
SCIENCE

Index to Volume 143
January—March 1964

Editorial Board

| | |
|-----------------------|------------------------|
| DAVID M. BONNER | WILLARD F. LIBBY |
| MELVIN CALVIN | NEAL E. MILLER |
| ERNEST COURANT | PHILIP M. MORSE |
| FARRINGTON DANIELS | COLIN S. PITTEENDRIGH |
| JOHN T. EDSELL | KENNETH S. PITZER |
| DAVID R. GODDARD | DEWITT STETTIN, JR. |
| ALEXANDER HOLLOWENDER | WILLIAM L. STRAUS, JR. |
| ROBERT JASTROW | EDWARD L. TATUM |
| EDWIN M. LERNER II | JOHN R. WINCKLER |
| CLARENCE M. ZENER | |

Editorial Staff

| | |
|---------------------------------|--|
| DAEL WOLFLE <i>Publisher</i> | HANS NUSSBAUM <i>Business Manager</i> |
|---------------------------------|--|

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 National Publishing Company

Copyright 1964 by the American Association for the Advancement of Science

INDEX TO VOLUME 143

| No. | Date of Issue | Pages | No. | Date of Issue | Pages |
|------|---------------|---------|------|---------------|-----------|
| 3601 | 3 January | 1-68 | 3608 | 21 February | 719-902 |
| 3602 | 10 January | 69-180 | 3609 | 28 February | 903-986 |
| 3603 | 17 January | 181-280 | 3610 | 6 March | 987-1070 |
| 3604 | 24 January | 281-416 | 3611 | 13 March | 1071-1262 |
| 3605 | 31 January | 417-502 | 3612 | 20 March | 1263-1366 |
| 3606 | 7 February | 503-626 | 3613 | 27 March | 1367-1502 |
| 3607 | 14 February | 627-718 | | | |

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

A

- AAAS: 1963 Cleveland meeting, 835; 1963 Council meeting, 829; officers, committees, and representatives for 1964, 831; president-elect, 826; reports of sections and societies, 843
- AAAS Committee on Science in the Promotion of Human Welfare: Science and the race problem (*letter*), 913
- AAAS meeting and the press (*letter*), R. A. Bruner, 763
- AAAS: *New affiliates*: American Fisheries Society, E. A. Seaman, 1237; Division of chemical literature of the American Chemical Society, 1236; *erratum*, 1424; Medical Library Association, 1240
- Abelson, P. H. (*editorials*): The appropriate function of a university, 10; Drilling in the ocean floor, 529; Federal support of basic research, 1397; Letters to the editor, 201; New goals for science in Britain, 919; A prodigious inventory-taking, 1127; Trends in scientific research, 218
- ABRIKOSOV, A. A., *et al.*, Methods of quantum field theory in statistical physics, *book review* of, 559
- Abstract harmonic analysis, vol. 1, Structure of topological groups, integration theory, and group representations, E. HEWITT and K. A. ROSS, *book review* by L. H. Loomis, 673
- Acceptance or rejection of male skin by isologous female mice: effect of injection of sperm, G. F. Katsh *et al.*, 41
- Acid of krypton and its barium salt, A. G. Streng and A. V. Grosse, 242
- ACKOFF, R. L., and P. RIVETT, A manager's guide to operations research, *book review* of, 232
- Actinomycin: correlation of structure and function of its complexes with purines and DNA, E. Reich, 684
- Actinomycin D as a probe for nucleic acid secondary structure, R. Haselkorn, 682
- Actinomycin D: effect on the immune response, C. J. Wust *et al.*, 1041
- Actinomycin D: suppression of recovery in x-irradiated mammalian cells, M. M. Elkind *et al.*, 1454
- Adams, T. C.: Salt migration to the northwest body of Great Salt Lake, Utah, 1027
- Adelberg, E. A.: *book review* of Molecular biology of bacterial viruses, 345
- Ades, H. *See* Webb, W. B.
- Advance in mass spectrometry, R. M. ELIOTT (Ed.), *book review* by A. O. Nier, 795
- Advances in photochemistry, vol. 1, W. A. NOYES, JR., *et al.* (Eds.), *book review* by H. Eyring, 1317
- Agogino, G. A., *et al.*: Early man in the new world (*meeting report*), 1350
- Agrawal, D. P.: Harappa culture: new evidence for a shorter chronology, 950
- Airborne algae: their abundance and heterogeneity, R. M. Brown *et al.*, 583
- Air pollution (*meeting report*), J. P. Dixon, 1349
- Ajello, L. *See* Bubash, G. R., *et al.*
- Albrecht, H. R.: Federal grants and small institutions (*letter*), 306
- Alderton, G., *et al.*: Heat adaptation and ion exchange in *Bacillus megaterium* spores, 141
- Alescio, T. *See* Elkind, M. M., *et al.*
- Alexander, A. L.: Thermal control in space vehicles, 654
- Alexander, N. *See* Beck, S. D.
- Allelic mapping in yeast by x-ray-induced mitotic reversion, T. R. Manney and R. K. Mortimer, 581
- Allott, G.: Mohole (*letter*), 1393
- Alpha-chymotrypsin and the nature of enzyme catalysis, C. Niemann, 1287
- Amdur, I.: *book review* of How chemical reactions occur, 947
- Ameiotic alteration of generations: a new life cycle in the ferns, A. M. Evans, 261
- America's new policy makers: the scientists' rise to power, D. W. Cox, *book review* by R. N. Kreidler, 1156
- Amino acid code in *Alcaligenes faecalis*, J. J. Protass *et al.*, 1174
- 6-Aminopenicillanic acid: inhibition of destruction of cephalosporin C by bacteria, R. B. Walton, 1438
- Analysis of variance of migmatite composition II: comparison of two areas, R. F. Ward and S. L. Werner, 1032
- Anangula: a geologic interpretation of the oldest archeologic site in the Aleutians, R. F. Black and W. S. Laughlin, 1321
- Ancient Mesoamerican civilization, R. S. MacNeish, 531
- Anderson, A. G., Jr.: *book review* of Organic functional group analysis, 123
- Anderson, R. K., *et al.*: Brucella-agglutinating antibodies: relation of mercaptoethanol stability to complement fixation, 1334
- Anderton, D. A., and C. Teichert: An aye for "I" (*letter*), 764
- Angel, J. L.: *book review* of Anthropometric survey of Turkey, Greece, and Italy, 1426
- Animal growth and development, F. MOOG, *book review* by J. K. Brierley, 668
- Anorganische Chemie, vols. 2 and 3, I. NARAY-SZABO, A. BELICZAY (Trans.), *book review* by K. F. Sporek, 794
- Ansley, H. R. *See* Black, M. M.
- Anthropometric survey of Turkey, Greece, and Italy, H. T. E. HERTZBERG *et al.*, *book review* by J. L. Angel, 1426
- Antibody activity in six classes of human immunoglobulins, J. L. Fahey and H. Goodman, 588
- Antibody suppression by antigen heavily labeled with iodine-131, M. M. Webber, 132
- Antidromic inhibition accompanied by ventral root positivities, R. Werman, 824
- Antiquity of American polypoid cotton, C. E. Smith, Jr., and R. S. MacNeish, 675
- Approaching ceilings in the supply of scientific manpower, W. R. Brode, 313
- Appropriate function of a university, The (*editorial*), P. H. Abelson, 10
- Archeology and the microscope, L. BIEK, *book review* by R. J. Gettens, 36
- Arends, T., and M. L. Gallango: Transferrins in Venezuelan Indians: high frequency of a slow-moving variant, 367
- Arking, A.: Latitudinal distribution of cloud cover from Tiros III photographs, 569
- Armstrong, G. T.: Calorimetry (*meeting report*), 158
- Armstrong, J. G., *et al.*: Vinblastine sulfate treatment of Hodgkin's disease during a pregnancy, 703
- Armstrong, N. E., and H. T. Odum: Photoelectric ecosystem, 256
- Arnold, J. R. *See* Honda, M.
- Art and science of growing crystals, The, J. J. GILMAN, *book review* by H. S. Peiser, 672
- Asakawa, H. *See* Turner, C. D.
- Astin, A. V.: Weights and measures (*meeting report*), 974
- Asynchronous synthesis of RNA in nucleoli of root meristem, A. K. Bal and P. R. Gross, 808
- Athay, R. G.: The challenge of chromospheric physics, 1129
- Atmospheric aldehydes related to petunia leaf damage, E. G. Brennan *et al.*, 818
- Atmospheric jet streams, D. O. Staley *et al.*, 489
- Atomic age, The, M. GRODZINS and E. RABINOWITCH (Eds.), *book review* by A. A. Berle, 341

Author(s)! Author(s)! (*letter*), R. B. Neuman, 763
 Autokinetic movement: selective manipulation of directional components by image stabilization, L. Matin and G. E. MacKinnon, 147
 Automated decision making: a threat, or a promise? (*letter*), I. Kraft, 99
 Autoradiographic distribution of radioactive sodium in rat kidney, P. F. Mercer and R. H. Wasserman, 695; *erratum*, 943
 Axelrod, J. *See* Wurtman, R. J., et al.
 Aye for "I," An (*letter*), D. A. Anderton and C. Teichert, 764

B

Bach, F., and K. Hirschhorn: Lymphocyte interaction: a potential histocompatibility test in vitro, 813
 Bach, F. *See* Rubin, A. L., et al.
 Bachvaroff, R., and P. R. B. McMaster: Separation of microsomal RNA into five bands during agar electrophoresis, 1177
 Bacteriophage: an unusual hybrid of serologically unrelated phages P22 and P221, N. Yamamoto, 144
 Baddour, R. F.: *book review* of High-temperature inorganic coatings, 233
 Baer, J. E. *See* Schubiger, A. E.
 Bagnara, J. T. *See* Obika, M.
 Baker, B. L. *See* Clark, R. H.
 Bakheit, Y. S., et al.: Precaution in the use of iodine-125 as a radioactive tracer, 799
 Bal, A. K., and P. R. Gross: Asynchronous synthesis of RNA in nucleoli of root meristem, 808
 Baldwin, R. D. *See* Rogoff, S. M., et al.
 Baltimore, D., et al.: Virus-specific double-stranded RNA in poliovirus-infected cells, 1034
 BANTOCK, G. H.: Education in an industrial society, *book review* of, 556
 Barnett, D. R. *See* Schneider, R. G., et al.
 Barth, W. F. *See* Law, L. W., et al.
 Bartoshuk, L. M., et al.: Taste of sodium chloride solutions after adaptation to sodium chloride: implications for the "water taste," 967
 Barut, A. O.: *book review* of Methods of quantum field theory in statistical physics, 559
 Barzun, J.: *book review* of Literature and science, 33
 Basaltic cone suggests constructional origin of some guyots, M. N. Christensen and C. M. Gilbert, 240
 Bascom, W.: Mohole (*letter*), 1274
 Basic research on a problem (*letter*), W. Spieth, 197
 Baskin, R. J., and G. M. Wiese: Contraction-band formation in barnacle myofibrils, 134
 Bastable, C. W.: Research funds—cost accounting (*letter*), 430
 BATEMAN, L. (Ed.), The chemistry and physics of rubber-like substances, *book review* of, 1429
 Battersby, W. S., and I. H. Wagman: Light adaptation kinetics: the influence of spatial factors, 1029
 Bayne-Jones, S.: *book review* of George Hoyt Whipple and his friends, 346
 Bearing of philosophy on the history of science, The, A. Grünbaum, 1406
 Beck, S. D., and N. Alexander: Hormonal activation of the insect brain, 478
 Becker, Y. *See* Baltimore, D., et al.
 Beckwith, B. P. *See* Yarnell, R. A., et al.
 Beeman, W. W.: *book review* of X-ray studies of materials, 793
 Behavior: confinement, adaptation, and compulsory regimes in laboratory studies, J. L. Kavanau, 490

Behavior of infant monkeys: differences attributable to mode of birth, G. W. Meier, 968
 Behavior: persistence of shock-induced aggression, R. E. Ulrich and W. H. Craine, 971
 Behrendt, J. C., and T. S. Laudon: Cretaceous fossils collected at Johnson Nunatak, Antarctica, 353
 Beliczay, A. *See* Naray-Szabo, I.
 Bell, A. G.: Diploid and endoreduplicated cells: measurements of DNA, 139
 Benditt, E. P., and R. J. Wedgwood: Sudden-death syndrome (*meeting report*), 156
 Benioff, H.: Earthquake source mechanisms, 1399
 Benson, A. N.: Scientists and causes: test bans and traffic jams (*letter*), 430
 Bent, H. A.: *book review* of Noble-gas compounds, 1425
 Berle, A. A.: *book review* of The atomic age, 341
 Berlowitz, L.: Science and poetry (*letter*), 1124
 Bessman, S. P., and S. J. Skolnik: Gamma hydroxybutyrate and gamma butyrolactone: concentration in rat tissues during anesthesia, 1045
 BIEK, L., Archeology and the microscope, *book review* of, 36
 Bile duct restoration in *Rana pipiens* after ligation of the hepatoduodenal ligament, J. C. Streett, Jr., 592
 Bioastronautics: fundamental and practical problems (*meeting report*), W. C. Kaufman, 1199
 Biological science: an inquiry into life, J. J. SCHWAB (Ed.), *book review* by J. K. Brierley, 668
 Biological science: molecules to man, J. J. SCHWAB (Ed.), *book review* by J. K. Brierley, 668
 Biology of birds, W. LANYON, *book review* by H. Friedmann, 562
 Biology of the seas of the U.S.S.R., L. ZENKEVITCH, *book review* by J. W. Hedgpeth, 35
 Biosynthesis of unsaturated fatty acids in microorganisms, J. Erwin and K. Bloch, 1006
 Birds of Hampshire and the Isle of Wight, E. COHEN, *book review* by H. Friedmann, 37
 Black, M. M., and H. R. Ansley: Histone staining with ammoniacal silver, 693
 Black, R. F., and W. S. Laughlin: Anangua: a geologic interpretation of the oldest archeologic site in the Aleutians, 1321
 Blessner, W.: *book review* of Electronic instrumentation, 35
 Bloch, K. *See* Erwin, J.
 Blumer, M. *See* Thomas, D. W.
 Bold, H. C. *See* Brown, R. M., Jr.
 Borges, W. H. *See* Wald, N., et al.
 Botany: a functional approach, W. H. MUELLER, *book review* by C. Heimsch, 1427
 Bowman, B. H. *See* Schneider, R. G., et al.
 BRADLEY, R. S. (Ed.), High pressure physics and chemistry, vols. 1 and 2, *book review* of, 460
 "Brain drain" figures (*letter*), J. A. Saxton, 1393
 Brain reflexes (*meeting report*), D. P. Purpura and H. Waelsch, 598
 Brancato, D. T.: Pay of government scientists (*letter*), 1120
 Brennan, E. G., et al.: Atmospheric aldehydes related to petunia leaf damage, 818
 BRENNER, G. J., The spores and pollen of the Potomac group of Maryland, *book review* of, 795
 Bridgman, C. F., and E. Eldred: Hypothesis for a pressure-sensitive mechanism in muscle spindles, 481
 Brierley, J. K.: *book review* of Animal growth and development; Biological science: an inquiry into life; Biological science: molecules to man; The complementarity of structure and function; High school biology; Teacher's handbook, 668
 Briggs, L. C. *See* McKusick, V. A.
 BRITTON, W. E., (Ed.), Lectures in theoretical physics, vol. 5, *book review* of, 460
 BROADHURST, P. L., The science of animal behaviour, *book review* of, 560
 Brock, T. D.: Chemical inhibition of viruses (*letter*), 195
 Brode, W. R.: Approaching ceilings in the supply of scientific manpower, 313
 Broder, G., and M. H. Weil: Excess lactate: an index of shock of reversibility in human patients, 1457
 Broecker, W.: Radiocarbon dating: a case against river mollusks and soil humus, 596
 BROTHWELL, D., and E. HIGGS: Science in archeology, *book review* of, 120
 Brown, G. N.: Cesium in liriodendron and other woody species: organic bonding sites, 368
 Brown, R. M., et al.: Airborne algae: their abundance and heterogeneity, 583
 Brown, S. C.: *book review* of Yankee scientist: William David Coolidge, 1159
 Browning, W. E., Jr. *See* Silverman, M. D.
 Brucella-agglutinating antibodies: relation of mercaptoethanol stability to complement fixation, R. K. Anderson et al., 1334
 Brumfield, H. P. *See* Anderson, R. K., et al.
 BRUNDAGE, B. C., Empire of the Inca, *book review* of, 36
 Bruner, R. A.: AAAS meeting and the press (*letter*), 763
 Bryan, E. *See* Yabe, Y., et al.
 Bryant, S. *See* Hirschberg, E., et al.
 Bubash, G. R., et al.: *Microsporum naevium*: first recorded isolation from animals in the United States, 366
 Buchwald, H. D., et al.: Identity of tarichatoxin and tetrodotoxin, 474
 Bugliarello, G., and G. C. C. Hsiao: Phase separation in suspensions flowing through bifurcations: a simplified hemodynamic model, 469
 BULLEN, K. E., An introduction to the theory of seismology, *book review* of, 1025
 Bunge, M.: Stating the problem (*letter*), 1394
 Burgess, E. D.: Gypsy moth control (*letter*), 526
 Burns, E. A.: *book review* of Infra-red spectroscopy and molecular structure, 671
 BUSH, R. R. *See* LUCE, R. D., et al.
 BUSINGER, J. A. *See* FLEAGLE, R. G.
 Byers, G. L., et al.: Moisture release from cut alfalfa, 1183

C

Cafruny, E. J. *See* Komorn, R. M.
 Calciphylaxis: passive transfer, H. Selye et al., 365
 Calorimetry (*meeting report*), G. T. Armstrong, 158
 Campbell, F. L.: *book review* of Wanted: amateur scientists, 558
 Campbell, L.: Science in Japan, 776
 Cannon, H. L.: Geology and trace elements: relation to nutrition (*meeting report*), 704
 Capillary chromatography, vol. 2 of Gas phase chromatography, *book review* by A. Weinstein, 1026
 Carey, D. E., et al.: Dengue types 1 and

INDEX TO VOLUME 143

- 4 viruses in wild-caught mosquitoes in south India, 131
- Carlston, C. W.: Tritium-hydrologic research: some results of the U.S. Geological Survey research program, 804
- Carrison, L. C. *See* Sclar, C. B., *et al.*
- Carver, M. J. *See* Ryan, W. L.
- Castellani, A., *et al.*: Overlap of photo-reactivation and liquid holding recovery in *Escherichia coli* B, 1170
- Catalogue of the type specimens of microlepidoptera in the British Museum (Natural History) described by Edward Meyrick, vol. 4, J. F. G. CLARKE, *book review* by A. B. Klots, 1320
- Cell wall replication in *Salmonella typhosa*, R. M. Cole, 820
- Cellulose acetate membranes: electron microscopy of structure, R. Riley *et al.*, 801
- Cerebellar ataxia in hamsters inoculated with rat virus, L. Kilham and G. Margolis, 1047
- Cesium in liriodendron and other woody species: organic bonding sites, G. N. Brown, 368
- CHADWICK, SIR J. (Ed.), The collected papers of Lord Rutherford of Nelson, vol. 2, *book review* of, 672
- α -chain of human hemoglobin: occurrence in vivo, P. Fessas and D. Loukopoulos, 590
- Challenge of chromospheric physics, The, R. G. Athay, 1129
- Chance, B., *et al.*: Cytochrome content of mitochondria stripped of inner membrane structure, 136
- Chandler, B., *et al.*: Circularity of the replicating form of a single-stranded DNA virus, 47
- Chang, T., and L. Weinstein: Inhibition of synthesis of the cell wall of *Staphylococcus aureus* by cephalothin, 807
- Charap, S. H., and R. F. Elfant: Magnetism (*meeting report*), 604
- Charlson, R. J.: Liquid film hygrometer, 1031
- CHEIN, I., *et al.*, The road to H: narcotics, delinquency, and social policy, *book review* of, 1157
- Chemical inhibition of viruses (*letters*), T. D. Brock, I. Tamm and H. J. Eggers, 195
- Chemical plant taxonomy, T. SWAIN (Ed.), *book review* by W. H. Wagner, Jr.
- Chemistry and physics of rubber-like substances, The, L. BATEMAN (Ed.), *book review* by A. T. McPherson, 1429
- Chemistry in three dimensions, L. F. FIESER, *book review* by G. B. Kauffman, 559
- Cheng, T., and N. Sueoka: Polymer similar to polydeoxyadenylate-thymidylate in various tissues of a marine crab, 1442
- Chernick, C. L. *See* Selig, H., *et al.*
- Chichibu, S. *See* Hagiwara, S., *et al.*
- Children's language: word-phrase relationship, J. Huttenlocher, 264
- Childs, B. *See* Young, W. J., *et al.*
- Chino, H., and L. I. Gilbert: Diglyceride release from insect fat body: a possible means of lipid transport, 359
- Cholinesterase inhibition in spider mites susceptible and resistant to organophosphate, H. R. Smissaert, 129
- Christian, J. G.: Nitrous oxide produced by the catalytic oxidation of organic nitrogen compounds, 573
- Christensen, C. J.: Henry Eyring, president-elect, 826
- Christie, R. W., *et al.*: Medical education: open minds and fragmentation, 198
- Christensen, M. N., and C. M. Gilbert: Basaltic cone suggests constructional origin of some guyots, 240
- Chronology of the galaxy, D. D. Clayton, 1281
- Chun, P. W. L. *See* Hess, E. L., *et al.*
- CHURCHILL, E. *See* HERTZBERG, H. T. E., *et al.*
- Cigarettes: polonium-210 (*letter*), I. Michelson, 917
- Cigarettes: testing on mice (*letter*), W. J. Turner, 994
- Cigna, A. A., and F. Giorecelli: Iodine-131 thyroid dose from milk in Italy during the period September 1962 to February 1963, 379
- Circadian periodicity in the concentration of prolactin in the rat hypophysis, R. H. Clark and B. L. Baker, 375
- Circularity of the replicating form of a single-stranded DNA virus, B. Chandler *et al.*, 47
- Claassen, H. H.: Freedom in large laboratories (*letter*), 917
- CLAPP, C. L., The congressman, his work as he sees it, *book review* of, 457
- Clark, R. H., and B. L. Baker: Circadian periodicity in the concentration of prolactin in the rat hypophysis, 375
- Clark, W. A. *See* Gerstein, G. L.
- Clarke, B. L.: Multiple authorship trends in scientific papers, 822
- CLARKE, J. F. G., Catalogue of the type specimens of microlepidoptera in the British Museum (Natural History) described by Edward Meyrick, vol. 4, *book review* of, 1320
- CLASON, W. E. *See* DE VRIES, L.
- Classen, H. H. *See* Selig, H., *et al.*
- Classification of fishes, A. D. S. JORDAN, *book review* by H. Deason, 1429
- Clays and clay minerals, A. SWINEFORD and P. C. FRANKS, *book review* by R. E. Grim, 35
- Clayton, D. C.: Chronology of the galaxy, 1281
- CLEMENTEL, E., and C. VILLI (Eds.), Direct interactions and nuclear reaction mechanisms, *book review* of, 34
- CLEMENTS, A. N.: The physiology of mosquitoes, *book review* of, 1430
- Clifford, A. F., and G. R. Zeilenga: Xenon fluorosilicate and related compounds, 1431
- Cloud, P. E.: The project system in grant allocation (*letter*), 1121
- Cloud, P. E., Jr., *book review* of Stratigraphy and sedimentation, 124
- CLUBB, O. E., Twentieth century China, *book review* of, 1158
- Cockburn, T. A.: Population problems and infectious diseases (*letter*), 916
- Coe, M. D., and K. V. Flannery: Microenvironments and Mesoamerican prehistory, 650
- COHEN, E.: Birds of Hampshire and the Isle of Wight, *book review* of, 37
- Cohen, W. D. *See* Glick, J. L.
- Colburn, M. W. *See* Byers, G. L., *et al.*
- Cole, R. M.: Cell wall replication in *Salmonella typhosa*, 820
- Collected papers of Lord Rutherford of Nelson, The, vol. 2, J. CHADWICK (Ed.), *book review* by E. Segrè, 672
- Collins, R. L.: Inheritance of avoidance conditioning in mice: a diallel study, 1188
- Colson, E.: *book review* of The Swazi, 558
- Compact bone in Chinese and Japanese, S. M. Garn *et al.*, 1439
- Comparative failure in science, B. G. Glaser, 1012
- Complementarity of structure and function, The, A. G. RICHARDS, *book review* by J. K. Brierley, 668
- Computer program for printing undeformed Fourier maps, J. D. H. Donnay and H. Takeda, 1162
- Conchostracans: Living and fossil from Chihuahua and Sonora, Mexico, P. Tasch and B. L. Shaffer, 806
- Condensation model producing crystalline or amorphous tetrahedral networks, F. Ordway, 800
- Conglutination: specific inhibition by carbohydrates, M. A. Leon and R. Yokohari, 1327
- Congressman, his work as he sees it, The, C. L. CLAPP, *book review* by C. A. Mosher, 457
- Consanguineous marriage (*letters*), V. A. McKusick and L. C. Briggs, 100
- Consanguineous marriage and biological selection (*letter*), J. L. Fischer, 1123
- Conselman, F. B.: Mohole fanfare (*letter*), 994
- Contraction-band formation in barnacle myofibrils, R. J. Baskin and G. M. Wiese, 134
- Control of growth and development in insects, H. A. Schneiderman and L. I. Gilbert, 325
- Conversion of leucoanthocyanins into the corresponding anthocyanidins, M. A. Joslyn and J. L. Goldstein, 954
- Cooper, A. R.: Silica (*meeting report*), 395
- Cooper, G. P., and D. J. Kimeldorf: Electroencephalographic desynchronization in irradiated rats with transected spinal cords, 1040
- Core, E. L.: *book review* of Flora of Missouri, 671
- Corn, M., and L. DeMaio: Sulfate particulates: size distribution in Pittsburgh air, 803
- CORNER, G. W., George Hoyt Whipple and his friends, *book review* of, 346
- Corrin, M. L.: *book review* of Thermodynamics of clouds, 1160
- Cover pictures: aromatic shrubs (31 Jan.); biological filters (17 Jan.); fern antheridia (24 Jan.); Great Salt Lake (6 Mar.); intracardiac growth (20 Mar.); Japanese space center site (21 Feb.); kidney autoradiography (14 Feb.); mitotic apparatus (7 Feb.); Queen Anne's lace (3 Jan.); regenerating cockroach leg (28 Feb.); San Andreas fault (27 Mar.); sensory ganglion (10 Jan.); solar chromosphere (13 Mar.)
- Cox, A., *et al.*: Geomagnetic polarity epochs, 351
- Cox, D. W., America's new policy makers: the scientists' rise to power, *book review* of, 1156
- Craine, W. H. *See* Ulrich, R. E.
- Creager, J. S.: *book review* of Submarine geology, 34
- Creasey, S. C.: *book review* of The tectonics of the Canadian shield, 945
- Cretaceous fossils collected at Johnson Nunatak, Antarctica, J. C. Behrendt and T. S. Laudon, 353
- Crevasse, L. *See* Shipp, J. C.
- CRITCHFIELD, F. E.: Organic functional group analysis, *book review* of, 123
- Cromroy, H. L. *See* Hahn, P. F.
- Crowley, R. L. *See* Hess, E. L., *et al.*
- Cryogenic technology, R. W. VANCE (Ed.), *book review* by L. B. Evans, 345
- Crystalline deamino-oxytocin, D. Jarvis and V. du Vigneaud, 545
- Culberson, C. F.: Joint occurrence of a lichen depsidone and its probable precursor, 255
- Cullinan, F. P.: *book review* of Vistas in botany, 459
- Culture against man, J. HENRY, *book review* by R. L. Scheele, 231
- CURIE, D.: Luminescence in crystals, *book review* of, 464
- Cutaneous slowly adapting mechanoreceptors in the cat, D. N. Tapper, 53
- Cystinuria: in vitro demonstration of an intestinal transport defect, S. Thier *et al.*, 483
- Cytochrome content of mitochondria stripped of inner membrane structure, B. Chance *et al.*, 136
- Cytodifferentiation and its controls, C. Grobstein, 643

INDEX TO VOLUME 143

v

Cytoplasmic interaction between macrophages and lymphocytic cells in antibody synthesis, M. D. Schoenberg *et al.*, 964

D

Daines, R. H. *See* Brennan, E. G., *et al.*
 Dalrymple, G. B. *See* Cox, A., *et al.*
 DAMON, A. *See* HERTZBERG, H. T. E., *et al.*
 Daniels, F.: *book review* of Luminescence in crystals, 464
 Darnell, J. E. *See* Baltimore, D., *et al.*
 Davenport, W.: *book review* of The structure of Chin society, 36
 DAVIES, C. W.: Ion association, *book review* of, 37
 Davis, A. A. *See* Garn, F. N., *et al.*, 1039
 DAVIS, M. (Ed.), Infra-red spectroscopy and molecular structure, *book review* of, 671
 Davis, R. B.: In defense of scientist-rotarians (*letter*), 763
 Dawson, D. M., *et al.*: Lactic dehydrogenases: functions of the two types, 929
 DEAN, B. V. (Ed.), Operations research in research and development, *book review* of, 232
 Deason, H.: *book review*: The genera of fishes; A classification of fishes, 1429
 de Beer, G.: *book review* of This view of life, 1311
 Deckert, G. H.: Pursuit eye movements in the absence of a moving visual stimulus, 1192
 Deep structure of continents, The, G. J. F. MacDonald, 921
 Defense of mate and mating chamber in a wood roach, H. Ritter, Jr., 1459
 Deffeys, K. S., *et al.*: Dolomitization: observations on the island of Bonaire, Netherlands Antilles, 678
 Delavier-Klutchko, C. *See* Flavin, M., *et al.*
 Delayed independence (*editorial*), D. Wolfe, 103
 DeMaio, L. *See* Corn, M.
 Denenberg, V. H., *et al.*: Mice reared with rats: modification of behavior by early experience with another species, 380
 Dengue types 1 and 4 viruses in wild-caught mosquitoes in south India, D. E. Carey *et al.*, 131
 Denzel, H. A.: Noise and health (*letter*), 992
 Dequasie, H. L., and M. L. Jensen: *book review* of Mass spectrometry, 462
 Dessart, D. J.: *book review* of The teaching of mathematics, 123
 Detection and quantitation of fallout particles in a human lung, A. V. Wegst *et al.*, 957
 Dethier, V. G.: Microscopic brains, 1138
 DE VRIES, L., and W. E. CLASON, Dictionary of pure and applied physics, vol. 1, *book review* of, 1426
 Diabetes mellitus in the sand rat induced by standard laboratory diets, K. Schmidt-Nielsen *et al.*, 689
 Dictionary of pure and applied physics, vol. 1, L. DE VRIES and W. E. CLASON, *book review* by T. W. Marton, 1426
 Di Ferrante, N.: Precipitins in the rabbit by protein polysaccharide from bovine nasal cartilage, 250
 Differences in the amino acid composition of a third rabbit antibody, M. E. Koshland *et al.*, 1330
 Diglyceride release from insect fat body: a possible means of lipid transport, H. Chino and L. I. Gilbert, 359
 Dimond, A. E., *et al.*: Pesticide research (*meeting report*), 151
 Dimond, E. G. *See* Christie, R. W., *et al.*
 2,4-Dinitrophenol: lack of interaction with high-energy intermediates of oxidative

phosphorylation, R. H. Eisenhardt and O. Rosenthal, 476
 Diploid and endoreduplicated cells: measurements of DNA, A. G. Bell, 139
 Direct interactions and nuclear reaction mechanisms, E. CLEMENTEL and C. VILLI (Eds.), *book review* by P. Goldhammer, 34
 Dissociation and recovery of a response learned under the influence of chlorpromazine or saline, L. S. Otis, 1347
 Dissociation of olfactory neural response and mucosal potential, T. Shibuya, 1338
 Dixon, J. P.: Air pollution (*meeting report*), 1349
 DNA segregation in *Escherichia coli*: observations by means of tritiated thymidine decay, S. Person and M. Osborn, 44
 Do antimalarial sprays explain declining death rates? (*letter*), H. Frederiksen, 197
 Dobelle, W. H. *See* Marks, W. B., *et al.*
 Dodson, H. W., and E. R. Hedeman, Solar minimum and the International Years of the Quiet Sun, 237
 Doell, R. G., and N. Kretchmer: Intestinal invertase: precocious development of activity after injection of hydrocortisone, 42
 Doell, R. R. *See* Cox, A., *et al.*
 Dolomitization: observations on the island of Bonaire, Netherlands Antilles, K. S. Deffeys *et al.*, 678
 Domestication of corn, P. C. Mangelsdorf *et al.*, 538; *erratum*, 1310
 Donnay, J. D. H., and H. Takeda: Computer program for printing undeformed Fourier maps, 1162
 Dooley, E. S. *See* Poe, R. H., *et al.*
 Drilling in the ocean floor (*editorial*), P. H. Abelson, 529
 DROBOT, S., and P. A. VIEBROCK (Eds.): Mathematical models in physical sciences, *book review* of, 794
 Drug administration to neonatal rats: effects on later emotionality and learning, R. D. Young, 1055
 Dryden, H. L.: NASA and education (*letter*), 427
 Dubanoski, R. A. *See* Thompson, W. R.
 DUBISCH, R., and V. E. HOWES, The teaching of mathematics, *book review* of, 123
 Dudley, H. S. *See* Quimby, F. H., *et al.*
 DUFOUR, L., and R. DEFAY, Thermodynamics of clouds, *book review* of, 1160
 Dunham, R. M. *See* Matarazzo, J. D., *et al.*
 Dunn, S. P.: *book review* of Peoples of Central Asia, 459
 DUPERTUIS, C. W. *See* HERTZBERG, H. T. E., *et al.*
 Durham, L. *See* Buchwald, H. D., *et al.*
 Du Vigneaud, V. *See* Jarvis, D.
 Dye, C. J.: Retrograde amnesia from electroconvulsive shock, 973
 Dyke, R. W. *See* Armstrong, J. G., *et al.*
 Dzyaloshinski, I. E. *See* Abrikosov, A. A., *et al.*

E

Early arousal and imprinting in chicks, W. R. Thompson and R. A. Dubanoski, 1187
 Early man in the new world (*meeting report*), G. A. Agogino *et al.*, 1350
 Earthquake source mechanisms, H. Benioff, 1399
 EBSWORTH, E. A. V., Volatile silicon compounds, *book review* of, 233
Editorials: The appropriate function of a university, 10; Delayed independence, 103; Drilling in the ocean floor, 529; Educational leadership, 767; Ethical problems: an invitation, 453; Federal support of basic research, 1397; Letters to the editor, 201; Lost opportunities, 989; Needs of the humanities, 1279; New goals for science in Britain, 919; Prodigious inventory-taking, A., 1127; Scientists and their images, 311; Self-development, 641
 Edsall, J. T.: New perspectives in biology (*meeting report*), 267
 Education in an industrial society, G. H. BANTOCK, *book review* by R. J. Havighurst, 556
 Education of American teachers (*letter*), R. F. Marschner, 7
 Educational leadership (*editorial*), D. Wolfe, 767
 Edwards, R. M.: *book review* of The technology of the treatment of uranium concentrates, 561
 Effect of cold on the presence of *Staphylococcus aureus* in the external nares of the rat, R. H. Poe *et al.*, 487
 Effects of cosmic rays on meteorites, M. Honda and J. R. Arnold, 203
 Eggers, H. J. *See* Tamm, I.
 Ehrenpreis, L.: *book review* of Linear partial differential operators, 234
 EHRLICH, P. R., and R. W. HOLM, The process of evolution, *book review* of, 1318
 Eilenberg, S.: *book review* of The mathematical works of J. H. C. Whitehead, vol. 4, Algebraic and classical topology, 796
 Eisenhardt, R. H., and O. Rosenthal: 2,4-Dinitrophenol: lack of interaction with high-energy intermediates of oxidative phosphorylation, 476
 Eldred, E. *See* Bridgeman, C. F.
 Electrical and thermal measurements with Bridgeman anvils, R. S. Kirk and R. J. Vaisnys, 1436
 Electrical resistance of cell membranes of *Avena coleoptiles*, N. Higinbotham *et al.*, 1448
 Electroencephalographic desynchronization in irradiated rats with transected spinal cords, G. P. Cooper and D. J. Kimeldorf, 1040
 Electromechanical coupling in potentiation of muscular contraction, A. Sandow *et al.*, 577; *erratum*, 791
 Electron scattering and nuclear and nucleon structure, R. HOFSTADTER, *book review* by C. L. Cowan, 334
 Electronic instrumentation, S. D. PRENSKY, *book review* by W. Blessner, 35
 Electrophoretic and immunological studies of squid axoplasm proteins, F. Hunneus-Cox, 1036
 Elements of structural geology, E. S. HILLS, *book review* by R. O. Kehle, 945
 Elfant, R. F. *See* Charap, S. H.
 Elkind, M. M., *et al.*: Actinomycin D: suppression of recovery in x-irradiated mammalian cells, 1454
 ELLIOTT, H. C., Textbook of neuroanatomy, *book review* of, 458
 ELLIOTT, R. M. (Ed.), Advances in mass spectrometry, *book review* of, 795
 EMIN, I., *et al.*: Russian-English physics dictionary, *book review* of, 121
 Emotion versus intelligence in public support of science (*letter*), W. H. Freeman; D. W. Riley, 433
 Empire of the Inca, B. C. BRUNDAGE, *book review* by A. Kiddler II, 36
 Encyclopedia of plant anatomy, vol. 6, P. OZENDA, *book review* by G. Llano, 122
 Englberger, F. M. *See* Koshland, M. E., *et al.*
 Ennis, W. B., Jr. *see* Dimond, A. E., *et al.*
 Equatorial undercurrent of the Indian Ocean, J. A. Knauss and B. A. Taft, 354
 Equilibrium of talc with enstatite and quartz, R. A. Robie, 1057

INDEX TO VOLUME 143

- Erasmus Darwin, D. KING-HELE, *book review* by P. C. Ritterbush, 1024
- Erickson, C. O.: Meteorological satellites (*meeting report*), 612
- Errata*: for AAAS new affiliate (13 Mar., p. 1237); for R. H. Davis, *Neurospora* mutant lacking in arginine-specific carbamyl phosphokinase [142, 1652 (1963)], 340; for P. C. Mangelsdorf *et al.* (7 Feb., p. 538), 1310; for P. E. Mercer and R. H. Wasserman (14 Feb., p. 695), 943; for *News and Comment* story on automation and the Library of Congress (31 Jan., p. 452), 667; for D. P. Purpura and H. Waelisch (7 Feb., 598), 1424; for A. Sandow (7 Feb., p. 577), 791
- Erythromycin: mode of action, A. D. Wolfe and F. E. Hahn, 1445
- Erythropoietin production following gamma irradiation and hemorrhage in dogs, N. Pesic *et al.*, 49
- Erwin, J., and K. Bloch: Biosynthesis of unsaturated fatty acids in microorganisms, 1006
- Estes, L. W. *See* Schuster, M. L., *et al.*
- Ethacrynic acid: diuretic property coupled to reaction with sulphydryl groups of renal cells, R. M. Komorn and E. J. Cafruny, 133
- Ethical problems: an invitation (*editorial*), D. Wolfe, 435
- Evans, A. M.: Ameiotic alteration of generations: a new life cycle in the ferns, 261
- Evans, L. B.: *book review* of Cryogenic technology, 345
- Evolution, J. M. SAVAGE, *book review* by H. M. Slatis, 1318
- Excess lactate: an index of reversibility of shock in human patients, G. Broder and M. H. Weil, 1457
- Experiment in communication: the information exchange group, An (*letter*), D. E. Green, 308
- Experimental reversal of germ cells in ovaries of fetal mice, C. D. Turner and H. Asakawa, 1344
- Explosive welding with nitroguanidine, L. D. Sadwin, 1164
- Eyring, H.: *book review* of Advances in photochemistry, vol. 1, 1317
- F**
- Fager, E. W.: Marine sediments; effects of a tube-building polychaete, 356
- Fahey, J. L. *See* Mishell, R. I.
- Fahey, J. L., and H. Goodman: Antibody activity in six classes of human immunoglobulins, 588
- Federal grants and small institutions (*letter*), H. R. Albrecht, 306
- Federal support of basic research (*editorial*), P. H. Abelson, 1397
- Federal support of science: a formula for cooperation, National Academy of Sciences Public Policy Committee, 1300
- Feiner, R. R.: The muse in the laboratory (*letter*), 1124
- Fernando, Q., *et al.*: Metal chelates in analytical chemistry (*meeting report*), 491
- Ferris, W. R. *See* Zaitlin, M.
- Fessas, P., and D. Loukopoulos: α -Chain of human hemoglobin: occurrence in vivo, 590
- Fibrous filters as particle-size analyzers, M. D. Silverman and W. E. Browning, Jr., 572
- FIESER, L. F., Chemistry in three dimensions, *book review* of, 559
- Fifth estate in the seventh decade, The, P. M. Gross, 13
- Findlay, G. P. *See* Higinbotham, N., *et al.*
- Finkelstein, J. D. *See* Schachter, D., *et al.* *See also* Mudd, S. H., *et al.*
- Finlayson, D. G. *See* Wilkinson, A.T.S., *et al.*
- First linkage of a species antigen in the genus *Streptopelia*, W. J. Miller, 1179
- First new nation, The, S. M. LIPSET, *book review* by S. K. Padover, 1022
- Fischer, H. G. *See* Buchwald, H. D., *et al.*
- Fischer, J. E. *See* Wurtman, R. J., *et al.*
- Fischer, J. L.: Consanguineous marriage and biological selection (*letter*), 1123
- Fisher, W. R., and S. Gurin: Structure of lipoproteins: covalently bound fatty acids, 362
- Fishman, W. H. *See* Sie, H.
- Fission-track ages and track-annealing behavior of some micas, R. L. Fleischer *et al.*, 349
- Flannery, K. V. *See* Coe, M. D.
- Flavin, M., *et al.*: Succinic ester and amide of homoserine: some spontaneous and enzymatic reactions, 50
- Fleagle, R. G.: *book review* of Jet-stream meteorology, 464
- FLEAGLE, R. G., and J. A. BUSINGER, An introduction to atmospheric physics, *book review* of, 1427
- Fleischer, R. L., *et al.*: Fission-track ages and track-annealing behavior of some micas, 349
- Fleischer, R. L., *et al.*: Novel filter for biological materials, 249
- FLETCHER, N. H., the physics of rainclouds, *book review* of, 236
- Flinn, P. A., *et al.*: Mössbauer effect for surface atoms: iron-57 at the surface of $\eta\text{Al}_2\text{O}_3$, 1434
- Flora of Missouri, J. A. STEYERMARK, *book review* by E. L. Core, 671
- Fluid mechanics before the Society for Natural Philosophy (*meeting report*), C. Truesdell, 382
- Fluoroacetate inhibition of amino acids during photosynthesis of *Chlamydomonas reinhardtii*, J. R. Kates and R. F. Jones, 145
- Focus on behavior (film series), *review* by E. G. Sherburne, Jr., 792
- Following and imprinting: effects of light and social experience, J. M. Polt and E. H. Hess, 1185
- Foner, S. N.: Free radicals and unstable molecules, 441
- Fooden, J.: Rhesus and crab-eating macaques: intergradation in Thailand, 363
- Foot, P. D.: Noise (*letter*), 101
- FORD, K. W.: The world of elementary particles, *book review* of, 1023
- Fossilized stomach contents of a sauropod dinosaur, W. L. Stokes, 576
- Foundations of differential geometry, S. KOBAYASHI and K. NOMIZU, *book review* by H. Levy, 235
- Foundations of linear algebra, A. I. Mal'cev, *book review* by H. J. Ryser, 560
- Fouts, P. J. *See* Armstrong, J. G., *et al.*
- Fowler, W. A. *See* Wasserburg, G. J., *et al.*
- Fox, M. *See* Thier, S., *et al.*
- Franke, N. H.: *book review* of Kremers and Urdang's history of pharmacy, 461
- Frederiksen, H.: Do antimalarial sprays explain declining death rates? (*letter*), 197
- Free radicals and unstable molecules, S. N. Foner, 441
- Freedom in large laboratories (*letter*), H. H. Claassen, 917
- Freeman, W. H.: Emotion versus intelligence in public support of science (*letter*), 433
- Freiser, H. *See* Fernando, Q., *et al.*
- Fremont-Smith, F.: *book review* of Problem-solving discussions and conferences, 1428
- Frenzel, C. W. *See* Staley, D. C., *et al.*
- Friedmann, H.: *book review* of Birds of Hampshire and the Isle of Wight, 37; Biology of birds, 562
- Friou, G. J., and P. O. Teague: Spontaneous autoimmunity in mice: antibodies to nucleoprotein in strain A/J, 1333
- FROMAN, R., Wanted: amateur scientists, *book review* of, 558
- Fry, T. H.: Mathematicians in industry—the first 75 years, 934
- Fuhrman, F. A. *See* Buchwald H. D., *et al.*
- Fulton, C.: Jargon of genetics (*letter*), 195
- G**
- Gabbiani, G. *See* Selye, H., *et al.*
- GALANTER, E. *See* LUCE, R. D., *et al.*
- Galinat, W. C. *See* Mangelsdorf, *et al.*
- GALKIN, N. P., *et al.*: The technology of the treatment of uranium concentrates, *book review* by R. M. Edwards, 561
- Gall, C. L. *See* Wust, C. J., *et al.*
- Gallango, M. L. *See* Arends, T.
- Gamma hydroxybutyrate and gamma butyrolactone: concentration in rat tissues during anesthesia, S. P. Bessman and S. J. Skolnik, 1045
- Gardner, J. O. *See* Riley, R., *et al.*
- Gardner, J. W.: *editorial*: Self-development, 641
- Gardner, W. R., and R. H. Nieman: Lower limit of water availability to plants, 1460
- Garn, S. M., *et al.*: Compact bone in Chinese and Japanese, 1439; Gonadal dosages in investigative radiography, 1039
- Garrett, H. E., and W. C. George: Science and the race problem (*letters*), 913
- Gas chromatography, vol. 1 of Gas phase chromatography, *book review* by A. Weinstein, 1026
- Gas phase chromatography, vols. 1-3, R. KAISER, *book review* by A. Weinstein, 1026
- Gautier, T. N.: The ionosphere and radio propagation in the lower frequencies (*meeting report*), 1197
- GEIL, P. H.: Polymer single crystals, *book review* of, 121
- Genera of fishes, The, D. S. JORDAN, *book review* by H. Deason, 1429
- Geology and trace elements: relation to nutrition (*meeting report*), H. L. Cannon, 704
- Geomagnetic polarity epochs, A. Cox *et al.*, 351
- Geometric introduction to linear algebra, A. D. PEDOE, *book review* by H. Levi, 1320
- George Hoyt Whipple and his friends, G. W. CORNER, *book review* by S. Bayne-Jones, 346
- George, W. C. *See* Garrett, H. E.
- George, W. L., Jr. *See* Shiffriss, O.
- GERARD, D. L. *See* CHEIN, I. *et al.*
- Gerstein, G. L., and W. A. Clark: Simultaneous studies of firing patterns in several neurons, 1325
- Gettens, R. J.: *book review* of Archeology and the microscope, 36
- Giant polytene chromosomes in hypodermal cells of developing footpads of dipteran pupae, J. M. Whitten, 1437
- Giberrellins: their effect on antheridium formation in fern gametophytes, B. R. Voeller, 373
- Gilbert, C. M. *See* Christensen, M. N.
- Gilbert, L. I. *See* Chino, H. *See also* Schneiderman, H. A.
- GILMAN, J. J., The art and science of growing crystals, *book review* of, 672
- Ginther, O. J. *See* Bubash, G. R., *et al.*
- Giorecelli, F. *See* Cigna, A. A.
- Glaser, B. G.: Comparative failure in science, 1012
- Glassman, E. *See* Keller, E. C.
- Glauber, I. P. *See* Christie, R. W., *et al.*

- Glick, J. L., and W. D. Cohen: Nocturnal changes in oxidative activities of rat liver mitochondria, 1184
- Global distribution of the net energy balance of the atmosphere from Tiros radiation data, S. I. Rasool, 567
- Glucose-6-phosphate dehydrogenase in *Drosophila*: X-linked electrophoretic variants, W. J. Young *et al.*, 140
- Glycogen synthetase: its response to cortisol, H. Sie and W. H. Fishman, 816
- Goldberg, B. I.: Shortage of medical students (*letter*), 639
- Goldberg, L.: Wiesner's public service (*letter*), 429
- Goldhamer, P.: book review of Direct interactions and nuclear reaction mechanisms, 34
- Goldstein, J. L. See Joslyn, M. A.
- Gonadal dosages in investigative radiography, S. M. Garn *et al.*, 1039
- Gonser, U., *et al.*: Mössbauer effects in hemoglobin with different ligands, 680
- GOODENOUGH, J. B.: Magnetism and the chemical bond, book review of, 33
- Goodfriend, T. L. See Dawson, D. M., *et al.*
- Goodman, H. See Fahey, J. L.
- Gordon Research Conferences: program for 1964, W. G. Parks, 1203
- Gorkov, L. P. See Abrikosov, A. A.
- Gough, P. See Anderson, R. K., *et al.*
- Government and science: how science policy is developed (*letter*), J. H. Hollomon, 427
- Goy, R. W. See Young, W. C., *et al.*
- Graham, E. E. See Hoffmann, B., *et al.*
- Grandes fonctions, Les, vol. 3 of Physiologie, C. KEYSER (Ed.), book review of, 1158
- Grant, R. W. See Gonser, U., *et al.*
- Grants to nonconformers (*letter*), F. de Körösy, 309
- Green, D. E.: An experiment in communication: the information exchange group (*letter*), 308
- Greenberg, D. M.: "Multivolumed rehashes" (*letter*), 992
- Greenberg, D. S., News and Comment: Brain drain—the view from this side of the Atlantic, 787; Civilian technology: opposition in Congress and industry leads to major realignment of program, 660; Congress and science: inquiries into R&D are currently quiet, 661; Elliott committee: first report should quell fears that inquiry has antiscientific orientation, 791; Fermi prize money: congressional committee takes steps to assume control of annual \$50,000 award, 1305; Foreign research: NIH, Defense, carrying out reduction of aid for work in laboratories abroad, 1017; LBJ and science: policies marked by continuity, but a few events suggest developments for future, 939; Mohole: the project that went awry, 115, 223, 334; The MURA accelerator: compromise for the Midwest, 450; National Academy of Sciences study; public policy group promotes science, 1304; New MURA problem: holding staff together, 1017; Population: new U.S. interest in offering assistance reveals lags in underdeveloped nations, 1016; Research competition: as budgetary pressures grow, Congress reveals concern about scientific choices, 1149; Tobacco: administration showing little enthusiasm for follow-up on Public Health Service report, 1418
- Greenberg, D. S. See also Scheff, T. J.
- Gregg, J. L.: book review of The technology of scandium, yttrium, and the rare earth metals, 561
- Grim, R. E.: book review of Clays and clay minerals, 35
- Grobman, H.: Student performance in new high school biology programs, 265
- Grobstein, C.: Cytodifferentiation and its controls, 643
- GRODZINS, M., and E. RABINOWITCH (Eds.), The atomic age, book review of, 341
- Gross, J.: Thermal denaturation of collagen in the dispersed and solid state, 960
- Gross, P. M.: The fifth estate in the seventh decade, 13
- Gross, P. R. See Bal, A. K.
- Grosse, A. V. See Streng, A. G.
- Ground water in North America, H. E. Thomas and L. B. Leopold, 1001
- Growth and development of cultured plant cells, F. C. Steward *et al.*, 20
- Growth control of nerve cells by a protein factor and its antiserum, R. Levi-Montalcini, 105
- Growth inhibition of sarcoma and carcinoma cells of homozygous origin, K. E. Hellström, 477
- Gruenbaum, A.: The bearing of philosophy on the history of science, 1406
- Grundfest, H. See Usherwood, P. N. R.
- Guanine: formation during the thermal polymerization of amino acids, C. Ponnamperuma *et al.*, 1449
- Gullery, R. W., and H. J. Ralston: Nerve fibers and terminals: electron microscopy after Nauta staining, 1331
- GUNNINER, A., and D. L. DEXTER: X-ray studies of materials, book review of, 793
- GUTHRIE, A.: Vacuum technology, book review of, 671
- Guttman, H. N.: Science fair projects (*letter*), 992
- Guze, L. B., and G. M. Kalmanson: Persistence of bacteria in "protoplast" form after apparent cure of pyelonephritis in rats, 1340
- Gynogenesis in salamanders related to *Ambystoma jeffersonianum*, H. C. MacGregor and T. M. Uzzell, Jr., 1043
- Gypsy moth control (*letter*), E. D. Burgess, 526
- H**
- Habich, K. I. See LeFevre, P. G., *et al.*
- Hackel, D. B. See Schmidt-Nielson, K., *et al.*
- Haggard, M. E. See Schneider, R. G., *et al.*
- Hagiwara, S., *et al.*: Membrane properties of barnacle muscle fiber, 1446
- Hahn, F. E. See Wolfe, A. D.
- Hahn, P. F., and H. L. Cromroy: Nonconformers again (*letters*), 994
- Haines, B. L. See Muller, C. H., *et al.*
- Haines, H. B. See Schmidt-Nielson, K., *et al.*
- Hajdukovic, S. See Pesic, N., *et al.*
- HAMMOND, G. S. See NOYES, W. A., JR., *et al.*
- Handbook of mathematical psychology, vol. 1, R. D. LUCE *et al.* (Eds.), book review by W. S. Torgerson, 1319
- Harada, R. See Buchwald, H. D., *et al.*
- Harappa culture: new evidence for a shorter chronology, D. P. Agrawal, 950
- Hardin, G.: Ultimate failure of rhythm (*letter*), 995
- Harrison, J. M., and R. Irving: Nucleus of the trapezoid body: dual afferent innervation, 473
- Hart, H. R., and R. W. Schmitt: Superconductivity (*meeting report*), 57
- Hart, J. T.: Luminous figures: influence of point of fixation in their disappearance, 1193
- Hartley, J. W., and W. P. Rowe: New papovavirus contaminating Shope papillomata, 258
- Harward, M. E.: book review of An introduction to clay colloid chemistry, 1023
- Haselkorn R.: Actinomycin D as a probe for nucleic acid secondary structure, 682
- Havighurst, R. J.: book review of Education in an industrial society, 556
- Hayashi, M. See Chandler, B., *et al.*
- Hayashi, M. N. See Chandler, B., *et al.*
- HAYES, H. K.: A professor's story of hybrid corn, book review of, 347
- Hayflick, L., *et al.*: Human diploid cell strains, 976
- Heat adaptation and ion exchange in *Bacillus megaterium* spores, G. Alderton, *et al.*, 141
- Hedberg, H. D.: Mohole (*letter*), 1274
- Hedeman, E. R. See Dodson, H. W.
- Hedgpeth, J. W.: book review of Biology of the seas of the U.S.S.R., 35
- Heding, H.: Radioactive myoinositol: incorporation into streptomycin, 953
- Heimsch, C.: book review of Botany: a functional approach, 1427
- Helium difluoride: possible preparative techniques based on nuclear transmutations, G. C. Pimental *et al.*, 674
- Hellström, K. E.: Growth inhibition of sarcoma and carcinoma cells of homozygous origin, 477
- Hemoglobin G *coushatta*: a new variant in an American Indian family, R. G. Schneider *et al.*, 697
- Hemoglobin solubility and α -chain structure in crosses between two inbred mouse strains, J. J. Hutton *et al.*, 252
- Henry Eyring, president-elect, C. J. Christensen, 826
- HENRY, J.: Culture against man, book review of, 231
- HERZBERG, H. T. E., *et al.*, Anthropometric survey of Turkey, Greece, and Italy, book review of, 1426
- Hess, E. H., and J. M. Polt: Pupil size in relation to mental activity during simple problem-solving, 1190
- Hess, E. H. See also Polt, J. M.
- Hess, E. L., *et al.*: Sonic energy effects in bovine serum albumin solutions, 1176
- Hess, H. S. See LeFevre, P. G., *et al.*
- Heterotransplantation of the kidney: two clinical experiences, K. Reemtsma *et al.*, 700
- Hewes, G. W.: book review of The Japanese people: origins of the people and the language, 1157
- HEWITT, E., and K. A. ROSS: Abstract harmonic analysis, vol. 1, book review of, 673
- Hicks, C. C. See Poe, R. H., *et al.*
- Hicks, D. L. See Odum, E. P., *et al.*
- High-pressure metallic indium telluride: preparation and crystal structure, C. B. Sclar *et al.*, 352
- High-pressure phase transition in tin telluride, J. A. Kafalas and A. N. Mariano, 952
- High pressure physics and chemistry, vols. 1 and 2, R. S. BRADLEY (Ed.), book review by N. H. Nachtrieb, 460
- High school biology, J. J. SCHWAB (Ed.), book review by J. K. Brierley, 668
- High-temperature inorganic coatings, J. HUMNIK, JR. (Ed.), book review by R. F. Baddour, 23
- Higinbotham, N., *et al.*: Electrical resistance of cell membranes of *Avena* coleoptiles, 1448
- HILDEBRAND, J. H., An introduction to molecular kinetic theory, book review of, 347
- HILDEBRANDT, T. H., Introduction to the theory of integration, book review of, 235
- HILLS, E. S., Elements of structural geology, book review of, 945
- Hirschberg, E., *et al.*: Thalidomide: ef-

INDEX TO VOLUME 143

- fects on enzymes of glutamic acid metabolism in mice, 1343
- Hirschhorn, K. *See* Bach, F. *See also* Rubin, A. L., *et al.*
- Histocompatibility and immunologic competence in renal homotransplantation, A. L. Rubin *et al.*, 815
- Histone staining with ammoniacal silver, M. M. Black and H. R. Ansley, 693
- History of chemistry, A. C. A. REICHEN, *book review* by L. P. Williams, 1026
- History of sciences in India, The, P. MAHESHWARI, (Ed.), *book review* by H. Woolf, 795
- Hoagland, H.: Science and the new humanism, 111. *See also* Yarnell, R. A., *et al.*
- Hoffmann, B., *et al.*: Standardized tests (*letters*), 997
- Hoffman, J. D.: *book review* of Polymer single crystals, 121
- HOFSTADTER, R.: Electron scattering and nuclear and nucleon structure, *book review* of, 344
- Hollomon, J. H.: Government and science: how science policy is developed (*letter*), 427
- HOLM, R. W. *See* EHRLICH, P. R.
- Holsten, R. D. *See* Steward, F. C., *et al.*
- Home movies of early childhood: correlative developmental data in the psychoanalysis of adults, H. M. Serota, 1195
- Homeostasis of the nonfat components of migrating birds, E. P. Odum *et al.*, 1037
- Homocystinuria: an enzymatic defect, S. H. Mudd *et al.*, 1443
- Honda, M., and J. R. Arnold: Effects of cosmic rays on meteorites, 203
- Hope, A. B. *See* Higinbotham, N., *et al.*
- HORMANDER, L.: Linear partial differential operators, *book review* of, 234
- Hormonal activation of the insect brain, S. D. Beck and N. Alexander, 478
- Hormonal control of egg development in *Calliphora*, E. Thompson, 973
- Hormones and sexual behavior, M. C. Young *et al.*, 212
- Hoseh, M.: *book review* of Russian-English physics dictionary, 121
- Hovis, W. A., Jr.: Infrared emission spectra of organic solids from 5 to 6.6 microns, 587
- How chemical reactions occur, E. L. KING, *book review* by I. Amdur, 947
- How history is made (*letter*), A. Ore, 1276
- Howard, F. E., Jr.: National policy for science: a congressional responsibility (*letter*), 308
- Hoyle, F. *see* Wasserburg, G. J., *et al.*
- Hsiao, G. C. C. *See* Bugliarello, G.
- Hudgens, G. A. *See* Denenberg, V. H., *et al.*
- Hudson, M. R. *See* LeFevre, P. G., *et al.*
- Hugo, J. A. *See* Philips, V. A.
- Human diploid cell strains (*meeting report*), L. Hayflick *et al.*, 976
- HUMINIK, J., JR. (Ed.): High-temperature inorganic coatings, *book review* of, 233
- Humoral thymic factor in mice: further evidence, L. W. Law *et al.*, 1049
- Huneus-Cox, F.: Electrophoretic and immunological studies of squid axoplasm proteins, 1036
- HUNT, J. P.: Metal ions in aqueous solution, *book review* of, 123
- Hunt, V. R. *See* Radford, E. P.
- Huston, J. L., *et al.*: Xenon tetroxide: mass spectrum, 1161. *See also* Selig, H., *et al.*
- Hutton, J. J., *et al.*: Hemoglobin solubility and α -chain structure in crosses between two inbred mouse strains, 252
- Huttonlocher, J.: Children's language: word-phrase relationship, 264
- HUXLEY, A.: Literature and science, *book review* of, 33
- Hybridization of half molecules of rabbit gamma globulin, A. Nisonoff and J. L. Palmer, 37
- Hydrogen energy levels: perturbation caused by proton structure, W. S. Porter, 1324
- Hydrogen in a tektite vesicle, J. A. O'Keeffe *et al.*, 39
- HYMAN, H. (Ed.): Noble-gas compounds, *book review* of 1425
- Hypothesis for a pressure-sensitive mechanism in muscle spindles, C. F. Bridgeman and E. Eldred, 481
- I**
- Identity of tarichatoxin and tetrodotoxin, H. D. Buchwald *et al.*, 474
- Iki, M. *See* Oomura, Y., *et al.*
- In defense of scientist-rotarians (*letter*), R. B. Davis, 763
- Induction of papillary growths in the heart, S. Rodbard *et al.*, 1341
- Infrared emission spectra of organic solids from 5 to 6.6 microns, W. A. Hovis, Jr., 587
- Infra-red spectroscopy and molecular structure, M. DAVIS (Ed.), *book review* by E. A. Burns, 671
- Infrared study of the OH groups in expanded kaolinite, R. L. Ledoux and J. L. White, 244
- Ingroups and dropouts (*letter*), S. Winokur, 526
- Inheritance of avoidance conditioning in mice: a diallel study, R. L. Collins, 1188
- Inhibition of antibody synthesis by L-phenylalanine, W. L. Ryan and M. J. Carver, 479
- Inhibition of synthesis of the cell wall of *Staphylococcus aureus* by cephalothin, T. Chang and L. Weinstein, 807
- Inhibitory postsynaptic potentials in grasshopper muscle, P. N. R. Usherwood and H. Grundfest, 817
- Inorganic fluorine chemistry (*meeting report*), L. Stein, 1058
- Inquiline roach responds to trail-marking substance of leaf-cutting ants, J. C. Moser, 1048
- Intercellular diffusion, Y. Kanno and W. R. Loewenstein, 959
- Intestinal invertase: precocious development of activity after injection of hydrocortisone, R. G. Doell and N. Kretchmer, 42
- Intracranial reward delay and the acquisition rate of a brightness discrimination, R. E. Keesey, 702
- Introduction historique; les fonctions de nutrition, vol. 1 of Physiologie, C. KEYSER (Ed.), *book review* of, 1158
- Introduction to atmospheric physics, An, R. G. FLEAGLE and J. A. BUSINGER, *book review* by D. P. Keily, 1427
- Introduction to clay colloid chemistry, An, H. VAN OLPHEN, *book review* by M. E. Harward, 1023
- Introduction to geological microbiology, S. I. KUZNETSOV *et al.*, *book review* by S. C. Rittenberg, 1156
- Introduction to medical genetics, An, J. A. F. ROBERTS, *book review* by L. H. Snyder, 947
- Introduction to molecular kinetic theory, An, J. H. HILDERBRAND, *book review* by R. A. Plane, 347
- Introduction to the theory of integration, J. H. HILDEBRANDT, *book review* by L. C. Young, 235
- Introduction to the theory of seismology, An, K. E. BULLEN, *book review* by H. M. Mooney, 1025
- Iodine-131 fallout from underground tests, E. A. Martell, 126
- Iodine-131 thyroid dose from milk in Italy during the period September 1962 to February 1963, A. A. Cigna and F. G. Giorecelli, 379
- Ion association, C. W. DAVIES, *book review* by E. L. King, 37
- Ionosphere and radio propagation in the lower frequencies, The (*meeting report*), T. N. Gautier, 1197
- Irreverre, F. *See* Mudd, S. H., *et al.*
- Irving, R. *See* Harrison, J. M.
- Irwin-Williams, C. *See* Agogino, G. A., *et al.*
- Isaacson, A. *See* Sandow, A., *et al.*
- Isotopic molecules: separation by recycle gas chromatography, J. W. Root *et al.*, 676
- IVANOV, M. V. *See* KUZNETSOV, S. I., *et al.*
- Iverson, R. M. *See* Stafford, D. W.
- J**
- Jackson, W. A. D.: *book review* of Land and life, 945
- JACKSON, W. A. D.: Politics and geographic relationships, *book review* of, 1025
- Jagendorf, A. T., and B. Kok: Photosynthesis (*meeting report*), 388
- Jagger, J. *See* Castellani, A., *et al.*
- JAMES, I. M. (Ed.): The mathematical works of J. H. C. Whitehead; vol. 4, Algebraic and classical topology, *book review* of, 796
- Japanese people: origins of the people and the language, The, I. KOMATSU, *book review* by G. W. Hewes, 1157
- Jargon add-on (*letter*), H. Rubinstein, 638
- Jargon of genetics (*letter*), C. Fulton, 195
- Jarvis, D., and V. du Vigneaud: Crystalline deamino-oxytocin, 545
- Jaselskis, B.: Xenic acid: reduction at the dropping-mercury electrode, 1324
- Jenkins, V. K. *See* Wald, N., *et al.*
- Jenness, R. *See* Anderson, R. K., *et al.*
- Jensen, M. L. *See* Dequasie, H. L.
- Jerison, H. J., and R. M. Pickett: Vigilance: the importance of the elicited observing rate, 970
- Jet-stream meteorology, E. R. REITER, *book review* by R. G. Fleagle, 464
- Johnson, C. A., *et al.*: Neurominidases and influenza virus infection in embryonated eggs, 1051
- Johnson, J. E., Jr. *See* Schneider, R. G., *et al.*
- Joint occurrence of a lichen depsidone and its probable depside precursor, C. F. Culberson, 255
- JONASSEN, H. B., and A. WEISSENBERGER (Eds.): Technique of inorganic chemistry, vol. 2, Nuclear chemistry, *book review* of, 235
- Jones, R. F. *See* Kates, J. R.
- JORDAN, D. S.: The genera of fishes; A classification of fishes, *book review* of, 1429
- Joslyn, M. A., and J. L. Goldstein: Conversion of leucoanthocyanins into the corresponding anthocyanins, 954
- Jura, G. *See* Souers, P. C.
- K**
- Kafalas, J. A., and A. N. Mariano: High-pressure phase transition in tin telluride, 952
- KAISER, R.: Gas phase chromatography, vols. 1-3, *book review* of, 1026
- Kalmanson, G. M. *See* Guze, L. B.
- Kanno, Y., and W. R. Loewenstein: Intercellular diffusion, 959
- Kao, C. Y. *See* Buchwald, H. D., *et al.*
- Kaplan, N. O. *See* Dawson, D. M., *et al.*
- Kassel, L. S. *See* Quimby, F. H., *et al.*
- Kates, J. R., and R. F. Jones: Fluoroacetate inhibition of amino acids dur-

INDEX TO VOLUME 143

ix

- ing photosynthesis of *Chlamydomonas reinhardtii*, 145
- Katsh, G. F., *et al.*: Acceptance or rejection of male skin by isologous female mice: effect of injection of sperm, 41
- Katsh, S. *See* Katsh, G. F., *et al.*
- Kaufman, G. B.: *book review* of Chemistry in three dimensions, 559
- Kaufman, W. C.: Bioastronautics: fundamental and practical problems (*meeting report*), 1199
- Kavanau, J. L.: Behavior: confinement, adaptation and compulsory regimes in laboratory studies, 490
- Kaye, C. A. *See* Quimby, F. H., *et al.*
- Keesey, R.: Intracranial reward delay and the acquisition rate of a brightness discrimination, 702
- Kehl, W. L. *See* Flinn, P. A., *et al.*
- Kehle, R. O.: *book review* of Elements of structural geology, 945
- Keily, D. P.: *book review* of An introduction to atmospheric physics, 1427
- Keller, E. C., and E. Glassman: Xanthine dehydrogenase: differences in activity among *Drosophila* strains, 40
- Kellogg, W. N., and C. E. Rice: Visual problem-solving in a bottlenose dolphin, 1052
- Kellogg, W. W.: *book review* of Progress in the astronautical sciences, 463
- Kent, A. E. *See* Steward, F. C., *et al.*
- Kerber, E. R.: Wheat: reconstitution of the tetraploid component (AABB) of hexaploids, 253
- Kerst, D. W.: MURA: The importance of encouraging scientific enterprise (*letter*), 1274
- Keston, A. S.: Mutarotase inhibition by 1-deoxyglucose, 698
- KEYSER, C. (Ed.): Physiologie, vols. 1-3, *book review* of, 1158
- Kidder, A., II: *book review* of Empire of the Inca, 36
- Kilham, L., and G. Margolis: Cerebellar ataxia in hamsters inoculated with rat virus, 1047
- Kimeldorf, D. J. *See* Cooper, G. P.
- Kimura, K. *See* Oomura, Y., *et al.*
- King, E. L.: *book review* of Ion association, 37
- KING, E. L., How chemical reactions occur, *book review* of, 947
- KING-HELE, D.: Erasmus Darwin, *book review* of, 1024
- Kinoshita, Y. *See* Rodbard, S., *et al.*
- Kirk, R. S., and R. J. Vaisnys: Electrical and thermal measurements with Bridgeman anvils, 1436
- KITTEL, C.: Quantum theory of solids, *book review* of, 672
- KLEBER, E. V. and B. LOVE: Technology of scandium, yttrium, and the rare earth metals, The, *book review* of, 561
- Klee, M. R., and K. Offenloch: Postsynaptic potentials and spike patterns during augmenting responses in cat's motor cortex, 488
- Klein, A.: *book review* of Mathematical models in physical sciences, 794
- Klots, A. B.: *book review* of Catalogue of the type specimens of Microlepidoptera in the British Museum (Natural History) described by Edward Meyrick, vol. 4, 1320
- Knauss, J. A., and B. A. Taft: Equatorial undercurrents of the Indian Ocean, 354
- KOBAYASHI, S., and K. NOMIZU: Foundations of differential geometry, vol. 1, *book review* of, 235
- Kok, B. *See* Jagendorf, A. T.
- KOMATSU, I.: The Japanese people: origins of the people and the language, *book review* of, 1157
- Komorn, R. M., and E. J. Cafruny: Ethacrynic acid: diuretic property coupled to reaction with sulphydryl groups of renal cells, 133
- Körösy, F. de: Grants to nonconformers (*letter*), 309
- Koshland, M. E., *et al.*: Differences in the amino acid composition of a third rabbit antibody, 1330
- Kowarski, S. *See* Schachter, D., *et al.*
- KRADER, L.: People of Central Asia, *book review* of, 459
- Kraft, I.: Automated decision making: a threat, or a promise? (*letter*), 99
- Kregzde, J. *See* Gonser, U., *et al.*
- Kreidler, R. N.: *book review* of America's new policy makers: the scientists' rise to power, 1156
- Kremers and Urdang's history of pharmacy, G. SONNENDECKER (Reviser), *book review* by N. H. Franke, 461
- Kretschmer, N. *See* Doell, R. G.
- Krombein, K. V. *See* Pake, G. E.
- KRUMBEIN, W. C., and L. L. SLOSS: Stratigraphy and sedimentation, *book review* of, 124
- Kuiper, P. J. C.: Water transport across root cell membranes; effect of akenylsuccinic acids, 690
- Kuniyoshi, M. *See* Oomura, Y., *et al.*
- KUPER, H., Swazi, The, *book review* of 558
- KUZNETSOV, S. I., *et al.*, Introduction to geological microbiology, *book review* of, 1156
- L**
- Lactic dehydrogenases: functions of the two types, D. M. Dawson *et al.*, 929
- Lade, J. H.: More on the 1953 fallout in Troy (*letter*), 994
- Land and life, J. LEIGHLY (Ed.), *book review* of, 945
- Langer, E.: News and Comment: Conservation: local and national interests conflict on proposals awaiting action in Congress, 941; Cooperative research: biologists plan international study program, 455; Disarmament: its economic impact to be studied by Johnson panel, 28; FDA: trouble-ridden medical unit gets new director, 1018; Human experimentation: cancer studies at Sloan-Kettering stir public debate on medical ethics, 551; Humane laws: action unlikely on variety of animal welfare laws, 339; Presidential medicine: Johnson panel to study heart disease, cancer, and strokes, 1308; Project plowshare, 1153; Subways and science: two N.Y. institutions consider meaning of coexistence in crowded Manhattan, 789
- Langridge, R., and J. Marmor: X-ray diffraction study of a DNA which contains uracil, 1450
- Lannholm, G. V. *See* Hoffmann, B., *et al.*
- LANYON, W.: Biology of birds, *book review* of, 562
- Lanzl, L. H., and J. H. Pingel: Radiation accidents and emergencies (*meeting report*), 1352
- Lapp, R. E.: Science planks and party platforms (*letter*), 195
- Larson, D. A. *See* Brown, R. M., Jr., *et al.*
- Laster, L. *See* Mudd, S. H., *et al.*
- Lateral hypothalamic lesions: effects on drinking elicited by carbachol in preoptic area and posterior hypothalamus, G. Wolf and N. E. Miller, 585
- Latitudinal distribution of cloud cover from Tiros III photographs, A. Arkling, 569
- Laudon, T. S. *See* Behrendt, J. C.
- LAVERACK, M. S.: The physiology of earthworms, *book review* of, 1024
- Law, L. W., *et al.*: Humoral thymic factor in mice: further evidence, 1049
- Leaf, A. L.: Pure maple syrup: nutritive value, 963
- Lectures in theoretical physics, vol. 5, W. E. BRITTEN (Ed.), *book review* by M. E. Rose, 460
- Ledoux, R. L., and J. L. White: Infrared study of the OH groups in expanded kaolinite, 244
- Lee, E. K. C. *See* Root, J. W., *et al.*
- LEE, R. S. *See* CHEIN, I., *et al.*
- LeFevre, P. G., *et al.*: Phospholipid-sugar complexes in relation to cell membrane monosaccharide transport, 955
- LEHMAN, F. K.: The structure of Chin society, *book review* of, 36
- LEIGHLY, J. (Ed.): Land and life, *book review* by W. A. D. Jackson, 945
- Lengyel, P. *See* Protass, J. J., *et al.*
- Leon, M. A., and R. Yokohari: Conglutination: specific inhibition by carbohydrates, 1327
- Leonards, G. A. *See* Woods, K. B.
- Leone, I. A. *See* Brennan, E. G., *et al.*
- Leopold, E. B.: *book review* of The spores and pollen of the Potomac group of Maryland, 795
- Leopold, L. B. *See* Thomas, H. E.
- Letters to the editor (*editorial*), P. H. Abelson, 201
- Levey, R. H. *See* Law, L. W., *et al.*
- Levi, H.: *book review* of A geometric introduction to linear algebra, 1320
- Levi-Montalcini, R.: Growth control of nerve cells by a protein factor and its antiserum, 105
- Levine, N. D.: Zoonoses (*meeting report*), 1464
- Levy, H.: *book review* of Foundations of differential geometry, 235
- Life of bacteria, The, K. V. THIMANN, *book review* by M. P. Starr, 234
- Life: origin and evolution (*meeting report*), R. S. Young and C. Ponnamperuma, 384
- Light adaptation kinetics: the influence of spatial factors, W. S. Battersby and I. H. Wagman, 1029
- Liller, W.: Optical effects of the 1963 Project West Ford experiment, 437
- Lindsay, M.: *book review* of Twentieth century China, 1158
- Linear differential equations in the real domain, K. S. MILLER, *book review* by H. Sagan, 124
- Linear partial differential operators, L. HÖRMANDER, *book review* by L. Ehrenpreis, 234
- Lipschutz, M. E.: Origin of diamonds in the ureilites, 1431
- LIPSCOMB, W. N.: Boron hydrides, *book review* of, 1318
- LIPSET, S. M.: The first new nation, *book review* of, 1022
- Liquid film hygrometer, R. J. Charlson, 1031
- Literature and science, A. HUXLEY, *book review* by J. Barzun, 33
- Livermore, A. H.: *book review* of Tables of experimental dipole moments, 460
- Llano, G.: *book review* of Encyclopedia of plant anatomy, 122
- Lloyd, T.: *book review* of Politics and geographic relationships, 1025
- Loewenstein, W. R. *See* Kanno, Y.
- Loomis, L. H.: *book review* of Abstract harmonic analysis, vol. 1, Structure of topological groups, integration theory, and group representations, 673
- Lost opportunities (*editorial*), D. Wolfe, 989
- Loukopoulos, D. *See* Fessas, P.
- Low-latitude noctilucent cloud of 2 November 1963, A. B. Meinel and C. P. Meinel, 38

INDEX TO VOLUME 143

- Lower limit of water availability to plants, W. R. Gardner and R. H. Nieman, 1460
- LUCE, R. D., *et al.* (Eds.), *Handbook of mathematical psychology*, vol. 1, *book review of*, 1319
- Lucia, F. J. *See* Deffeyes, K. S., *et al.*
- Lueck, R. H.: Scientific advisers for congress (*letter*), 525
- Luminescence in crystals. D. CURIE, *book review by* F. Daniels, 464
- Luminous figures: influence of point of fixation on their disappearance, J. T. Hart, 1193
- LYALIKOVA, N. N. *See* KUZNETSOV, S. I., *et al.*
- Lymphocyte interaction: a potential histocompatibility test in vitro, F. Bach and K. Hirschhorn, 813
- M**
- MacDiarmid, A. G.: *book review of Volatile silicon compounds*, 233
- MacDonald, G. J. F.: The deep structure of continents, 921. *See also* Wasserburg, G. J., *et al.*
- MacGregor, H. C., and T. M. Uzzel, Jr.: Gynogenesis in salamanders related to *Ambystoma jeffersonianum*, 1043
- Macinko, G. *See* Yarnell, R. A., *et al.*
- Mackinnon, G. E. *See* Matin, L.
- MacNeish, R. S.: Ancient Mesoamerican civilizations, 531
- MacNeish, R. S. *See* Mangelsdorf, P. C., *et al.* *See also* Smith, C. E., Jr.
- MacNichol, E. F., Jr. *See* Marks, W. B., *et al.*
- MacRae, D., Jr. *See* Quimby, F. H., *et al.*
- Maddox, J.: Science policy shapes up as issue in coming British election, 1146; Scientific migration: Britain agitated anew by research team's decision to move to United States, 786
- Maddux, J. F.: *book review of The road to H: narcotics, delinquency, and social policy*, 1157
- Maeno, T. *See* Oomura, Y., *et al.*
- Magnetism (*meeting report*), S. H. Charap and R. F. Elfant, 604
- Magnetism and the chemical bond, J. B. GOODENOUGH, *book review by* D. W. Robinson, 33
- MAHESHWARI, P. (Ed.), *The history of sciences in India*, *book review of*, 795
- MAIER, N. R. F., Problem-solving discussions and conferences, *book review of*, 1428
- Majorov, A. A. *See* Galkin, N. P., *et al.*
- Mal'cev, A. I., Foundations of linear algebra, *book review of*, 560
- Malm, J. G. *See* Selig, H., *et al.*
- Maloney, C. J., and D. Rothman: Statistics section (*letter*), 637
- Manager's guide to operations research, A. R. L. ACKOFF and P. RIVETT, *book review by* M. K. Starr, 232
- Mangelsdorf, P. C.: *book review of A professor's story of hybrid corn*, 347
- Mangelsdorf, P. C., *et al.*: Domestication of corn, 538; *erratum*, 1310
- Manney, T. R., and R. K. Mortimer: Allelic mapping in yeast by x-ray-induced mitotic reversion, 581
- Mapes, M. O. *See* Steward, F. C., *et al.*
- Margolis, G. *See* Kilham, L.
- Mariano, A. N. *See* Kafalas, J. A.
- Marine sediments: effects of a tube-building polychaete, E. W. Fager, 356
- Mark, R. *See* Schlesinger, M.
- Marks, E. P., and J. P. Reinecke: Regenerating tissues from the cockroach leg: a system for studying in vitro, 961
- Marks, W. B., *et al.*: Visual pigments of single primate cones, 1181
- Marmur, J. *See* Langridge, R.
- Marschner, R. F.: Education of American teachers (*letter*), 7
- Marshall, L.: *book review of The world of elementary particles*, 1023
- Marshall, M. S. *See* Hoffmann, B., *et al.*
- Martell, E. A.: Iodine-131 fallout from underground tests, 126
- Martin, T. W., and R. E. Rummel: Mass spectral studies of surface catalysis: the production of free radicals at 40°C, 797
- Marton, T. W.: *book review of Dictionary of pure and applied physics*, 1426
- Mass spectral studies of surface catalysis: the production of free radical at 40°C, T. W. Martin and R. E. Rummel, 797
- Mass spectrometry, C. A. McDowell, *book review by* E. P. Wigner, 462
- Matarazzo, J. D., *et al.*: Speech duration of astronaut and ground communicator, 148
- Maternal behavior in mammals, H. RHEINGOLD (Ed.), *book review by* J. P. Scott, 944
- Mathematical models in physical sciences, S. DROBOT and P. A. VIEBROCK (Eds.), *book review by* A. Klein, 794
- Mathematical works of J. H. C. Whitehead, vol. 4, *Algebraic and classical topology*, I. M. JAMES (Ed.), *book review by* S. Eilenberg, 796
- Mathematicians in industry—the first 75 years, T. H. Fry, 934
- Mather, A.: Overdone overhead (*letter*), 764
- Matin, L., and G. E. MacKinnon: Auto-kinetic movement: selective manipulation of directional components by image stabilization, 147
- McBurney, D. H. *See* Bartoshuk, L. M., *et al.*
- McCaw, B. K. *See* Ponnamperuma, C., *et al.*
- MCLELLAN, A. L., Tables of experimental dipole moments, *book review of*, 460
- McCracken, B. H. *See* Reemtsma, K., *et al.*
- McCrea, J. F. *See* Bakhle, Y. S., *et al.*
- McDonald, J. E.: *book review of The physics of rainclouds*, 236
- McDonald, J. E.: Pollen wettability as a factor in washout by raindrops, 1180
- McDonald, J. E. *See also* Staley, D. O., *et al.*
- McDOWELL, C. A. (Ed.), Mass spectrometry, *book review of*, 462
- McKusick, V. A., and L. C. Briggs: Consanguineous marriage (*letters*), 100
- McMaster, P. R. B. *See* Bachvaroff, R.
- McNutt, C. W. *See* Schneider, R. G., *et al.*
- McPherson, A. T.: *book review of The chemistry and physics of rubber-like substances*, 1429
- Medical education: open minds and fragmentation (*letters*), R. W. Christie, *et al.*, 198
- Meeting reports: Air pollution, 1349; Bioastronautics: fundamental and practical problems, 1199; Brain reflexes, 598; Calorimetry, 158; Early man in the new world, 1350; Fluid mechanics before the Society for Natural Philosophy, 382; Geology and trace elements: relation to nutrition, 704; Human diploid cell strains, 976; Ionosphere and radio propagation in the lower frequencies, The, 1197; Life: origin and evolution, 384; Magnetism, 604; Metal chelates in analytical chemistry, 491; Meteorological satellites, 612; Neutron irradiation: biological effects, 1466; New perspectives in biology, 267; Paleontology, 166; Pes-
- ticide research, 151; Photosynthesis, 388; Polar geology, 1196; Polymers: thermal stability, 704; Radiation accidents and emergencies, 1352; Silica, 395; Sudden-death syndrome, 156; Superconductivity, 57; Weights and measures, 974; Zoology: sixteenth international congress, 164; Zoonoses, 1464
- Meier, G. W.: Behavior of infant monkeys: differences attributable to mode of birth, 968
- Meighan, C. W.: *book review of Science in archeology*, 120
- Meinel, A. B., and C. P. Meinel: Low-latitude noctilucent cloud of 2 November 1963, 38
- Meinel, C. P. *See* Meinel, A. B.
- Melatonin synthesis in the pineal gland: effect of light mediated by the sympathetic nervous system, R. J. Wurtman *et al.*, 1328
- Membrane properties of barnacle muscle fiber, S. Hagiwara *et al.*, 1446
- Menaker, M.: X-rays: are there cyclic variations in radiosensitivity? 597
- Mencher, E.: *book review of The fundamentals of well log interpretation*, 560
- Mercer, P. F., and R. H. Wasserman: Autoradiographic distribution of radioactive sodium in rat kidney, 695; *erratum*, 943
- Merten, U. *See* Riley, R., *et al.*
- Metal chelates in analytical chemistry (*meeting report*), Q. Fernando *et al.*, 491
- Metal ions in aqueous solution, J. P. HUNT, *book review by* R. S. Tobias, 123
- Meteorological satellites (*meeting report*), C. O. Erickson, 612
- Methods of quantum field theory in statistical physics, A. A. ABRIKOSOV, *et al.*, *book review by* A. O. Barut, 599
- Metric system: small quid for a large quo (*letter*), A. E. Schubiger and J. E. Baer, 638
- Mice reared with rats: modification of behavior by early experience with another species, V. H. Denenberg *et al.*, 380
- Michelson, I.: Cigarettes: polonium-210 (*letter*), 917
- Microenvironments and Mesoamerican prehistory, M. D. Coe and K. V. Flannery, 650
- Microscopic brains, V. G. Dethier, 1138
- Microsporum nanum*: first recorded isolation from animals in the United States, G. R. Bubash *et al.*, 366
- Miller, A. R. *See* Pimental, G. C., *et al.*
- Miller, D. S. *See* Fleischer, R. L., *et al.*
- MILLER, J. A., Yankee scientist: William David Coolidge, *book review of*, 1159
- MILLER, K. S., Linear differential equations in the real domain, *book review of*, 124
- Miller, N. E. *See* Wolf, G.
- Miller, W. J.: First linkage of a species antigen in the genus *Streptopelia*, 1179
- Mirsky, A.: Polar geology (*meeting report*), 1196
- Mishell, R. I., and J. L. Fahey: Molecular and submolecular localization of two isoantigens of mouse immunoglobulins, 1440
- Mitchell, J. M., Jr.: Stemming the paper flood (*letter*), 526
- Miyadi, D.: Social life of Japanese monkeys, 783
- Mohole (*letters*), G. Allott, 1393; H. D. Hedberg; W. Bascom, 1274
- Mohole fanfare (*letter*), F. B. Conselman, 994
- Moisture release from cut alfalfa, G. L. Byers *et al.*, 1183
- Molecular and submolecular localization of two isoantigens of mouse immuno-

- globulins, R. I. Mishell and J. L. Fahey, 1440
 Molecular biology of bacterial viruses, G. S. STENT, book review by E. A. Adelberg, 345
 Moment, G. B.: book review of Natural history, 347
 Moment, G. B.: Zoology: sixteenth international congress (meeting report), 164
 Montes, M. See Rodbard, S., et al.
 Moog, F.: Animal growth and development, book review of, 668
 Mooney, H. M.: book review of An introduction to the theory of seismology, 1025
 Moore, G. E.: Who gets the word? (letter), 99
 Moore, R. D. See Schoenberg, M. D., et al.
 More on the 1953 fallout in Troy (letter), J. H. Lade, 994
 Morgan, C. T.: book review of The sciences of animal behaviour, 560
 Morley, H. V. See Wilkinson, A. T. S., et al.
 Mortimer, R. K. See Manney, T. R.
 Moser, J. C.: Inquiline roach responds to trail-marking substance of leaf-cutting ants, 1048
 Mosher, C. A.: book review of The congressman, his work as he sees it, 457
 Mosher, H. S. See Buchwald, H. D., et al.
 Mössbauer effect for surface atoms: iron-57 at the surface of $n\text{Al}_2\text{O}_3$, P. A. Flinn et al., 1434
 Mössbauer effect in hemoglobin with different ligands, U. Gonser et al., 680
 Motivational research on our subscribers ($N = 1$) (letter), R. Schmidt, 430
 Mozell, M. M.: Olfactory discrimination: electrophysiological spatiotemporal basis, 1336
 Mudd, S. H., et al.: Homocystinuria: an enzymatic defect, 1443
 Muller, C. H., et al.: Volatile growth inhibitors produced by aromatic shrubs, 471
 MULLER, W. H.: Botany: a functional approach, book review of, 1427
 Muller, W. H. See also Muller, C. H., et al.
 Multiple authorship trends in scientific papers, B. L. Clarke, 822
 "Multivolumed rehashes" (letter), D. M. Greenberg, 992
 Mumaw, V. R. See Schoenberg, M. D., et al.
 Munoz, E. F. See Ponnamperuma, C., et al.
 MURA: The importance of encouraging scientific enterprise (letter), D. W. Kerst, 1274
 Murchie, W. R.: book review of The physiology of earthworms, 1024
 Muse in the laboratory, The (letter), R. R. Feiner, 1124
 Mutarotase inhibition by 1-deoxyglucose, A. S. Keston, 698
 Myatt, D. O.: Nonconformers again (letter), 992
 Myers, R. M. See Carey, D. E., et al.
- N**
- Nachtrieb, N. H.: book review of High pressure physics and chemistry, vols. 1 and 2, 460
 Naka, K. See Hagiwara S., et al.
 NARAY-SZABO, I. A. BELICZAY (Trans.), Anorganische chemie, vols. 2 and 3, book review of, 794
 NASA and education (letter), H. L. Dryden, 427
 National Academy of Sciences Public Policy Committee: Federal support of science: a formula for cooperation, 1300
 National policy for science: a congressional responsibility (letter), F. E. Howard, Jr., 308
 Natural carbon-14 activity of organic substances in streams, A. A. Rosen and M. Rubin, 1163
 Natural history, R. A. PIMENTAL, book review by G. B. Moment, 347
 Needs of the humanities (editorial), D. Wolfe, 1279
 Negative temperature coefficient of resistance in bismuth I, P. C. Souers and G. Jura, 467
 Nerve fibers and terminals: electron microscopy after Nauta staining, R. W. Guillory and H. J. Ralston, 1331
 New goals for science in Britain (editorial), P. H. Abelson, 919
 New papavirus contaminating Shope papillomata, J. W. Hartley and W. P. Rowe, 258
 New perspectives in biology (meeting report), J. T. Edsall, 267
 Neuman, R. B.: Author(s)! Authors(s)! (letter), 763
 Neuraminidases and influenza virus infection in embryonated eggs, C. A. Johnson et al., 1051
 Neutron irradiation: biological effects (meeting report), H. H. Smith, 1466
 News and Comment: Appropriations: the critics of Congress often slight an inner redoubt of the system, 548; Budget: requests for R&D funds edge above \$15 billion mark for a fiscal year of "austerity," 337; California: aerospace industry has meant a second gold rush; climate and education get credit, 1151; Civilian technology: opposition in Congress and industry leads to major realignment of program, 660; Commission on heart disease, cancer and strokes, 1308; Congress and science: inquiries into R&D are currently quiet, 661; Conservation: local and national interests conflict on proposals awaiting action in Congress, 941; Cooperative research: biologists plan international study program, 455; Disarmament: its economic impact to be studied by Johnson panel; subject has been little explored, 28; Elliott committee: first report should quell fears that inquiry has anti-scientific orientation, 791; FDA: trouble-ridden medical unit gets new director after 2-year search to fill difficult position, 1018; Federal pay: in the competition for professionals, government faces salary gap, other problems, 228; Fermi prize money, 1305; Foreign research: NIH, Defense carrying out reductions of aid for work in laboratories abroad, 1017; Human experimentation: cancer studies at Sloan-Kettering stir public debate on medical ethics, 551; Humane laws: action unlikely on variety of animal welfare laws still pending in Congress, 339; JPL: Ranger VI failure increases speculation on Jet Lab's future links with Space Agency, Caltech, 1014; LBJ and science: policies marked by continuity, but a few events suggest developments for future, 939; Legislation: in first session, 88th Congress shows itself to be more critical patron of science, 27; Library of Congress: automation urged for bibliographic control but not prescribed as a panacea, 452 erratum, 667; Mohole: the project that went awry, 115; 223; 334; The MURA accelerator compromise for the Mid-west, 450; Narcotic and drug abuse; report of advisory commission prescribes for old problems, new dangers, 662; NAS study; Public Policy Group promotes science, 1304; New MURA problem: holding staff together, 1017; Population: new U. S. interest in offering assistance reveals lags in underdeveloped nations, 1016; Presidential medicine: Johnson panel to study heart disease, cancer, strokes, 1308; Project plowshare: AEC program for peaceful nuclear explosives slowed down by test ban treaty, 1153; Research competition: as budgetary pressures grow, Congress reveals concern about scientific choices, 1149; Scientific migration: Britain agitated anew by research team's decision to move to United States, 786; SLAC: Stanford-AEC accelerator is coming along on schedule, but creating some high tension, 1419; Subways and science: two N.Y. institutions consider meaning of coexistence in crowded Manhattan, 789; Tobacco: administration showing little enthusiasm for follow-up on Public Health Service report, 1417; Tobacco report: agencies ponder action; Congress takes the lead with a \$5-million research plan, 788; Tobacco report: PHS study group, after 14-month survey, agrees that smoking is indeed harmful, 227
 Nieman, R. H. See Gardner, W. R.
 Niemann, C.: Alpha-chymotrypsin and the nature of enzyme catalysis, 1287
 Nier, A. O.: book review of Advance in mass spectrometry, 795
 Nisonoff, A., and J. L. Palmer: Hybridization of half molecules of rabbit gamma globulin, 376
 Nitrous oxide produced by the catalytic oxidation of organic nitrogen compounds, J. G. Christian, 573
 Nixon, A. C.: book review of The petroleum industry, 1319
 Noble-gas compounds, H. HYMAN (Ed.), book review by H. A. Bent, 1425
 Nocturnal changes in oxidative activities of rat liver mitochondria, J. L. Glick and W. D. Cohen, 1184
 Noise (letter), P. D. Foote, 101
 Noise and health (letter), H. A. Denzel, 992
 NOMIZU, K. See KOBAYASHI, S.
 Nonconformers again (letters), D. O. Myatt, P. F. Hahn and H. L. Cromroy, 992
 Nonprevalence of humanoids, The, G. G. Simpson, 769
 Novel filter for biological materials, R. L. Fleischer et al., 249
 Novelli, G. D. See Wust, C. J., et al.
 NOYES, W. A. JR., et al. (Eds.), Advances in photochemistry, book review of, 1317
 Nucleus of the trapezoid body: dual afferent innervation, J. M. Harrison and R. Irving, 473
- O**
- Obika, M., and J. T. Bagnara: Pteridines as pigments in amphibians, 485
 Odum, E. P., et al.: Homeostasis of the nonfat components of migrating birds, 1037
 Odum, H. T. See Armstrong, N. E.
 Offenloch, K. See Klee, M. R.
 O'Keefe, J. A., et al.: Hydrogen in a tektite vesicle, 39
 Olfactory discrimination: electrophysiological spatiotemporal basis, M. M. Mozell, 1336
 OLPHEN H. VAN, An introduction to clay colloid chemistry, book review of, 1023
 Oncogenic effect of human adenovirus type 12, in mice, Y. Yabe et al., 46
 Oomura, Y., et al.: Reciprocal activities of the ventromedial and lateral hypothalamic areas of cats, 484
 Ooyama, H. See Oomura, Y., et al.

INDEX TO VOLUME 143

Operations research in research and development, B. V. DEAN, (Ed.), *book review* by M. K. Starr, 232
 Optical effects of the 1963 Project West Ford experiment, W. Liller, 437
 Ordway, F.: Condensation model producing crystalline or amorphous tetrahedral networks, 800
 Ore, A.: How history is made (*letter*), 1276
 Organic functional group analysis, F. E. CRITCHFIELD, *book review* by A. G. Anderson, Jr., 123
 Origin of diamonds in the ureilites, M. E. Lipschutz, 1431
 Orr, P. C.: Pleistocene chipped stone tool on Santa Rosa Island, California, 243
 Osborn, M. *See* Person, S.
 Osnos, M. *See* Hirschberg, E., *et al.*
 Otis, L. S.: Dissociation and recovery of a response learned under the influence of chlorpromazine or saline, 1347
 Overdone overhead (*letter*), A. Mather, 764
 Overlap of photoreactivation and liquid holding recovery in *Escherichia coli*, B., A. Castellani *et al.*, 1170
 Oxidation of carbon-14-labeled endogenous lipids by isolated perfused rat heart, J. C. Shipp *et al.*, 371
 OZENDA, P., Encyclopedia of plant anatomy, vol. 6, *book review* of, 122

P

Pacific Science Center (*letter*), R. S. Weiss, 639
 Padover, S. K.: *book review* of The first new nation, 1022
 Painter, R. H.: Unknowns in entomology (*letter*), 1276
 Pake, G. E., and K. V. Krombein: Research grants and overhead (*letters*), 7
 Paleontology (*meeting report*), D. B. Sass, 166
 Palmer, J. L. *See* Nisonoff, A.
 Pao, E. M. *See* Garn, S. M., *et al.*, 1439
 Parasitism, J. F. A. SPRENT, *book review* by F. G. Wallace, 561
 Parks, W. G.: Gordon Research Conferences: program for 1964, 1203
 Parry, R. W.: *book review* of Boron hydrides, 1318
 Parsons, D. F. *See* Chance, B., *et al.*
 Patton, A. R.: Spelling and hostility (*letter*), 526
 Pay of government scientists (*letter*), D. T. Brancato, 1120
 Peacock, L. J., and J. A. Watson, Radiation-induced aversion to alcohol, 1462
 Pearl, M. *See* Reemtsma, K., *et al.*
 Pearson, L. C.: Population planning (*letter*), 1124
 PEDOE, D., A geometric introduction to linear algebra, *book review* of, 1320
 Peiser, H. S.: *book review* of The art and science of growing crystals, 672
 Pekas, D. J. *See* Johnson, C. A., *et al.*
 Pelletier, C. A. *See* Wegst, A. V., *et al.*
 Peoples of Central Asia, L. KRADER, *book review* by S. P. Dunn, 459
 Perkins, F. *See* Hayflick, L., *et al.*
 Permafrost (*meeting report*), K. B. Woods and G. A. Leonards, 1060
Peromyscus leucopus: an interesting subject for studies of socially induced stress responses, C. H. Southwick, 55
 Persistence of bacteria in "protoplast" form after apparent cure of pyelonephritis in rats, L. B. Guze and G. M. Kalmanson, 1340
 Person, S., and M. Osborn: DNA segregation in *Escherichia coli*: observations by means of tritiated thymidine decay, 44
 Personnel selection in academic institutions (*letter*), M. B. Shimkin, 637

Pesic, N., *et al.*: Erythropoietin production following gamma irradiation and hemorrhage in dogs, 49
 Pesticide research (*meeting report*), A. E. Dimond *et al.*, 151
 Petroleum industry, The, G. SELL, *book review* by A. C. Nixon, 1319
 Petrology of Venus: further deductions, L. S. Walter, 1161
 Pfaffmann, C. *See* Bartoshuk, L. M., *et al.*
 Phase separation in suspensions flowing through bifurcations: a simplified hydrodynamic model, G. Bugliarello and G. C. C. Hsiao, 469
 Philips, V. A., and J. A. Hugo: X-ray hazard from electron microscopes (*letter*), 1120
 Phoenix C. H. *See* Young, W. C., *et al.*
 Phospholipid-sugar complexes in relation to cell membrane monosaccharide transport, P. G. LeFevre *et al.*, 955
 Photoelectric ecosystem, N. E. Armstrong and H. T. Odum, 256
 Photosynthesis (*meeting report*), A. T. Jagendorf and B. Kok, 388
 Physical chemistry of petroleum solvents, W. W. REYNOLDS, *book review* by B. J. Zwolinski, 946
 Physics of rainclouds, The, N. H. FLETCHER, *book review* by J. E. McDonald, 236
 Physiologie, vols. 1-3, C. KEYSER (Ed.), *book review* of, 1158
 Physiology of earthworms, The, M. S. LAVERACK, *book review* by W. R. Murchie, 1024
 Physiology of mosquitoes, The, A. N. CLEMENTS, *book review* by P. A. Woke, 1430
 Pickett, R. M. *See* Jerison, H. J.
 Pigeons and cryptococcosis (*letter*), J. D. Schneidau, Jr., 525
 Pimental, G. C., *et al.*: Helium difluoride: possible preparative technique based on nuclear transmutations, 674
 PIMENTAL, R. A., Natural history, *book review* of, 347
 Pingel, J. H. *See* Lanzl, L. H.
 PITTS, J. N., JR. *See* NOYES, W. A., JR., *et al.*
 Plane, R. A.: *book review* of An introduction to molecular kinetic theory, 347
 Pleistocene chipped stone tool on Santa Rosa Island, California, P. C. Orr, 243
 Pleistocene wood rat middens and climatic change in Mohave Desert: a record of juniper woodlands, P. V. Wells and C. D. Jorgensen, 1171
 Poe, R. H., *et al.*: Effect of cold on the presence of *Staphylococcus aureus* in the external nares of the rat, 487
 Polar geology (*meeting report*), A. Mirsky, 1196
 Politics and geographic relationships, W. A. D. JACKSON, *book review* by T. Lloyd, 1025
 Pollen wettability as a factor in washout by raindrops, J. E. McDonald, 1180
 Polonium-210: a volatile radioelement in cigarettes, E. P. Radford, Jr. and V. R. Hunt, 247
 Polt, J. M., and E. H. Hess: Following and imprinting: effects of light and social experience, 1185
 Polt, J. M. *See* Hess, E. H.
 Polymer similar to polydeoxyadenylate-thymidylate in various tissues of a marine crab, T. Cheng and N. Sueoka, 1442
 Polymer single crystals, P. H. GEIL, *book review* by J. D. Hoffman, 121
 Polymers: thermal stability (*meeting report*), P. B. Stickney, 704
 Ponnamperuma, C., *et al.*: Guanine: formation during the thermal polymerization of amino acids, 1449
 Ponnamperuma, C. *See* Young, R. S.

Population planning (*letter*), L. C. Pearson, 1124
 Population problems and infectious diseases (*letter*), T. A. Cockburn, 916
 Porter, J. E. *See* Young, W. J., *et al.*
 Porter, W. S.: Hydrogen energy levels: perturbation caused by proton structure, 1324
 Postsynaptic potentials and spike patterns during augmenting responses in cat's motor cortex, M. R. Klee and K. Offenloch, 488
 Potter, R. G., Jr. Rhythm method (*letter*), 1394
 Powers, W. T. *See* Quimby, F. H., *et al.*
 Precaution in the use of iodine-125 as a radioactive tracer, Y. S. Bakhle *et al.*, 799
 Precipitins in the rabbit produced by protein polysaccharide from bovine nasal cartilage, N. Di Ferrante, 250
 PRENSKY, S. D., Electronic instrumentation, *book review* of, 35
 Price, P. B. *See* Fleischer, R. L., *et al.*
 Prior, M. E.: Scientists in public affairs (*letter*), 638
 Problem-solving discussions and conferences, N. R. F. MAIER, *book review* by F. Fremont-Smith, 1428
 Process of evolution, The, P. R. EHRLICH and R. W. HOLM, *book review* by H. M. Slatis, 1318
 Prodigious inventory-taking, A (*editorial*), P. H. Abelson, 1127
 Professor's story of hybrid corn, A. H. K. HAYES, *book review* by P. C. Mangelsdorf, 347
 Progress in the astronautical sciences, vol. 1, S. F. SINGER (Ed.), *book review* by W. W. Kellogg, 463
 Project system in grant allocation, The (*letter*), P. E. Cloud, Jr., 1121
 Protass, J. J., *et al.*: Amino acid code in *Alcaligenes faecalis*, 1174
 Prusoff, W. H. *See* Bakhle, Y. S., *et al.*
 Pteridines as pigments in amphibians, M. Obika and J. T. Bagnara, 485
 Pupil size in relation to mental activity during simple problem-solving, E. H. Hess and J. M. Polt, 1190
 Pure maple syrup: nutritive value, A. L. Leaf, 963
 Purpura, D. P., and H. Waesch: Brain reflexes (*meeting report*), 598; erratum, 1424
 Pursuit eye movements in the absence of a moving visual stimulus, G. H. Deckert, 1192
 Pyrene and fluoranthene in manganese nodules, D. W. Thomas and M. Blumer, 39

Q

Quantum theory of fields, The, *book review* by E. P. Wigner, 462
 Quantum theory of solids, C. KITTEL, *book review*, by G. H. Wannier, 672
 Quiet crisis, The, S. L. Udall, *book review* by D. J. Zinn, 458
 Quimby, F. H., *et al.*: The race problem and science (*letters*), 306

R

Race problem and science, The (*letters*), F. H. Quimby *et al.*, 306
 Radford, E. P., Jr., and V. R. Hunt: Polonium-210: a volatile radioelement in cigarettes, 247
 Radiation accidents and emergencies (*meeting report*), L. H. Lanzl and J. H. Pingel, 1352
 Radiation-induced aversion to alcohol, L. J. Peacock and J. A. Watson, 1462

- Radiation-induced mouse leukemia: consistent occurrence of an extra and a marker chromosome, N. Wald *et al.*, 810
- Radio observation of the electromagnetic emission from warm clouds, J. D. Sartor, 948
- Radioactive myoinositol: incorporation into streptomycin, H. Heding, 953
- Radioautographic evidence for the incorporation of leucine-carbon-14 into the mitotic apparatus, D. W. Stafford and R. M. Iverson, 580
- Radiocarbon dating: a case against the proposed link between river mollusks and soil humus, W. Broecker, 596
- Radotic, M. *See* Pesic, N., *et al.*
- Ralston, H. J. *See* Guillory, R. W.
- Rasool, S. I.: Global distribution of the net energy balance of the atmosphere from Tiros radiation data, 567
- Reciprocal activities of the ventromedial and lateral hypothalamic areas of cats, Y. Oomura *et al.*, 484
- Reduction of transpiration of leaves through stomatal closure induced by alkylsuccinic acids, I. Zelitch, 692
- Reemtsma, K., *et al.*: Heterotransplantation of the kidney: two clinical experiences, 700
- Regenerating tissue from the cockroach leg: a system for studying in vitro, E. P. Marks and J. P. Reinecke, 961
- Reich, E.: Actinomycin: correlation of structure and function of its complexes with purines and DNA, 684
- REICHEN, C. A., A history of chemistry, *book review of*, 1026
- Reinecke, J. P. *See* Marks, E. P.
- REITER, E. R., Jet-stream meteorology, *book review of*, 464
- Relative contributions of uranium, thorium, and potassium to heat production in the earth, G. J. Wasserburg *et al.*, 465
- Remer, T. G.: Serendipity—the last word (*letter*), 196
- Research funds—cost accounting (*letter*), C. W. Bastable, 430
- Research grants and overhead (*letters*), G. E. Pake and K. V. Krombein, 7
- Respiratory distress: relation to prematurity and other factors in newborn monkeys, W. F. Windle, 1345
- Retrograde amnesia from electroconvulsive shock, C. J. Dye, 973
- Reuben, R. *See* Carey, D. E., *et al.*
- Reynolds, H. T. *See* Dimond, A. E. *et al.*
- REYNOLDS, W. W., Physical chemistry of petroleum solvents, *book review of*, 946
- RHEINGOLD, H. (Ed.), Maternal behavior in mammals, *book review of*, 944
- Rhesus and crab-eating macaques: intergradation in Thailand, J. Fooden, 363
- Rhines, R.: *book review of* Textbook of neuroanatomy, 458
- Rhythm method (*letter*), R. G. Potter, Jr., 1394
- Rice, C. E. *See* Kellogg, W. N.
- RICHARDS, A. G., The complementarity of structure and function, *book review of*, 668
- Richardson, M. B.: Who should teach engineering? (*letter*), 916
- Rihl, M. E. *See* Garn, S. M., *et al.*, 1439
- Riley, D. W.: Emotion versus intelligence in public support of science (*letter*), 433
- Riley, R., *et al.*: Cellulose acetate membranes: electron microscopy of structure, 801
- Risser, P. G.: Somatic mitoses in cells of *Picea glauca* cultivated in vitro, 591
- Rittenberg, S. C.: *book review of* Introduction to geological microbiology, 1156
- Ritter, H., Jr.: Defense of mate and mating chamber in a wood roach, 1459
- Ritterbush, P. C.: *book review of* Erasmus Darwin, 1024
- Rivett, P. *See* Ackoff, R. L.
- Road to H: narcotics, delinquency, and social policy, The, I. CHEIN *et al.*, *book review by* J. F. Maddux, 1157
- ROBERTS, J. A. F., An introduction to medical genetics, *book review of*, 947
- Robie, R. A.: Equilibrium of talc with enstatite and quartz, 1057
- Robinson, D. W.: *book review of* Magnetism and the chemical bond, 33
- Rock, I., and J. Victor: Vision and touch: an experimentally created conflict between the two senses, 594
- Rodbard, S., *et al.*: Induction of papillary growths in the heart, 1341
- Rogers, D. T. *See* Odum, E. P., *et al.*
- Rogers, T.: *book review of* Physiology, vols. 1–3, 1158
- Rogoff, S. M., *et al.*: Specialization in medicine (*letters*), 8
- Role of diffusion in catalysis, The, C. N. SATTERFIELD and T. K. SHERWOOD, *book review by* C. H. Ware, Jr., 1430
- Root, J. W., *et al.*: Isotopic molecules: separation by recycle gas chromatography, 676
- Rose, M. E.: *book review of* Lectures in theoretical physics, 460
- Rosen, A. A., and M. Rubin: Natural carbon-14 activity of organic substances in streams, 1163
- Rosenberg, L. E. *See* Thier, S., *et al.*
- ROSENFELD, E. *See* CHEIN, I., *et al.*
- Rosenfeld, S. S.: Soviet-American exchanges, 1413
- Rosenthal, O. *See* Eisenhardt, R. H.
- Rothman, D. *See* Maloney, C. J.
- Routley, D. G. *See* Byers, G. L., *et al.*
- Rovner, I. *See* Agogino, G. A., *et al.*
- Rowe, W. P. *See* Hartley, J. W.
- Rowland, F. S. *See* Root, J. W., *et al.*
- Rubin, A. L., *et al.*: Histocompatibility and immunologic competence in renal homotransplantation, 815
- Rubin, M. *See* Rosen, A. A.
- Rubinstein, H.: Jargon add-on (*letter*), 638
- Ruby, S. L. *See* Flinn, P. A., *et al.*
- Rummel, R. E. *See* Martin, T. W.
- Russell, E. S. *See* Hutton, J. J., *et al.*
- Russian-English physics dictionary, I. EMIN *et al.*, *book review by* M. Hoseh, 121
- Ryan, W. L., and M. J. Carver: Inhibition of antibody synthesis by L-phenylalanine, 479
- Ryser, H. J.: *book review of* Foundations of linear algebra, 560
- S
- Sadwin, L. D.: Explosive welding with nitroguanidine, 1164
- Sagan, H.: *book review of* Linear differential equations in the real domain, 124
- Salt migration to the northwest body of Great Salt Lake, Utah, T. C. Adams, 1027
- Samper, L. *See* Yabe, Y., *et al.*
- Sandow, A., *et al.*: Electromechanical coupling in potentiation of muscular contraction, 577; *erratum*, 791
- Sandstedt, R. *See* Schuster, M. L., *et al.*
- Sarcomas in cotton rats inoculated with Rous virus, G. J. Svet-Moldavsky and I. A. Svet-Moldavskaya, 54
- Sartor, J. D.: Radio observation of the electromagnetic emission from warm clouds, 948
- Saslow, G. *See* Matarazzo, J. D., *et al.*
- Sass, D. B.: Paleontology (*meeting report*), 166
- SATTERFIELD, C. D., and T. K. SHERWOOD, The role of diffusion in catalysis, *book review of*, 1430
- SAVAGE, J. M., Evolution, *book review of*, 131
- Saxton, J. A.: "Brain drain" figures (*letter*), 1393
- Schachter, D., *et al.*: Vitamin D₃: direct action on the small intestine of the rat, 143
- Scheele, R. L.: *book review of* Culture against man, 231
- Scheff, T. J., and D. S. Greenberg: Scientists, lawyers, and admirals (*letter*), 7
- Schlegel, J. U. *See* Reemtsma, K., *et al.*
- Schlesinger, M., and R. Mark: Wasting disease induced in young mice by administration of cortisol acetate, 965
- Schmidt, R.: Motivational research on our subscribers (*N=1*) (*letter*), 430
- Schmidt-Nielson, K., *et al.*: Diabetes mellitus in the sand rat induced by standard laboratory diets, 689
- Schmitt, R. W. *See* Hart, H. R.
- Schneidau, J. P., Jr.: Pigeons and cryptococcosis (*letter*), 525
- Schneider, R. G., *et al.*: Hemoglobin G Coushatta: a new variant in an American Indian family, 697
- Schneiderman, H. A., and L. I. Gilbert: Control of growth and development in insects, 325
- Schoenberg, M. D., *et al.*: Cytoplasmic interaction between macrophages and lymphocytic cells in antibody synthesis, 964
- Schubiger, A. E., and J. E. Baer: Metric system: small quid for a large quo (*letter*), 638
- Schumacher, E.: *book review of* Technique of inorganic chemistry, vol. 2, Nuclear chemistry, 235
- Schuster, M. L., *et al.*: Starch formation induced by a plant parasitic nematode, 1342
- SCHWAB, J. J. (Ed.), Biological science: an inquiry into life; Biological science: molecules to man; High school biology; Teacher's handbook, *book review of*, 668
- Schwartz, C. M. *See* Sclar, C. B., *et al.*
- Schweet, R. S. *See* Hutton, J. J., *et al.*
- Science and poetry (*letter*), L. Berlowitz, 1124
- Science and the new humanism, H. Hoagland, 111
- Science and the race problem, AAAS Committee on Science in the Promotion of Human Welfare, 915
- Science and the race problem (*letters*), H. E. Garrett and W. C. George, 913
- Science as a tail to NASA's kite (*letter*), P. Siekevitz, 429
- Science, culture, and determinism (*letters*), R. A. Yarnell *et al.*, 1121
- Science fair projects (*letter*), H. N. Guttmann, 992
- Science in archeology, D. BROTHWELL and E. HIGGS, *book review by* C. W. Meighan, 120
- Science in Japan, L. Campbell, 776
- Science of animal behaviour, The, P. L. BROADHURST, *book review by* C. T. Morgan, 560
- Science planks and party platforms (*letter*), R. E. Lapp, 195
- Science policy shapes up as issue in coming British election, J. Maddox, 1146
- Scientific advisers for Congress (*letter*), R. H. Lueck, 525
- Scientific explanation, W. Weaver, 1297
- Scientists and causes: test bans and traffic jams (*letter*), J. H. Weaver, K. F. Zeisler, A. N. Benson, 430
- Scientists and patents: a lawyer comments (*letter*), A. R. Whale, 1123

INDEX TO VOLUME 143

- Scientists and their images (*editorial*), A. T. Waterman, 311
 Scientists in public affairs (*letter*), M. E. Prior, 638
 Scientists, lawyers, and admirals (*letters*), T. J. Scheff and D. S. Greenberg, 7
 Sclar, C. B., *et al.*: High-pressure metallic indium telluride: preparation and crystal structure, 352
 Scott, J. P.: *book review* of Maternal behavior in mammals, 944
 Sea level changes in the past 6000 years: possible archeological significance, F. P. Shepard, 574
 Segal, S. *See* Thier, S., *et al.*
 Segré, E.: *book review* of The collected papers of Lord Rutherford of Nelson, 672
 Seguin, J. J. *See* Sandow, A., *et al.*
 Selenoamino acids: decrease of radiation damage to amino acids and proteins, F. Shimazu and A. L. Tappel, 369
 Self-development (*editorial*), J. W. Gardner, 641
 Selig, H., *et al.*: Xenon tetroxide: preparation and some properties, 1322
 SELL, G.: The petroleum industry, *book review* of, 1319
 Selye, H., *et al.*: Calciphylaxis: passive transfer, 365
 Sensitivity of female inbreds of *Cucumis sativus* to sex reversion by gibberellin, O. Shiffriss and W. L. George, Jr., 1452
 Separation of microsomal RNA into five bands during agar electrophoresis, R. Bachvaroff and P. R. B. McMaster, 1177
 Serendipity—the last word (*letter*), T. G. Remer, 196
 Serota, H. M.: Home movies of early childhood: correlative developmental data in the psychoanalysis of adults, 1195
 Setlow, R. B. *See* Castellani, A., *et al.*
 Shaffer, B. L. *See* Tasch, P.
 Shapanka, R. *See* Koshland, M. E., *et al.*
 SHAPELEY, H.: The view from a distant star, *book review* of, 1160
 Shepard, F. P.: Sea level changes in the past 6000 years: possible archeological significance, 574
 SHEPARD, F. P.: Submarine geology, *book review* of, 34
 Sherburne, D. G., Jr.: *review* of Focus on behavior (film series), 792
 SHERWOOD, T. K. *See* SATTERFIELD, C. N.
 Shibuya, T.: Dissociation of olfactory neural response and mucosal potential, 1338
 Shiffriss, O., and W. L. George, Jr.: Sensitivity of female inbreds of *Cucumis sativus* to sex reversion by gibberellin, 1452
 Shimazu, F., and A. L. Tappel: Selenoamino acids: decrease of radiation damage to amino acids and proteins, 369
 Shimkin, M. B.: Personnel selection in academic institutions (*letter*), 637
 Shipp, J. C., *et al.*: Oxidation of carbon-14-labeled endogenous lipids by isolated perfused rat heart, 371
 Shortage of medical students (*letter*), B. I. Goldberg, 639
 Shortridge, R. W. *See* Quinby, F. H., *et al.*
 Sie, H., and W. H. Fishman: Glycogen synthetase: its response to cortisol, 816
 Siekavitz, P.: Science as a tail to NASA's kite (*letter*), 429
 Silica (*meeting report*), A. R. Cooper, 395
 Silverman, F. N. *See* Garn, S. M., *et al.*, 1039
 Silverman, M. D., and W. E. Browning: Fibrous filters as particle-size analyzers, 572
 Simpson, G. G.: The nonprevalence of humanoids, 769
 SIMPSON, G. G.: This view of life, *book review* of, 1311
 Simultaneous studies of firing patterns in several neurons, G. L. Gerstein and W. A. Clark, 1325
 SINGER, S. F. (Ed.): Progress in the astronomical sciences, vol. 1, *book review* of, 463
 Sitterly, B. W.: *book review* of The view from a distant star, 1160
 Skolnik, S. J. *See* Bessman, S. P.
 Slatis, H. M.: *book review*: The process of evolution; Evolution, 1318
 Slaughter, C. *See* Flavin, M., *et al.*
 Sleep tendencies: effects of barometric pressure, W. B. Webb and H. Ades, 263
 Sloth, E. N. *See* Huston, J. L., *et al.*
 Smisaert, H. R.: Cholinesterase inhibition in spider mites susceptible and resistant to organophosphate, 129
 Smith, C. E., Jr., and R. S. MacNeish: Antiquity of American polyploid cotton, 675
 Smith, H. H.: Neutron irradiation: biological effects (*meeting report*), 1466
 Smith, R. H.: Variation in the monoterpenes of *Pinus ponderosa* laws, 1337
 Snell, N. *See* Alderton, G., *et al.*
 Snyder, L. H.: *book review* of An introduction to medical genetics, 947
 Social life of Japanese monkeys, D. Miyadi, 783
 Solar minimum and the International Years of the Quiet Sun, H. W. Dodson and E. R. Hedeman, 237
 Somatic mitoses in cells of *Picea glauca* cultivated in vitro, P. G. Risser, 591
 Sonic energy effects in bovine serum albumin solutions, E. L. Hess *et al.*, 1176
 SONNENDECKER, G. (Reviser), Kremers and Urdang's history of pharmacy, *book review* of, 461
 Souers, P. C., and G. Jura: Negative temperature coefficient of resistance in bismuth I, 467
 Southwick, C. H.: *Peromyscus leucopus*: an interesting subject for studies of socially induced stress responses, 55
 Soviet-American exchanges, S. S. Rosenfeld, 1413
 Soviet men of science, J. TURKEVICH (Ed.), *book review* of, 673
 Specialization in medicine (*letters*), S. M. Rogoff *et al.*, 8
 Speech durations of astronaut and ground communicator, J. D. Matarazzo *et al.*, 148
 Speilman, A.: Swamp mosquito, *Culiseta melanura*: occurrence in an urban habitat, 361
 Speling and hostillity (*letter*), A. R. Patton, 526
 Speyer, J. F. *See* Protass, J. J., *et al.*
 Spiegelman, S. *See* Chandler, B., *et al.*
 Spieth, W.: Basic research on a problem (*letter*), 197
 Spontaneous autoimmunity in mice: antibodies to nucleoprotein in strain A/J, G. J. Friou and P. O. Teague, 1333
 Sporek, K. F.: *book review* of Anorganische chemie, vols. 2 and 3, 794
 Spores and pollen of the Potomac Group of Maryland, The, G. J. BRENNER, *book review* by E. B. Leopold, 795
 Spratley, R. D. *See* Pimental, G. C., *et al.*
 SPRENT, J. F. A.: Parasitism, *book review* of, 561
 Stafford, D. W., and R. M. Iverson: Radioautographic evidence for the incorporation of leucine-carbon-14 into the mitotic apparatus, 580
 Staley, D. O., *et al.*: Atmospheric jet streams, 489
 Standardized tests (*letters*), B. Hoffmann *et al.*, 997
 Starch formation induced by a plant parasitic nematode, M. L. Schuster *et al.*, 1342
 Starr, M. K.: *book review* of Manager's guide to operations research, 232; Operations research in research and development, 232
 Starr, M. P.: *book review* of The life of bacteria, 234
 Stating the problem (*letter*), M. Bunge, 1394
 Statistics section (*letter*), C. J. Maloney and D. Rothman, 637
 Stein, L.: Inorganic fluorine chemistry (*meeting report*), 1058
 Stemming the paper flood (*letter*), J. M. Mitchell, Jr., 526
 STENT, G. S.: Molecular biology of bacterial viruses, *book review* of, 345
 Stenzel, K. H. *See* Rubin, A. L., *et al.*
 STEVENSON, J. S. (Ed.): The tectonics of the Canadian shield, *book review* of, 945
 Stevenson, R. E. *See* Hayflick, L., *et al.*
 Steward, F. C., *et al.*: Growth and development of cultured plant cells, 20
 STEYERMARK, J. A.: Flora of Missouri, *book review* of, 671
 Stickney, P. B.: Polymers: thermal stability (*meeting report*), 704
 Stokes, W. L.: Fossilized stomach contents of a sauropod dinosaur, 576
 Stratigraphy and sedimentation, W. C. KRUMBEIN and L. L. SLOSS, *book review* by P. E. Cloud, Jr., 124
 Streett, J. C., Jr.: Bile duct restoration in *Rana pipiens* after ligation of the hepatoduodenal ligament, 592
 Streng, A. G., and A. V. Grosse: Acid of krypton and its barium salt, 242
 Stretch receptor-like organs in the fly larva: their possible role in growth regulation, J. M. Whitten, 260
 Structure of Chin society, The, F. K. LEHMAN, *book review* by W. Davenport, 36
 Structure of lipoproteins: covalently bound fatty acids, W. R. Fisher and S. Gurin, 362
 Student performance in new high school biology programs, H. Grobman, 265
 Studier, M. H. *See* Huston, J. L., *et al.*
 Submarine geology, F. P. SHEPARD, *book review* by J. S. Creager, 34
 Succinic ester and amide of homoserine: some spontaneous and enzymatic reactions, M. Flavin *et al.*, 50
 Sudden-death syndrome (*meeting report*), F. P. Benditt and R. J. Wedgwood, 156
 Sueoka, N. *See* Cheng, T.
 Sulfate particulates: size distribution in Pittsburgh air, M. Corn and L. DeMaio, 803
 Superconductivity (*meeting report*), H. R. Hart, Jr., and R. W. Schmitt, 57
 Sussman, M. L. *See* Rogoff, S. M., *et al.*
 Svet-Moldavskaya, I. A. *See* Svet-Moldavsky, G. J.
 Svet-Moldavsky, G. J., and I. A. Svet-Moldavskaya: Sarcomas in cotton rats inoculated with Rous virus, 54
 SWAIN, T. (Ed.): Chemical plant taxonomy, *book review* of, 1428
 Swamp mosquito, *Culiseta melanura*: occurrence in an urban habitat, A. Spielman, 361
 Swazi, The, H. KUPER, *book review* by E. Colson, 558
 SWINEFORD, A., and P. C. FRANKS (Eds.): Clays and clay minerals, *book review* of, 35
 Symes, E. M. *See* Fleischer, R. L., *et al.*
 Système nerveux; muscle, vol. 2 of Physiologie, C. KEYSER (Ed.), *book review* by Terence Rogers, 1158

T

- Tables for gas chromatography, vol. 3 of *Gas phase chromatography, book review* by A. Weinstein, 1026
 Tables of experimental dipole moments, A. L. MCCLELLAN, *book review* by A. H. Livermore, 460
 Taft, B. A. *See* Knauss, J. A.
 Takeda, H. *See* Donnay, J. D. H.
 Talmage, D. W. *See* Kash, G. F., et al.
 Tamm, I., and H. J. Eggers: Chemical inhibition of viruses (*letters*), 196
 Tappel, A. L. *See* Shimazu, F.
 Tapper, D. N.: Cutaneous slowly adapting mechanoreceptors in the cat, 53
 Tasch, P., and B. L. Shaffer: Conchostracans: living and fossil from Chihuahua and Sonora, Mexico, 806
 Taste of sodium chloride solutions after adaptation to sodium chloride: implications for the "water taste," L. M. Bartoshuk et al., 967
 Taylor, G. *See* Yabe, Y., et al.
 Taylor, R. L.: Seventh Cleveland meeting, 835
 Taylor, S. R. *See* Sandow, A., et al.
 Teacher's handbook, J. J. SCHWAB (Ed.), *book review* by J. K. Brierley, 668
 Teaching of mathematics, The, R. DUBBISCH and V. E. HOWES, *book review* by D. J. Dessart, 123
 Teague, P. O. *See* Friou, G. J.
 Technique of inorganic chemistry, vol. 2, Nuclear chemistry, H. B. JONASSEN and A. WEISSENBERGER (Eds.), *book review* by E. Schumacher, 235
 Technology of scandium, yttrium, and the rare earth metals, The, E. V. KLEBER and B. LOVE, *book review* by J. L. Gregg, 561
 Technology of the treatment of uranium concentrates, The, N. P. GALKIN et al., *book review* by R. M. Edwards, 561
 Tectonics of the Canadian shield, The, J. S. STEVENSON (Ed.), *book review* by S. C. Creasey, 945
 Teichert, C. *See* Anderton, D. A.
 Textbook of neuroanatomy, H. C. ELLIOTT, *book review* by R. Rhines, 458
 Thalidomide: effects on enzymes of glutamic acid metabolism in mice, E. Hirschberg et al., 1343
 Thermal control in space vehicles, A. L. Alexander, 654
 Thermal denaturation of collagen in the dispersed and solid state, J. Gross, 960
 Thermodynamics of clouds, L. DUFOUR and R. DEFAY, *book review* by M. L. Corrin, 1160
 Thier, S., et al.: Cystinuria: in vitro demonstration of an intestinal transport defect, 482
 THIMANN, K. v., The life of bacteria, *book review* of, 234
 This view of life, G. G. SIMPSON, *book review* by G. de Beer, 1311
 Thomas, D. W., and M. Blumer: Pyrene and fluoranthene in manganese nodules, 39
 Thomas, H. E., and L. B. Leopold: Ground water in North America, 1001
 Thomas, J. M. *See* Shipp, J. C., et al.
 Thompson, E.: Hormonal control of egg development in *Calliphora*, 973
 Thompson, P. A. *See* Alderton, G., et al.
 Thompson, W. R., and R. A. Dubanowski: Early arousal and imprinting in chicks, 1187
 Tobias, R. S.: *book review* of Metal ions in aqueous solution, 123
 Torgerson, W. S.: *book review* of Handbook of mathematical psychology, 1319
 Toxic residues in soil 9 years after

treatment with aldrin and heptachlor, A. T. S. Wilkinson et al., 681
 Trainin, N. *See* Law, L. W., et al.
 Transferrins in Venezuelan Indians: high frequency of a slow-moving variant, T. Arends and M. L. Gallango, 367
 Trends in scientific research, P. H. Abelson, 218

- Trentin, J. J. *See* Yabe, Y., et al.
 Tritium-hydrologic research: some results of the U.S. Geological Survey Research Program, C. W. Carlson, 804
 Truesdell, C.: Fluid mechanics before the Society for Natural Philosophy (*meeting report*), 382
 Tuchweber, B. *See* Selye, H., et al.
 TURKEVICH, J. (Ed.), Soviet men of science, *book review* of, 673
 Turner, C. D., and H. Asakawa: Experimental reversal of germ cells in ovaries of fetal mice, 1344
 Turner, W. J.: Cigarettes: testing on mice (*letter*), 994
 TURRILL, W. B.: Vistas in botany, vol. 2, *book review* of, 459
 TV program for junior scientists (*letter*), E. L. Yochelson, 997
 Twentieth century China, O. E. CLUBB, *book review* by M. Lindsay, 1158

U

- UDALL, S. L., The quiet crisis, *book review* of, 458
 Ulrich, R. E., and W. H. Craine: Behavior: persistence of shock-induced aggression, 971
 Ultimate failure of rhythm (*letter*), G. Hardin, 995
 Ultmann, J. E. *See* Hirschberg, E., et al.
 Unknowns in entomology (*letter*), R. H. Painter, 1276
 Unusual aggregation of a nonfunctional tobacco mosaic virus protein, M. Zaitlin and W. R. Ferris, 1451
 Upton, A. C. *See* Wald, N., et al.
 Usherwood, P. N. R., and H. Grundfest: Inhibitory postsynaptic potentials in grasshopper muscle, 817
 Uzzell, T. M., Jr. *See* MacGregor, H. C.

V

- Vacuum technology, A. GUTHRIE, *book review* by T. A. Vanderslice, 671
 Vaisnys, R. J. *See* Kirk, R. S.
 VANCE, R. W. (Ed.), Cryogenic technology, *book review* of, 345
 Vanderslice, T. A.: *book review* of Vacuum technology, 671
 Variation in the monoterpenes of *Pinus ponderosa* laws, R. H. Smith, 1337
 Veryatin, U. D. *See* Galkin, N. P., et al.
 Victor, J. *See* Rock, I.
 View from a distant star, The, H. SHAPLEY, *book review* by B. W. Sitterly, 1160
 Vigilance: the importance of the elicited observing rate, H. J. Jerison and R. M. Pickett, 970
 Vinblastine sulfate treatment of Hodgkin's disease during a pregnancy, J. G. Armstrong et al., 703
 Virus-specific double-stranded RNA in poliovirus-infected cells, D. Baltimore et al., 1034
 Vision and touch: an experimentally created conflict between the two senses, I. Rock and J. Victor, 594
 Vistas in botany, vol. 2, W. B. TURRILL, *book review* by F. P. Cullinan, 459
 Visual pigments of single primate cones, W. B. Marks et al., 1181
 Visual problem-solving in a bottlenose

- dolphin, W. N. Kellogg and C. E. Rice, 1052
 Vitamin D₃: Direct action on the small intestine of the rat, D. Schachter et al., 143
 Voas, R. B. *See* Matarazzo, J. D., et al.
 Voeller, B. R.: Gibberellins: their effect on antheridium formation in fern gametophytes, 373
 Volatile growth inhibitors produced by aromatic shrubs, C. H. Muller et al., 471
 Volatile silicon compounds, E. A. V. EBBSWORTH, *book review* by A. G. MacDiarmid, 233

W

- Waelsch, H. *See* Purpura, D. P.
 Wagman, I. H. *See* Battersby, W. S.
 Wagner, W. H., Jr.: *book review* of Chemical plant taxonomy, 1428
 Wald, N., et al.: Radiation-induced mouse leukemia: consistent occurrence of an extra and a marker chromosome, 810
 Wallace, F. G.: *book review* of Parasitism, 561
 Walsh, J.: *News and Comment*: Appropriations: the critics of Congress often slight an inner redoubt of the system, 548; Budget: requests for R&D funds edge above \$15 billion mark for a fiscal year of "austerity," 337; California: aerospace industry has meant a second gold rush; climate and education get credit, 1151; Federal pay: in the competition for professionals, government faces salary gap, other problems, 228; JPL: Ranger VI failure increases speculation on Jet Lab's future links with Space Agency, Caltech, 1014; Legislation: in first session, 88th Congress shows itself to be more critical patron of science, 27; Library of congress: automation urged for bibliographic control but not prescribed as a panacea, 452; Narcotic and drug abuse: report of advisory commission prescribes for old problems, new dangers, 662; SLAC: Stanford-AEC Accelerator is coming along on schedule but creating some high tension, 1419; Stanford: boom in electronics in The San Francisco Bay area, 1305; Tobacco report: agencies ponder action; Congress takes the lead with a \$5-million research plan, 788
 Walter, L. S.: Petrology of Venus: further deductions, 1161
 Walter, L. S. *See also* O'Keefe, J. A., et al.
 Walton, R. B.: 6-Aminopenicillanic acid: inhibition of destruction of cephalosporin C by bacteria, 1438
 Wannier, G. H.: *book review* of Quantum theory of solids, 672
 Wanted: amateur scientists, R. FROMAN, *book review* by F. L. Campbell, 558
 Ward, R. F., and S. L. Werner: Analysis of variance of migmatite composition II: comparison of two areas, 1032
 Ware, C. H., Jr.: *book review* of The role of diffusion in catalysis, 1430
 Wasserburg, G. J., et al.: Relative contributions of uranium, thorium, and potassium to heat production in the earth, 465
 Wasserman, R. H. *See* Mercer, P. F.
 Wasting disease induced in young mice by administration of cortisol acetate, M. Schlesinger and R. Mark, 965
 Water transport across root cell membranes: effect of alkenylsuccinic acids, P. J. C. Kuiper, 690

INDEX TO VOLUME 143

Waterman, A. T.: *editorial*: Scientists and their images, 311
 Watson, J. A. *See* Peacock, L. J.
 Weaver, J. M.: Scientists and causes: test bans and traffic jams (*letter*), 430
 Weaver, W.: Scientific explanation, 1297
 Webb, W. B., and H. Ades: Sleep tendencies: effects of barometric pressure, 263
 Webber, M. M.: Antibody suppression by antigen heavily labeled with iodine-131, 132
 Wedgwood, R. J. *See* Benditt, E. P.
 Wegst, A. V., *et al.*: Detection and quantitation of fallout particles in a human lung, 957
 Weights and measures (*meeting report*), A. V. Astin, 974
 Weil, M. H. *See* Broder, G.
 Weinstein, A.: *book review* of Gas phase chromatography, vols. 1-3, 1026
 Weinstein, L. *See* Chang, T.
 Weisberger, A. S. *See* Schoenberg, M. D., *et al.*
 Weiss, R. S.: Pacific Science Center (*letter*), 639
 WEISSBERGER, A. *See* JONASSEN, H. B.
 Wells, P. V., and C. D. Jorgensen: Pleistocene wood rat middens and climatic change in Mohave Desert: a record of juniper woodlands, 1171
 Werman, R.: Antidromic inhibition accompanied by ventral root positivities, 824
 Werner, S. L. *See* Ward, R. F.
 Weyl, P. K. *See* Deffeyes, K. S., *et al.*
 Whale, A. R.: Scientists and patents: a lawyer comments (*letter*), 1123
 Wheat: reconstitution of the tetraploid component (AABB) of hexaploids, E. R. Kerber, 253
 Whipple, G. H. *See* Wegst, A. V., *et al.*
 White, J. L. *See* Ledoux, R. L.
 WHITE, R. M. *See* HERTZBERG, H. T. E., *et al.*
 Whitmore, G. F. *See* Elkind, M. M., *et al.*
 Whitten, J. M.: Giant polytene chromosomes in hypodermal cells of developing footpads of dipteran pupae, 1437; Stretch receptor-like organs in the fly larva: their possible role in growth regulation, 260
 Who gets the word? (*letter*), G. E. Moore, 99
 Who should teach engineering? (*letter*), M. B. Richardson, 916
 Wiens, A. N. *See* Matarazzo, J. D., *et al.*
 Wiese, G. M. *See* Baskin, R. J.
 Wiesner's public service (*letter*), L. Goldberg, 429
 Wigner, E. P.: *book review* of The quantum theory of fields, 462

Wilkinson, A. T. S., *et al.*: Toxic residues in soil 9 years after treatment with aldrin and heptachlor, 681
 Williams, G. R. *See* Chance, B., *et al.*
 Williams, L. P.: *book review* of A history of chemistry, 1026
 Windle, W. F.: Respiratory distress: relation to prematurity and other factors in newborn monkeys, 1345
 Winokur, S.: Ingroups and dropouts (*letter*), 526
 Winzler, R. J. *See* Johnson, C. A., *et al.*
 Wise, E. *See* Fernando, Q., *et al.*
 Woke, P. A.: *book review* of The physiology of mosquitoes, 1430
 Wolf, G., and N. E. Miller: Lateral hypothalamic lesions: effects on drinking elicited by carbachol in preoptic area and posterior hypothalamus, 585
 Wolfe, A. D., and F. E. Hahn: Erythromycin: mode of action, 1445
 Wolfe, H. G. *See* Hutton, J. J., *et al.*
 Wolfe, D.: AAAS Council meeting, 1963, 829; *editorials*: Delayed independence, 103; Educational leadership, 767; Ethical problems: an invitation, 453; Lost opportunities, 989; Needs of the humanities, 1279
 Wood, F. M., Jr. *See* O'Keefe, J. A., *et al.*
 Woods, K. B., and G. A. Leonards: Permafrost (*meeting report*), 1060
 Woolf, H.: *book review* of The history of sciences in India, 795
 World of elementary particles, The, K. W. FORD, *book review* by L. Marshall, 1023
 Wurtman, R. J., *et al.*: Melatonin synthesis in the pineal gland: effect of light mediated by the sympathetic nervous system, 1328
 Wust, C. J., *et al.*: Actinomycin D: effect on the immune response, 1041
 WYLLIE, M. R. J.: Fundamentals of well log interpretation, The, *book review* of, 560

X

Xanthine dehydrogenase: differences in activity among *Drosophila* strains, E. C. Keller and E. Glassman, 40
 Xenic acid: reduction at the dropping-mercury electrode, B. Jaselskis, 1324
 Xenon fluorosilicate and related compounds, A. F. Clifford and G. R. Zeilenga, 1431
 Xenon tetroxide: mass spectrum, J. L. Huston *et al.*, 1161
 Xenon tetroxide: preparation and some properties, H. Selig *et al.*, 1322
 X-ray diffraction study of a DNA which contains uracil, R. Langridge and J. Marmur, 1450
 X-ray hazard from electron microscopes

(*letter*), V. A. Philips and J. A. Hugo, 1120
 X-ray studies of materials, A. GUINIER and D. L. DEXTER, *book review* by W. W. Beeman, 793
 X-rays: are there cyclic variations in radiosensitivity? M. Menaker, 597

Y

Yabe, Y., *et al.*: Oncogenic effect of human adenovirus type 12, in mice, 46
 Yamamoto, N.: Bacteriophage: an unusual hybrid of serologically unrelated phages P22 and P221, 144
 Yankee scientist: William David Coolidge, J. A. MILLER, *book review* by S. C. Brown, 1159
 Yarnell, R. A., *et al.*: Science, culture, and determinism (*letters*), 1121
 Yochelson, E. L.: TV program for junior scientists (*letter*), 997
 Yokohari, R. *See* Leon, M. A.
 Young, L. C.: *book review* of Introduction to the theory of integration, 235
 Young, R. D.: Drug administration to neonatal rats: effects on later emotionality and learning, 1055
 Young, R. S., and C. Ponnampерuma: Life: origin and evolution (*meeting report*), 384. *See also* Ponnampерuma, C., *et al.*
 Young, W. C., *et al.*: Hormones and sexual behavior, 212
 Young, W. J., *et al.*: Glucose-6-phosphate dehydrogenase in *Drosophila*: X-linked electrophoretic variants, 140

Z

Zaitlin, M., and W. R. Ferris: Unusual aggregation of a nonfunctional tobacco mosaic virus protein, 1451
 Zarrow, M. X. *See* Denenberg, V. H., *et al.*
 Zeilenga, G. R. *See* Clifford, A. F.
 Zeisler, K. F.: Scientists and causes: test bans and traffic jams (*letter*), 430
 Zelitch, I.: Reduction of transpiration of leaves through stomatal closure induced by alkenylsuccinic acids, 692
 ZENKEVITCH, L.: Biology of the seas of the U.S.S.R., *book review* of, 34
 Zinn, D. J.: *book review* of Quiet crisis, The, 458
 Zoology: sixteenth international congress (*meeting report*), G. B. Moment, 164
 Zoonoses (*meeting report*), N. D. Levine, 1464
 Zwolinski, B. J.: *book review* of Physical chemistry of petroleum solvents, 946