
SCIENCE

Index to Volume 137 July–September 1962

Editorial Board

KONRAD B. KRAUSKOPF	H. BURR STEINBACH
EDWIN M. LERNER	WILLIAM L. STRAUS, JR.
PHILIP M. MORSE	EDWARD L. TATUM

Editorial Staff

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

PHILIP H. ABELSON
Editor

ROBERT V. ORMES <i>Managing Editor</i>	ELLEN E. MURPHY <i>Assistant Editor</i>
---	--

NANCY TEIMOURIAN, *Assistant to the Editor*

News: DANIEL S. GREENBERG, PATRICIA D. PADDOCK

Book Reviews: SARAH S. DEES

Editorial Assistants: ELEANOR J. BUTZ, GRAYCE A. FINGER, NANCY S. HAMILTON, OLIVER W. HEATWOLE, EDGAR C. RICH, JOHN E. RINGLE, CECIL F. SWEENEY, CONRAD YUNG-KWAI

Staff Assistants: LILLIAN HSU, MARION Y. KLINE, KAY E. KROZELY

EARL J. SCHERAGO, *Advertising Director*

Published by the

American Association for the Advancement of Science

1515 Massachusetts Avenue, NW, Washington 5, D.C.

Printed in Washington, D.C., by National Publishing Company

Copyright 1962 by the American Association for the Advancement of Science

No.	Date of Issue	Pages	No.	Date of Issue	Pages
3523	6 July	1-52	3530	24 August	561-636
3524	13 July	53-178	3531	31 August	637-704
3525	20 July	179-246	3532	7 September	705-780
3526	27 July	247-298	3533	14 September	781-938
3527	3 August	299-358	3534	21 September	939-1006
3528	10 August	359-484	3535	28 September	1007-1086
3529	17 August	485-560			

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

A

- AAAS, Eighth Philadelphia meeting, R. L. Taylor, 229; election of officers, 1065; financial report for 1961, 694; new editor for science, 267
- AAAS Committee on Science in the Promotion of Human Welfare, Air conservation (*editorial*), 9
- Aaron, J. M. *See* Ford, A. B.
- Abelson, Philip Hauge, new editor of *Science*, F. L. Campbell, 267
- Academic president—educator or caretaker?, The, H. W. DODDS, *book review* by J. A. Perkins, 416
- Action of acetylcholine on bivalve hearts, M. J. Greenberg and D. A. Windsor, 534
- Action of tetanus toxin in the cerebral cortex, V. B. Brooks and H. Asanuma, 674
- Action spectrum for developmental photoinduction of the blue-green alga *Nostoc muscorum*, N. Lazaroff and J. Schiff, 603
- Acute radiosensitivity in mice of differing *W* genotype, S. E. Bernstein, 428
- Adderley, E. E., and E. G. Bowen: Lunar component in precipitation data, 749
- ADDISON, W. E., Structural principles in inorganic compounds, *book review* of, 663
- Additional genetic variation of human serum transferrin, W. C. Parker and A. G. Bearn, 854
- Adjusting data (*letters*), W. Squire; A. W. Astin, 912
- Admission charges (*editorial*), D. Wolffe, 827
- Adrenocorticotropin secretion inhibited by implantation of hydrocortisone in the hypothalamus, J. M. Davidson and S. Feldman, 125
- Adventures in radioisotope research, G. HEVESY, *book review* by M. D. Kamen, 333
- Affanni, J., *et al.*: Higher nervous activity in cats with midpontine pretrigeminal transections, 126
- Air conservation (*editorial*), AAAS Committee on Science in the Promotion of Human Welfare, 9
- Albers, H.: *book review* of *The stars*, 122
- Albertson, N. F. *See* Archer, S., *et al.*
- Aldrich, D. V.: Photoautotrophy in *Gymnodinium breve* Davis, 988
- Alfvén waves, F. I. Boley and J. M. Wilcox, 511
- Alston, R. E., *et al.*: Chromatographic validation of two morphologically similar hybrids of different origins, 1048
- Alveolar epithelial cell mitochondria as source of the surface-active lung lining, M. Klaus *et al.*, 750
- Alveolar pathways during 90-foot, breath-hold dives, K. E. Schaefer and C. R. Carey, 1051
- Ambler, H. R.: An atypical occurrence (*letter*), 464
- Amygdalectomy in the kitten, A. Kling, 429
- Analytic geometry: a vector approach, C. WEXLER, *book review* by D. G. Dickson, 846
- Ancient agriculture in the Negev (*letter*), P. Mayerson, 171
- Ancient Greeks in Ireland? (*letter*), I. J. Yetwin, 949
- Anderson, A. B., *et al.*: On the decay retardant properties of some tropolones, 859
- Anderson, R. W., and P. F. Gustafson: Concentration of cesium-137 in human rib bone, 668
- Andrew, R. J.: Evolution of intelligence and vocal mimicking, 585
- Angular displacement of the visual feedback of motion, J. Gould and K. U. Smith, 619
- Animal tissue techniques, G. L. HUMASON, *book review* by I. R. Königsberg, 332
- Animals used as food by Late Archaic and Woodland cultural groups in New England, J. H. Waters, 283
- Annual review of pharmacology, W. C. CUTTING, (Ed.), *book review* by L. J. Roth, 663
- Anopheles leucosphyrus* identified as a vector of monkey malaria in Malaya, R. H. Wharton *et al.*, 758
- Antarctic peninsula traverse, J. C. Behrendt and P. E. Parks, Jr., 601
- Antibiotics in agriculture (*meeting report*), R. N. Goodman and H. S. Goldberg, 133
- Antigenic structure of *Plasmodium vinckei*, D. Spira and A. Zuckerman, 536
- Apparently new lethal virus disease of infant mice, An, L. M. Kraft, 282
- Appleman, D. E. *See* Eugster, H. P., *et al.*
- Archeological survey and excavation in Iran, 1961, F. Hole, 524
- Archer, S., *et al.*: Narcotic antagonists as analgesics, 541
- Architecture of the human lung, E. R. Weibel and D. M. Gomez, 577
- Artifact in plant autoradiography, An, E. Levi, 343
- Asanuma, H. *See* Brooks, V. B.
- Astin, A. W.: Adjusting data (*letter*), 912
- Atmospheric concentration of *Cladosporium* spores, S. Rich and P. E. Waggoner, 962
- Atomic-absorption spectrophotometry, W. T. ELWELL and J. A. F. GIDLEY, *book review* by G. H. Morrison, 847
- Atypical occurrence, An (*letter*), H. R. Ambler, 464
- AUERBACH, C., Mutation, vol. 1, *book review* of, 218
- Augsberg, T. *See* Ziskind, E.
- Autoimmune response in rabbits injected with rat and rabbit liver ribosomes, M. C. Dodd *et al.*, 688

B

- Bachra, B. N., and O. R. Trautz: Carbonic anhydrase and the precipitation of apatite, 337
- Baldwin, I. L.: *book review* of Silent spring, 1042
- Bard, R. C.: Federal university-laboratory (*letter*), 162
- Barmack, J. E. *See* Kahn, E.
- Barnothy, M. F.: Environmental factors and correlation coefficients (*letter*), 465
- Barr, L. *See* Dewey, M. M.
- Barth's travels in Nigeria, A. H. M. KIRK-GREENE, *book review* by L. C. Briggs, 31
- Basic endocrinology, J. H. U. BROWN and S. B. BARKER, *book review* by A. E. Wilhelmi, 744
- Bassett, C. A. L., and R. O. Becker: Generation of electric potentials by bone in response to mechanical stress, 1063
- Bates, C. H., *et al.*: New high-pressure polymorph of zinc oxide, 993
- BATES, D. R. (Ed.), Quantum theory, vol. 1, *book review* of, 219
- Battle not won (*letter*), H. E. Essex, 911
- BAUER, H. (Ed.), Fortschritte der Zoologie, vol. 14, *book review* of, 217
- Bayer, F. M.: Pogonophora in the western Atlantic ocean, 670
- Bazinet, M. *See* Wharton, D. R. A., *et al.*
- Bearn, A. G. *See* Parker, W. C.
- Beck, J. S., and T. R. Manney: Neutron activation analysis for phosphorus in a study of development in a beetle wing, 865
- Becker, R. O. *See* Bassett, C. A. L.
- Bedrock geology of the Thiel mountains, Antarctica, A. B. Ford and J. M. Aaron, 751
- Beer, B. *See* Valenstein, E. S.
- Behrend, E. R., and M. E. Bitterman: Probability learning (*letter*), 921
- Behrendt, J. C., and P. E. Parks, Jr.: Antarctic peninsula traverse, 601
- Bellinger, P. F.: *book review* of Soil animals, 418
- Bellrose, F. C. *See* Lord, R. D., Jr., *et al.*
- Berger, R. J., and I. Oswald: Eye movements during active and passive dreams, 601
- Berkson, G. *See* Mason, W. A.
- Bern, H. A.: Mouse mammary tumor virus (*meeting report*), 351
- Berner, R. A.: Tetragonal iron sulfide, 669
- Bernstein, S. E.: Acute radiosensitivity in mice of differing *W* genotype, 428
- Best, J. B.: On planarian behavior (*letter*), 452
- Beta brain waves as an index of alertness, R. E. Dustman *et al.*, 533
- Biennial review of anthropology, 1961, B. J. SIEGEL (Ed.), *book review* by G. W. Hewes, 276
- Bigley, N. J. *See* Dodd, M. C., *et al.*
- Biological and oceanographic observations under an Antarctic ice shelf, J. L. Littlepage and J. S. Pearse, 679
- Biological research center (*letter*), J. Martinson, 900
- Biological structure and function, T. W. GOODWIN and O. LINDBERG (Eds.), *book review* by H. Swift, 661
- Biosynthesis of coumarin and herniarin in lavender, S. A. Brown, 977
- Bird, J. G. *See* Archer, S., *et al.*
- Birdsey, E. C., and V. H. Lynch: Utilization of nitrogen compounds by unicellular algae, 763
- Bitterman, M. E. *See* Behrend, E. R.
- Black E. D. *See* Wharton, D. R. A., *et al.*
- Black, H.: Proposed pay raises for scientists in government (*letter*), 949
- Black, H. S. *See* Wheeler, H.
- Blincoe, C., and V. R. Bohman: Bovine thyroid iodine-131 concentrations subsequent to Soviet nuclear weapon tests, 690
- Blood groups and splenomegaly in chick embryos, W. P. Jaffe and M. McDermid, 984
- Blumenthal, G., and H. Hassal: Resumption of testing (*letter*), 191
- Bodian, D.: The generalized vertebrate neuron, 323
- Bohman, V. R. *See* Blincoe, C.
- Boley, F. I., and J. M. Wilcox: Alfvén waves, 511
- Bondareff, W.: *book review* of Structural aspects of ageing, 973
- Bonner, J.: The upper limit of crop yield, 11
- BONNER, J. T., The ideas of biology, *book review* of, 275
- Boring, E. G.: On the moon illusion (*letter*), 900
- Bořkovec, A. B.: Sexual sterilization of insects by chemicals, 1034
- Boswell, R. S. *See* Dustman, R. E., *et al.*
- Botelho, S. *See* Steinberg, S.
- Boucot, A. J.: *book review* of On the morphology and classification of the brachiopod suborder Chonetoida, 744
- BOURNE, G. H. (Ed.), Structural aspects of ageing, *book review* of, 973
- Bovine thyroid iodine-131 concentrations subsequent to Soviet nuclear weapon tests, C. Blincoe and V. R. Bohman, 690
- Bowen, E. G. *See* Adderley, E. E.
- Bowles, F.: *book review* of The world role of universities, 519
- Bowles, J. M. *See* Cannon, H. L.
- Boxer, G. E., and Devlin, T. M.: Conversion of pyruvate to lactate in tumors (*letter*), 918
- Boycott, J. A.: *Salmonella* species in turtles, 761
- Boyd, W. C., and S. Matsubara: Different tastes of enantiomorphous hexoses, 669
- Braceland, F. J.: *book review* of The psychology of Jung, 333
- Bradley, D. A., *et al.*: Lunar synodical period and widespread precipitation, 748
- Breger, I. A., and A. Brown: Kerogen in the Chattanooga shale, 221
- Bridger, M.: Programmed instruction and the arts (*letter*), 930
- Brier, G. W. *See* Bradley, D. A., *et al.*
- Briggs, L. C.: *book review* of Barth's travels in Nigeria, 31
- Bronson, F. H. *See* Eleftheriou, B. E., *et al.*
- BROOKS, S. M., Integrated basic science, *book review* of, 275
- Brooks, V. B., and H. Asanuma: Action of tetanus toxin in the cerebral cortex, 674
- Bross, I. D. J., *et al.*: Tobacco and health (*letter*), 925
- Brown, A. *See* Breger, I. A.
- BROWN, J. H. U., and S. B. BARKER, Basic endocrinology, *book review* of, 744
- Brown, J. L.: Harmonic analysis of visual stimuli below fusion frequency, 686
- Brown, S. A.: Biosynthesis of coumarin and herniarin in lavender, 977
- BROWNLEE, R. B., *et al.*, Elements of chemistry, *book review* of, 32
- Bucha, H. C., *et al.*: Substituted uracil herbicides, 537
- BUCK, R. C. (Ed.), Studies in modern analysis, *book review* of, 28
- Bueker, E. D. *See* Schenkein, I.
- Buerger, M. J.: *book review* of Direct observation of imperfections in crystals, 972
- BULLARD, F. M., Volcanoes, *book review* of, 970
- Bundy, F. P.: Direct conversion of graphite to diamond in static pressure apparatus, 1057; Melting point of graphite at high pressure: heat of fusion, 1055
- Burley, J. W. A. *See* Webb, K. L.
- Bush, L. E.: *book review* of Mathematics manual, 522

C

- Calciophylaxis, H. SELYE, *book review* by M. R. Urist, 120
- Calcium and other ions in blood and skeleton of Nicaraguan fresh-water shark, M. R. Urist, 984
- Calvin, M. *See* Ponnampuruma, C. A., *et al.*
- CALVIN, M., and J. A. BASSHAM, The photosynthesis of carbon compounds, *book review* of, 273
- Campbell, F. L.: Philip Hauge Abelson, new editor of *Science*, 267
- Cannon, H. L., and J. M. Bowles: Contamination of vegetation by tetraethyl lead, 765
- Carbohydrates of living tissues, M. STACEY and S. A. BARKER, *book review* by K. Meyer, 1044
- Carbonic anhydrase and the precipitation of apatite, B. N. Bachra and O. R. Trautz; D. McConnell *et al.*, 337
- Carey, C. R. *See* Schaefer, K. E.
- Carey, F. G., and K. Schmidt-Nielsen: Secretion of iodide by the nasal gland of birds, 866
- Carrea, R., and A. Lanari: Chronic effect of tetanus toxin applied locally to the cerebral cortex of the dog, 342
- CARSON, R., Silent spring, *book review* of, 1042
- Catalytic dehydrogenation of coal, R. Raymond *et al.*, 681
- Center for retired scientists (*letter*), G. Ross, 172
- Cesium-137 in man, C. O. Onstead *et al.*, 508
- Challenge of the universe, J. A. HYNK and N. D. ANDERSON, *book review* by J. B. Irwin, 971
- CHALLINOR, J., A dictionary of geology, *book review* of, 522

- CHALMERS, B. (Ed.), Progress in materials science, vol. 9, pts. 1-5, *book review of*, 331
- Chance, B., *et al.*: Intracellular oxidation-reduction states in vivo, 499
- Changes in permeability induced by victorin, H. Wheeler and H. S. Black, 983
- Chave, K. E., *et al.*: Observations on the solubility of skeletal carbonates in aqueous solutions, 33
- Chemical control of water loss in growing plants, E. M. Stoddard and P. M. Miller, 224
- Chemical effect of ionizing radiation on cytosine, C. A. Ponnamperna *et al.*, 605
- Chloroplasts of *Euglena gracilis* affected by furadantin, D. R. McCalla, 225
- Chromatographic validation of two morphologically similar hybrids of different origins, R. E. Alston *et al.*, 1048
- Chronic effect of tetanus toxin applied locally to the cerebral cortex of the dog, R. Carrea and A. Lanari, 342
- Ciak, J., and F. E. Hahn: Concurrent morphological and chemical events in *Staphylococcus aureus* exposed to penicillin, 982
- Circadian rhythm in the in vitro response of mouse adrenal to adrenocorticotrophic hormone, F. Ungar and F. Halberg, 1058
- Civil service salaries (*letter*), B. Lepson, 166
- Clams as indicators of strontium-90, D. J. Nelson, 38
- Classification and nomenclature of enzymes, R. H. S. Thompson, 405
- Clemente, C. D. *See* Wyrwicka, W., *et al.*
- Clements, J. A. *See* Klaus, M., *et al.*
- Cochran, W. W. *See* Lord, R. D., Jr., *et al.*
- Cockrum, E. L. *See* Davis, R.
- Cohen, A. J., and H. L. Smith: Variable transmission silicate glasses sensitive to sunlight, 981
- Cohen, P. *See* Chance, B., *et al.*
- Collected papers of Lord Rutherford of Nelson, The, vol. 1, *book review by* E. Segré, 1044
- Comparative biochemistry, vol. 3, pt. A, M. FLORKIN and H. S. MASON (Eds.), *book review by* W. J. van Wagtenonk, 745
- Comparative pathology (*meeting report*), H. L. Ratcliffe, 550
- Comprehension and understanding (*letters*), G. Tullock; M. H. Marx, 462
- Computer control systems technology, C. T. LEONDES (Ed.), *book review by* G. Franklin, 595
- Concentration of cesium-137 in human rib bone, R. W. Anderson and P. F. Gustafson, 668
- Concurrent morphological and chemical events in *Staphylococcus aureus* exposed to penicillin, J. Ciak and F. E. Hahn, 982
- Condensed chemical dictionary, A. ROSE and E. ROSE, *book review by* R. H. Eastman, 523
- Conditioning of extrasystoles in humans with respiratory maneuvers as unconditional stimulus, J. Perez-Cruet, 1060
- Conditioning of induced electroencephalographic sleep patterns in the cat, W. Wyrwicka *et al.*, 616
- Conditions influencing vocal responsiveness of infant chimpanzees, W. A. Mason and G. Berkson, 127
- Congdon, C. C.: *book review of* Diagnosis and treatment of acute radiation injury, 123
- Congressional seminars (*editorial*), D. Wolffe, 309
- Contamination of vegetation by tetraethyl lead, H. L. Cannon and J. M. Bowles, 765
- Continuous culture of a melanotic cell line from the golden hamster, G. E. Moore *et al.*, 986
- Convenient assay of xanthine dehydrogenase in single *Drosophila melanogaster*, E. Glassman, 990
- Conversion of pyruvate to lactate in tumors (*letters*), E. T. Rakitzis; G. E. Boxer and T. M. Devlin, 918
- Cope, F. W. *See* Sever, R. J., *et al.*
- Cornelius, C. E., and J. J. Kaneko: Erythrocyte life span in the guanaco, 673
- Corner, E. J. H.: Evolution in *Ficus* (*letter*), 573
- Correspondence of Isaac Newton, The, vol. 3, H. W. TURNBULL (Ed.), *book review by* D. J. de Solla Price, 743
- Corwin, A. H.: *book review of* Structure and properties of organic compounds, 334
- Cost of credit, The (*letters*), R. L. D. Morse; R. Cox, 168
- Cotton, J. E. *See* Koteff, C.
- COURANT, R., and D. HILBERT, Methods of mathematical physics, vol. 2, *book review of*, 334
- Court, A., and R. W. Lenhard, Jr.: Wind fluctuations in the troposphere (*letter*), 191
- Cover pictures: aluminum oxide platelet (31 Aug.); bile acids (21 Sept.); *Braarudosphaera undata* Stradner (10 Aug.); cocklebur (7 Sept.); detonating spiral of LEDC (20 July); *Drosophila melanogaster* (13 July); germanium single crystal (3 Aug.); human lung (24 Aug.); prehistoric blue pigment from Chicken Itza, Yucatan (17 Aug.); snow erosion (6 July); soil horizons (28 Sept.); tapetum of the cat's eye (27 July); water lily, *Victoria amazonica* (14 Sept.)
- COX, D. R., and W. L. SMITH, Queues, *book review of*, 742
- Cox, R.: The cost of credit (*letter*), 168
- Cropper, W. H.: Radiation effects on the reactivity of solid surfaces, 955
- Crystalline structure and surface reactivity, H. C. Gatos, 311
- Cupery, W. E. *See* Bucha, H. C., *et al.*
- Curl, R. L., Speleology (*meeting report*), 285
- Current problems in research: Induction and extinction of mammary cancer, C. Huggins and N. C. Yang, 257; Physiology of flowering, J. A. D. Zeevaart, 723; Radiation effects on the reactivity of solid surfaces, W. H. Cropper, 955; Soil classification in the United States, R. W. Simonson, 1027
- CUTTING, W. C. (Ed.), Annual review of pharmacology, *book review of*, 663
- D**
- Daily rhythm in the reaction of fish to light, R. E. Davis, 430
- DALTON, A. J., and F. HAGUENAU (Eds.): Ultrastructure in biological systems, vol. 1, *book review of*, 849
- Davenport, D.: On planarian behavior (*letter*), 452
- Davidson, J. M., and S. Feldman: Adrenocorticotropin secretion inhibited by implantation of hydrocortisone in the hypothalamus, 125
- Davis, J. B., and H. F. Yarbrough, Jr.: Preliminary experiments on a microbial fuel cell, 615
- Davis, R., and E. L. Cockrum: Repeated homing exhibited by a female pallid bat, 341
- Davis, R. E.: Daily rhythm in the reaction of fish to light, 430
- Deamer, D. W., *See* McConnell, D., *et al.*
- Decay retardant properties of some tropolones, A. B. Anderson *et al.*, 859
- Deffeyes, K. S. *See* Chave, K. E., *et al.*
- Dement, W. *See* Kahn, E.
- Dennen, W. H.: *book review of* On the external characters of minerals, 419
- de Solla Price, D. J.: *book review of* The correspondence of Isaac Newton, vol. 3, 743
- Determination of the mixing ratios of water vapor and carbon dioxide in the stratosphere, S. F. Rohrbough, 599
- Determination of the tropospheric residence time of lead-210, L. M. Fry and K. K. Menon, 994
- Deutsch, J. A. *See* Howarth, C. I.
- Devlin, T. M. *See* Boxer, G. E.
- Dewey, M. M., and L. Barr: Intercellular connection between smooth muscle cells: the nexus, 670
- Dexter, R. W. *See* Zinn, D. J.
- Dhanamitta, S. *See* Gyorgy, P., *et al.*
- Diagnosis and treatment of acute radiation injury, *book review by* C. C. Congdon, 123
- Dialyzable cofactor in nerve growth promoting protein from mouse salivary glands, I. Schenkein and E. D. Bueker, 433
- Dickie, M. M. *See* Sidman, R. L., *et al.*
- Dickson, D. G.: *book review: Introductory college mathematics; Elementary and advanced trigonometry; Analytic geometry: a vector approach; Foundations of geometry and trigonometry*, 846
- Dictionary of commercial chemicals, F. SNELL and C. SNELL, *book review by* M. Hoseh, 523
- Dictionary of geological terms, *book review by* C. R. Longwell, 522
- Dictionary of geology, A. J. CHALLINOR, *book review by* C. R. Longwell, 522
- Different tastes of enantiomorphous hexoses, W. C. Boyd and S. Matsubara, 669
- Direct conversion of graphite to diamond in static pressure apparatus, F. P. Bundy, 1057
- Direct observation of imperfections in crystals, J. B. NEWKIRK and J. H. WERNICK (Eds.), *book review by* M. J. Buerger, 972
- Dobzhansky, T.: Genetics and equality, 112

- Dobzhansky, T.: *book review* of Problemy radiacionnoi genetiki, 276
- Documentation and the individual, R. R. Shaw, 409
- Dodd, M. C., *et al.*: Autoimmune response in rabbits injected with rat and rabbit liver ribosomes, 688
- DODDS, H. W., The academic president—educator or caretaker?, *book review* of, 416
- Dodge, S. H. *See* Walk, R. D.
- Domestication of cattle, On the, E. Isaac, 195
- DOYLE, P. A., Readings in pharmacy, *book review* of, 1044
- Dreams of reason: science and utopias, The, R. DUBOS, *book review* by B. Glass, 216
- Drive decay: the cause of fast "extinction" of habits learned from brain stimulation, C. I. Howarth and J. A. Deutsch, 35
- Droz, B., and C. P. Leblond: Migration of proteins along the axons of the sciatic nerve, 1047
- DRY, A. M., The psychology of Jung, *book review* of, 333
- DUBININ, N. P., Problemy radiacionnoi genetiki, *book review* of, 276
- DUBOS, R., The dreams of reason: science and utopias, *book review* of, 216
- Duncan, C. *See* Anderson, A. B., *et al.*
- Dunning, K. L. *See* O'Keefe, J. A., *et al.*
- DuShane, G.: *editorials*: The editorial chair, 255; You can't go home again, 89
- Dustman, R. E., *et al.*: Beta brain waves as an index of alertness, 533
- DYSON, J. L., The world of ice, *book review* of, 416

E

- EAMES, F. E., *et al.*, Fundamentals of mid-Tertiary stratigraphical correlation, *book review* of, 31
- Early comments on the moon illusion (*letter*), N. I. Harway, 1022
- Eastman, R. H.: *book review*: Condensed chemical dictionary; New dictionary of chemistry, 523
- Edgerton, H. E. *See* Rogers, G. T.
- Editorial chair, The (*editorial*), G. DuShane, 255
- Editorials*: Admission charges, 827; Air conservation, 9; Congressional seminars, 309; The editorial chair, 255; 1895–, 643; The keeper of the gate, 721; Momentous innovation, 953; The prophetic quality, 193; Stability and change, 1025; The thalidomide lesson, 497; Where shall we meet?, 575; Which yardstick?, 397; You can't go home again, 89
- Edsall, J. T.: Science and democracy (*letter*), 456
- Edwards, R. R.: Iodine-129: its occurrence in nature and its utility as a tracer, 851
- Effect of rotation on flowering response of *Xanthium pennsylvanicum*, T. Hoshizaki and K. C. Hamner, 535
- Effects of early perceptual restriction on simple visual discrimination, R. Melzack, 978
- Effects of perceptual training at three age levels, D. Elkind *et al.*, 755
- Egdahl, R. H. *See* Mannick, J. A.
- Ehrlich, P. R., and R. W. Holm: Patterns and populations, 652
- 1895– (*editorial*), D. Wolffe, 643
- Electrical activity in single myocardial cells of *Limulus polyphemus*, F. V. McCann, 340
- Electron spin resonance of nitric oxide–hemoglobin complexes in solution, K. M. Sancier *et al.*, 752
- Electron-microscope studies of *Braarudosphaera bigelowi* and some related coccolithophorids, W. W. Hay and K. M. Towe, 426
- Eleftheriou, B. E., *et al.*: Interaction of olfactory and other environmental stimuli on implantation in the deer mouse, 764
- Elementary and advanced trigonometry, K. S. MILLER and J. B. WALSH, *book review* by D. G. Dickson, 846
- Elements of chemistry, R. B. BROWNLEE *et al.*, *book review* by C. H. Sorum, 32
- Elements of infrared technology, P. W. KRUSE *et al.*, *book review* by W. J. Fredericks, 123
- Elements of queuing theory, T. L. SAATY, *book review* by P. M. Morse, 742
- ELIEL, E. L., Stereochemistry of carbon compounds, *book review* of, 1046
- Elkind, D., *et al.*: Effects of perceptual training at three age levels, 755
- Ellis, L. M. *See* Bucha, H. C., *et al.*
- Ellobiopsidae from the Pacific, J. E. McCauley, 867
- Elving, P. J.: *book review* of Standard methods of chemical analysis, 121
- ELWELL, W. T., and J. A. F. GIDLEY, Atomic-absorption spectrophotometry, *book review* of, 847
- Emerson, R.: *book review* of Fungi in oceans and estuaries, 662
- Endogenous conditioning to abnormal cerebral electrical transients in man, J. R. Stevens, 974
- Enhanced afterglow in neon by removal of electrical excitation, G. T. Rogers and H. E. Edgerton, 34
- Environmental factors and correlation coefficients (*letters*), M. F. Barnothy; W. C. Levengood, 465
- Equilibration of isoagglutinins of human group O serum, J. M. Solomon, 684
- Erratum*: for B. Chance *et al.*, Intracellular oxidation-reduction states in vivo [137, 499 (17 Aug. 1962)], 660; for R. B. Nathanson, Deoxyribonucleic acid mediates sensitization of penicillin-resistant *Staphylococcus* [135, 916 (16 Mar. 1962)], 969
- Erythrocyte life span in the guanaco, C. E. Cornelius and J. J. Kaneko, 673
- Essex, H. E.: Battle not won (*letter*), 911
- Ethical issues (*letter*), A. Wittenberg, 468
- Eugster, H. P., *et al.*: Unit-cell dimensions of natural and synthetic scapolites, 853
- Evidence for direct stimulation of the mammalian nervous system with ionizing radiation, E. L. Hunt and D. J. Kimeldorf, 857
- Evolution in *Ficus* (*letter*), E. J. H. Corner, 573
- Evolution of intelligence and vocal mimicking, R. J. Andrew, 585
- Evolution of life, The, F. H. T. RHODES, *book review* by L. Van Valen, 972
- Excitable cells in *Mimosa*, T. Sibaoka, 226
- Experimental embryology, R. RUGH, *book review* by F. H. Moyer, 521
- External characters of minerals, On the, A. G. WERNER, *book review* by W. H. Dennen, 419
- Eye movements during active and passive dreams, R. J. Berger and I. Oswald, 601
- Eyles, D. E. *See* Wharton, R. H., *et al.*

F

- Fact and fashion in scientific nomenclature (*letter*), R. W. Wescott, 913
- Factors causing seasonal forms in *Ascia monuste* (Lepidoptera), R. W. Pease, Jr., 987
- Fain, J. N.: Federal university-laboratory (*letter*), 162
- Farrand, W. R.: Frozen mammoths (*letter*), 449
- Fatehchand, R., *et al.*: Retinal receptor potentials and their linear relationship to light intensity, 666
- Federal university-laboratory (*letters*), C. J. Shellabarger; W. J. Platt; J. N. Fain; R. C. Bard; A. M. Weinberg, 162
- Feldman, S. *See* Davidson, J. M.
- Feshbach, H.: *book review* of "Frontiers in physics" series, 846
- Findlay, J. W.: Protecting the science of radio astronomy, 829
- Fischer, E.: *book review* of Fortschritte der Zoologie, vol. 14, 217
- Fisher, A. E. *See* Vaughan, E.
- Fisher, C. *See* Kahn, E.
- FLAHERTY, B. E. (Ed.), Psychophysiological aspects of space flight, *book review* of, 1045
- FLETCHER, A., *et al.*, Index of mathematical tables, vols. 1 and 2, *book review* of, 332
- Flight behavior of a fly alighting on a ceiling, W. G. Hyzer, 609
- FLORKIN, M., and H. S. MASON (Eds.), Comparative biochemistry, vol. 3, pt. A, *book review* of, 745
- Ford, A. B., and J. M. Aaron: Bedrock geology of the Thiel mountains, Antarctica, 751
- Formation of carbon monoxide during seed germination and seedling growth, S. M. Siegel *et al.*, 683
- Fortschritte der Zoologie, vol. 14, H. BAUER (Ed.), *book review* by E. Fischer, 217
- Foundations of geometry and trigonometry, H. LEVI, *book review* by D. G. Dickson, 846
- Fox, S. S., and J. H. O'Brien: Inhibition and facilitation of afferent information by the caudate nucleus, 423
- Frajola, W. J. *See* McConnell, D., *et al.*
- See also* Guda, H. E., *et al.*
- Franklin, G.: *book review* of Computer control systems technology, 595
- Fredericks, W. J.: *book review* of Elements of infrared technology, 123
- Freeman, G. *See* Sancier, K. M., *et al.*
- "Frontiers in physics" series, D. PINES,

- (Ed.), *book review* by H. Feshbach, 846
- Frozen mammoths (*letters*), H. E. Lippman; W. R. Farrand, 449
- Fry, L. M., and K. K. Menon: Determination of the tropospheric residence time of lead-210, 994
- Fry, L. M. *See* Kuroda, P. K., *et al.*
- Fuchs, L. H.: Occurrence of whitlockite in chondritic meteorites, 425
- Fuller, R. W., *et al.*: Serum uric acid in mongolism, 868
- Fundamentals of mid-Tertiary stratigraphical correlation, F. E. EAMES *et al.*, *book review* by W. P. Woodring, 31
- Fungi in oceans and estuaries, T. W. JOHNSON, JR., and F. K. SPARROW, JR., *book review* by R. Emerson, 662
- FURMAN, N. H. (Ed.), Standard methods of chemical analysis, *book review* of, 121
- Fusfeld, H. I.: On withholding information (*letter*), 573

G

- Gaffron, H.: *book review* of The photosynthesis of carbon compounds, 273
- Garrels, R. M. *See* Chave, K. E., *et al.*
- Gas spitting by alarmed fish disturbs their hydrostatic equilibrium, F. J. Verheijen, 864
- Gases in tektite bubbles, J. A. O'Keefe *et al.*, 228
- Gatos, H. C.: Crystalline structure and surface reactivity, 311
- Gene in *Drosophila* that produces a new chromosomal banding pattern, A. L. Levine and L. Van Valen, 993
- General limits of space travel, The, S. von Hoerner, 18
- General pattern for American public higher education, A. T. R. MCCONELL, *book review* by L. H. Lanier, 743
- Generalized vertebrate neuron, The, D. Bodian, 323
- Generation by visible light of labile free radicals in the melanin granules of the eye, R. J. Sever *et al.*, 128
- Generation of electric potentials by bone in response to mechanical stress, C. A. L. Bassett and R. O. Becker, 1063
- Genesis of cancer (*letter*), G. G. Simpson, 460
- Genetic composition and cultural structure (*letters*), A. Leeds; G. G. Simpson, 914
- Genetic differences among White Leghorn chicks in requirements of arginine, M. C. Nesheim and F. B. Hutt, 691
- Genetics and equality, T. Dobzhansky, 112
- Geyer, V. B. *See* Dodd, M. C., *et al.*
- Giarman, N. J. *See* McKean, C. M., *et al.*
- Gilliland, W. N.: Possible continental continuation of the Mendocino fracture zone, 685
- Gillispie, C. C.: *book review* of Histoire générale des sciences, vol. 3, pt. 1, 418
- Givens, W.: *book review*: Mathematics: a cultural approach; Popular lectures in mathematics; Studies in modern analysis, 28
- Glass, B.: *book review* of The dreams of reason: science and utopias, 216
- Glassman, E.: Convenient assay of xanthine dehydrogenase in single *Drosophila melanogaster*, 990
- Go, E. *See* Elkind, D., *et al.*

- Goethite in radular teeth of recent marine gastropods, H. A. Lowenstam, 279
- Goldberg, H. S. *See* Goodman, R. N.
- Gomez, D. M. *See* Weibel, E. R.
- Goodman, R. N., and H. S. Goldberg: Antibiotics in agriculture (*meeting report*), 133
- GOODWIN, T. W., and O. LINDBERG (Eds.), Biological structure and function, *book review* of, 661
- GORBMAN, A., and H. A. BERN, A textbook of comparative endocrinology, *book review* of, 744
- GOULD, E. S., Inorganic reactions and structure, *book review* of, 417
- Gould, J., and K. U. Smith: Angular displacement of the visual feedback of motion, 619
- Government regulations (*letter*), 951
- Government-sponsored research (*letter*), J. E. Prier, 161
- Graubard, M.: *book reviews*: Integrated basic science, 275; Introductory zoology, 1045
- Gravity factor for auxin transport, C. J. Lyon, 432
- Gray, D. E.: Information and research—blood relatives or in-laws?, 263
- Gray, J. *See* Martin, P. S.
- Gray, W.: Maneuvers on lattices (*letter*), 571
- Greenberg, D. S. (*news and comment*): Arms agency, 738; atomic power, 268; civil defense, 214, 658; International Atomic Energy Agency, 966; medical research funds and NIH, 115; military in space, 23; NIH administration, 269; Navy's radio telescope, 327; news from Geneva, 842; population explosion, 1038; Soviet space feat, 590; space program, 212; test ban, 514; tobacco and health, 328; U.S. Office of Education, 413
- Greenberg, M. J., and D. A. Windsor: Action of acetylcholine on bivalve hearts, 534
- GREENWOOD, J. A., and H. O. HARTLEY, Guide to tables in mathematical statistics, *book review* of, 332
- Gregg, J. R.: *book review* of The ideas of biology, 275
- Grinsfelder, H.: Research costs (*letter*), 467
- Grunbaum, B. W. *See* Laudel, A. F., *et al.*
- Guda, H. E., *et al.*: Molecular changes in deoxyribonucleic acid induced by x-rays, 607
- Guide to tables in mathematical statistics, J. A. GREENWOOD and H. O. HARTLEY, *book review* by H. C. Thacher, Jr., 332
- Gustafson, P. F. *See* Anderson, R. W.
- Gyorgy, P., *et al.*: Protective effects of human milk in experimental staphylococcus infection, 338

H

- Hahn, F. E. *See* Ciak, J.
- Halberg, F. *See* Ungar, F.
- Hallucinations in sensory deprivation—method or madness?, E. Ziskind and T. Augsberg, 992
- Hamner, K. C. *See* Hoshizaki, T.
- Handbook of North American birds, vol. 1, R. S. PALMER (Ed.), *book review* by A. H. Miller, 520
- Handbook of statistical tables, D. B. OWEN, *book review* by H. C. Thacher, Jr., 849
- Harmonic analysis of visual stimuli below fusion frequency, J. L. Brown, 686
- Harris, L. S. *See* Archer, S., *et al.*
- Harrod, J. E. *See* Bucha, H. C., *et al.*
- Hartman, B. O.: *book review* of Psychophysiological aspects of space flight, 1045
- Harway, N. I.: Early comments on the moon illusion (*letter*), 1022
- Hassal, H. *See* Blumenthal, G.
- Haupt, R. E., and D. M. Wall: High-speed cinematography of muscle contraction, 132
- Hay, W. W., and K. M. Towe: Electron-microscope studies of *Braarudosphaera bigelowi* and some related coccolithophorids, 426
- Heckscher, A.: The prophetic quality (*editorial*), 193
- Heterogeneity of human serum beta-lipoprotein, S. H. Lawrence and F. C. Shean, 227
- Hevesy, G., Adventures in radioisotope research, *book review* of, 333
- Hewes, G. W.: *book review* of Biennial review of anthropology, 1961, 276
- Hicks, L. *See* Marsh, J. T., *et al.*
- High-speed cinematography of muscle contraction, R. E. Haupt and D. M. Wall, 132
- Higher nervous activity in cats with mid-pontine pretectal transections, J. Affanni *et al.*, 126
- Hiraizumi, Y., and E. Matsunaga: Meiotic drive, 861
- Histoire générale des sciences, vol. 3, pt. 1, R. TATON (Ed.), *book review* by C. C. Gillispie, 418
- History of chemistry, A, J. R. PARTINGTON, *book review* by L. P. Williams, 594
- Hodges, H. L. *See* Kuroda, P. K., *et al.*
- Hole, F.: Archeological survey and excavation in Iran, 1961, 524
- Holm, R. W. *See* Ehrlich, P. R.
- HONEGGER, G., and P. VAN DE KAMP, Space, the architecture of the universe, *book review* of, 1046
- Honey, J. C.: NASA's fellowship program (*letter*), 166
- Horne, D. *See* Alston, R. E., *et al.*
- Horsfall, F. L., Jr.: *book review* of Ultrastructure in biological systems, 849
- Hoseh, M.: *book review* of Dictionary of commercial chemicals, 523
- Hoshizaki, T., and K. C. Hamner: Effect of rotation on flowering response of *Xanthium pennsylvanicum*, 535
- Howarth, C. I., and J. A. Deutsch: Drive decay: the cause of fast "extinction" of habits learned from brain stimulation, 35
- Huggins, C., and N. C. Yang: Induction and extinction of mammary cancer, 257
- HUMASON, G. L., Animal tissue techniques, *book review* of, 332
- Hunt, E. L., and D. J. Kimeldorf: Evidence for direct stimulation of the mammalian nervous system with ionizing radiation, 857
- Huntsman, A. G.: World population problem (*letter*), 1019
- HUTCHINSON, E., Physical chemistry, *book review* of, 596
- Hutt, F. B. *See* Nesheim, M. C.
- HYNEK, J. A., and N. D. ANDERSON, Challenge of the universe, *book review* of, 971
- Hyzer, W. G.: Flight behavior of a fly alighting on a ceiling, 609

I

- Icosahedral models and viruses: a critical evaluation, H. D. Mayor and J. L. Melnick, 613
- Ideas of biology, The, J. T. BONNER, *book review* by J. R. Gregg, 275
- ILBERRY, P. L. T. (Ed.), *Radiobiology, book review* of, 219
- Incidence of color in immediately recalled dreams, E. Kahn *et al.*, 1054
- Increase in diffusible auxin after treatment with gibberellin, S. Kuraishi and R. M. Muir, 760
- Index of mathematical tables, An, vols. 1 and 2, A. FLETCHER *et al.*, *book review* by H. C. Thacher, Jr., 332
- Individuality of human serum by immunoelectrophoresis, A. F. Laudel *et al.*, 862
- Induction and extinction of mammary cancer, C. Huggins and N. C. Yang, 257
- Information and research—blood relatives or in-laws?, D. E. Gray, 263
- Inhibition and facilitation of afferent information by the caudate nucleus, S. S. Fox and J. H. O'Brien, 423
- Inorganic reactions and structure, E. S. GOULD, *book review* by H. D. Kaesz, 417
- Integrated basic science, S. M. BROOKS, *book review* by M. Graubard, 275
- Interaction of olfactory and other environmental stimuli on implantation in the deer mouse, B. E. Eleftheriou *et al.*, 764
- Intercellular connection between smooth muscle cells: the nexus, M. M. Dewey and L. Barr, 670
- International biological program (*meeting report*), G. L. Stebbins, 768
- Intracellular oxidation-reduction states in vivo, B. Chance *et al.*, 499
- Introduction to evolution, P. A. MOODY, *book review* by L. Van Valen, 972
- Introduction to the theory of queues, L. TAKÁCS, *book review* by P. M. Morse, 742
- Introductory college mathematics, C. G. JAEGER and H. M. BACON, *book review* by D. G. Dickson, 846
- Introductory zoology, L. C. PETTIT, *book review* by M. Graubard, 1045
- Iodine-129: its occurrence in nature and its utility as a tracer, R. R. Edwards, 851
- Irwin, J. B.: *book reviews*: Challenge of the universe, 971; Space, the architecture of the universe, 1046
- Isaac, E.: On the domestication of cattle, 195
- Isolation of the sex attractant of the American cockroach, D. R. A. Wharton *et al.*, 1062

J

- JAEGER, C. G., and H. M. BACON, *Introductory college mathematics, book review* of, 846
- Jaffe, W. P., and E. M. McDermid: Blood groups and splenomegaly in chick embryos, 984
- Jensen, M. L.: Sulfur isotopes (*meeting report*), 470
- Jobsis, F. *See* Chance, B., *et al.*
- JOHNSON, T. W., JR., and F. K. SPARROW, JR., Fungi in oceans and estuaries, *book review* of, 662

K

- KACHROO, P. (Ed.), *Proceedings of the symposium on algology, book review* of, 122
- Kaesz, H. D.: *book review* of *Inorganic reactions and structure*, 417
- Kahn, E., *et al.*, Incidence of color in immediately recalled dreams, 1054
- Kalkstein, M. I.: Rhodium-102 high-altitude tracer experiment, 645
- Kamen, M. D.: *book review* of *Adventures in radioisotope research*, 333
- Kaneko, J. J. *See* Cornelius, C. E.
- KARE, M. R., and B. P. HALPERN (Eds.), *Physiological and behavioral aspects of taste, book review* of, 662
- Kaufman, L. *See* Rock, I.
- Keary, F. V. *See* Onstead, C. O., *et al.*
- Keats, A. S. *See* Archer, S., *et al.*
- Keeper of the gate, The (*editorial*), D. Wolfe, 721
- Kellogg, W. N.: Sonar system of the blind, 399
- Kent, A.: Research is a gamble (*letter*), 949
- Kerogen in the Chattanooga shale, I. A. Breger and A. Brown, 221
- Kerr, P. F.: Possible quick-clay motion in turbidity currents, 420
- Kevan, D. K. M., Soil animals, *book review* of, 418
- Kikuchi, Y. *See* Moore, G. E., *et al.*
- Kimeldorf, D. J. *See* Hunt, E. L.
- Kirby-Smith, J. S.: *book review* of *Radio-biology*, 219
- Kirk, P. L. *See* Laudel, A. F., *et al.*
- KIRK-GREENE, A. H. M., Barth's travels in Nigeria, *book review* of, 31
- Klaus, M., *et al.*: Alveolar epithelial cell mitochondria as source of the surface-active lung lining, 750
- KLINE, M., Mathematics: a cultural approach, *book review* of, 28
- Kling, A.: Amygdalectomy in the kitten, 429
- Koegler, R. R. *See* Elkind, D., *et al.*
- Konigsberg, I. R.: *book reviews*: Animal tissue techniques, 332; Methods of tissue culture, 275
- Koteff, C., and J. E. Cotton: Preliminary results of recent deep drilling on Cape Cod, Massachusetts, 34
- Kraft, L. M.: An apparently new lethal virus disease of infant mice, 282
- KRUSE, P. W., *et al.*, Elements of infrared technology, *book review* of, 123
- Kuraishi, S., and R. M. Muir: Increase in diffusible auxin after treatment with gibberellin, 760
- Kuroda, P. K., and J. Nix: Strontium-90 fallout from the 1961 Soviet nuclear detonations, 991
- Kuroda, P. K., *et al.*: Stratospheric residence time of strontium-90, 15

L

- Lanari, A. *See* Carrea, R.
- Lane, P. W. *See* Sidman, R. L., *et al.*
- Lahier, L. H.: *book review* of A general pattern for American public higher education, 743
- Lapp, R. E.: Nevada test fallout and radioiodine in milk, 756
- Laties, G. G.: *book review* of Mineral salts absorption in plants, 596
- Laudel, A. F., *et al.*: Individuality of

- human serum by immunoelectrophoresis, 862
- Laufer, M. *See* Fatehchand, R., *et al.*
- Laughlin, W. S., and W. G. Reeder: Revision of Aleutian prehistory, 856
- Law for loudness discrimination, A. J. L. Stewart, 618
- Lawrence, S. H., and F. C. Shean: Heterogeneity of human serum beta-lipoprotein, 227
- Lazaroff, N., and J. Schiff: Action spectrum for developmental photoinduction of the blue-green alga *Nostoc muscorum*, 603
- Leeds, A.: Genetic composition and cultural structure (*letter*), 914
- Lehner, D. F. *See* Moore, G. E., *et al.*
- Lemmon, R. M. *See* Ponnamperna, C. A., *et al.*
- Lenhard, R. W., Jr. *See* Court, A.
- LEONDES, C. T. (Ed.), Computer control systems technology, *book review* of, 595
- Lepson, B.: Civil service salaries (*letter*), 166
- Less, L. A. *See* Moore, G. E., *et al.*
- Lessler, M. A. *See* Guda, H. E., *et al.*
- Lester, R. N. *See* Alston, R. E., *et al.*
- Levengood, W. C.: Environmental factors and correlation coefficients (*letter*), 465
- Levi, E.: An artifact in plant autoradiography, 343
- LEVI, H., Foundations of geometry and trigonometry, *book review* of, 846
- Levin, M. L. *See* Bross, I. D. J., *et al.*
- Levine, L., and L. Van Valen: A gene in *Drosophila* that produces a new chromosomal banding pattern, 993
- Levine, N. D.: Martian antifreeze (*letter*), 928
- Li, C. H. *See* Stewart, J.
- Lifelike forms in meteorites (*meeting report*), H. C. Urey, 623
- Lippman, H. E.: Frozen mammoths (*letter*), 449
- Littlepage, J. L., and J. S. Pearse: Biological and oceanographic observations under an Antarctic ice shelf, 679
- Longwell, C. R.: *book review*: A dictionary of geology; Dictionary of geological terms, 522
- Lord, R. D., Jr., *et al.*: Radiotelemetry of the respiration of a flying duck, 39
- Lotz, J. R.: *book review* of The world of ice, 416
- Loux, H. M. *See* Bucha, H. C., *et al.*
- Lowenstam, H. A.: Goethite in radular teeth of recent marine gastropods, 279
- Lowman, P. D., Jr. *See* O'Keefe, J. A., *et al.*
- Luce, M. W. *See* Fuller, R. W., *et al.*
- Lunar component in precipitation data, E. E. Adderley and E. G. Bowen, 749
- Lunar synodical period and widespread precipitation, D. A. Bradley *et al.*, 748
- Lykken, D. T.: Preception in the rat: autonomic response to shock as function of length of warning interval, 665
- Lynch, V. H. *See* Birdsey, E. C.
- Lyon, C. J.: Gravity factor for auxin transport, 432

M

- Maas, J. W.: Neurochemical differences between two strains of mice, 621
- MacKenzie, C. L., Jr.: Transportation of oyster drills by horseshoe "crabs," 36

- Mackie, G. O.: Pigment effector cells in a cnidarian, 689
- Macromolecular specificity and biological memory, F. O. SCHMITT (Ed.), *book review* by E. A. Schneour, 849
- Male sexual behavior induced by intracranial electrical stimulation, E. Vaughan and A. E. Fisher, 758
- Maloney, C. J.: Proving grounds in the behavioral sciences (*letter*), 458
- Maneuvers on lattices (*letters*), W. Gray; D. Page, 571
- Manney, T. R. *See* Beck, J. S.
- Mannick, J. A., and R. H. Egdahl: Ribonucleic acid in "transformation" of lymphoid cells, 976
- Marchiafava, P. L. *See* Affanni, J., *et al.*
- Marciniak, E., *et al.*: Toxicity of blood clotting factors, 421
- Marsh, J. T., *et al.*: Some effects of room acoustics on evoked auditory potentials, 280
- Marshall, M. S.: Questions and answers (*letter*), 929
- Martian antifreeze (*letters*), N. D. Levine; F. Salisbury, 928
- Martin, P. S., and J. Gray: Pollen analysis and the Cenozoic, 103
- Martinson, J.: Biological research center (*letter*), 900
- Marx, M. H.: Comprehension and understanding (*letter*), 462
- Mason, W. A., and G. Berkson: Conditions influencing vocal responsiveness of infant chimpanzees, 127
- Mathematics: a cultural approach, M. KLINE, *book review* by W. Givens, 28
- Mathematics manual, F. S. MERRITT, *book review* by L. E. Bush, 522
- Matsubara, S. *See* Boyd, W. C.
- Matsunaga, E. *See* Hiraizumi, Y.
- Mattern, C. F. T.: Polyoma and papilloma viruses: do they have 42 or 92 subunits?, 612
- Mayall, N. U.: The story of the Crab Nebula, 91
- Mayer, J.: Studies on the metric system proposal (*letter*), 1021
- Mayerson, P.: Ancient agriculture in the Negev (*letter*), 171
- Mayor, H. D., and J. L. Melnick: Icosahedral models and viruses: a critical evaluation, 613
- McCalla, D. R.: Chloroplasts of *Euglena gracilis* affected by furadantin, 225
- McCann, F. V.: Electrical activity in single myocardial cells of *Limulus polyphenus*, 340
- McCauley, J. E.: Ellobiopsidae from the Pacific, 867
- McConnell, D., *et al.*: Carbonic anhydrase and the precipitation of apatite, 337
- MCCONNELL, T. R., A general pattern for American public higher education, *book review* of, 743
- McCoy, F. W. *See* Dodd, M. C., *et al.*
- McDermid, E. M. *See* Jaffe, W. P.
- McKean, C. M., *et al.*: A mechanism of the indole defect in experimental phenylketonuria, 604
- Mechanism of the indole defect in experimental phenylketonuria, A. C. M. McKean *et al.*, 604
- Mechanism of tissue reconstruction by dissociated cells, II: time-course of events, M. S. Steinberg, 762
- Meeting reports: Antibiotics in agriculture, 133; Comparative pathology, 550; International biological program, 768; Lifelike forms in meteorites, 623; Mouse mammary tumor virus, 351; Plant tissue and organ culture, 472; Speleology, 285; Sulfur isotopes, 470
- Meiotic drive, E. Novitski; Y. Hiraizumi and E. Matsunaga, 861
- Melnick, J. L. *See* Mayor, H. D.; Smith, K. O.
- Melting point of graphite at high pressure: heat of fusion, F. P. Bundy, 1055
- Melzack, R.: Effects of early perceptual restriction on simple visual discrimination, 978
- Menon, K. K. *See* Fry, L. M.
- Menzel, D. H.: *book review* of Physics of the solar chromosphere, 848
- Merritt, C., Jr. *See* Wharton, D. R. A., *et al.*
- MERRITT, F. S., Mathematics manual, *book review* of, 522
- Mertz, E. T. *See* Fuller, R. W., *et al.*
- Merz, T.: *book review* of Tritium in the physical and biological sciences, 971
- Metabolic requirements for the swimming activity of three antarctic fishes, D. E. Wohlschlag, 1050
- Methods of mathematical physics, vol. 2, R. COURANT and D. HILBERT, *book review* by M. M. Schiffer, 334
- Methods of tissue culture, R. C. PARKER, *book review* by I. R. Konigsberg, 275
- Meyer, K.: *book review* of Carbohydrates of living tissues, 1044
- Meyer, R. K. *See* Strauss, W. F.
- MIALL, L. M. (Ed.), A new dictionary of chemistry, *book review* of, 523
- Migration of proteins along the axons of the sciatic nerve, B. Droz and C. P. Leblond, 1047
- Miller, A. H.: *book review* of Handbook of North American birds, 520
- MILLER, K. S., and WALSH, J. B.: Elementary and advanced trigonometry, *book review* of, 846
- Mills, J. S. *See* Sancier, K. M., *et al.*
- Miller, P. M. *See* Stoddard, E. M.
- Mineral salts absorption in plants, J. F. SUTCLIFFE, *book review* by G. G. Laties, 596
- Mintz, A.: *book review* of Psychotherapy in the Soviet Union, 217
- Moersch, G. W.: *book review* of Stereochemistry of carbon compounds, 1046
- Mohan Ram, H. Y.: Plant tissue and organic culture (*meeting report*), 472
- Molecular changes in deoxyribonucleic acid induced by x-rays, H. E. Guda *et al.*, 607
- Momentous innovation (*editorial*), 953
- MOODY, P. A., Introduction to evolution, *book review* of, 972
- Moon illusion (*letters*), H. Wallach; E. G. Boring; I. Rock and L. Kaufman, 900
- Moore, Arthur Russell, general physiologist, *obituary* by B. T. Scheer, 411
- Moore, G. E., *et al.*: Continuous culture of a melanotic cell line from the golden hamster, 986. *See also* Bross, I. D. J., *et al.*
- Moore, H. E. *See* Kuroda, P. K., *et al.*
- Moorhouse, D. E. *See* Wharton, R. H., *et al.*
- Morphology and classification of the brachiopod suborder Chonetioidea, On the, H. M. MUIR-WOOD, *book review* by A. J. Boucot, 744
- Morrison, G. H.: *book review* of Atomic-absorption spectrophotometry, 847
- Morse, P. M.: *book review*: Elements of queuing theory; Introduction to the theory of queues; Queues; Stochastic service systems, 742
- Morse, R. L. D.: The cost of credit (*letter*), 168
- Moses, L. E.: *book review* of Use and abuse of statistics, 417
- Moses, V.: *book review* of New methods of cell physiology, 30
- Mössbauer, R. L.: Recoilless nuclear resonance absorption of gamma radiation, 731
- Mossman, A. S., and H. W. Mossman: Ovulation, implantation, and fetal sex ratio in impala, 869
- Mossman, H. W. *See* Mossman, A. S.
- Moulton, D. G.: *book review* of Physiological and behavioral aspects of taste, 662
- Mouse mammary tumor virus (*meeting report*), H. A. Bern, 351
- Moyer, F. H.: *book review* of Experimental embryology, 521
- Mueller, R. F.: Theory of homologous sublattices and intracrystalline equilibria, 540
- Muir, R. M. *See* Kuraishi, S.
- MUIR-WOOD, H. M., On the morphology and classification of the brachiopod suborder Chonetioidea, *book review* of, 744
- Musilek, V.: Occurrence of a porphyrin pigment in streptomycetes, 674
- Mutation, vol. 1, C. AUERBACH, *book review* by B. S. Strauss, 218
- Myotonia in a horse, S. Steinberg and S. Botelho, 978

N

- Narcotic antagonists as analgesics, S. Archer *et al.*, 541
- NASA's fellowship program (*letter*), J. C. Honey, 166
- Nature of the sound produced by *Drosophila melanogaster* during courtship, H. H. Shorey, 677
- Nelson, D. J.: Clams as indicators of strontium-90, 38
- Nesheim, M. C., and F. B. Hutt: Genetic differences among White Leghorn chicks in requirements of arginine, 691
- Neural timing of ovulation in immature rats treated with gonadotrophin, W. F. Strauss and R. K. Meyer, 860
- Neurochemical differences between two strains of mice, J. W. Maas, 621
- Neuroepithelial component of the urethra and urogenital junction of the rat, P. L. Risley and C. N. Skrepetos, 600
- Neutron activation analysis for phosphorus in a study of development in a beetle wing, J. S. Beck and T. R. Manney, 865
- Nevada test fallout and radioiodine in milk, R. E. Lapp, 756
- New dictionary of chemistry, A. L. M. MIALl (Ed.), *book review* by R. H. Eastman, 523
- New high-pressure polymorph of zinc oxide, C. H. Bates *et al.*, 993
- New methods of cell physiology, O. H. WARBURG, *book review* by V. Moses, 30
- NEWKIRK, J. B., and J. H. WERNICK (Eds.),

- Direct observation of imperfections in crystals, *book review of*, 972
- Newman, S. M.: Patent Office search files: a tool for historical research and technological development, 672
- News and comment*: Arms Control and Disarmament Agency, 738; atomic power, 268; civil defense, 214, 658; International Atomic Energy Agency, 966; medical research funds and NIH, 115; military in space, 23; NIH administration, 269; Navy's radio telescope, 327; news from Geneva, 842; population explosion, 1038; Soviet space feat, 590; space program, 212; test ban, 514; tobacco and health, 328; U.S. Office of Education, 413; Wiesner (Jerome B.) confirmed as director of Office of Science and Technology, 270
- Nims, L. F.: Tracers, transfer through membranes, and coefficients of transfer, 130
- Nix, J. *See* Kuroda, P. K.
- Nolan, T. B.: Water research by the geological survey (*letter*), 571
- NOLLER, C. R., Structure and properties of organic compounds, *book review of*, 334
- Nordskog, A. W. *See* Schierman, L. W.
- Norton, H. W.: Sex conversion in the copepod (*letter*), 951
- Novitski, E.: Meiotic drive, 861
- Nyland, G.: Possible virus-induced genetic abnormalities in tree fruits, 598

O

- Oberhausen, E. *See* Onstead, C. O., *et al.*
- Obituary*: Arthur Russell Moore, general physiologist, 411
- O'Brien, J. H. *See* Fox, S. S.
- Observations on the solubility of skeletal carbonates in aqueous solutions, K. E. Chave *et al.*, 33
- Occurrence of a porphyrin pigment in streptomycetes, V. Musilek, 674
- Occurrence of whitlockite in chondritic meteorites, L. H. Fuchs, 425
- O'Keefe, J. A., *et al.*: Gases in tektite bubbles, 228
- Onstead, C. O., *et al.*: Cesium-137 in man, 508
- Operant conditioning of heart rate, D. W. Shearn, 530
- Origin of tektites, H. C. Urey, 746
- Orion book of volcanoes, The, H. TAZIEFF, *book review by* H. Williams, 970
- Oswald, I. *See* Berger, R. J.
- Ovulation, implantation, and fetal sex ratio in impala, A. S. Mossman and H. W. Mossman, 869
- OWEN, D. B., Handbook of statistical tables, *book review of*, 849
- Oxygen-motivated behavior in the goldfish, *Carassius auratus*, P. van Sommers, 678

P

- Page, D.: Maneuvers on lattices (*letter*), 571
- PALMER, R. S., (Ed.), Handbook of North American birds, *book review of*, 520
- Pampapathi Rao, K.: Physiology of acclimation to low temperature in poikilotherms, 682
- Papadopoulos, C. N. *See* Archer, S., *et al.*
- Parental handling in two strains of mice

- reared by foster parents, R. H. Ressler, 129
- PARKER, R. C., Methods of tissue culture, *book review of*, 275
- Parker, W. C., and A. G. Bearn: Additional genetic variation of human serum transferrin, 854
- Parks, P. E., Jr. *See* Behrendt, J. C.
- PARTINGTON, J. R., A history of chemistry, *book review of*, 594
- Patent Office search files: a tool for historical research and technological development, S. M. Newman, 672
- Patterns and populations, P. R. Ehrlich and R. W. Holm, 652
- Patterns of gene pleiotropy in morphogenetic processes, K. C. Sondhi, 538
- Pearse, J. S. *See* Littlepage, J. L.
- Pearson, C. M. *See* Wood, F. D.
- Pease, R. W., Jr.: Factors causing seasonal forms in *Ascia monuste* (Lepidoptera), 987
- Perez-Cruet, J.: Conditioning of extra-systoles in humans with respiratory maneuvers as unconditional stimulus, 1060
- Perkins, J. A.: *book review of* The academic president—educator or caretaker?, 416
- PETTIT, L. C., Introductory zoology, *book review of*, 1045
- Photoautotrophy in *Gymnodinium breve* Davis, D. V. Aldrich, 988
- Photosynthesis of carbon compounds, The, M. CALVIN and J. A. BASSHAM, *book review by* H. Gaffron, 273
- Physical chemistry, E. HUTCHINSON, *book review by* R. L. Strong, 596
- Physics of the nucleus, M. A. PRESTON, *book review by* R. M. Thaler, 848
- Physics of the solar chromosphere, R. N. THOMAS and R. G. ATHAY, *book review by* D. H. Menzel, 848
- Physiological and behavioral aspects of taste, M. R. KARE and B. P. HALPERN (Eds.), *book review by* D. G. Moulton, 662
- Physiology of acclimation to low temperature in poikilotherms, K. Pampapathi Rao, 682
- Physiology of flowering, J. A. D. Zeevaart, 723
- Piel, C. *See* Klaus, M., *et al.*
- Pierson, A. K. *See* Archer, S., *et al.*
- Pigment effector cells in a cnidarian, G. O. Mackie, 689
- PINES, D. (Ed.), "Frontiers in physics" series, *book review of*, 846
- Planarian behavior, On (*letters*), D. Davenport; J. B. Best, 452
- Plant tissue and organic culture (*meeting report*), H. Y. Mohan Ram, 472
- Platt, W. J.: Federal university-laboratory (*letter*), 162
- Pogonophora in the western Atlantic ocean, F. M. Bayer, 670
- Polis, B. D. *See* Sever, R. J., *et al.*
- Pollen analysis and the Cenozoic, P. S. Martin and J. Gray, 103
- Polyoma and papilloma viruses: do they have 42 or 92 subunits?, C. F. T. Mattern, 612
- Ponnamperuma, C. A., *et al.*: Chemical effect of ionizing radiation on cytosine, 605
- POOLE, L., and G. POOLE, Volcanoes in action, *book review of*, 970
- Popular lectures in mathematics, vols. 1-6, *book review by* W. Givens, 28
- Porter, P. B. *See* Dustman, R. E., *et al.*
- Possible continental continuation of the Mendocino fracture zone, W. N. Gilliland, 685
- Possible quick-clay motion in turbidity currents, P. F. Kerr, 420
- Possible virus-induced genetic abnormalities in tree fruits, G. Nyland, 598
- Preception in the rat: autonomic response to shock as function of length of warning interval, D. T. Lykken, 665
- Preliminary experiments on a microbial fuel cell, J. B. Davis and H. F. Yarbrough, Jr., 615
- Preliminary results of recent deep drilling on Cape Cod, Massachusetts, C. Koteff and J. E. Cotton, 34
- PRESTON, M. A., Physics of the nucleus, *book review of*, 848
- Prier, J. E.: Government-sponsored research (*letter*), 161
- Probability learning (*letters*), E. R. Behrend and M. E. Bitterman; S. H. Revusky, 921
- Problemy radiacionnoi genetiki, N. P. DUBININ, *book review by* T. Dobzhansky, 276
- Proceedings of the symposium on algology, P. KACHROO (Ed.), *book review by* P. C. Silva, 122
- Programmed instruction and the arts (*letters*), M. Bridger; J. M. Reid, 930
- Progress in materials science, vol. 9, pts. 1-5, B. CHALMERS (Ed.), *book review by* J. Shyne, 331
- Prophetic quality, The (*editorial*), A. Heckscher, 193
- Proposed pay raises for scientists in government (*letter*), H. Black, 949
- Prostka, H. J. *See* Eugster, H. P., *et al.*
- Protecting the science of radio astronomy, J. W. Findlay, 829
- Protection of rats against adjuvant arthritis by bacterial lipopolysaccharides, F. D. Wood and C. M. Pearson, 544
- Protective effects of human milk in experimental staphylococcus infection, P. Gyorgy *et al.*, 338
- Proving grounds in the behavioral sciences (*letter*), C. J. Maloney, 458
- Psychology of Jung, The, A. M. DRY, *book review by* F. J. Braceland, 333
- Psychophysiological aspects of space flight, B. E. FLAHERTY (Ed.), *book review by* B. O. Hartman, 1045
- Psychotherapy in the Soviet Union, R. B. WINN (Ed.), *book review by* A. Mintz, 217

Q

- Quantum theory, vol. 1, D. R. BATES (Ed.), *book review by* F. Villars, 219
- Quest for human cancer viruses, The, J. J. Trentin *et al.*, 835
- Questions and answers (*letter*), M. S. Marshall, 929
- Queues, D. R. COX and W. L. SMITH, *book review by* P. M. Morse, 742

R

- Radiation effects on the reactivity of solid surfaces, W. H. Cropper, 955
- Radiobiology, P. L. T. ILBERY (Ed.), *book review by* J. S. Kirby-Smith, 219

- Radiocarbon ages of postglacial lake clays near Michigan City, Indiana, E. M. Winkler, 528
- Radiotelemetry of the respiration of a flying duck, R. D. Lord, Jr., *et al.*, 39
- Rakitzis, E. T.: Conversion of pyruvate to lactate in tumors (*letter*), 918
- Rao, K. Pampapathi. *See* Pampapathi Rao, K.
- Ratcliffe, H. L.: Comparative pathology (*meeting report*), 550
- Raymond, R., *et al.*: Catalytic dehydrogenation of coal, 681
- Readings in pharmacy, P. A. DOYLE, *book review* by G. Sonnedecker, 1044
- Reappearance of *Eulimnadia agassizii* with notes on its biology and life history, D. J. Zinn and R. W. Dexter, 676
- Recognition and quantitation of herpesvirus particles in human vesicular lesions, K. O. Smith and J. L. Melnick, 543
- Recoilless nuclear resonance absorption of gamma radiation, R. L. Mössbauer, 731
- Reeder, W. G. *See* Laughlin, W. S.
- Reggel, L. *See* Raymond, R., *et al.*
- REICHMANN, W. J.: Use and abuse of statistics, *book review* of, 417
- Reid, J. M.: Programmed instruction and the arts (*letter*), 930
- Reinforcing brain stimulation in competition with water reward and shock avoidance, E. S. Valenstein and B. Beer, 1052
- Reiss, O. K. *See* Klaus, M., *et al.*
- Relationship of erythrocyte to leukocyte antigens in chickens, L. W. Schierman and A. W. Nordskog, 620
- Renwick, G. *See* Siegel, S. M., *et al.*
- Repeated homing exhibited by a female pallid bat, R. Davis and E. L. Cockrum, 341
- Research costs (*letter*), H. Grinsfelder, 467
- Research is a gamble (*letter*), A. Kent, 949
- Ressler, R. H.: Parental handling in two strains of mice reared by foster parents, 129
- Resumption of testing (*letter*), G. Blumenthal and H. Hassal, 191
- Retinal receptor potentials and their linear relationship to light intensity, R. Fatehchand *et al.*, 666
- Retirement (*letter*), N. Tischler, 167
- Revision of Aleutian prehistory, W. S. Laughlin and W. G. Reeder, 856
- Revusky, S. H.: Probability learning (*letter*), 921
- REY, H. A.: The stars, *book review* of, 122
- RHODES, F. H. T.: The evolution of life, *book review* of, 972
- Rhodium-102 high-altitude tracer experiment, M. I. Kalkstein, 645
- Ribonucleic acid in "transformation" of lymphoid cells, J. A. Mannick and R. H. Egdahl, 976
- Rich, S., and P. E. Waggoner: Atmospheric concentration of *Cladosporium* spores, 962
- RIORDAN, J.: Stochastic service systems, *book review* of, 742
- Risley, P. L., and C. N. Skrepetos: Neuroepithelial component of the urethra and urogenital junction of the rat, 600
- RITTMANN, A.: Volcanoes and their activity, *book review* of, 970
- Riviello, M. Sanchez. *See* Shaw, J. G.
- Robinson, D. W.: *book review* of Structural principles in inorganic compounds, 663
- Rock, I., and L. Kaufman: On the moon illusion (*letter*), 900
- Rodríguez-Erdmann, F. *See* Marciniak, E., *et al.*
- Rogers, G. T., and H. E. Edgerton: Enhanced afterglow in neon by removal of electrical excitation, 34
- Rohrbough, S. F.: Determination of the mixing ratios of water vapor and carbon dioxide in the stratosphere, 599
- ROSE, A., and E. ROSE, Condensed chemical dictionary, *book review* of, 523
- Rosen, L. A. *See* Siegel, S. M., *et al.*
- Ross, G.: Center for retired scientists (*letter*), 172
- Roth, L. J.: *book review* of Annual review of pharmacology, 663
- Rothman, D.: On withholding information (*letter*), 573
- Rowley, J. R.: Stranded arrangement of sporopollenin in the exine of microspores of *Poa annua*, 526
- Roy, R. *See* Bates, C. H., *et al.*
- RUGH, R.: Experimental embryology, *book review* of, 521
- S**
- SAATY, T. L.: Elements of queuing theory, *book review* of, 742
- Salisbury, F.: Martian antifreeze (*letter*), 928
- Salmonella* species in turtles, J. A. Boycott, 761
- Sanchez Riviello, M. *See* Shaw, J. G.
- Sancier, K. M., *et al.*: Electron spin resonance of nitric oxide-hemoglobin complexes in solution, 752
- Schaefer, K. E., and C. R. Carey, Alveolar pathways during 90-foot, breath-hold dives, 1051
- Schanberg, S. M. *See* McKean, C. M., *et al.*
- Scheer, B. T.: Arthur Russell Moore, general physiologist (*obituary*), 411
- Scheffer, T. C. *See* Anderson, A. B., *et al.*
- Schenkein, I., and E. D. Bueker: Dialyzable cofactor in nerve growth promoting protein from mouse salivary glands, 433
- Schierman, L. W., and A. W. Nordskog: Relationship of erythrocyte to leukocyte antigens in chickens, 620
- Schiff, J. *See* Lazaroff, N.
- Schiffer, M. M.: *book review* of Methods of mathematical physics, vol. 2, 334
- Schmidt-Nielsen, K. *See* Carey, F. G.
- SCHMITT, F. O., (Ed.): Macromolecular specificity and biological memory, *book review* of, 849
- Schneour, E. A.: *book review* of Macromolecular specificity and biological memory, 849
- Schoener, B. *See* Chance, B., *et al.*
- Schusterman, R. J.: Transfer effects of successive discrimination-reversal training in chimpanzees, 422
- Science and democracy (*letter*), J. T. Edsall, 456
- Secretion of iodide by the nasal gland of birds, F. G. Carey and K. Schmidt-Nielsen, 866
- Seegers, W. H. *See* Marciniak, E., *et al.*
- Ségré, E.: *book review* of The collected papers of Lord Rutherford of Nelson, vol. 1, 1044
- SELYE, H.: Calciphylaxis, *book review* of, 120
- Serum uric acid in mongolism, R. W. Fuller *et al.*, 868
- Sever, R. J., *et al.*: Generation by visible light of labile free radicals in the melanin granules of the eye, 128
- Sex conversion in the copepod (*letter*), H. W. Norton, 951
- Sexual sterilization of insects by chemicals, A. B. Borkovec, 1034
- Shaw, J. G., and M. Sanchez Riviello: Sterility in the Mexican fruit fly caused by chemicals, 754
- Shaw, R. R.: Documentation and the individual, 409
- Shean, F. C. *See* Lawrence, S. H.
- Shearn, D. W.: Operant conditioning of heart rate, 530
- Shellabarger, C. J.: Federal university-laboratory (*letter*), 162
- SHKLARSKY, D. O., *et al.*, USSR Olympiad problem book, *book review* of, 595
- Shorey, H. H.: Nature of the sound produced by *Drosophila melanogaster* during courtship, 677
- Shyne, J.: *book review* of Progress in materials science, vol. 9, pts. 1-5, 331
- Sibaoka, T.: Excitable cells in *Mimosa*, 226
- Sidman, R. L., *et al.*: Staggerer, a new mutation in the mouse affecting the cerebellum, 610
- SEIGEL, B. J. (Ed.), Biennial review of anthropology, 1961, *book review* of, 276
- Siegel, S. M., *et al.*: Formation of carbon monoxide during seed germination and seedling growth, 683
- Silent spring, R. CARSON, *book review* by I. L. Baldwin, 1042
- Silva, P. C.: *book review* of Proceedings of the symposium on algology, 122
- Similarity and dimensional methods in biology, W. R. Stahl, 205
- Simonson, R. W.: Soil classification in the United States, 1027
- Simple and rapid method for the coding of punched cards, J. A. Thoma, 278
- Simpson, G. G.: Genesis of cancer (*letter*), 460; Genetic composition and cultural structure (*letter*), 914
- Skrepetos, C. N. *See* Risley, P. L.
- Smith, H. L. *See* Cohen, A. J.
- Smith, K. O., and J. L. Melnick: Recognition and quantitation of herpesvirus particles in human vesicular lesions, 543
- Smith, K. U. *See* Gould, J.
- SNELL, F., and C. SNELL, Dictionary of commercial chemicals, *book review* of, 523
- Soil animals, D. K. M. KEVAN, *book review* by P. F. Bellinger, 418
- Soil classification in the United States, R. W. Simonson, 1027
- Solomon, J. M.: Equilibration of isoagglutinins of human group O serum, 684
- Some effects of room acoustics on evoked auditory potentials, J. T. Marsh *et al.*, 280
- Sonar system of the blind, W. N. Kellogg, 399
- Sondhi, K. C.: Patterns of gene pleiotropy in morphogenetic processes, 538
- Sonnedecker, G.: *book review* of Readings in pharmacy, 1044
- Sorbitol translocation in apple, K. L. Webb and J. W. A. Burley, 766

Sorum, C. H.: *book review* of Elements of chemistry, 32

Space, the architecture of the universe, G. HONEGGER and P. VAN DE KAMP, *book review* by J. B. Irwin, 1046

Speleology (*meeting report*), R. L. Curl, 285

Spinal cord convulsions in developing rats, A. Vernadakis, 532

Spira, D., and A. Zuckerman: Antigenic structure of *Plasmodium vinckei*, 536

Squire, W.: Adjusting data (*letter*), 912

Stability and change (*editorial*), W. Weaver, 1025

STACEY, M., and S. A. BARKER, Carbohydrates of living tissues, *book review* of, 1044

Staggerer, a new mutation in the mouse affecting the cerebellum, R. L. Sidman *et al.*, 610

Stahl, W. R.: Similarity and dimensional methods in biology, 205

Standard methods of chemical analysis, vol. 1, The elements, N. H. FURMAN (Ed.), *book review* by P. J. Elving, 121

Stars, The, H. A. REY, *book review* by H. Albers, 122

Stebbins, G. L.: International biological program (*meeting report*), 768

Steers, E. *See* Gyorgy, P., *et al.*

Steinberg, M. S.: Mechanism of tissue reconstruction by dissociated cells, II: time-course of events, 762

Steinberg, S., and S. Botelho: Myotonia in a horse, 978

Steinhart, C. E.: Tissue cultures of a cactus, 545

Stereochemistry of carbon compounds, E. L. ELIEL, *book review* by G. W. Moersch, 1046

Sterility in the Mexican fruit fly caused by chemicals, J. G. Shaw and M. Sanchez Riviello, 754

Sterman, M. B. *See* Wyrwicka, W., *et al.*

Stevens, J. R.: Endogenous conditioning to abnormal cerebral electrical transients in man, 974

Stewart, J., and C. H. Li: On the use of -tropin or -trophin in connection with anterior pituitary hormones, 336

Stewart, J. L.: A law for loudness discrimination, 618

Stochastic service systems, J. RIORDAN, *book review* by P. M. Morse, 742

Stoddard, E. M., and P. M. Miller: Chemical control of water loss in growing plants, 224

Story of the Crab Nebula, The, N. U. Mayall, 91

Stranded arrangement of sporopollenin in the exine of microspores of *Poa annua*, J. R. Rowley, 526

Stratospheric residence time of strontium-90, P. K. Kuroda *et al.*, 15

Strauss, B. S.: *book review* of Mutation, vol. 1, 218

Strauss, W. F., and R. K. Meyer: Neural timing of ovulation in immature rats treated with gonadotrophin, 860

Strong, R. L.: *book review* of Physical chemistry, 596

Strontium-90 fallout from the 1961 Soviet nuclear detonation, P. K. Kuroda and J. Nix, 991

Structural aspects of ageing, G. H. BOURNE (Ed.), *book review* by W. Bondareff, 973

Structural principles in inorganic com-

pounds, W. E. ADDISON, *book review* by D. W. Robinson, 663

Structure and properties of organic compounds, C. R. NOLLER, *book review* by A. H. Corwin, 334

Studies in modern analysis, R. C. BUCK (Ed.), *book review* by W. Givens, 28

Studies on the metric system proposal (*letter*), J. Mayer, 1021

Substituted uracil herbicides, H. C. Bucha *et al.*, 537

Sulfur isotopes (*meeting report*), M. L. Jensen, 470

SUTCLIFFE, J. F., Mineral salts absorption in plants, *book review* of, 596

Svaetichin, G. *See* Fatehchand, R., *et al.*

Swift, H.: *book review* of Biological structure and function, 661

T

TAKÁCS, L., Introduction to the theory of queues, *book review* of, 742

TATON, R. (Ed.), Histoire générale des sciences, vol. 3, pt. 1, *book review* of, 418

Taylor, G. *See* Trentin, J. J., *et al.*

Taylor, R. L.: Eighth Philadelphia meeting (AAAS), 229

TAZIEFF, H., The Orion book of volcanoes, *book review* of, 970

Telford, J. *See* Archer, S., *et al.*

Tetragonal iron sulfide, R. A. Berner, 669

Textbook of comparative endocrinology, A. A. GORBMAN and H. A. BERN, *book review* by A. E. Wilhelmi, 744

Thacher, H. C., Jr.: *book reviews*: An index of mathematical tables, vols. 1 and 2; Guide to tables in mathematical statistics, 332; The handbook of statistical tables, 849

Thaler, R. M.: *book review* of Physics of the nucleus, 848

Thalidomide lesson, The (*editorial*), D. Wolfe, 497

Theory of homologous sublattices and intracrystalline equilibria, R. F. Mueller, 540

Thoma, J. A.: Simple and rapid method for the coding of punched cards, 278

THOMAS, R.N., and R. G. ATHAY: Physics of the solar chromosphere, *book review* of, 848

Thompson, M. E. *See* Chave, K. E., *et al.*

Thompson, R. H. S.: Classification and nomenclature of enzymes, 405

Tischler, N.: Retirement (*letter*), 167

Tissue cultures of a cactus, C. E. Steinhart, 545

Tobacco and health (*letter*), I. D. J. Bross *et al.*, 925

Tooley, W. H. *See* Klaus, M., *et al.*

Towe, K. M. *See* Hay, W. W.

Toxicity of blood clotting factors, E. Marciniak *et al.*, 421

Tracers, transfer through membranes, and coefficients of transfer, L. F. Nims, 130

Transfer effects of successive discrimination-reversal training in chimpanzees, R. J. Schusterman, 422

Transportation of oyster drills by horseshoe "crabs," C. L. MacKenzie, Jr., 36

Trautz, O. R. *See* Bachra, B. N.

Trentin, J. J., *et al.*: The quest for human cancer viruses, 835

Tritium in the physical and biological sciences, *book review* by T. Merz, 971

Tullock, G.: Comprehension and understanding (*letter*), 462

TURNBULL, H. W. (Ed.), The correspondence of Isaac Newton, vol. 3, *book review* of, 743

Turner, B. L. *See* Alston, R. E., *et al.*

U

Ultrastructure in biological systems, vol. 1, A. J. DALTON and F. HAGUENAU (Eds.), *book review* by F. L. Horsfall, Jr., 849

Ungar, F., and F. Halberg: Circadian rhythm in the in vitro response of mouse adrenal to adrenocorticotrophic hormone, 1058

Unit-cell dimensions of natural and synthetic scapolites, H. P. Eugster *et al.*, 853

Upper limit of crop yield, The, J. Bonner, 11

Urey, H. C.: Lifelike forms in meteorites (*meeting report*), 623; Origin of tektites, 746

Urist, M. R.: Calcium and other ions in blood and skeleton of Nicaraguan freshwater shark, 984; *book review* of Calciophylaxis, 120

Use and abuse of statistics, W. J. REICHMANN, *book review* by L. E. Moses, 417

Use of -tropin or -trophin in connection with anterior pituitary hormones, On the, J. Stewart and C. H. Li, 336

USSR Olympiad problem book, D. O. SHKLARSKY *et al.*, *book review* by I. Wirszup, 595

Utilization of nitrogen compounds by unicellular algae, E. C. Birdsey and V. H. Lynch, 763

V

Valenstein, E. S., and B. Beer, Reinforcing brain stimulation with water reward and shock avoidance, 1052

van Sommers, P.: Oxygen-motivated behavior in the goldfish, *Carassius auratus*, 678

Van Valen, L.: *book review*: The evolution of life; Introduction to evolution, 972. *See also* Levine, L.

van Wagtenonk, W. J.: *book review* of Comparative biochemistry, vol. 3, pt. A, 745

Variable transmission silicate glasses sensitive to sunlight, A. J. Cohen and H. L. Smith, 981

Vaughan, E., and A. E. Fisher: Male sexual behavior induced by intracranial electrical stimulation, 758

Verheijen, F. J.: Gas spitting by alarmed fish disturbs their hydrostatic equilibrium, 864

Vernadakis, A.: Spinal cord convulsions in developing rats, 532

Villars, F.: *book review* of Quantum theory, vol. 1, 219

Visual depth perception of a 10-month-old monocular human infant, R. D. Walk and S. H. Dodge, 529

Volcanoes, F. M. BULLARD, *book review* by H. Williams, 970

Volcanoes and their activity, A. RITTMANN, *book review* by H. Williams, 970

Volcanoes in action, L. POOLE and G.

POOLE, *book review* by H. Williams, 970
 von Hoerner, S.: The general limits of space travel, 18

W

Waggoner, P. E. *See* Rich, S.
 Walk, R. D., and S. H. Dodge: Visual depth perception of a 10-month-old monocular human infant, 529
 Wall, D. M. *See* Haupt, R. E.
 Wallach, H.: On the moon illusion (*letter*), 900
 Walsh, J. T. *See* Wharton, D. R. A., *et al.*
 WARBURG, O. H., New methods of cell physiology, *book review* of, 30
 Warren, M. *See* Wharton, R. H., *et al.*
 Water research by the geological survey (*letter*), T. B. Nolan, 571
 Waters, J. H.: Animals used as food by Late Archaic and Woodland cultural groups in New England, 283
 Weaver, W.: Stability and change (*editorial*), 1025
 Webb, K. L., and J. W. A. Burley: Sorbitol translocation in apple, 766
 Weibel, E. R., and D. M. Gomez: Architecture of the human lung, 577
 WEIDNER, E. W., The world role of universities, *book review* of, 519
 Weinberg, A. M.: Federal university-laboratory (*letter*), 162
 Wender, I. *See* Raymond, R., *et al.*
 WERNER, A. G., On the external characters of minerals, *book review* of, 419
 Wescott, R. W.: Fact and fashion in scientific nomenclature (*letter*), 913
 WEXLER, C., Analytic geometry: a vector approach, *book review* of, 846
 Weyl, P. K. *See* Chave, K. E., *et al.*
 Wharton, D. R. A., *et al.*: Isolation of the sex attractant of the American cockroach, 1062
 Wharton, M. L. *See* Wharton, D. R. A., *et al.*

Wharton, R. H., *et al.*: *Anopheles leucophyrus* identified as a vector of monkey malaria in Malaya, 758
 Wheeler, H., and H. S. Black: Changes in permeability induced by victorin, 983
 Where shall we meet? (*editorial*), D. Wolfe, 575
 Which yardstick? (*editorial*), D. Wolfe, 397
 White, W. B. *See* Bates, C. H., *et al.*
 Wilcox, J. M. *See* Boley, F. I.
 Wilhelmi, A. E.: *book review*: A textbook of comparative endocrinology, Basic endocrinology, 744
 Williams, H.: *book review*: Volcanoes and their activity, Volcanoes, The Orion book of volcanoes, Volcanoes in action, 970
 Williams, L. P.: *book review* of A history of chemistry, 594
 Wilson, H. E. *See* Dodd, M. C., *et al.*
 Wind fluctuations in the troposphere (*letter*), A. Court and R. W. Lenhard, Jr., 191
 Windsor, D. A. *See* Greenberg, M. J.
 Winkler, E. M.: Radiocarbon ages of postglacial lake clays near Michigan City, Indiana, 528
 WINN, R. B. (Ed.), Psychotherapy in the Soviet Union, *book review* of, 217
 Wirszup, I.: *book review* of USSR Olympiad problem book, 595
 Withholding information, On (*letters*), H. I. Fufeld; D. Rothman, 573
 Wittenberg, A.: Ethical issues (*letter*), 468
 Wohlschlag, D. E.: Metabolic requirements for the swimming activity of three antarctic fishes, 1050
 Wolfe, D.: AAAS election of officers, 1065; AAAS finances: report for 1961, 694; *editorials*: Admission charges, 827; Congressional seminars, 309; 1895-, 643; The keeper of the gate, 721; The thalidomide lesson, 497; Where shall we meet?, 575; Which yardstick?, 397

Wood, F. D., and C. M. Pearson: Protection of rats against adjuvant arthritis by bacterial lipopolysaccharides, 544
 Woodbury, M. A. *See* Bradley, D. A., *et al.*
 Woodring, W. P.: *book review* of Fundamentals of mid-Tertiary stratigraphical correlation, 31
 Worden, F. G. *See* Marsh, J. T., *et al.*
 World of ice, The, J. L. DYSON, *book review* by J. R. Lotz, 416
 World population problem (*letter*), A. G. Huntsman, 1019
 World role of universities, The, E. W. WEIDNER, *book review* by F. Bowles, 519
 Wyrwicka, W., *et al.*: Conditioning of induced electroencephalographic sleep patterns in the cat, 616

Y

Yabe, Y. *See* Trentin, J. J., *et al.*
 Yang, N. C. *See* Huggins, C.
 Yarbrough, H. F., Jr. *See* Davis, J. B.
 Yetwin, I. J.: Ancient Greeks in Ireland? (*letter*), 949
 You can't go home again (*editorial*), G. DuShane, 89

Z

Zarrow, M. X. *See* Eleftheriou, B. E., *et al.*
 Zeevaart, J. A. D.: Physiology of flowering, 723
 Zernicki, B. *See* Affanni, J., *et al.*
 Zinn, D. J., and R. W. Dexter: Reappearance of *Eulimnadia agassizii* with notes on its biology and life history, 676
 Ziskind, E., and T. Augsberg: Hallucinations in sensory deprivation—method or madness?, 992
 Zuckerman, A. *See* Spira, D.