Stevens, G.: Psychological literature (*letter*), 301
- Stigler, S. M. *See* Schleusener, R. A.
- Still specifications (*letters*), E. L. Gibbs *et al.*, 298
- Stimulus-coupled secretion of  $\gamma$ -aminobutyric acid from rat brain synaptosomes, W. B. Levy *et al.*, 676
- Stoming, T. A., and E. Bresnick: Gas chromatographic assay of epoxide hydrolase activity with 3-methylcholanthrene-11,12-oxide, 951
- Stone, E. M. WINKLER, *book review* by W. D. Keller, 838
- Stonier, T.: *book review* of Analysis of leaf development, 648
- Stoolmiller, A. C. *See* Thompson, J. N., *et al.*
- Strauss, R. R. *See* Paul, B. B., *et al.*
- Strom, T. B., *et al.*: Microtubule function in immune and nonimmune lymphocyte-mediated cytotoxicity, 171
- Strunk, T. H., *et al.*: Perspectives on linear heat transfer, 184
- Strychnine and memory process, J. W. Hu *et al.*, 363
- Stuart, F. P. *See* Rowley, D. A., *et al.*
- STUBBE, H., History of genetics, *book review* of, 336
- Subfornical organ: site of drinking elicitation by angiotensin II, J. B. Simpson and A. Routtenberg, 1172
- SULLIVAN, D. *See* BARBER, B., *et al.*
- Summers, M. R. *See* Oroszlan, S., *et al.*
- Sundqvist, H., *et al.*: Hurricane seeding analysis, 1072
- Superinduction of endogenous type C virus by 5-bromodeoxyuridine from transformed mouse clones, M. M. Lieber *et al.*, 443
- Support of new principal investigators by NIH: 1966 to 1972, C. D. Douglass and J. C. James, 241
- Survey of academic job applicants (*letter*), M. G. Emsley, 496
- Suspensions: fluid with fading memories, A. Okagawa and S. G. Mason, 159
- SUSSEX, I. M. *See* STEEVES, T. A.
- Swafford, J. R. *See* Burke, W. F., *et al.*
- Swank, R. T., and D. W. Bailey: Recombinant inbred lines: value in the genetic analysis of biochemical variants, 1249
- Swenson, G. W., Jr., and W. W. Cochran: Radio noise from towns: measured from an airplane, 543
- Swofford, H. S. *See* Eaton, J. W., *et al.*
- Sykes, L. R. *See* Scholz, C. H., *et al.*
- Synergism of insecticides by herbicides, E. P. Lichtenstein *et al.*, 847
- Synthesis of RNA-polyadenylic acid by isolated brain nuclei, S. P. Banks and T. C. Johnson, 1064
- Systems for technological information transfer, W. T. Knox, 415
- SZILARD, G. W. *See* GELD, B. T., *et al.*

## T

- Talamo, R. C., *et al.*:  $\alpha$ -Antitrypsin deficiency: a variant with no detectable  $\alpha$ -antitrypsin, 70
- Tanaka, Y., *et al.*: Intestinal calcium transport: stimulation by low phosphorus diets, 564
- Tartof, K. D. *See* Greenberg, J. R., *et al.*
- Taub, E. *See* Allison, T., *et al.*
- Taub, E., *et al.*: Behavioral development after forelimb deafferentation on day of birth in monkeys with and without blinding, 959
- Taunton-Rigby, A., *et al.*: Lysergic acid diethylamide: radioimmunoassay, 165
- Taxation and energy conservation (*letter*), W. Forst, 112
- Taylor, A., *et al.*: Vasopressin: possible role of microtubules and microfilaments in its action, 347
- Taylor, D. H., and K. Adler: Spatial orientation by salamanders using plane-polarized light, 285
- Teasdale, F. *See* Adcock, E. W., III, *et al.*
- Technology assessment and the university (*letter*), J. C. Cobb, 495
- Tecson, N. *See* Officer, J. E., *et al.*
- Temporal constancy of zodiacal light, J. G. Sparrow and E. P. Ney, 438
- Testicular morphology in rats vasectomized as adults, S. M. Plaut, 554
- Teter, M. P. *See* Evans, D. L., *et al.*
- Thermal conductivities of the elements, R. W. Powell and Y. S. Touloukian, 999
- Thermodynamic aspects of developmental biology, A. I. ZOTIN, *book review* by K. Kornacker, 1159
- Thermoperiodic control of diapause in an insect: theory of internal coincidence, D. S. Saunders, 358
- Thermophilic ostracod: aquatic metazoan with the highest known temperature tolerance, C. E. Wickstrom and R. W. Castenholz, 1063
- Thinking metric (*letter*), W. H. Calhoun, 1201
- Thirst satiation and the temperature of ingested water, E. Deaux, 1166
- THOM, R., Stabilité structurelle et morphogénèse, *book review* of, 536
- Thomas, D. R. *See* Welker, R. L., *et al.*
- Thomas, H., *et al.*: Observation is insufficient for discovering that the surface of water is invariantly horizontal, 173
- Thompson, J. N., *et al.*: N-Acetyl- $\beta$ -hexosaminidase: role in the degradation of glycosaminoglycans, 866
- Thornton, H. *See* Collard, W., *et al.*
- Thyroid hormone action: a cell-culture system responsive to physiological concentration of thyroid hormones, H. H. Samuels *et al.*, 1253
- Tikriti, S. *See* Bakir, F., *et al.*
- Tillett, S. S. *See* Short, L. L., *et al.*
- Todaro, G. J. *See* Lieber, M. M., *et al.*
- Toksöz, N. *See* Nakamura, Y., *et al.*
- Tolman, C. A., and J. P. Jesson: Homogeneous catalysis, 501
- Tomich, P. Q.: *book review* of Nature conservation in the Pacific, 1240

- Tomkins, G. M. *See* Bourne, H. R., *et al.*
- Tomoeda, M. *See* Helinski, D. R., *et al.*
- Toon, O. B. *See* Sagan, C., *et al.*
- Torrey, J. G.: Hormonal regulation of plant growth and morphogenesis (*meeting report*), 1075
- Touloukian, Y. S. *See* Powell, R. W.
- Toxic metal fumes from mantle-type camp lanterns, K. Griggs, 842
- Tracy, C. R. *See* Strunk, T. H., *et al.*
- Travassos, L. R.: The Brazilian momentum (*letter*), 391
- Trees (*letter*), T. H. Jukes, 220
- Trelstad, R. L. *See* Bruns, R. R., *et al.*
- TRINGHAM, R. *See* UCKO, P. J., *et al.*
- Triple-stranded polynucleotide helix containing only purine bases, S. Arnott and P. J. Bond, 68
- Tropical cyclone Bebe creates a new land formation on Funafuti Atoll, J. E. Maragos *et al.*, 1161
- Tropical rain forests (*letters*), L. L. Short *et al.*, 893
- Tsai, J. S. *See* Samuels, H. H., *et al.*
- Tsang, N., *et al.*: Common mechanism for repellents and attractants in bacterial chemotaxis, 60
- Tubular packing of spheres in biological fine structure, R. O. Erickson, 705
- Tucker, J. C. *See* Rasmussen, D. H., *et al.*
- TULVING, E., and W. DONALDSON (Eds.), Organization of memory, *book review* of, 740
- Tuohimaa, P. *See* Segal, S. J., *et al.*
- Turkevich, A. L. *See* Economou, T. E., *et al.*
- Turner, S. C. *See* Greenberg, J. R., *et al.*
- Turning points in western technology, D. S. L. CARDWELL, *book review* by E. Layton, 1035
- Two visual systems in the frog, D. Ingle, 1053
- Tyler, C. W.: Stereoscopic vision: cortical limitations and a disparity scaling effect, 276

## U

- UCKO, P. J., *et al.* (Eds.), Man, settlement and urbanism, *book review* of, 646
- L'univers relativiste, S. MAVRIDÈS, *book review* by J. Silk, 1038
- University and R&D, The (*letter*), H. S. Bright, 301
- University-industry interaction (*letters*), G. D. Cody *et al.*, 800
- University or knowledge factory? (*editorial*), H. L. Enarson, 897
- Unsworth, B. R. *See* DeCosse, J. J., *et al.*
- Unusual retinal cells in the dolphin eye, W. W. Dawson and J. M. Perez, 747
- Upchurch, M. L., *et al.*: Objectives of agricultural research (*letters*), 216
- Uphoff, D. E., *et al.*: Maternal influences on mouse embryos and preservation of mutant strains by freezing, 287
- Uruk countryside, The, R. MCC. ADAMS and H. J. NISSEN, *book review* by I. Rouse, 150

## V

- van den Ende, P.: Predator-prey interaction in continuous culture, 561
- VanderWeele, D. A. *See* Novin, D., *et al.*
- van Emden, H. F.: *book review* of Insect and mite nutrition, 1036
- VanStone, J. W.: *book review* of Circumpolar problems, 257
- Vasopressin: possible role of microtubules and microfilaments in its action, A. Taylor *et al.*, 347
- Vázquez-Yanes, C. *See* Short, L. L., *et al.*
- Veath, M. L. *See* O'Brien, J. S., *et al.*
- Veech, R. L. *See* Lust, W. D., *et al.*
- Veech, H. H., *et al.*: Contemporary phos-

- phorites on the continental margin of Peru, 844
- Viability versus fecundity selection in the slender wild oat, *Avena barbata* L., M. T. Clegg and R. A. Allard, 667
- Vine, F. J.: *book review* of Palaeomagnetism and plate tectonics, 538
- Virus-free adenocarcinoma of the frog (summer phase tumor) transcribes Lucké tumor herpesvirus-specific RNA, W. Collard *et al.*, 448
- Virus-induced cholesterol crystals, C. G. Fabricant *et al.*, 566
- Visek, W. J. *See* Wakeling, A. E.
- Visual effects on alpha feedback training, D. A. Paskewitz and M. T. Orne, 360
- VLADIMIROV, L., The Russian space bluff, *book review* of, 150
- VLS (vapor-liquid-solid): newly discovered growth mechanism on the lunar surface?, J. L. Carter, 841
- Vonnegut, B. *See* Passarelli, R. E., Jr., *et al.*

## W

- Wachtel, S. S., *et al.*: Male-specific antigen: modification of potency by the H-2 locus in mice, 862
- WADDINGTON, C. H. *See* COUNCE, S. J.
- Wade, N. (*News and Comment*): British Council for Science and Society, 420; environmental precedent for Nixon tapes case, 1031; foreign scientists in the United States, 832; Fort Detrick and new leadership, 328; insect viruses, 925; Nixon-Brezhnev summit, 38, 39; psychical research, 138; science writing prize, 247; world food situation, 634
- Waggoner, P. E.: Agricultural research (*editorial*), 499
- Wagner, H.: Cell-mediated immune responses in vitro: interaction of thymus-derived cells during cytotoxic allograft responses in vitro, 1170
- Wakeling, A. E., and W. J. Visek: Insecticide inhibition of 5  $\alpha$ -dihydrotestosterone binding in the rat ventral prostate, 659
- WALKER, D. (Ed.), Bridge and barrier, *book review* of, 934
- Walker, D. L., *et al.*: Human papovavirus (JC): induction of brain tumors in hamsters, 674
- Walkinshaw, C. H. *See* Dowty, B., *et al.*
- Walsh, J. (*News and Comment*): Congress and the Executive expand adversary relationship, 1152; conversation with Eugene Wigner, 527; medical evaluation, 1023; *New York Times* information retrieval system, 640; Office of Science and Technology is dead, 140; research systems in five small countries studied by Organisation for Economic Cooperation and Development, 329; Science and Aeronautics Committee in new orbit, 422; Stever urged to advise the President actively, 421
- Ward, W. R.: Large-scale variations in the obliquity of Mars, 260
- Wasserman, E. A.: Pavlovian conditioning with heat reinforcement produces stimulus-directed pecking in chicks, 875
- Waste paper used for the cleanup of oil spills, J. F. Oesterling and L. A. Spano, 775
- Wax, N. *See* Albrecht, F., *et al.*
- Weather modification (*letters*), R. A. Schleusener and S. M. Stigler, 798
- Weeks, J. R.: Prostaglandins (*meeting report*), 370
- Weidman, W. H. *See* Weinshilboum, R. M., *et al.*
- Weinberger, M. A.: The blind technique (*letter*), 219
- Weinshilboum, R. M., *et al.*: Serum dopamine- $\beta$ -hydroxylase activity: sibling-sibling correlation, 943
- WEISSKOPF, V. F., Physics in the twentieth century, *book review* of, 836
- Welfare reform 1973: the social services dimension, R. Morris, 515
- Welker, R. L. *See* Gamzu, E. R., *et al.*
- Westgaard, R. H. *See* Jansen, J. K. S., *et al.*
- Westman, W. E., and R. M. Gifford: Environmental impact: controlling the overall level, 819
- Westöb, G.: Methylmercury as percentage of total mercury in flesh and viscera of salmon and sea trout of various ages, 567
- White, G. *See* Zimbardo, P. G., *et al.*
- White, I. *See* Gibbs, E. L., *et al.*
- White, L., Jr.: Another scientist in Congress (*letter*), 112
- Whitehead, D. R., *et al.*: Late glacial and postglacial productivity changes in a New England pond, 744
- Whiten, J. T. *See* Shank, R. P., *et al.*
- Whitt, G. S. *See* Borden, D., *et al.*
- Whitten, J. M.: Kinetosomes in insect epidermal cells and their orientation with respect to cell symmetry and intercellular patterning, 1066
- Whittingham, D. G. *See* Uphoff, D. E., *et al.*
- Wickstrom, C. E., and R. W. Castenholz: Thermophilic ostracod: aquatic metazoan with the highest known temperature tolerance, 1063
- Wiener, H. *See* Peltzman, S.
- Wilkinson, C. F. *See* Slade, M.
- Wilkniss, P. E. *See* Carr, R. A.
- Williams, B. A. *See* Hanegan, J. L.
- Williams, D. R. *See* Gamzu, E. R., *et al.*
- Williams, E., *et al.*: Natural abundance carbon-13 nuclear magnetic resonance spectra of the canine sciatic nerve, 869
- Williams, M. A. *See* Bull, D. M., *et al.*
- Wilson, R. *See* Gottschalk, E.
- Wilson, T. R. S. *See* Sayles, F. L., *et al.*
- Wilson's disease: identification of an abnormal copper-binding protein, G. W. Evans *et al.*, 1175
- Winfree, A. T.: Scroll-shaped waves of chemical activity in three dimensions, 937
- Winkelstein, W., Jr. *See* Marmot, M. G., *et al.*
- WINKLER, E. M., Stone, *book review* of, 838
- WINSOR, K. R. *See* GELD, B. T., *et al.*
- Wise, C. D., and L. Stein: Dopamine- $\beta$ -hydroxylase deficits in the brains of schizophrenic patients, 344
- Wojtkowski, P. W. *See* Klun, J. A., *et al.*
- Wold, F.: *book review* of Proteins, 838
- WOLF, L. L. *See* MC NAUGHTON, S. J.
- Women in the job market (*letter*), A. C. Dean and R. C. Dean, 990
- Women job applicants (*letter*), B. R. Green, 496
- Wood, C. A., and S. H. Zisk: Radar mapping of the moon: central peaks, 364
- World's cats, The, R. L. EATON (Ed.), *book review* by R. F. Ewer, 1159
- Wurtman, R. J. *See* McGuire, R. A., *et al.*
- Wyman, D. *See* Steinman, R. M., *et al.*
- Wyrski, K.: An equatorial jet in the Indian Ocean, 262

## Y

- Yang, S.-L. *See* Silvers, W. K.
- Yeaple, D. S.: Highway salting (*letter*), 113
- YUMI, S. *See* MELCHIOR, P.

## Z

- Ziman, J.: *book review* of Physics in the twentieth century, 836
- Zimbardo, P. G., *et al.*: Objective assessment of hypnotically induced time distortion, 282
- Zinc: a trace element essential in vitamin A metabolism, J. C. Smith, Jr. *et al.*, 954
- Zisk, S. H. *See* Wood, C. A.
- ZOTIN, A. I., Thermodynamic aspects of developmental biology, *book review* of, 1159
- ZuRhein, G. M. *See* Walker, D. L., *et al.*
- Zust, J. R. *See* Greenberg, J. R., *et al.*
- Zwarun, A. A.: The case of Nina Strokata (*letter*), 300