
SCIENCE

Index to Volume 119

January–June 1954

AAAS EDITORIAL BOARD

Duane Roller
Editor

Charlotte V. Meeting
Assistant Editor

Mark H. Adams Karl Lark-Horovitz
William R. Amberson Edwin M. Lerner
Wallace R. Brode Walter J. Nickerson
Bentley Glass William L. Straus, Jr.

Advertising Representative: F. A. Moulton

Published by the

AMERICAN ASSOCIATION FOR THE
ADVANCEMENT OF SCIENCE

1515 MASSACHUSETTS AVENUE, NW, WASHINGTON 5, D. C.

No.	Date of Issue	Pages	No.	Date of Issue	Pages
3079	January 1	1- 50	3092	April 2	427-448
3080	January 8	51- 76	3093	April 9	449-484
3081	January 15	77-102	3094	April 16	485-516
3082	January 22	103-134	3095	April 23	517-568
3083	January 29	135-166	3096	April 30	569-618
3084	February 5	167-194	3097	May 7	619-660
3085	February 12	195-222	3098	May 14	661-702
3086	February 19	223-264	3099	May 21	703-740
3087	February 26	265-298	3100	May 28	741-784
3088	March 5	299-332	3101	June 4	785-818
3089	March 12	333-356	3102	June 11	819-852
3090	March 19	357-394	3103	June 18	853-886
3091	March 26	395-426	3104	June 25	887-914

This index was
prepared by
Dorothy Witham
Brown of the
editorial staff.

Author—Subject Index

A

- AAAS:
address of retiring president, Detlev W. Bronk, 223
administrative secretary, Dael Wolfe, 230
Alaska Division officers, 242; Arctic Branch, 152; Cook Inlet Branch, 834
Alaska Science Conference, 176, 682
American Dental Association, new affiliate, 394
Arden House recommendations, 484
assistant editor, Charlotte V. Meeting, 339
Astronomical League, new associated society, 3A (6/4)
Atlanta, 1955 annual meeting locale, discussion, 483
Berkeley meeting, call for papers, 484
preliminary program announcement, 780
transportation, 484
Boston meeting report, 244
reports of sections and societies, 249
business, 241, 483
committee appointments for 1954, 783
Cooperative Committee on Teaching of Science and Mathematics, election, 599
Edwin Grant Conklin resolution, 243
finances and membership, 261
future of AAAS, 3A (2/19)
George Westinghouse Science Writing Awards; address by E. U. Condon, 227
termination, 483
Gordon Research Conferences, 3A (4/16), 487
Committees, 497
program, 489
international arid lands symposium in 1955, 869
members-at-large, election, 210
new building, 483
Newcomb Cleveland prize to Barry Commoner, 149
officers for 1954, general and administrative, 241
Pacific Division, June meeting, 635
officers, 242
president-elect for 1954, George W. Beadle, 229
- Robert Andrews Millikan resolution, 242
secretaries of sections and subsections, 242
Society for American Archaeology, new affiliate, 3A (1/15)
Society for Experimental Stress Analysis, new affiliate, 3A (4/30)
Southwestern Division meeting, 377 officers, 242
Theobald Smith Award to Irving M. London, 149
1954 nominations, 724
treasurer, appointment of Paul A. Scherer, 231
retirement of W. E. Wrather, 859
Utah Academy of Sciences, Arts and Letters, new affiliate, 3A (1/22)
who speaks for whom or for what? 3A (2/26)
Acetylcholinesterase in rabbit brain and behavior patterns, 158
Acoustical measurements, standard for, 767
ACTH, audiogenic seizure and, 475, 476
-like activities in animal food supplements, 379
Adams, John E., 438
Adams, Mark H., 101, 424
Adams, Roger, retirement; alumni symposium in chemistry, 765
Adenosinetriphosphate and pentobarbital inhibition, 185
Adrenal cortex, and audiogenic seizure, 475, 476
hormones, effect on murine typhus in mice, 468
Adrenocorticotropin activity of non-mammalian origin, 379
Adriance, G. W., 507
Age, parental, and sex ratio, 473
Aggeler, Paul M., 806
Agglutinins, plant, specific precipitating activity, 419
Agriculture, tropical, toxic component in forage crop, 322
Alanine, growth regulating properties of naphthyl derivatives, 217
Alaska, ground water resources in Matanuska Valley, 356
helicopter and walkie-talkie in field surveys, 389
volcanic activity, 319
Albritton, C. C., Jr., 474
- Alcaino, Francisco, 735
Alearaz-Mira, Enrique, 296
Alcohol intake of rats, vitamin-B complex and, 735
Aleutian Islands, geology, 446
Aleutian Range, volcanic activity, 319
Alfalfa saponin, role in ruminant bloat, 157
Algae, death of F. E. Kritsch, 895
Mesozoic Charophyta, 421
primitive, 311
stromatolite classification, Montana, 659
Allard, Claude, 351
Allergy, reagins and electrophoretic components of serum, 289
Alligator urine, effect of carbonic anhydrase inhibitor, 291
Alloxan diabetes prevention in rats, 349
Alpert, Harry, 837
Alphalipoic acid and alcohol intake, 735
Alt, H. L., 380
Alyea, Hubert N., 556
Amberson, William R., 645, 699
American Association for the Advancement of Science see AAAS
American scientists, attempt at classifying, 655
American Standards Association, letter symbols for sciences, 767
Aminco-Stern electrophoresis apparatus, optical masking device for, 73
Amines from cysteine and cystine, nomenclature, 163
Amino acids, angiotonin, structure, 849
in lake waters, 605
in urine, 510
isatin as color reagent, 124
Ammonite deposits in Mowry and Aspen Shales, 355
Analgesics, steric configurations, 112
Analysis of variance, 475, 476
Anderson, George E., 516
Anderson, John W., 808
Anderson, Thomas F., 297
Anemia, and chelated iron, 608
in hookworm, 412
Angiotonin, structure, 849
Anhydrovitamin A, iso-, structure, 660
Animal, bloat, alfalfa saponin and, 157
experimental, for psychiatric research, 360

- food supplements, antibiotic, 379
invertebrate, heat death temperature, 773
nutrition; antithyroid action of antibiotics, 128
organs, embryonic growth stimulation, 894
See also under individual listings
Animal Care Panel, meeting, 90
Animals, vertebrate, production of ultrasonic sounds, 808
Anoxia, effect on DNA synthesis in bone marrow and spleen, 380
Anson, Barry J., 564
Antarctic observation, 580
Anthropology, Australopithecinae, estimates of geologic age, 863
Manus society reappraisal, 278
physical, 265, 884
death of E. A. Hooton, 861
meeting report, 675
prehistoric man, camp site in south central France, 311
Anti-auxins *see* Auxins
Antibiotics, animal food supplements, 379
antithyroid action of, in rats, 128
influence on antibody production, 296
plant disease-inhibiting properties of, 347
Antibody, formation in spleen, 585
production, influence of antibiotics, 296
Antisera, Group A streptococcus, use of cells for production, 69
Antithyroid, action of antibiotics, 128
agent, Itrumil, and thyroid tissue, 912
See also Thyroid
Aortic sclerosis in rat, 842
Apatites, carbonate, Soviet claims about, 913
Appalachian Basin, geology, 512
Apparatus:
beta-ray microscope, 51
cooperative multiple-choice, 189, 656
dehydrator for d.c. amplifiers, 420
dew duration recorder, 294
electric conducting glass for lesion counting, 849
electronic quantitation of light absorption and nuclear fluorescence in living cells, 410
electrophoresis, optical masking device for, 73
homogeneous graphite research reactor, 15
inexpensive inoculation chamber, 512
mercury manometer for student use, 415
water boiler neutron source, 9, 21
Appleton, Sir Edward, 103
Apricot trees *see* Trees
Aprison, M. H., 158
Aqueous solutions, effects of freezing, 73
Archbold Expedition to New Guinea, 498
Argonne Cancer Research Hospital, 30
Arid regions, and conifer growth, 396, 883
ground water in Navajo country, 421
1955 international symposium on, 869
Arizona, navajoite, new vanadium oxide, 326
serpentine pipes, Garnet Ridge, 618
Arnold Arboretum of Harvard University, administration controversy, 369, 459
Arnold, James R., 155
Aromatic biosynthesis, 774
Articles, unpublished, listings of, 221
Arzangoolian, Hilda, 816
Ascites tumor-bearing mice, 880
Aspartic acid in urine, 510
Aspergillus flavus, nitrate formation, 187
Aspirator method of insect collection, myiasis from, 814
Astin, Allen V., 3A (5/7)
Astronomy *see* Radio astronomy
Astrophysics, 449
Athay, R. Grant, 548
Atherosclerosis, 842
Athletic records, 333
Atkinson, D. E., 269
Atkinson, Edward R., 250
Atmosphere, outer, winds in, 587
Atmospheric electricity, 580
Atmospheric glow, 584
Atomic energy *see* Nuclear energy, Nuclear reactor
Atomic Energy Commission and J. Robert Oppenheimer, 827, 7A (6/18), 894
Atoms and ions in sun, 449
Auditory seizure and adrenal cortex, 475, 476
Aurora and airglow observation, International Geophysical Year program, 574
morphology, 583
theory, 576
Australopithecinae, estimates of geologic age, 863
Autoradiographs, production method, 659
Auxin-florigen balance in soybean flowering, 71
Avian chromosome study technique, 508
- B**
- Bachofen, C. S., 378
Bacillus subtilis, growth inhibition by vitrain ingredient, 214
Bacitracin, 379
Baer, Z. M., 163
Bacteria, adrenocorticotrophic activity of, 379
C. botulinum hemagglutination, 440
disease of fruit trees, 347
motility, energy requirements, 286
P. pestis virulence, 413
Bactericides, lack of bactericidal effect of mouse serum on common microorganisms, 877
quaternaries as, 686
Bacteriophage T1, protection against irradiation, 378
Bacteriostatic substance from vitrain, 214
Bacterium, structure, 583
Baddiley, J., 163
Baffin Island Expedition, 591
Baginsky, Walter, 259
Baker, A. D., 92
Baker, Arthur J., 252
Baker, P. S., 469
Baker, William K., 46
Baldwin, Leo S., retirement, 895
Baldwin, R. R., 219
Banta, H. E., 350
Baradost culture, northern Iraq, 234
Barbosalite, Brazilian phosphate mineral, 739
Barghoorn, Elso S., 606
Barker, W. G., 286
Barnard, Robert D., 391
Bartley, S. Howard, 564
Barton, D. H. R., 49
Basaltic magma, Hawaiian, silica content, 388
Paricutin volcano, 515
Basidiomycetes, nucleus formation, 691
Bass, Allan D., 256
Beach, Frank A., 254
Bean plants, MOPA movement through root systems, 437
Bear, Firman E., retirement, 592
Bedford shale, geology, 512
Bedrock geology of Montpelier quadrangle, 695
Behavior patterns, acetylcholinesterase and, in rabbit, 158
Behnke, John A., 259
Beirne, P. B., 3A (2/12)
Bell, H., 686
Benjamin, Jack, 851
Benson, Manuel A., 694
Benson, William E., 387
Benzothiazol-2-oxyacetic acid and delayed maturity in grapes, 287
Berea sandstone, geology, 512
Berg, Clarence P., 274
Berkley, Carl, 410
Berkner, L. V., 569
Berrill, N. J., 194
Best, Charles H., 842
Beta-active dust, contamination of photographic emulsion, 422
Beta-ray microscope, 51
Bethe, Hans A., 75
Betz, Frederick, Jr., 616
Bibliographies, unpublished, listings of, 221
Billman, Carl, 260
Biochemistry of cholesterol, 710
Biogenic origin of carbon, 506
Biological Sciences, International Union of, reorganization, 58
Biology and Lysenkoism, 908
Biometric Conference report, 204
Bio-sciences, research support, 661
Bird, chromosome study technique, 508
tape recordings of distress calls as repellents, 318
Bisteni, Abdo, 200
Black, Donald M., 164
Black widow spider in New England, 192
geographic range, 390
Blackburn, Virginia, 348
Blackhurst, H. T., 507
Blackwelder, R. E., 252
Blatt, A. H., 424
Bliss, C. I., 204
Blood, capillary resistance, endocrine regulation, 790
cholesterol, 710
clotting, chemistry of, 293
intravascular, test for, 883
factor **U**, distribution and heredity, 734
glucose levels, effect of growth hormones, 96
group specific agglutinins, 419
groups, 734
in racial classification, 776, 777

- hemagglutination by *C. botulinum*, 440
 hemoglobin and chelated iron, 608
 iron uptake by, factors influencing, 94
 leukocyte counts from mouse tail and heart, 353
 loss in hookworm, radioactive iron and, 412
 oxygen saturation, 731
 plasma, factor B, purification; identification as beta₂ globulin, 806
 protein separation, radioactive gold and, 95
 pressure recording, 415
 prothrombin, activation and organic compounds, 293
 sera of reptiles, comparison of protein and albumin content, 98
 serum, lack of bactericidal effect on microorganisms, 877
 fractions, allergy reagins and electrophoretic components, 289
 sickle-cell trait, 718
 venous, from orbital sinus, technique, 100
 Blum, John L., 732
 Bodine, J. H., 251
 Boll, William G., 220
 Bolster, Rear Admiral Calvin M., retirement, 149
 Bolton, E. K., 175
 Bone, density evaluation from roentgenograms, 810
 inorganic matrix, preparation, 771
 marrow, effect of hypoxia on DNA synthesis, 380
 cells, factors influencing iron uptake, 94
 Bonner, James, 556
 Book listings: 50, 102, 134, 194, 222, 298, 332, 356, 393, 482, 647, 702, 730, 770, 805, 839, 874, 902
 Book publication by International Scholars Forum, 539
 Book purchases and UNESCO coupons, 61
 Book reviews:
 Ackoff, R. L., *Design of Social Research*, 837
 Adrenal Cortex, E. P. Ralli, Ed., 392
 Advances in Carbohydrate Chemistry, C. S. Hudson et al., Eds., 194
 Advances in Enzymology and Related Subjects of Biochemistry, F. F. Nord, Ed., 222
 Advances in Genetics, V. M. Demerec, Ed., 646
 Advances in Veterinary Science, C. A. Brandly and E. L. Jungherr, Eds., 872
 Advances in Virus Research, K. M. Smith and M. A. Lauffer, Eds., 701
 Adventures in Physiology, H. H. Dale, 562
 Aim and Structure of Physical Theory, P. Duhem, 517
 Albrecht, F. O., *Anatomy of the Migratory Locust*, 561
 Anatomy of the Migratory Locust, F. O. Albrecht, 561
 Appleton, Edward, Sir, *Scientific Papers Presented to Max Born*, 550
 Applied Electron Microscopy, R. B. Fischer, 481
 Arctic Bibliography, 3A (3/26)
 Ascidians of Sagami Bay, T. Tokio-ka, 194
 Astronomical Photoelectric Photometry, F. B. Wood, Ed., 548
 Audus, L. J., *Plant Growth Substances*, 556
 Bacterial Genetics, W. Braun, 332
 Bambas, L. L., *Five-Membered Heterocyclic Compounds Containing Nitrogen and Sulfur or Nitrogen, Sulfur, and Oxygen*, 392
 Barth, L. G., *Embryology*, 392
 Bell, G. H., Davidson, J. N., and Scarborough, H., *Textbook of Physiology and Biochemistry*, 699
 Biochemical Preparations, E. E. Snell, Ed., 482
 Bourne, G. H., and Danielli, J. F., Eds., *International Review of Cytology*, 728
 Brandly, C. A., and Jungherr, E. L., Eds., *Advances in Veterinary Science*, 872
 Braun, H., and Riehm, E., *Krankheiten und Schädlinge der Kulturpflanzen und ihre Bekämpfung*, 331
 Braun, W., *Bacterial Genetics*, 332
 Brown, G. I., *Simple Guide to Modern Valency Theory*, 553
 Brown, H., *Challenge of Man's Future*, 901
 Brown, R., and Danielli, J. F., Eds., *Symposia of the Society for Experimental Biology*, 165
 Buchholz, A., *Ideologie und Forschung in der Sowjetischen Naturwissenschaft*, 545
 Bullen, K. E., *Introduction to the Theory of Seismology*, 701
 Busemann, H., and Kelly, P. J., *Projective Geometry and Projective Metrics*, 901
 Byers, H. R., Ed., *Thunderstorm Electricity*, 550
 Catalogue of Fossil Cirripedia in the Department of Geology, T. H. Withers, 557
 Causality in Natural Science, V. F. Lenzen, 728
 Challenge of Man's Future, H. Brown, 901
 Challenge of Our Times, F. Daniels and T. M. Smith, Eds., 729
 Chemical Physiology of Contraction in Body and Heart Muscle, A. Szent-Györgyi, 803
 Chemie Lexikon, H. Römpf, 698
 Chemistry of the Lanthanons, R. C. Vickery, 554
 Climatic Change, H. Shapley, Ed., 546
 Conisbee, L. R., *List of the Names Proposed for Genera and Subgenera of Recent Mammals*, 134
 Conquest of Plague, L. F. Hirst, 563
 Contact Dermatitis, G. L. Waldott, 166
 Cook, J. W., Ed., *Progress in Organic Chemistry*, 424
 Cottrell, A. H., *Dislocations and Plastic Flow in Crystals*, 551
 Courant, R., and Hilbert D., *Meth- ods of Mathematical Physics*, 75
 Crew, F. A. E., *Sex Determination*, 872
 Crombie, A. C., *Robert Grosseteste and the Origins of Experimental Science*, 901
 Curme, G. O., Jr., Ed., *Glycols*, 602
 Dale, H. H., *Adventures in Physiology*, 562
 Daniels, F., and Smith, T. M., Eds., *Challenge of Our Times*, 729
 Demerec, V. M., Ed., *Advances in Genetics*, 646
 Design of Social Research, R. L. Ackoff, 837
 Determination of Adrenocortical Steroids and Their Metabolites, P. Eckstein and S. Zuckerman, Eds., 603
 Dialogue on the Great World Systems, and Dialogue Concerning the Two Chief World Systems—Ptolemaic & Copernican, Galileo Galilei, 546
 Dielectric Aerials, D. G. Kiely, 902
 Diringer, D., *Hand-Produced Book*, 545
 Dislocations and Plastic Flow in Crystals, A. H. Cottrell, 551
 Dislocations in Crystals, W. T. Read, Jr., 551
 Duhem, P., *Aim and Structure of Physical Theory*, 517
 Earth, The, H. Jeffreys, 102
 Eccles, J. C., *Neurophysiological Basis of Mind*, 194
 Eckstein, P., and Zuckerman, S., Eds., *Determination of Adrenocortical Steroids and Their Metabolites*, 603
 Effect of ACTH and Cortisone upon Infection and Resistance, G. Schwartzman, Ed., 769
 Electrochemical Constants, 647
 Elements of Mathematical Analysis, J. H. Michell and M. H. Belz, 549
 Elements of Statistics, H. C. Fryer, 803
 Ellerman, J. R., Scott, T. C. S. M., and Hayman, R. W., *Southern African Mammals*, 1758 to 1951, 802
 Embryology, L. G. Barth, 392
 Energy in the Future, P. C. Putnam, 50
 Epilepsy and the Functional Anatomy of the Human Brain, W. Penfield and H. Jasper, 645
 Fields and Waves in Modern Radio, S. Ramo and J. R. Whinnery, 727
 Fischer, R. B., *Applied Electron Microscopy*, 481
 Five-Membered Heterocyclic Compounds Containing Nitrogen and Sulphur or Nitrogen, Sulfur, and Oxygen, L. L. Bambas, 392
 Flory, P. J., *Principles of Polymer Chemistry*, 555
 Floyd, W. F., and Welford, A. T., Eds., *Symposium on Fatigue*, 564
 Frontal Lobes and Schizophrenia, Milton Greenblatt and Harry C. Solomon, Eds., 566
 Fruton, J. S., and Simmonds, S.,

- General Biochemistry*, 101
 Fryer, H. C., *Elements of Statistics*, 803
 Galilei, Galileo, *Dialogue on the Great World Systems*, and *Dialogue Concerning the Two Chief World Systems—Ptolemaic & Copernican*, 546
 Gamow, G., *Mr Tompkins Learns the Facts of Life*, 76
 Garrett, C. G. B., *Magnetic Cooling*, 838
General Biochemistry, J. S. Fruton and S. Simmonds, 101
General Virology, S. H. Luria, 561
Geology of India, D. N. Wadia, 331
 Gilman, H., Ed., *Organic Chemistry*, 297
Glycols, G. O. Curme, Jr., Ed., 602
 Goody, R. M., *Physics of the Stratosphere*, 603
 Gram, E., and Weber, A., *Plant Diseases in Orchard, Nursery and Garden Crops*, 76
 Greenblatt, M., and Solomon, H. C., Eds., *Frontal Lobes and Schizophrenia*, 566
Groupes Sanguins Chez l'Homme, J. Ruffié, 702
 Gurr, E., *Practical Manual of Medical and Biological Staining Techniques*, 802
 Hall, C. E., *Introduction to Electron Microscopy*, 481
 Ham, A. W., *Histology*, 133
Hand-Produced Book, D. Diringer, 545
 Hansen, M. H., Hurwitz, W. N., and Madow, W. G., *Sample Survey Methods and Theory*, 803
 Hartung, E. J., *Screen Projection of Chemical Experiments*, 556
 Herdan, G., *Small Particle Statistics*, 298
 Hill, W. C. O., *Primates: Comparative Anatomy and Taxonomy*, 558
 Hirst, L. F., *Conquest of Plague*, 563
Histology, A. W. Ham, 133
History of the Theories of Aether and Electricity, Sir Edmund Whittaker, 769
 Homburger, F., and Fishman, W. H., Eds., *Physiopathology of Cancer*, 565
 Householder, A. S., *Principles of Numerical Analysis*, 547
 Hovanitz, W., *Textbook of Genetics*, 560
 Hudson, C. S., et al., Eds., *Advances in Carbohydrate Chemistry*, 194
Human Embryology, B. M. Patten, 837
Hypnotism, A. M. Weitzenhoffer, 838
Ideologie und Forschung in der Sowjetischen Naturwissenschaft, A. Buchholz, 545
 Ingold, C. K., *Structure and Mechanism in Organic Chemistry*, 481
International Review of Cytology, G. H. Bourne and J. F. Danielli, Eds., 728
Introduction to Electron Microscopy, C. E. Hall, 481
Introduction to the Theory of Seismology, K. E. Bullen, 701
 Jeffreys, H., *The Earth*, 102
 Karrer, P., *Lehrbuch der Organischen Chemie*, 729
 Kiely, D. G., *Dielectric Aerials*, 902
 Kinsey, A. C., *Sexual Behavior in the Human Female*, 601
Krankheiten und Schädlinge der Kulturpflanzen und ihre Bekämpfung, H. Braun and E. Riehm, 331
 Kuiper, G. P., Ed., *The Sun-The Solar System*, 548
 Langley, L. L., and Cheraskin, E., *Physiology of Man*, 872
Language of Science, T. H. Savory, 544
Leaders in American Science, 655
Lehrbuch der Organischen Chemie, P. Karrer, 729
 Lenzen, V. F., *Causality in Natural Science*, 728
List of the Names Proposed for Genera and Subgenera of Recent Mammals, A., L. R. Conisbee, 134
 Luria, S. E., *General Virology*, 561
 MacDuffee, C. C., *Theory of Equations*, 730
Magnetic Cooling, C. G. B. Garrett, 838
Major Features of Evolution, G. G. Simpson, 699
 McCartney, E. S., *Recurrent Maladies in Scholarly Writing*, 544
Medusae of the British Isles, F. S. Russell, 562
Methods of Mathematical Physics, R. Courant and D. Hilbert, 75
 Michell, J. H., and Belz, M. H., *Elements of Mathematical Analysis*, 549
Mr Tompkins Learns the Facts of Life, G. Gamow, 76
 Nachmansohn, D., Ed., *Nerve Impulse*, 560
Nature and Significance of the Antibody Response, A. M. Pappenheimer, Jr., Ed., 601
 Neurath, H., and Bailey, K., Eds., *The Proteins*, 554
Neurophysiological Basis of Mind, J. C. Eccles, 194
Nerve Impulse, D. Nachmansohn, Ed., 560
 Newell, N. D., et al., *Permian Reef Complex of the Guadalupe Mountains Region, Texas and New Mexico*, 727
 Nord, F. F., Ed., *Advances in Enzymology*, 222
Organic Chemistry, H. Gilman, Ed., 297
 Overholts, L. O., *Polyporaceae of the United States, Alaska and Canada*, 559
 Pappenheimer, A. M., Jr., Ed., *Nature and Significance of the Antibody Response*, 601
 Patten, B. M., *Human Embryology*, 837
 Penfield, W., and Jasper, H., *Epilepsy and the Functional Anatomy of the Human Brain*, 645
Permian Reef Complex of the Guadalupe Mountains Region, Texas and New Mexico, N. D. Newell et al., 727
Phylogeny and Morphogenesis, C. W. Wardlaw, 559
Physics of the Stratosphere, R. M. Goody, 603
Physiological Acoustics, E. G. Wever and M. Lawrence, 560
Physiology of Man, L. L. Langley and E. Cheraskin, 872
Physiopathology of Cancer, F. Homburger and W. H. Fishman, Eds., 565
 Pincus, G., Ed., *Recent Progress in Hormone Research*, 873
 Piveteau, J., Ed., *Traité de Paléontologie*, 698
Plant Diseases in Orchard, Nursery and Garden Crops, E. Gram and A. Weber, 76
Plant Growth Substances, L. J. Audus, 556
Polyporaceae of the United States, Alaska and Canada, L. O. Overholts, 559
Practical Manual of Medical and Biological Staining Techniques, E. Gurr, 802
Present Problems in Nutrition Research, F. Verzár, Ed., 553
Primates: Comparative Anatomy and Taxonomy, W. C. O. Hill, 558
Principles of Numerical Analysis, A. S. Householder, 547
Principles of Polymer Chemistry, P. J. Flory, 555
Principles of Transistor Circuits, R. F. Shea, Ed., 552
Probability and Information Theory, with Applications to Radar, P. M. Woodward, 874
Problems in the Anatomy of the Pelvis, E. Uhlenhuth, 564
Proceedings of the First International Congress of Electron Microscopy, 297
Progress in Organic Chemistry, J. W. Cook, Ed., 424
Projective Geometry and Projective Metrics, H. Busemann and P. J. Kelly, 901
Proteines, Les, 424
Proteins, The, H. Neurath and K. Bailey, Eds., 554
 Putnam, P. C., *Energy in the Future*, 50
 Radin, P., *World of Primitive Man*, 480
Radioactive Isotopes, W. J. Whitehouse and J. L. Putnam, 552
Radioisotope Techniques, 838
 Ralli, E. P., Ed., *Adrenal Cortex*, 392
 Ramo, S., and Whinnery, J. R., *Fields and Waves in Modern Radio*, 727
 Read, W. T., Jr., *Dislocations in Crystals*, 551
Recent Progress in Hormone Research, G. Pincus, Ed., 873
Recurrent Maladies in Scholarly Writing, E. S. McCartney, 544
Reports on Progress in Physics, A. C. Stickland, Ed., 101
Robert Grosseteste and the Origins of Experimental Science, A. C. Crombie, 901
 Römpf, H., *Chemie Lexikon*, 698
 Ruffié, J., *Groupes Sanguins Chez l'Homme*, 702
 Russell, F. S., *Medusae of the British Isles*, 562

- Sample Survey Methods and Theory*, M. H. Hansen, W. N. Hurntitz, and W. G. Madow, 803
Savory, T. H., Language of Science, 544
Science in Alaska, 1951, 297
Scientific Papers Presented to Max Born, Sir Edward Appleton et al., 550
Screen Projection of Chemical Experiments, E. J. Hartung, 556
Seidell, A., and Linke, W. F., *Solubilities of Inorganic and Organic Compounds*, 902
Sex Determination, F. A. E. Crew, 872
Sexual Behavior in the Human Female, A. C. Kinsey, et al., 601
Shapley, H., Ed., *Climatic Change*, 546
Shea, R. F., Ed., *Principles of Transistor Circuits*, 552
Shwartzman, G., Ed., *Effect of ACTH and Cortisone upon Infection and Resistance*, 769
Silicified Middle Ordovician Trilobites, H. B. Whittington and W. R. Evitt, 873
Simple Guide to Modern Valency Theory, G. I. Brown, 553
Simpson, G. G., *Major Features of Evolution*, 699
Small Particle Statistics, G. Herdan, 298
Smith, K. M., and Lauffer, M. A., Eds., *Advances in Virus Research*, 701
Snell, E. E., Ed., *Biochemical Preparations*, 482
Solubilities of Inorganic and Organic Compounds, A. Seidell and W. F. Linke, 902
Southern African Mammals, 1758 to 1951, J. R. Ellerman, T. C. S. M. Scott, and R. W. Hayman, 802
Stickland, A. C., Ed., *Reports on Progress in Physics*, 101
Structure and Mechanism in Organic Chemistry, C. K. Ingold, 481
Sun, The; The Solar System, G. P. Kuiper, Ed., 548
Symposia of the Society for Experimental Biology, No. VII: *Evolution*, R. Brown and J. F. Danielli, Eds., 165
Symposium on Fatigue, W. F. Floyd and A. T. Welford, Eds., 564
Synthetic Methods of Organic Chemistry, W. Theilheimer, 555
Szent-Györgyi, A., Chemical Physiology of Contraction in Body and Heart Muscle, 803
Textbook of Genetics, W. Hovanitz, 560
Textbook of Physiology and Biochemistry, G. H. Bell, J. N. Davidson, and H. Scarborough, 699
Theilheimer, W., *Synthetic Methods of Organic Chemistry*, 555
Theory of Equations, C. C. MacDuffee, 730
Thunderstorm Electricity, H. R. Byers, Ed., 550
Tokioka, T., *Ascidians of Sagami Bay*, 194
Traité de Paléontologie, J. Piveteau, Ed., 698
Uhlenhuth, E., *Problems in the Anatomy of the Pelvis*, 564
Ustilaginales of the World, G. L. Zundel, 645
Verzár, F., Ed., *Present Problems in Nutrition Research*, 553
Vickery, R. C., *Chemistry of the Lanthanons*, 554
Wadia, D. N., *Geology of India*, 331
Waldott, G. L., *Contact Dermatitis*, 166
Wardlaw, C. W., *Phylogeny and Morphogenesis*, 559
Weizenhoffer, A. M., *Hypnotism*, 838
Wever, E. G., and Lawrence, M., *Physiological Acoustics*, 560
Whitehouse, W. J., and Putnam, J. L., *Radioactive Isotopes*, 552
Whittaker, Sir Edmund, *A History of the Theories of Aether and Electricity*, 769
Whittington, H. B., and Evitt, W. R., *Silicified Middle Ordovician Trilobites*, 873
Withers, T. H., *Catalogue of Fossil Cirripedia in the Department of Geology*, 557
Wood, F. B., Ed., *Astronomical Photoelectric Photometry*, 548
Woodward, P. M., *Probability and Information Theory*, 874
World of Primitive Man, P. Radin, 480
Zundel, G. L., *Ustilaginales of the World*, 645
Books, Kenneth G., 513
Botany, need for international glossary of terms in, 910
Botulism, hemagglutination, 440
Bouthilet, Lorraine, 340
Bowen, I. S., 204
Boyd, William C., 419, 702, 776,
Bradley, Walter O., 912
Brain, intracerebral injection of procaine in hyperkinetic disorders, 417
lesions, rabbit, relation between acetylcholinesterase and behavior patterns, 158
Brandt, C. Stafford, 94
Branson, Carl C., 655
Brazil, geology of iron deposits, Congonhas District, 616
new phosphate minerals, 739
Breder, C. M., Jr., 386
Brennan, James M., 443
Brenner, M. W., 911
Bridgeman, Percy William, retirement, 677
Briggs, Lyman J., 3A (5/7)
Brigham, John C., 200
British Association for the Advancement of Science, 1953 presidential address, 103
1954 meeting, preliminary announcement, 834
British "atomic factories," 433
Britten, E. J., 913
Brocken spectre, Grand Canyon, 164, 511
Brode, Wallace R., 297
Brokaw, A. L., 474
Bronk, Detlev W., 223
Brooks, Frank G., 252
Brown, Georgiana L., 92
Brown, Mary B., 439
Brown, R. D., Jr., 419
Brown, Raymond, 289
Brown, Roland W., 330
Brownson, Helen L., 357
Bruner, H. D., 838
Brunetti, Rosemary, 74
Bullard, E. C., 102
Bumpus, F. Merlin, 849
Bunting, Russell W., 256
Bureau of Standards see National Bureau of Standards
Burns, Piromen and survival, 348
Burnside, R. J., 617
Bush, S., 415

C

- Cady, Wallace M., 695
Cain, Stanley A., 253
Calcite, 913
Calesnick, B., 128
California, Hayward fault zone, 386
outbreak of malaria in, 74
rare-earth mineral deposits, 325
Callus tissue and shoot formation from root culture, 220
Cambrian division see Pre-Cambrian Camera, x-ray, to study materials at temperatures up to 4000° F, 279
Campbell, Dan H., 289, 601
Canadian men of science, 167
Canadian Shield, fossil plants, 606
pre-Cambrian carbon of biogenic origin, 506
Cancer, chemotherapy, rational, 77
in liver tissue, trace element content, 772
laboratory research facilities available, 386
research and cholesterol, 710
use of cesium-137, 794
See also Growth; Tissue; Tumor
Cann, John R., 289
Cantero, Antonio, 351
Capillary resistance, endocrine regulation, 790
Carbohydrates see Starch
Carbon, for dating matter 40,000 years old, 116
14, dates obtained at Chicago, 135
dating of peat, 908
scintillation counting of, 155
13, variations in sequoia rings and atmosphere, 141
Carbon-14 incorporation in tobacco leaf carbohydrates after different periods of photosynthesis, 906
Carbon, pre-Cambrian, of biogenic origin, 506
Carbonate apatites, problem of, Soviet approach to, 913
Carbonate minerals in California, 325
Carbonic anhydrase inhibition, effect on urine, 291
Carleton, Robert H., 258
Carmichael, Leonard, 901
Carotenoids in lake waters, 605
Carter, J. C., 213
Carvin, Frank D., 255
Cascade Mountains, till-like deposits, 878
Caspari, Ernst, 560, 646
Catatonic-like response in opossum, 360
Cattle, toxic component in trailing indigo forage, 322
Cells, growth; discovery of new building blocks, 207
living, electronic quantitation of light absorption and nuclear fluorescence, 410

- neuroblasts and, separation from insect embryos, 93
single, plant tissue cultures from, 877
yolk, in silkworm, 161
- Cellulose microfibrils, fine structure, 80
Central nervous system gliogenesis in Piromen-treated rat embryos, 438
Centralia-Chehalis district, geology and coal resources, 419
Cesium-137, possible use in cancer research, 794
Chadwick, L. E., 442
Chalker, Ralph, 9
Chang, Alfred Zee, 785
Chanin, Martin, 323
Charophyta, Mesozoic, 421
Chelated iron and hemoglobin regeneration, 608
Chemical elements in sun, 449
Chemical research, U.S., and foreign scientists, 84
Chemical warfare, nerve gas formula, 61
Chemistry, of cholesterol, 710
high polymer, conference report, 367
of thorium and morin, 445
society meeting report, 716
Chemotherapy, cancer, 77
Chen, T. H., 413
Chicago radiocarbon dates, 135
Chicken embryo, extract filtration for tissue cultures, 321
influence of hydrocortisone on intestinal phosphatase, 809
nerve growth, 581
Chicken house, isolation of *H. capsulatum*, 71
Childs, C. E., 514
China, Communist, scientists in, 785
Chloride determination by silver-silver chloride electrode, 323
Chlorophyllin-odorant systems, copper, 609
Chlorophylls in lake sediments, 605
paper chromatography of, 68
Chloroplast, electron microscopy of details, 115
Cholecytokinin concentrates and ileal section contraction, 812
Cholesterol, chemistry and biochemistry, 710
Chlorine-deficient diet, aortic sclerosis and, 842
Cholinesterase in brain and behavior patterns, 158
Christ, C. L., 513
Christensen, Clyde M., 645
Christensen, Eric, 127
Christman, Ruth C., 534
Chromate interaction with nucleic acids, 221
Chromatography, paper, isatin as color reagent for amino acids, 124
of angiotonin, 849
of chlorophylls, 68
quantitative, technique for, 653
Steroid Reference Substances, 828
Chromogenic substrates in enzyme kinetics, 337
Chromosomes, avian, study technique, 508
effects of fast neutrons on *Tradescantia*, 36, 42, 46
effects of radiation on grasshopper, 685
on lily, 485
on oocytes, 581
Chupp, Charles, 331
Cinnabar and metacinnabar, saturation curves, 467
Clark, Herbert M., 619
Clay see Kaolin
Climate and conifer longevity, 396, 883
Clostridium botulinum, hemagglutination, 440
Cloud, Preston E., Jr., 727
Clouds as water sources, 207
Coal, bacteriostatic substance from vitrain ingredient, 214
fungistatic substance from vitrain, 213
resources of Centralia-Chehalis district, Washington, 419
Cobalt 60, clinical use in radiation, 415
irradiation with rotating sector method, 159
Cobban, William A., 355
Cocconi, Giuseppe, 422
Coenzyme A and pentobarbital inhibition in liver extracts, 185
Coesite, silica phase, 738
Cohen, Elias, 98
Cohen, L., 734
Colby, B. R., 614, 657
Colleges and universities see Education
Collier, John, retirement, 796
Collins, Henry B., 3A (3/26)
Colloidal solutions, preparation, 911
Color reagent for amino acids, isatin as, 124
Colorado, glacial chronology, San Juan Mountains, 614
Columbia Valley, landslide investigations, 475
Comer, J. J., 441, 815
Commoner, Barry, winner of Newcomb Cleveland prize, 149
Communism, charges of, 227
Communist China, scientists in, 785
Condon, E. U., 227
Conger, Alan D., 36
Conger, Beverly, 671
Congonhas District, geology of iron deposits, 616
Conifers, longevity under adversity, 396, 883
Conklin, Edwin Grant, AAAS resolution, 243
memorial, 91, 684
Conroy, Elizabeth, 69
Contraceptives, plant materials and, 626
Cook, A. C., 157
Coolidge, Harold J., 3A (5/28)
Coolidge, William D., 110
address, 110
dinner honoring 80th birthday, 115
Coonen, L. P., 694
Cooper, Irving S., 417
Cooper, J. A. D., 380
Cooperation, psychologic study of, 189, 656
Copeland, Herbert F., 388
Copper, chlorophyllin-odorant systems, 609
deposits in Michigan White Pine district, 354
Corley, Ralph C., 194
Cormack, Robert G. H., 615
Corn, cellulose microfibrils, 80
origin, 402
pericarp chromosomal element of maize, 577
phenomenon associated with seed irradiation, 45
Coronary disease; redox potentials in salivary samples, 847
coronary sclerosis, 842
See also Heart
Climate and conifer longevity, 396, 883
Corticosterone, radioactive, availability, 64
Cortisone, and murine typhus in mice, 468
influence on antibody production, 296
into corticosterone, 586
Cosmic radiation, 578
Coulson, Roland A., 291
Coulter, Henry W., 319
Courtemanche, Albert, 908
Cow, lactation, oxytocin and, 67
Craig, Harmon, 141
Crane, Julian C., 383
Cretaceous shales, ammonites in, 355
Cromwell, Townsend, 648
Crouse, Helen V., 485
Crystal growth, gallium purification by, 411
Cucumber seeds and growth regulating properties of β -naphthylalanines, 217
Culex tarsalis, live, shipping technique, 443
Currier, H. B., 817
Cyclohexane bonds, nomenclature, 49
Cyclotron, irradiation and dominant lethals, 46
neutron calibration, 44
Cysteine, nomenclature of amines from, 163
Cytodifferentiation, 587

D

- da Costa, Hernani C., 351
Daniels, Farrington, 82
Darden, E. B., Jr., 44
Davies, William E., 697
Davis, Bernard D., 774
Davis, Carl L., 837
Davis, John B., 381
Davis, R. E., 157
Day, B. E., 817
DDT resistance in *Drosophila*, 649
Dean, H. Trendley, 394
Decalactone and off flavor in milk, 218
Defense projects and government clearance of scientists, 293
Deering, Ed. F., 249
Dehydrator for d.c. amplifiers, 420
Dehydrogenase see Succinic dehydrogenase
Deignan, Stella Leche, 661
de Lamirande, Gaston, 351
de Laszlo, Henry, 626
Delaware River water, chemical and physical characteristics, 613
Demarest, David F., 512
Dental caries, effect of thyroid, 687
Dental health services, increased demand, 894
Dental research and education, 394 support, 666, 764
Dentistry, nuclear energy tools, 31
Denton, R. W., 812
Denues, A. R. T., 309
Dermatophytes and fungistatic action of squalene, 816
De Robertis, E., 301
Desoxyribonucleic acid synthesis in bone marrow and spleen, hypoxia and, 380
Desoxyribose nucleotides, 690

- Devils Lake Basin, chemical quality of waters, 614
 Dew duration recorder, 294
 de Witt, Wallace, Jr., 512
 Diabetes, alloxan, prevention in rats, 349
 insulin and oxygen consumption of mammalian muscle, 813
 insulin test, 516
 radiozinc uptake by rat pancreas, 219
 Dialysis, of fish poisons, 160
 peritoneal, intestinal intussusception by, 845
 Dickson, Frank W., 467
 Diet, choline-deficient, aortic sclerosis and, 842
 Dietz, Albert A., 482
 Diffraction spectrum by silver chromate gelatin, 651
 Dikaryon nuclei, exchange of incompatibility factors, 691
 Dimond, A. E., 123
 Disaster Studies, Clearinghouse for, 35
 Dissent, duty of, 227
 Distemper immunization of ferrets, 125
 Dobrin, Milton B., 793
 Dobzhansky, Theodosius, 165, 545, 908
 Doctoral disserations, publication plan, 153
 Dog, intestinal intussusception by peritoneal dialysis, 845
 lung transplants, 97
 potassium in ventricular tachycardia, 200
 Donaldson, David M., 877
 Donker, J. D., 67
 Donn, William L., 55
 Douvan, Elizabeth, 1
 Downs, Cora M., 468
 Drafting substitute in map reproduction, 330
 Dreams, hostility scale in, and hypertension, 382
 Dreger, Ralph Mason, 612
Drosophila, dominant lethals through irradiation, 46
 irradiation of oocyte chromosomes, 581
 reciprocal selection for correlated quantitative characters, 649
 Drought and conifer longevity, 396, 883
 DuBridge, L. A., 272
 Ductus arteriosus, physiologic closure, 731
 Dudley, H. C., 478
 Duhem, Pierre, philosophy of physics, 517
 Dulbecco, R., 561
 Duncan, F. R., 469
 Durfor, C. N., 613
 Dwornik, E. J., 513
 Dwyer, Peter, 623
- E**
- Eades, Charles H., Jr., 510
 Earth's crust, characteristics of formation, 361
 Earthquakes, Hayward fault zone, 386
 Echolocation, possible use by rats, 808
 Eckhardt, E. A., retirement, 206
 Editorial conference *see* Scientific editorial problems, conference on, 529
- Editorials:
 Arctic Bibliography, 3A (3/26)
 Astronomical League, 3A (6/4)
 central file of figures of insect types, 3A (2/12)
 future of the AAAS, 3A (2/19)
 Gordon Research Conferences, 3A (4/16)
 information for contributors to *Science*, 3A (1/29)
 International Depository of Cytological Slides, 3A (1/8)
 International Geophysical Year, 1957-58, 3A (4/9)
 International Union for Protection of Nature, 3A (5/28)
 Lyman J. Briggs, 3A (5/7)
 mathematics and Federal support, 3A (5/21)
 more important than war, 3A (1/1)
 nuclear power—its future, 3A (1/1)
 population problems and American Eugenics Society, 3A (5/14)
 proposed Congressional committee on science, 3A (3/12)
 scientific author as I have known him, 3A (4/23)
 75th anniversary of the U.S. Geological Survey, 3A (3/5)
 shall all international congresses be held abroad? 3A (3/19)
 Society for American Archaeology, 3A (1/15)
 Society for Experimental Stress Analysis, 3A (4/30)
 suggestions for contributors to *Science*, 3A (4/2), 3A (6/11)
 trial of a security system, 7A (6/18)
 two excerpts from a letter written by a gentleman in our government to a "recent" graduate of the College of William and Mary in Virginia, 3A (2/5)
 types of articles for *Science*, 5A (6/25)
 Utah Academy of Sciences, Arts and Letters, 3A (1/22)
 who speaks for whom or for what, 3A (2/26)
- Edmondson, Frank K., 250
 Edsall, John T., 302
 Education, higher, NSF committee to study effects of government support, 60
 science, UNESCO program for study of, 343
 See also Medical education
 Edwards, Carl F., 772
 Eggan, Fred, 145
 Ehrenfried, George, 251
 Elder, Joseph D., 536
 Eldjarn, L., 163
 Eldridge, Frederic L., 731
 Elections of officers:
 AAAS, Alaska Division, 176; 152; 834
 Cooperative Committee on Teaching of Science and Mathematics, 599
 Academy of Psychosomatic Medicine, 121
 Alabama Academy of Science, 542
 American Academy of Arts and Sciences, 834
 American Academy for Cerebral Palsy, 34
 American Academy of Dental Medicine, 799
- American Association of Clinical Chemists, 898
 American Association of Colleges of Pharmacy, 34
 American Eugenics Society, 766
 American Institute of Chemical Engineers, 34
 American Institute of Chemists, 869
 American Institute of Mining and Metallurgical Engineers, 898
 American Mathematical Society, 345
 American Medical Writers' Association, 34
 American Ornithologists' Union, 121
 American Orthopsychiatric Association, 152
 American Philosophical Society, 766
 American Psychosomatic Society, 899
 American Society of Agronomy, 339
 American Society of Heating and Ventilating Engineers, 239
 American Society of Human Genetics, 152
 American Society of Mechanical Engineers, 152
 American Society of Plant Physiologists, western section, 345
 American Society for Professional Biologists, 34
 American Society of Safety Engineers, 800
 Association of American Geographers, 725
 Association of American Medical Colleges, 121
 Association of Geology Teachers, 63; Far Western Section, 766
 Association for Research in Nervous and Mental Diseases, 122
 Association of Southeastern Biologists, 316, 862
 Biometric Society, Eastern Region, 800
 Botanical Society of America, 34
 Citizens for Conservation, 464
 Colorado-Wyoming Academy of Science, 834
 Federation of American Scientists, 766
 Florida Academy of Sciences, 183
 Gerontological Society, 152
 Indiana Academy of Science, 800
 Industrial Research Institute, 869
 Institute of the Aeronautical Sciences, 503
 International Association of Milk and Food Sanitarians, 899
 International Union of Biological Sciences, 58
 Kansas Academy of Science—Kansas Psychological Association, 835
 Metric Association, 835
 Michigan Academy of Science, Arts, and Letters, 153, 870
 National Pharmaceutical Council, Inc., 34
 National Society for Medical Research, 503
 Nebraska Academy of Sciences, 726
 New Orleans Academy of Sciences, 767
 New York Academy of Sciences, 346
 North Carolina Academy of Science, 870

- Northwest Scientific Association, 504
 Ohio Academy of Science, 801
 Oklahoma Academy of Science, 899
 Phi Delta Kappa, 184
 Phi Lambda Upsilon, 377
 Phi Tau Sigma, 122
 Sigma Delta Epsilon, 64
 Society for the Advancement of Criminology, 899
 Society for American Archaeology, 3A (1/15)
 Society of American Foresters, 153
 Society of Exploration Geophysicists, 317
 Society for Industrial Microbiology, 767
 Society of Nuclear Medicine, 408
 Society of Rheology, 871
 Soil Conservation Society of America, 153
 Soil Science Society of America, 339
 South Carolina Academy of Science, 684
 Southern Psychiatric Association, 801
 Tennessee Academy of Science, 600
 Torrey Botanical Club, 346
 Utah Academy of Sciences, Arts and Letters, 3A (1/22)
 Virginia Academy of Science, 899
 Western Society of Naturalists, 153
See also Meeting reports
 Electric conducting glass for plant lesion counting, 849
 Electrical engineering, meeting report, 368
 Electrode potentials in polarography, calculation, 324
 Electron diffraction study of minerals, 513
 Electron microscopy in Latin America, 301
 nuclear emulsions, 441, 815
 Electron microscope, society meeting report, 309
 study of spermatozoa, 212
 Electronic Component Parts, Professional Group on, organization, 91
 Electronic equipment, development of Project Tinkertoy at NBS, 60
 Electronic parts, test standards, 466
 Electronic thermometer, 827
 Electrophoresis, apparatus, optical masking device for, 73
 patterns of plasma, radioactive gold in, 95
 serum fractions, reagin activity, 289
 Element 99 identified, 234
 Element 100 identification, 460
 isolation of new isotope, 894
 Ellis, Gordon H., 94
 Ellison, Willie B., 845
 Embrey, Lee Anna, 231
 Embryo, development, physico-chemical changes, 576
 extract, filtration for tissue cultures, 321
 grasshopper, neuroblast separation, 93
 growth of organs, stimulation, 894
 intestinal phosphatase, hydrocortisone influence, 809
 Emery, Byron E., 806
 Emiliani, Cesare, 853
 Emotional stress as function of early experience, 285
- Endoconidiophora fagacearum*, inhibition by vitrain extracts, 213
 Endocrine regulation of capillary resistance, 790
 Energy requirements for bacterial motility, 286
 Engineering experiment stations, University of Illinois and Iowa State College, 50th anniversaries, 824
 Engineering, geology and soil, 616
 Englesberg, E., 413
 Entomology, meeting report, 431
 new type-figuring subsection, International Union of Biological Sciences, 505
 Enzyme, phosphoglucomutase and substrate occurrence of group transfer, 631
 research, competing substrates, 337
 Enzymes, of uridine polyphosphates, 479
See also individual listings
 Eocene age, kaolin in North Dakota, 387
Ephelis on *S. halepense* in Mysore, 288
 Equatorial undercurrent in Pacific Ocean, 648
Escherichia coli, internal sulfur reservoirs, 579
 mutant, phenylalanine requiring, 774
 Esplin, Don W., 877
 Essman, Leonard J., 659
 Ethane, microbially produced, detection, 381
 Ethylene, from plants, nonspecificity of triple response, 123
 thermochromic, 193
 Eugenics Society, American, population problems and, 3A (5/14)
 Everitt, W. L., 824
 Evolution, organic, 707
 Explorers Club, anniversary meeting report, 635
- F**
 Fabric studies of gravelly sediments, 696
 Farinholt, L. H., 553
 Farmdale drift, 693
 Fatigue in athletic contests, 336
 Fatty acids and milk flavor, 218
 Faunas, Paleozoie, Pacific Coast, 737
 Faust, Ernest Carroll, 563
 Fellig, Josef, 129
 Fellowship plan for research, 395
 Fenn, Wallace O., 623
 Fermat's Last Theorem, 586
 Ferrets, distemper immunization, 125
 Fertility, differential, and intelligence of new generations, 675
 plant materials to affect, 626
 Feuer, Henry, 392, 555, 602, 902
 Fibers, fine structure of cellulose microfibrils, 80
 Fields, Russell J., 166
 Fieser, Louis F., 710
 Fiji Island plants, 719
 Fineman, Marian, 259, 529
 Finesinger, Jacob E., 257
 Firestone, John E., 200
 Fish, destruction of molluscacides, 470
 poisons, dialysis, 160
 Fisher, J. E., 71
 Fission products, 619
 Flesch, Peter, 70
 Fletcher, Mary H., 445
- Flood-frequency studies, streamflow and, 694
 Florissant flora, 330
 Flowers, magnolia, maleic hydrazide retards maturation, 843
 Fluocarbonate, rare-earth, in California, 325
 Fluorine, thyroid, and dental caries, 687
 Foote, Paul D., retirement, 206
 Foreign scientists, visas to, 342, 3A (3/19), 498, 677
Forest *see* Trees
 Fort Monmouth security investigations, 676
 Fossil, dating, Chicago radiocarbon dates, 135
 fauna, Pacific Coast, 737
 Foraminifera, 448
 invertebrates in Mowry and Aspen shales, 355
 mammals, McKay Reservoir, 311
 plants, in Canadian Shield, 606
 Oligocene, 330
 primitive, Lake Superior, 311
 primates, camp site in south central France, 311
 Piltdown, 265
 nasal turbinete, 884
 tree dating, 141
 trilobites, 737
 Fossils, amino acids in, 576
 Foster, L. E., 413
 Foulkes, Robert H., 124, 911
 Francolite, crystal structure of, 913
 Frank, Philipp, 233, 823
 Fraser, George D., 446
 Free-radical formation; oxygen poisoning and x-irradiation, 623
 Freed, Simon, 68
 Freeman, G. R., 159
 Freezing of water, 73
 Frey-Wyssling, A., 80
 Friedeberg, H., 651
 Friedman, Townsend B., 289
 Friend, Joseph H., 912
 Frings, Hubert, 318
 Fritsch, F. E., 173
 Frost damage of trees, 383
 D-Fructose, alkali and, 587
 Fruit, setting and sex ratio in mango, 389
trees *see* Trees
 Fry, Cleota G., 730
 Fuel sources from solar energy, 82
 Fullmer, J. Z., 855
 Fungi, action of squalene on certain dermatophytes, 816
 airborne, 385
Ephelis on *S. halepense*, 288
 fossil, 311
 geographic variations in histoplasmin sensitivity prevalence, 654
 mites, and potato-rot nematode, relations, 92
 sclerotia in operculate discomycete, 737
 soil, nitrate formation, 187
 Fungistatic substance from vitrain, 213
 Fungitoxicity, 582
 Furcolow, Michael L., 71
 "Future" experiences, living out under hypnosis, 472
- G**
 Gabrielson, Ira N., 297
 Galactic research, 590
 Galambos, Robert, 560

- Gallium, high-purity, impurities in, 411
 Gall bladder tissue, succinic dehydrogenase inhibition in, 881
 Gallstones, cholesterol and, 711
 Garn, Stanley M., 675, 847
 Garnet Ridge, serpentine pipes, 618
 Gates, Olcott, 446
 Gaulden, Mary Esther, 862
 Gaunt, Robert, 392
 Gellhorn, E., 194
 Gene, concept, 703
 — structure, 585
 Genetics, blood groups in racial classification, 776, 777
 dicentric bridges, radiation and meiosis in grasshopper, 685
 dominant lethals in *Drosophila* through irradiation, 46
 ethics and Lysenkoism, 908
 inheritance of quantitative characters in *Drosophila*, 649
 Lysenkoism in Athens, 694
 philosophies of, 703
 sex ratio and parental age, 473
 technique for avian chromosome study, 508
Tradescantia chromosomes, effects of fast neutrons, 36, 42, 46
 traits correlated with poliomyelitis susceptibility, 914
 x-ray breakage of lily chromosomes, 485
 Geochemistry, geochemical effects of freezing, 73
 Geochronological significance of extinct natural radioactivity, 851
 Geographic range, extensions in, or lack of data, 390
 Geographic variations in histoplasmin sensitivity prevalence, 654
 Geologic controls of lead and zinc deposits, Nevada, 474
 Geological Survey, U.S., history and scope of operations, 741
 75th anniversary, 3A (3/5)
 Geologist, helicopter support, 697
 Geology, and coal resources of Centralia-Chehalis district, Washington, 419
 bedrock, of Montpelier quadrangle, 695
 carbonate apatites, Soviet claims, 913
 characteristics of formation of earth's crust, 361
 helicopter and walkie-talkie in field surveys, 389
 map of Wyoming, 327
 ocean temperatures, 853
 of Aleutian Islands, 446
 of Bedford shale and Berea sandstone, 512
 of Glacier National Park, 658
 of Hawaiian volcanoes, 388
 of iron deposits, Congonhas District, Brazil, 616
 of landslides, 475
 of Matanuska Valley, Alaska, 356
 Roberts thrust, Nevada, 423
 Scurvy reef survey, Texas, 617
 special-purpose terrain evaluations, 616
 structural and igneous, of La Sal Mountains, 477
 till-like deposits on Natapoc Mountain, 878
 See also individual subject entries
 Geophysical survey in Salt Lake Val-
- ley, 513
 Geophysics, American Geophysical Union, meeting report, 799
 exploration, meeting report, 793
 See also International Geophysical Year
 Germanium oxide-titanium phosphate glass, 478
 Germicides, quaternary ammonium, and *S. schottmuelleri*, 686
 Gero, Alexander, 112
 Gerritsen, Th., 412
 Gershbein, Leon L., 812
 Gerschman, Rebecca, 623
 Gertler, Menard M., 847
 Giauque-Kelvin temperature scale proposal, 761
 Gibbons, Anna J., 185
 Gilbert, Daniel L., 623
 Gill, Robert S., 3A (4/23)
 Gilluly, James, 423
 Gilmer, Raymond, 845
 Gilvarg, Charles, 774
 Gingrich, Newell S., 366
 Ginoza, William, 269
 Glacial chronology, San Juan Mountains, 614
 Glacial drift, Illinois, 693
 Glacier National Park, geology, 658
 Glass, Bentley, 58, 601
 Glass, electric conducting, for plant lesion counting, 849
 germanium oxide-titanium phosphate, 478
 Gliogenesis, central nervous system, 438
 Globulin, beta, identification of plasma factor B as, 806
 Glucose-1,6-diphosphate, occurrence of group transfer, 631
 Glucuronic acid conjugates of aspartic and glutamic acid, 510
 β -Glucuronidase and competing substrate technique, 337
 Glutamic acid in urine, 510
 Gold see Radioactive gold
 Goldie, Horace, 353
 Goldman, Benjamin, 391
 Goldschmidt, Richard B., 703
 Gomberg, H. J., 51
Goniobasis livescens, heat death temperatures, 773
 Goodman, R. N., 347
 Goodsprings district, Nevada, geographic control of lead and zinc deposits, 474
 Gordon, Mendel T., 816
 Gordon Research Conferences, 3A (4/16), 487
 committees, 497
 1954 program, 489
 Gorham, John R., 125
 Gorham, L. Whittington, 772
 Government, medical research funds for bio-sciences, 661
 projects, security clearance, 293
 Fort Monmouth investigations, 676
 research see Research
 security regulations see Scientists and security investigations
 support, mathematics and, 3A (5/21)
 to colleges, NSF committee study of, 60
- Govier, Wm. M., 185
 Govindu, H. C., 288
 Graham, Jack B., 250
 Grand Canyon, Brocken spectre phe-
- nomena, 164, 511
 Granulestin, influence on antibody production, 296
 Grapes, benzothiazol-2-oxyacetic acid and delayed maturity, 287
 Graphite research reactor, 15
 Grasshopper, dicentric bridge production during meiosis, 685
 embryos, neuroblast separation, 93
 Gravimetric thermal precipitation, analysis, 816
 Gravitation, generalized theory, revision, 177
 Gray, Ralph, 251
 Green, David E., 444
 Greenberg, Joseph, 880
 Greene, H. B., 469
 Greene, Harry S. N., 365
 Greenstein, Jesse P., 144
 Griesel, Wesley O., 843
 Grimaldi, F. S., 327
 Grosvenor, Gilbert, retirement, 720
 Ground water, in High Plains of western U.S., 446
 in Navajo country, 421
 resources, Louisville area, 477
 Matanuska Valley, 356
 See also Water
- Group research, 395, 444
 Growth, animal, embryo organ stimulation, 894
 by monofunctional steroids, 582
 hormones, effect on blood glucose in types of obesity in rats, 96
 See also Cancer, Plant growth, Tissue, Tumor
- Gudger, Eugene, retirement, 638
 Guild, Philip W., 616
 Guinea pig ileal sections, contraction by cholecystokinin concentrates and histamine, 812
 Gurney, Ashley B., 431, 561
 Gutierrez, Joyce C., 125
 Gyrogonites, 422
- H**
- Haag, Maurice R., 339
 Hafstad, L. R., 3A (1/1)
 Hagen, John P., 588
 Hainer, R. M., 609
 Haines, William J., 379
 Hair, depigmentation as radiation dosimeter, 186
 Haley, K. D. C., 167
 Haley, Thomas J., 126
 Hall, James C., 813
 Hallowell, A. Irving, 480
 Halstead, Bruce W., 160
 Hamazaki, Yukio, 690
 Hamner, Charles L., 217
 Handley, Charles O., Jr., 802
 Harbeck, G. E., 328
 Hardin, Creighton A., 97
 Harper, P. V., 447
 Harrington, R. V., 219
 Harris, A. Sidney, 200
 Harris, W. D., 128
 Harrison, George R., 729
 Harshbarger, John W., 421
 Hart, Hiram E., 880
 Hartroft, W. Stanley, 842
 Harvey, A. McGehee, 562
 Hassel, O., 49
 Hawaii, silica content of basaltic magma, 388
 volcanoes, 388
 Hayward fault zone, California, 386
 Heart, coronary sclerosis, 842
 disease; redox potentials in salivary

- samples, 847
ductus arteriosus closure, 731
ventricular tachycardia and potassium, 200
Heat death temperatures in snails, 773
Heavy-water reactor conference, 28
Hederra, Arturo, 735
Hedgepeth, Joel W., 562
Heggen, George, 772
Heiman, Jacob, 911
Heinz, H. J., 412
Helicopter, and geology, 697
and walkie-talkie in field surveys, 389
Hemagglutination *see* Blood hemagglutination
Hemagglutinating viruses, mechanism of suppression, 391
Hembree, C. H., 657
Hemming, Francis, 131, 477, 801
Hemoglobin *see* Blood hemoglobin
Hemophilia and plasma factor B, 806
Hemphill, D. D., 347
Henderson, James H. M., 512
Henderson, Roland G., 329
Henkel, Dennis, 567
Henry, Dora Priaux, 557
Henshaw, Paul S., 626
Herald, Carl T., 218
Heredit, human, and blood factor U, 734
Hermann, Heinz, 221
Hernandez, Thomas, 291
Hesler, L. R., 559
Heston, W. E., 565
Hidalgo, John, 608
Hildebrandt, A. C., 877
High polymer chemistry, forum report, 367
Himwich, H. E., 158
Hiptagenic acid, toxic component of *I. endecaphylla*, 322
Histamine and ileal section contraction, 812
Histochemistry of ketoénolic substances, 690
Histology *see* Tissue
Histoplasma capsulatum, isolation from air, 71
spores, air-borne, 385
Histoplasmin sensitivity, geographic variations in prevalence, 654
Holland, Hal C., 189
Holt, Marshall, 3A (4/30)
Hookworm, estimation of blood loss with radioactive iron, 412
Hoover, Linn, 419
Horecker, B. L., 222
Hormones, endocrine regulation of capillary resistance, 790
See also individual listings
Horseshoe atoll, west Texas, geological survey, 617
Horsfall, Frank L., Jr., 427
Hose, R. K., 327
Hospital for atomic age, 30
Hostility scale in dreams and hypertension, 382
Houck, C. Riley, 845
Howton, David R., 420
Hudson, R. P., 838
Hultgren, Herbert N., 731
Human being, atomic energy treatment, 31
ductus arteriosus, physiologic closure, 731
evolution, 265
fertility, plant materials and, 626
intervertebral disk, hyaluronic acid determination, 189
life expectancy in U.S., 828
liver tissue, cancerous and noncancerous, trace element content, 772
perspiration constituent with ultraviolet absorption, 514
radioactivity, 429
skin, effect of serum ultrafiltrate on tissue mast cells, 99
structure, 70
vision, mechanism of visual threshold and adaptation, 887
Hummel, R. W., 159
Hunt, Charles B., 331, 477
Hunter, Preston E., 649
Hunter, Walter S., 230
Hurd, Paul D., Jr., 814
Hurder, Wm. P., 476
Hurricane studies, microseism period and, 55
Hyaluronic acid, quantitative determination in human intervertebral disk, 189
Hydrazines, acid, and phosgene in tuberculosis, 514
Hydrocarbons, gaseous, microbiologically produced, detection of, 381
Hydrocortisone, influence on embryonic intestinal phosphatase, 809 synthetic supply, 207
Hydrology *see* Ground water, River, Water
Hyperglycemia, 96
Hyperkinetic disorders, intracerebral injection of procaine, 417
Hypertension, hostility scale of dreams and, 382
Hypnosis, living out of "future" experiences under, 472
Hypoxia *see* Anoxia
- I**
- Ibach, Martha J., 71
Illinois, glacial drift, 693
Illustrations for scientific publications, 534
Indigofera endecaphylla, toxic component in, 322
Individual, support in research, 395
Indole-3-acetic acid and disease-inhibiting properties of antibiotics, 347
Infants, ductus arteriosus closure, 731
Information, electronic storage, 584
Infrared optical systems, glass for, 478
Ingalls, James W., Jr., 191
Inoculation, airborne, for distemper immunization of ferrets, 125 chamber, inexpensive, 512
Insect, collection, myiasis from aspirator method of, 814 population counts, limitations of zero method, 689 pupation site in *Drosophila*, 649
Insects, social, organization for study, 283
Insulin, and oxygen consumption of mammalian muscle, 813 6-min responsiveness test, 516
Intelligence, of new generations, differential fertility and, 675 tests, different, different IQ's for, 611, 612
Intermolecular forces, 582
International Geophysical Year, 1957-58, 3A (4/9)
international scientific action, 569 program, 457
International meetings *see* Meeting reports
International Union of Biological Sciences, entomology type-figuring subsection, 505
Intervertebral disk, hyaluronic acid determination, 189
Intestine, embryonic, influence of hydrocortisone on epithelial phosphatase, 809 infections, sulfaguanidine in, 191 intussusception in nephrectomized dogs by peritoneal dialysis, 845 muscle contraction by cholecystokinin concentrates and histamine, 812
Intracellular recordings and prefilled microelectrodes, 846
Intravascular clot test, 883
Intussusception, intestinal, 845
Iodine 131 metabolism in thyroid, body irradiation and, 65
Ionization radiations, protection by oxygen, 378
Ionospheric program of International Geophysical Year, 574
Ionospheric storms, morphology, 577
Ions, free energies, entropies, 583 in sun's elements, 449
Iowa State College, 50th anniversary of engineering experiment station, 824
IQ *see* Intelligence tests
Iron, chelated, and hemoglobin regeneration, 608 deposits of Congonhas District, geology, 616 uptake by blood and bone marrow cells, factors influencing, 94 Irradiation, and oxygen poisoning, 623 body, and iodine 131 metabolism in thyroid, 65 cyclotron, and dominant lethals in *Drosophila*, 46 of maize seeds, relation between dose and seedling height, 45 of mice, cobalt diet and, 415 lymphoid tumors and thymectomy, 439 vitamin E and survival time, 126 of water and radical yield of, 904 plant stem, root growth after, 127 ultraviolet, triuret from uric acid by, 129 with cobalt 60, 159
See also Radiation
Irvine, J. W., Jr., 771
Isatin as color reagent for amino acids, 124
Ischemia, myocardial, ventricular tachycardia and, 200
Iso-anhydrovitamin A, structure, 660
Isonicotinic acid hydrazide, 514
Isotopic lithium metal, preparation by thermochemical reduction, 469
Itabirite in Brazil, 616
Itrumil, effects on thyroid tissue, 912

J—K

- Jackson Memorial Laboratory, classified bibliography of mice, 295
 James, Audrey B., 92
 Jarde茨ky, W. S., 361
 Jargon—good and bad, 536
 Jefferson, Th., 3A (2/5)
 John Scott award, history, 502
 Johnson, M. J., 76
 Johnson, Shirley A., 293
 Joliot-Curie, I., and American Chemical Society, 340
 Jones, Arnold M., 353
 Jones, B. E., 328
 Jones, Fred C., 475
 Jones, Hugh N., 636
 Jones, R. S., 128
 Journals, editorial phases *see Scientific journals*
 Journals newly published:
Acta Facultatis Mediceae Zagreben sis, 899
Actas de la Clínica Yódice, 122
A.S.B. Bulletin, 211
Boletín Indigenista Venezolano, 122
Bulletin of the Chinese Association for the Advancement of Science, 122
Bulletin of the Institute of Nuclear Sciences "Boris Kidrich," 122
Canadian Journal of Microbiology, 153
Deep-Sea Research, 122
Eugenics Quarterly, 283
General Motors Engineering Journal, 122
Insectes Sociaux, 283
ISA Journal, 408
Journal of the Indiana Medical Profession, 726
Journal of the Operations Research Society of America, 122
Kobutsugaku Zasshi, 870
Medical Abstracts, 644
Meteoritics, 240
Mineralogical Journal (Japan), 870
Newsletter of the Gerontological Society, 408
Oceanus, 122
Optica Acta, 153
Radiation Research, 64
Revue Libérale, La, 122
Wakayama Medical Reports, 122
Yokohama Mathematical Journal, 122
Zeitschrift für Physikalische Chemie, Neue Folge, 836
 Juhle, Werner, 319
 Jumber, Joseph, 318
 Kalckar, Herman M., 479
 Kamen, Martin D., 552
 Kao, C-Y., 846
 Kaolin in North Dakota, early Eocene, 387
 Kaplan, Henry S., 439
 Kaplan, Irving, 101
 Kaplan, Joseph, 3A (4/9)
 Karlstrom, Thor N. V., 696
 Kaston, B. J., 192
 Katmai National Monument, volcanic activity, 319
 Keatite, silica phase, 738
 Keeney, Philip G., 218
 Keighton, W. B., 613
 Kelly, Harry C., 50
 Keratinization, sulfhydryl and disulfide in, 70
 Kerr, William, 51
 Ketoenoic substances, histochemistry, 690
 Keysort cards, bibliography of inbred strains of mice, 295
 Kidney, intestinal intussusception by dialysis, 845
See also Urine
 Kinsey statistical methods, 718
 Kirby-Smith, J. S., 42
 Kirk, Paul L., 99
 Kittle, C. Frederick, 97
 Knebelman, M. S., 901
 Knight, Paul, 390
 Koehler, James S., 551
 Kohman, Truman P., 851
 Kohn, Henry I., 438
 Korf, Richard P., 737
 Kornhauser, E. T., 769
 Kosanke, Robert M., 214
 Koshi, J. H., 67
 Kramár, Jenö, 790
 Kratz, Paul H., 395
 Kravitz, E., 686
 Krebs, A. T., 415, 429
 Kron, Gerald E., 548
 Krotkov, G., 906
 Kuhn, Thomas S., 546
 Kurtz, Albert K., 611
- L**
- Lactones and flavor deterioration of milk fat, 218
 Lahovary, Nicolas, 777
 Lahr, T. N., 739
 Laird, L. B., 477
 Landslide investigations in Columbia Valley, 475
 Langbein, W. B., 328
 Langer, Rudolph E., 249
 Larsh, Howard W., 71
 La Sal Mountains, structural and igneous geology, 477
 Lasker, Gabriel, 253
 Laszlo, Daniel, 880
 Lathrop, K. A., 447
 Latin America, electron microscopy, 301
 Lavas, Paricutin volcano, origin of compositional variation, 515
 Law *see Legal*
 Laymen, criticisms of science, 162
 scientist's responsibility for interpretation of concepts to, 299
 writing for, 567, 851
 Lead deposits in Nevada, geologic control, 474
 Leader, R. W., 125
 Lecithin molecule, depiction, 420
 Lee, Milton O., 530
 Legal protection of scientific "property," 909
 Legal testimony of scientists, 819
 Lenzen, Victor F., 517
 Leopold, Luna B., 326
 Lerner Marine Laboratory, cancer research facilities available, 386
 LeRoy, Charles H., 3A (6/4)
 Leukocytes *see Blood leukocytes*
 Levine, Harry, 327
 Levvy, G. A., 337
 Levy, J. B., 413
 Lewin, Ruth, 880
 Lhamon, William, 382
 Li⁷ (*n,t*) reaction, 350
 Libby, W. F., 135
 Liesegang Rings, 651
 Lietzke, M. H., 333
 Light, absorption in living cells, elec-
- tronic quantitation, 410
 adaptation, human, 887
See also Optics
 Lily chromosomes, x-ray breakage, 485
 chemical quality of waters, Devils Lake Basin, 614
 International Congress of, meeting report, 173
 water pollution and plankton, 732
 Lindahl, Ivan L., 157
 Lindberg, M. L., 739
 Linehan, Daniel, S.J., 701
 Lipid, abnormal, in coronary arteries of rats on choline-deficient diet, 842
 Lippmann, F., 163
 Literary style *see Scientific writing*
 Lithium metal, isotopic, preparation, 469
 Live, L., 872
 Liver, acid and alkaline RNase, 351
 cells, succinic dehydrogenase inhibition in, 881
 extracts, pentobarbital inhibition of sulfanilamide acetylation, 185
 mouse, ascites tumor-bearing, 880
 tissue, human, cancerous and non-cancerous, trace element content, 772
 Loeser, Charles N., 410
 Lohman, Stanley W., 446
 Long, William A., 878
 Longevity under adversity in conifers, 396, 883
 Loomis, W. E., 71
 Loosli, Clayton G., 769
 Louisville area, water resources, 477
 Love, J. D., 327
 Lovell, Donald J., 544
 Low temperature physics, conference report, 90
 and chemistry, conference report, 400
 Lowenberg, Robert I., 883
 Lowry, J. R., 219
 Lundby, Arne, 28
 Lundquist, Denise, 514
 Lung transplants, 97
 Luria, S. E., 701
 Lymphoid tumors, development in nonirradiated thymic grafts in thymectomized irradiated mice, 439
 Lynen, F., 163
 Lysenkoism, and ethics, 908
 in Athens, 694
- M**
- Mabey, D. R., 740
 MacCardle, Ross C., 802
 Mackay, R. Stuart, 905
 Mackey, W. J., 367
 Macklin, R. L., 350
 Maclay, W. D., 157
 MacNamara, Donal E. J., 255
 Macnee, Alan B., 552
 Magnesium in sulfuric acid, spectrum of, 850
 Magnetic field distributions, anomalies of three-dimensional distributions by model fields, 329
 Magnetic survey of Salt Lake Valley, 513
 Magnetite, discovery in Puerto Rico, 311
 Magnolia flowers, maleic hydrazide

- retards maturation, 843
 Maguire, Bassett, 826
 Mail, G. Allen, 443
 Maize *see* Corn
 Malamud, Nathan, 438
 Malaria, outbreak in California, non-endemic area, 74
 Malde, Harold E., 618
 Maleic hydrazide, retards maturation in magnolia flowers, 843
 sprout inhibitor in sweetpotatoes, 507
 Man *see* Human being
 Mango, sex ratio and fruit setting, 389
 Manometer, mercury, for student use, 415
 Manpower, scientific, foreign scientists and U.S. chemical research, 84
 National Register of Scientific and Technical Personnel, 863
 selective service and, 760
 Manus society in New Guineas, appraisal, 278
 Manuscript preparation *see* Scientific writing
See also *Science*, suggestions to contributors
 Manuscripts, publication by International Scholars Forum, 539
 scientific, listings of, 221
 Map, of Wyoming, geologic, 327
 reproduction, use of scribing, 330
 Mapping shallow horizons with seismograph, 740
 Marcus, Stanley, 877
 Mardones, Jorge, 735
 Margenau, Henry, 728
 Marigold, tissue cultures from single cells, 877
 Markus, Gabor, 324
 Marmorston, Jessie, 816
 Marranzino, Albert P., 655
 Marsh, C. A., 337
 Martens, P., 3A (1/8)
 Maryland, Paleocene Ostracoda, 656
 Master, Regina, 382
 Mathematics and Federal support, 3A (5/21)
 Mather, Kirtley F., 299
 retirement, 679
 Mayer, Jean, 96, 553
 McCarthy, M. D., 348
 McCartney, Eugene S., 525
 McClure, Claude, 189
 McConnell, Duncan, 913
 McCormick, W. G., 126
 McCulloch, Warren S. *see* McCullough, Warren S.
 McCullough, Eve F., 126
 McCullough, Warren S., 634
 McCurdy, Harold G., 656
 McFarland, William, 810
 McKeehan, L. W., 293
 McKenzie, Fred F., 212
 McKenzie, Lawson M., 909
 McLaughlin, Dean B., 546
 Medicine, atomic age, for human diseases, 31
 hospital design, 30
 education, conference report, 275
 research support in bio-sciences, 661
 schools, decrease of applicants, 541
 foreign, improvement, 500
 Meeting reports:
Alaska Science Conference, 176
American Association of Physical Anthropologists, 675
- American Association of Physics Teachers, 458
 American Chemical Society, 716
 American Geophysical Union, 799
 American Institute of Electrical Engineers, 368
 American Psychological Association, 340
 American Society of Agronomy, 339
 Animal Care Panel, 90
 Anthropological research meetings, University of Arizona, 239
 Association of Southeastern Biologists, 862
 Canadian High Polymer Forum, 367
 Chemical Institute of Canada, organic chemistry division, 504
 Conference on Scientific Editorial Problems, 529
 Conference on validation of scientific theories, 233
 Electron Microscope Society of America, 309
 Entomological Society of America, 431
 Explorers Club, 50th anniversary, 635
 Heavy-water reactor conference, Oslo, 28
 International Biometric Conference, 204
 International Conference on Low Temperature Physics, 90
 International Conference on Low Temperature Physics and Chemistry, 400
 International Conference on Soil Mechanics and Foundation Engineering, 310
 International Congress of Limnology, 173
 International Congress of Zoology, 114, 131
 International Statistical Institute, 205
 International Symposium on Dynamics of Virus Infections, 427
 International Union of Biological Sciences, 58
 Nebraska Academy of Sciences, 726
 Pacific Science Congress and Far-Eastern Prehistory Congress, 145
 Pasadena conference on protein structure, 302
 Photonuclear conference, University of Pennsylvania, 836
 Physics of particle size analysis, 870
 Radio astronomy conference, 588
 Radiological Society of North America, 636
 Rochester high-energy physics conference, 758
 Society of American Bacteriologists, 893
 Society of Exploration Geophysicists, 793
 Society of Women Engineers, 643
 Symposium on Utilization of Solar Energy, 82
 World Conference on Medical Education, 275
See also Elections of officers
- Meiosis, 485
 in grasshopper, dicentric bridge production with x-radiation, 685
 Meisel, E., 100
- Meister, Morris, 258
 Mental defectives; redox potentials in salivary samples, 847
 Mental disorders and drugs, 587
 Mercurial diuretics, inhibition of succinic dehydrogenase in kidney, 100
 Mercury manometer for student use, 415
 Mercury, ore deposits, 467
 ores and precipitation curve of cinnabar, 311
 Merriam, C. W., 737
 Mesozoic Charophyta, 421
 Metabolism, activity of uridine-5'-phosphate derivatives, 59
 in mammalian placenta, 582
 Iodine 131, in thyroid, body irradiation and, 65
 products, long-term recovery from rats, 447
 products of *E. coli*, 578
 Metacinnabar ore, saturation curve, 467
 Metamict minerals, crystalline regions, 513
 Meteorology, data about tropical Pacific, 61
 in International Geophysical Year program, 573
 microseism period and hurricane studies, 55
 Methadone, relation of chemical structure and physiologic activity, 112
 International Conference on Low α-Methoxyphenylacetic acid, movement from one plant to another through root systems, 437
- Metric system, advantages, 567
 Mexico, Paricutin volcano lavas, 515
 Meyer, K. F., 413
 Meyerhoff, Howard A., 859
 Mice *see* Mouse
 Michigan, copper deposits in White Pine district, 354
 Mickey, George H., 728
 Microbially produced gaseous hydrocarbons, detection, 381
 Microcard editions of *Science*, 211
 Microelectrodes, prefilled, technique, 846
 Microfibrils *see* Fibers
 Microorganisms, common, lack of bactericidal effect of mouse serum on, 877
- heterotrophic, nitrate formation, 187
 Microscope, beta-ray, 51
See also Electron microscope
 Microseism period and storm position, relation between, 55
 Military draft of scientists, 760
 Milk, ejection phenomenon, oxytocin and, 67
 off-flavor, causes, 218
 Milkey, Robert G., 445
 Millar, C. E., 257
 Miller, Esther, 661
 Miller, Frederic H., 549
 Miller, Garth, 420
 Mills, Thomas J., 260
 Minas Gerais, new phosphate minerals from, 739
 Minerals, metamict, crystalline regions, 513
 navajoite, 326
 radioactive, identification technique, 441, 815
 rare-earth deposits, San Bernardino County, 325

- Mingoli, Elizabeth S., 774
Minto, Wallace L., 914
Mitchell, John W., 437
Mites, fungi, and potato-rot nematode, relations, 92
Mnemiopsis stimulation, 581
Mohler, Fred L., 249
Mohr, H. C., 507
Molecular diameters, 577
Molluscacides, quaternary ammonium compounds as, 470
Molybdenum blue reaction and determination of phosphorus in sea water, 327
Monroe, Robert A., 65
Montagu, M. F. Ashley, 884
Montana, geology of Glacier National Park, 658
stromatolite classification, 659
Montgomery, R. B., 648
Montpelier quadrangle, bedrock geology, 695
Moog, Florence, 567, 809
Moore, Amy Weedon, 845
Moore, Charlotte E., 449
Moore, Maurice L., 256
Moraines, San Juan Mountains, 614
Morgen, Ralph, 82
Mori, Itsuhiko, 653
Morin, chemistry, 445
Morowitz, Harold J., 286
Morphine, new synthesis method, 235
See also Methadone
Morris, M. P., 322
Morrison, P., 550
Moshier, Ross W., 647
Moshman, Jack, 186
Mouse, ascites tumor-bearing, Y^{90} distribution in, 880
biologic effects of nuclear radiation, 40
cobalt diet and radiation sensitivity, 415
hair depigmentation as radiation dosimeter, 186
hydrocortisone and epithelial phosphatase of intestine, 809
inbred strains, classified bibliography, 295
irradiated, lymphoid tumors and thymectomy, 439
vitamin E and survival time, 126
irradiation and oxygen poisoning, 623
leukocyte counts from tail and heart, 353
murine typhus and cortisone, 468
obesity, multiple etiology, 96
obtaining venous blood from orbital sinus, 100
P. pestis virulence, 413
pregnant, succinic dehydrogenase inhibition in, 881
serum, lack of bactericidal effect on microorganisms, 877
Mountain building, 364
Mourant, A. E., 776
Movies, three-dimensional, 905
Mueller, G. E., 727
Mueller, Joseph C., 687
Muir, W. H., 877
Muller, Ernest H., 319
Mullins, L. J., 560, 803
Multiple-choice apparatus, 189, 656
Munro, J. Alex, 371
Munroe, E. G., 3A (2/12)
Murphree, O. D., 189, 657
Murphy, Walter J., 716
Murray, Marvin, 293
Murray, Milton, 815
Murray, Thomas E., 3A (1/1)
Muscle, contraction by cholecystokinin concentrates and histamine, 812
mammalian, insulin and oxygen consumption, 813
Mustafa, Ahmed, 193
Mustakallio, Kimmo K., 881
Myers, D. A., 617
Myiasis from use of aspirator method of insect collection, 814
Myocardial ischemia, ventricular tachycardia and, 200
- N
- Najjar, Victor A., 631
 β -Naphthylalanines, growth regulating properties, 217
Narcotics and hypnotics, effects on acetylation systems, 185
Nasal turbinete, Piltdown, 884
Nash, Carroll B., 773
Natapoc Mountain, till-like deposits, 878
Nath, M. C., 349
Nathan, P., 158
National Academy of Sciences, annual meeting, abstracts of papers, 576
Abbot, C. G., 576
Abelson, P. H., 576
Beach, F. A., Goldstein, A., and Jacoby, G., 576
Bennett, W. H., and Hulbert, E. O., 576
Bodine, J. H., 576
Booker, H. G., 577
Briggs, L. J., 577
Brink, R. A., and Barclay, P. C., 577
Britten, R., 578
Brode, R. B., 578
Bullen, K. E., 578
Cannon, P. R., Frazier, L. E., and Hughes, R. H., 578
Chaney, R. W., and Axelrod, D. I., 579
Cowie, D. B., Roberts, R. B., and Bolton, E. T., 579
Dennison, D. M., 579
DuMond, J. W. M., Berreman, D., and Henke, B., 579
Emerson, R., and Chalmers, R. V., 580
Farr, L. E., Robertson, J. S., and Stickley, E. E., 580
Gould, L. M., 580
Gunn, R., 580
Hamburger, V., 581
Harvey, E. N., and Chang, J. J., 581
Herskowitz, I. H., 581
Hirschfelder, J. O., 582
Horsfalls, J. G., and Rich, S., 582
Huggett, A. St. G., 582
Huggins, C., and Jensen, E. V., 582
Kaplan, J., 583
Kerst, D. W., Snyder, J. N., and Powell, J. L., 583
Labaw, L. W., and Mosley, V. M., 583
Latimer, W. M., 583
Meinel, A. B., 583
Menzel, D. H., 584
Olson, H. F., 584
Pettersson, H., 584
Roach, F. E., 584
Sax, K., 585
Shedlovsky, T., 585
Stadler, L. J., and Emmerling, M., 585
Taliaferro, W. H., and Taliaferro, L. G., 585
Tishler, M., Taub, D., Pettebone, R. H., and Wendler, N. L., 586
Urey, H. C., 586
Vandiver, H. S., Lehmer, D. H., and Lehmer, E., 586
Weiss, P., and James, R., 587
Wexler, H., 587
Whipple, F. L., 587
Wolfrom, M. L., and Schumacher, J. N., 587
Woolley, D. W., and Shaw, E., 587
National Academy of Sciences, officers and new members, 682
National Academy of Sciences—National Research Council, Clearinghouse for Disaster Studies, 35
National Bureau of Standards, functions and operations, 195
Project Tinkertoy, 60
National Register of Scientific and Technical Personnel, 863
National Science Board, prospective appointments, statement of FAS, 84
National Science Foundation, Advisory Panel for Radio Astronomy, 726
committee to consider effects of government support to colleges, 60
register of scientific and technical personnel, 863
studies of scientific research and development programs of government agencies, 432, 458
Navajo country, ground water in, 421
Navajoite, vanadium oxide from Arizona, 326
Nebraska, computations of river sediment discharge, 657
Necrology: 35, 154, 284, 409, 600, 768, 900
Negroes, blood factor U, 734
blood groups, 776
sickle-cell trait, 718
Nehari, Varda, 809
Nelson, E. C., 547
Nelson, John W., 379
Nelson, Paul H., 902
Nematodes, potato-rot, mites, and fungi, relations, 92
Neoplasm, apparently benign, transplantation of, 124, 911
Nephrectomy and intestinal intussusception, 845
Nerve gas formula, 61
Nervous system, central *see* Central nervous system
Neuroblasts, separation from grasshopper embryos, 93
Neurotoxins from fish, 160
Neutron, calibration in cyclotron, 44 source, water boiler, design and construction, 9
experimental uses, 26
operation, 21
Neutrons, and dominant lethals in *Drosophila*, 46
from nuclear detonations, effects on chromosome breakage, 36, 42, 46
Nevada, geologic controls of lead and zinc deposits, 474
Roberts thrust, 423

- Newcastle disease virus inhibition, 391
 New England, black widow spider in, 192, 390
 New Guinea, Archbold Expedition, 498
 New York Botanical Garden, Venezuelan expedition, 826
 Newell, Homer E., Jr., 603
 Newman, Richard, 472
 Niobium, chemical procedure for analysis, 655
 Niobrara River, sediment discharge computations, 657
 Nitrate formation by soil fungus, 187
 Nitrogen, in sea sediments, 66 metabolism, 322
 β -nitropropionic acid and hiptogenic acid, 322
 Noble, William J., 167
 Nomenclature, botanical, 910
 of amines from cysteine and cysteine, 163
 of cyclohexane bonds, 49
 See also Zoological nomenclature
 Nonmilitary aspects of atomic energy, public reaction, 1
 Norman, A. G., 76
 Norman, Jacque, 257
 North American Aviation, design and construction of water boiler neutron source, 9
 homogeneous graphite research reactor, 15
 operation of water boiler neutron source, 21
 North Dakota, Devils Lake Basin, 614 kaolin in, 387
 Norton, Horace W., 475
 Norton, Joanne Parker, 220
 Novitski, E., 473
 Noyes, H. P., 758
 Noyes, W. Albert, Jr., 529
 Nuclear emulsions for electron microscopy, 441, 815
 Nuclear energy, biologic effects, 36, 42, 45, 46
 British production of, 433
 dental research tools, 31
 for human diseases, 31
 fuels; Ames Laboratory project, 372
 nonmilitary aspects, public reaction, 1
 peacetime uses, 1, 26
 Nuclear fluorescence in living cells, electronic quantitation, 410
 Nuclear physics, high-energy, conference report, 758
 photonuclear conference, University of Pennsylvania, 836
 Nuclear reactor, core components, 9
 core construction, metals, 4
 heavy-water reactor conference, 28
 homogeneous graphite, 15
 Nucleic acid, derivatives; triuret production, 129
 in tissues, chromate interaction with, 221
 Nucleoprotein, host-cell differential ability of TMV strains to bind, 269
 Nucleus formation; incompatibility factors in dikaryon, 691
 Nuclides, radio-, extinct natural, geochronological significance, 851
 Nussbaum, Hans, 261
 Nutrition, research, food and, project listings, 768
 vitamin-B complex and alcohol intake, 735
 Nye, Sylvanus W., 623
- O**
- Obesity, multiple etiology in mice, 96
 Obituaries:
 Bennett, Wendell Clark, 674
 Brand, Erwin, 144
 Coolidge, Cole, 175
 Eisenstein, Albert Sterling, 366
 Gonzalez, Bienvenido Maria, 789
 Harvey, Samuel Clark, 365
 Hooton, Earnest A., 861
 Hubble, Edwin P., 204
 Huskins, Charles Leonard, 306
 Mattill, Henry Albright, 274
 Millikan, Robert Andrews, 272
 AAAS resolution, 242
 Pike, Frank Henry, 634
 Stanton, Timothy William, 307
 von Mises, Richard, 823
 Wilhelm, Joseph Oscar, 367
 Ocean, North Pacific exploration by Scripps Institution, 116
 Pacific, equatorial undercurrent, 648
 radioactivity, 584
 salinity, 66
 smaller Foraminifera, 448
 waters, molybdenum blue reaction and phosphate determination, 327
 Pacific and polar, temperatures in Tertiary, 853
 Ocfemia, G. O., 789
 O'Connell, Paul W., 379
 Odor reduction, 609
 Oil, bearing structures, west Texas, 617
 deposits, soil bacteria in locating, 312
 prospecting, description of sedimentary strata, 317
 Oligocene plants, 330
 Oliver, Clarence P., 252
 Olson, J. C., 325
 Olson, Kenneth B., 772
 Olympic racing records, analysis, 333
 O'Neill, T., 415
 Operculate discomycete, sclerotia in, 737
Ophiocytium Nägeli, *Spirodiscus Ehrenberg* and, 388
 Opossum in psychiatric research, 360
 Oppenheimer, J. Robert, and AEC, 827, 7A (6/18), 894
 Optics, diffraction phenomena, Broken spectre, 164, 511
 optical transmittance of glass, 478
 Ordovician, discovery in Mexican tin mine, 311
 Oreskes, Irwin, 124
 Oroshnik, William, 660
 Orvedal, Arnold C., 616
 Osborn, Frederick, 3A (5/14)
 Osgood, Cornelius, 674
 Ostracoda, Paleocene, from Maryland outcrops, 656
 Ott, Emil, 487
 Owades, Joseph L., 911
 1,3,4-Oxidiazolones in tuberculosis treatment, 514
 Oxidation-reduction potentials in salivary samples, 847
 Oxygen, consumption, "true" rate, by photosynthetic organisms, 827
 of mammalian muscle, insulin and, 813
 poisoning and x-irradiation, 623
 protection against ionizing radiations, 378
 Oxytocin, exogenous, and milk ejection phenomenon, 67
- P—Q**
- Pacific Coast Paleozoic faunas, 737
 Pacific Ocean, equatorial undercurrent, 648
 smaller Foraminifera, 448
 temperatures of bottom waters in Tertiary, 853
 Pacific Science Congress report, 145
 Pagán, C., 322
 Page, Irvine H., 849
 Page, O. T., 286
 Pakiser, L. C., 740
 Paleoanthropology, 265, 884
 Paleocene Ostracoda from Maryland outcrops, 656
 Paleoecology, smaller Foraminifera and, 448
 Paleotemperatures, 853
 Paleozoic faunas, Pacific Coast, 737
 Palmer, Allison R., 737
 Pancreas, rat, radiozinc uptake, 219
 Pant, Divya Darshan, 910
 Papazian, H. P., 691
 Paper chromatography see Chromatography
 Paricutin volcano, origin of compositional variation of lavas, 515
 Parkinson, W. D., 550
 Parkinsonism, new treatment, 417
 Parks, W. George, 3A (4/16), 489
 Parr, W., 415
 Pasteurella pestis virulence, 413
 Paterson, D. R., 507
 Patterson, Bryan, 558
 Patton, Stuart, 218
 Pea seedlings, measure of gaseous ethylene production, 123
 Pease, M. H., Jr., 419
 Peat from James Bay, radiocarbon dating, 908
 Peek, Raymond E., 421
 Pecora, W. T., 739
 Pedersen, Benthabe, 3A (3/19)
 Pencil drawings, photographic reproduction of, 913
 Pentobarbital, inhibition of sulfanilamide acetylation, 185
 Pepper, James F., 512
 Periodicals, survey of operations and finances, 357
 Perspiration constituent with ultraviolet absorption, 514
 Pest repellent, acoustic, 318
 Peters, H. N., 189, 657
 Petersen, W. E., 67
 Pfeiffer, John E., 260
 Phenylalanine, aromatization step in biosynthesis, 774
 Philosophy of science, 233
 Phosgene and acid hydrazides in tuberculosis treatment, 514
 Phosphatase of embryonic intestine, hydrocortisone and, 809
 Phosphate minerals from Brazil, 739
 Phosphoglucomutase and substrate, occurrence of group transfer, 631
 Phosphorus in sea water, molybdenum blue reaction and, 327
 Photographic emulsion contamination by beta-active dust, 422

- Photographic reproduction, of pencil drawings, 913
 Photonuclear research, conference report, 836
 Photosynthesis, chloroplast details through electron microscopy, 115 efficiency, 580 photosynthetic organisms, "true" rate of oxygen consumption, 827
 Physical theory, significance, 517 Physics, high-energy, conference report, 758 teachers association, meeting report, 458 theoretical, 517
See also Nuclear physics Physiology, analysis of athletic records, 333 damage under emotional stress as function of early experience, 285
 Phytoplankton *see* Plankton Pierce, Sterling, 420 Pierce, William M., 257 Pigeon liver extracts, pentobarbital inhibition of sulfanilamide acetylation, 185 Piltzdown hoax, 265 Pine trees *see* Conifers Piromen, and survival after thermal injury, 348 -treated rat embryos, central nervous system gliogenesis, 438 Pitzer, K. S., 49 Planetary cores, 578 Plankton, and water pollution, 732 in Pacific Ocean, correlation and paleoecology, 448 Plant, agglutinins, specific precipitating activity, 419 chromosomes, radiation from nuclear detonation, 36, 42, 46 disease-inhibiting properties of antibiotics, indole-3-acetic acid and, 347 flowering, hormone control of, 71 from Fiji Islands, 719 frost resistance and 2,4,5-T, 383 lesion counting, glass for, 849 longevity, conifers, 396, 883 materials used to affect fertility, 626 Oligocene, 330 root, culture, callus and shoot formation, 220 growth after stem irradiation, 127 hair growth, 615 systems, MOPA movement, 437 sprout inhibitors, maleic hydrazide as, 507 tissue, nonspecificity of triple response for ethylene, 123 tissue culture, from single cells, 877 inoculation chamber, 512
 Plant growth, and nuclear radiation levels, 45 conditions and appearance of starch grains of potato tubers, 509 inhibition; maleic hydrazide and magnolia flowers, 843 modifiers, MOPA movement through root systems, 437 regulators, benzothiazol-2-oxyacetic acid and delayed maturity in grapes, 287 indole-3-acetic acid and antibiotics, 347 β -naphthylalanines, properties, 217
- Plasma *see* Blood plasma *Plasmodium vivax* malaria, outbreak in nonendemic area, 74 Poetry and science, 855 Polar superficial waters, temperatures in Tertiary, 853 Polar Year *see* International Geophysical Year, 572 Polarography, calculation of electrode potentials, 324 determination of tungsten in rocks, 355 Polhemus, Dale N., 294 Poliomyelitis, susceptibility and genetic traits, 914 virus, plaque technic for, 178 Politics and science, 227 Pollack, Robert L., 510 Polonium-beryllium irradiation, 350 Population, fertility and intelligence of new generations, 675 insect counts, limitations of zero method, 689 problems and American Eugenics Society, 3A (5/14) Postman, Leo, 671 Potassium, excitant in ventricular tachycardia, 200 Potato-rot nematode, mites, and fungi, relations, 92 Potato tubers, growth conditions and appearance of starch grains, 509 induction of scab lesions, 286
See also Sweetpotatoes Potentiometric method for chloride ion determination, 323 Pottinger, M. Aelred, 378 Potzger, J. E., 908 Powers, H. A., 388 Pray, L. C., 325 Pre-Cambrian, carbon of biogenic origin, 506 rocks of Canadian Shield, plants in, 606 Prelog, V., 49 Prentice, Donald B., 260 Prephenic acid, isolation, 775 Preston, W. H., Jr., 437 Primitive peoples, plant materials used to affect fertility, 626 Printing, contact, 913 Procaine, intracerebral injection in hyperkinetic disorders, 417 Proctor, Bernard E., 509 Progesterone, cholesterol and, 710 Protaspidi, trilobite, with superfamiliy differences, 737 Proteins, structure, Pasadena conference report, 302 synthesis, 578
See also Blood serum proteins, Nucleoprotein Prothrombin *see* Blood prothrombin Psychiatry, behavior patterns in rabbit, acetylcholinesterase and, 158 hostility scale in dreams and hypertension, 382 living out of "future" experiences under hypnosis, 472 mental disorders and drugs, 587 research, new experimental animal for, 360 Psychology, association, meeting report, 340 different IQ's with different intelligence tests, 611, 612 experimental; cooperative multiple-choice apparatus, 189 two uses of, 656
- fertility and intelligence of new generations, 675 physiologic, advisory committee in, organization, 316 damage under emotional stress, 285 verbal habits and visual recognition of words, 671 Public relations, scientists' definition of, 815 Publishing as applied science, 538 Pullman, Maynard E., 631 Pure vs. utilitarian science, 103 Pyne, C. K., 685 Quaternary ammonium compounds, as germicides, 686 as molluscacides, 470 Quebec, radiocarbon dating of peat from, 908 Quimby, Freeman H., 162
- R**
- Rabbit, bactericidal effect of blood serum, 877 brain, acetylcholinesterase and behavior patterns, 158 electron microscopic study of sperm, 212 insulin and oxygen consumption of muscle, 813 Rabbitt, John C., 741 Rabbitt, Mary C., 741 Racial classification, blood groups in, 776, 777 Racing records analysis, Olympic, 333 Radiation, dicentric bridges in meiosis in grasshopper, 685 dosimeter, hair depigmentation as, 186 ionizing, oxygen protection in, 378 of *Tradescantia* chromosomes, 36, 42, 46 sensitivity and cobalt, 415
See also Irradiation Radical yield, primary, of irradiated water, 904 Radioactivity, availability of corticosterone, 64 extinct natural, geochronologic significance of, 851 for tracing beta particles, 51 in tissues, determining, 739 of carbon, 116, 135, 141, 155, 908 of gold, electrophoresis patterns of plasma, 95 of human being, 429 of iron, estimation of blood loss in hookworm, 412 of minerals, identification technique, 441, 815 of yttrium in tumor-bearing mice, 880 zinc uptake by rat pancreas, 219 Radioactive dust and photographic emulsions, 422 Radioactive rainout, Troy, New York, 619 Radio astronomy, 106 advisory panel appointment, 726 conference report, 588 Radiological Society of North America, meeting report, 636 Rahn, Hermann, 442 Rainwater, radioactivity of, 619 Ralls, R. J., 160 Ram, electron microscopic study of sperm, 212

- Rambach, W. A., 380
 Ramsey, W. O., 838
 Rankama, Kalervo, 506
 Ranney, R. E., 415
 Rapaport, Irving, 849
 Rare-earth mineral deposits, San Bernardino County, 325
 Rasetti, Franco, 873
 Rat, alcohol intake and vitamin-B complex, 735
 alloxan diabetes, prevention, 349
 antibiotics and antibody production, 296
 antithyroid action of antibiotics, 128
 audiogenic seizure and adrenal cortex, 475, 476
 behavior, effects of shock, 576
 bone marrow and spleen, hypoxia and DNA synthesis, 380
 chelated iron and hemoglobin regeneration, 608
 coronary sclerosis on choline-deficient diet, 842
 dental caries and thyroid, 687
 embryos, Piromen-treated, nervous system gliogenesis in, 438
 endocrine regulation of capillary resistance, 790
 grafting frozen sex glands, 279
 liver, acid and alkaline ribonuclease in, 351
 long-term recovery of metabolic products, 447
 neoplasm transplantation, 124, 911
 pancreas, uptake of radiozinc, 219
 Piromen and survival after thermal injury, 348
 thyroid, body irradiation and iodine 131 metabolism in, 65
 tissue, effects of Itrumil, 912
 ultrasonic sound production, 808
 venous blood from orbital sinus, obtaining, 100
 Rattlesnake, temperature dependence of rattling frequency, 442
 Rau, W. W., 419
 Rawles, Mary E., 392
 Ray, Donald P., 254
 Ray-Chaudhuri, S. P., 685
 Reactors *see* Nuclear reactor
 Rebstock, Theodore L., 217
 Reduction-oxidation potentials in saliva samples, 847
 Reed, G. B., 906
 Reed, Sheldon C., 252
 Rees, Mina, 3A (5/21)
 Reeside, John B., Jr., 307, 355
 Reeve, Wilkins, 437
 Reflection seismograph, mapping shallow horizons with, 740
 Reichen, Laura E., 355
 Reinemund, J. A., 474
 Relativity, general theory, 676
 Religion, committee for scientific study of, meeting report, 725
 in the age of science, 683
 Remley, Marlin E., 21
 Reptiles, blood sera, comparison of protein and albumin content, 98
 Research, and development, Federal government recommendations for, 178, 432, 458
 fundamental, plea for, 110
 government, functions and operations of National Bureau of Standards, 195
 support in bio-sciences, 661
 group research, 444
 projects and government clearance, 293
 pure and applied, 103
 support of individual, 395
 Rexworthy, D. R., 909
 Reynolds, Orr E., 144
 Rezak, Richard, 659
 Rhoads, C. P., 77
 Rhodopsin in mechanism of visual threshold and adaptation, 887
 Ribeiro, I. Fonseca, 470
 Ribeiro, O. Fonseca, 470
 Ribonuclease, acid and alkaline, in rat liver, 351
 Richards, A. Glenn, 481
 Richards, Arthur, 474
 Richmond, Gerald M., 614
Rickettsia mooseri, 468
 Rier, John P., Jr., 512
 Riker, A. J., 877
 River, morphology studies, 326
 sediment discharge computations, Niobrara River, 657
 water, Delaware, chemical and physical characteristics, 613
 Roberts, Albert E., 419
 Roberts, Edith A., 509
 Roberts thrust, Nevada, 423
 Robinson, G. D., 386
 Rock phosphates, chemical composition of, 913
 Roentgenograms, bone density evaluation, 810
 Roller, Duane H. D., 901
 Roots, Roland, 385
 Rorabaugh, M. I., 477
 Roseco, Ernest J., 851
 Rose, Jerzy E., 566
 Rose, S. Meryl, 251
 Rosinski, Martin A., 737
 Ross, Clyde P., 658
 Rotating sector method and gamma-ray irradiation, 159
 Rothstein, Jerome, 874
 Rowbottom, J., 904
 Rowe, J. J., 327
 Rowland, John B., 330, 389
 Rubenstein, Robert, 472
 Rubin, Thor, 66
 Ruminant bloat and alfalfa, 157
 Russell, Raymond A., 200
 Russian science *see* Soviet science
 Rust, John H., 65
 Ryan, Francis J., 332
 Ryan, Herbert, 353
- S**
- Sachs, David, 382
 Sahu, V. K., 349
 Saifer, Abraham, 124
 St. Amand, Georgia S., 93
 Saladonis, Jere, 514
 Salinity of ocean, 66
 Salivary samples, reduction-oxidation potentials, 847
 Saller, Henry A., 4
Salmonella schottmuelleri, quantitative flocculation by quaternary ammonium germicides, 686
 Salt Lake Valley, geophysical survey, 513
 San Juan Mountains, glacial chronology, 614
 Sancier, Kenneth M., 68
 Sanders, A. F., 476
 Sandnes, Gunnar C., 508
 Sandstone, Berea, geology, 512
 Saponin, alfalfa, role in ruminant bloat, 157
 Saul, Leon, 382
 Savard, Kenneth, 603
 Scab lesions on potato tubers, induction, 286
 Schaffner, Carl P., 729
 Schenck, Norman C., 213
Schistosoma, intermediate host destruction, 470
 Schizophrenia, 189, 656
 Schmidt, Edwin L., 187
 Schmidt, Karl P., 114
 Schönb erg, Alexander, 193
 Schrader, F. F., 477
 Schulman, Edmund, 396, 883
 Schwartz, Drew, 45
 Science, and the poets, 855
 and politics, 227
 and public relations, 815
 concepts of, 299
 criticisms by laymen, 162
 education, UNESCO program for study of, 343
 for its own sake, 103
 proposed congressional committee on, 3A (3/12)
 role of scientists in furtherance of, 223
 writers and writing, opinion survey, 179
Science, microcard editions, 211
 suggestions for contributors, 3A (1/29), 3A (4/2), 3A (6/11), 5A (6/25)
 Scientific books, publication by International Scholars Forum, 539
 Scientific editorial problems, conference, 529
 Scientific journals, editing, 532
 financing, 530
 illustrations for, 534
 operations and finances, 357
 publishing as applied science, 538
 trends, 529
 Scientific manpower *see* Manpower
 Scientific "property," 909
 Scientific research *see* Research
 Scientific theories, validation, conference report, 233
 Scientific writing, 851
 accuracy, 912
 cessation of George Westinghouse awards, 483
 does writing make an exact man? 525, 912
 jargon—good and bad, 536
 padded, recommended diet for, 522
 poetry and, 855
 Scientist, support of individual in research, 395
 Scientists, American, attempt at classifying, 655
 and education of public, 162
 and public relations, 815
 and security investigations, 293, 676, 827, 7A (6/18), 894
 Canadian, 167
 court testimony, 819
 ethics in a divided world, 908
 foreign, and visa problem, 342, 3A (3/19), 498, 677
 in Communist China, 785
 individual research vs. group research, 444
 loyalty of, 227
 origins of, 167, 680

- responsibility for interpretation of concepts to laymen, 299
role in furtherance of science, 223
social responsibility, 909
writing for the general public, 567, 851
- Scintillation counting of natural radionuclides, 155
- Sclerotia in operculate discomycete, 737
- Scribing in map reproduction, 330
- Scripps Institution, expedition, 116
- Seurry reef, Texas, geological survey, 617
- Sea *see* Ocean
- Security system, trial of, 7A (6/18)
See also Scientists and security investigations
- Sediment, discharge computation, Niobrara River, 657
gravelly, fabric studies, 696
- Seeger, Victor P., 608
- Seeger, Raymond J., 255
- Seegers, Walter H., 293
- Segovia, Natividad, 735
- Seismograph, reflection, mapping shallow horizons with, 740
- Selby, Dorothy, 382
- Selective service, scientists and, 760
- Sell, Harold M., 217
- Sequoia, longevity, 396, 883
rings, carbon 13 variations in, 141
- Serotonin in mental disorders, 587
- Serpentine pipes, Garnet Ridge, 618
- Serum, allergy reagents and electrophoresis, 289
- Serum ultrafiltrate and tissue mast cells from human skin, 99
- Sewage gas, 381
- Sex ratio, and fruit setting in mango, 389
and parental age, 473
- Shafer, William G., 687
- Shaffer, Paul R., 693
- Shapiro, Harry L., 861
- Shapleigh, Elizabeth, 419
- Sharp, W. N., 325
- Shaw, Robert S., 458
- Shawe, D. R., 325
- Shenstone, A. G., 511
- Sheppard, C. W., 44
- Sheppard, Edith, 382
- Sherman, Abraham A., 659
- Sherwood, Alexander N., 326
- Shiraishi, Masataka, 690
- Sickle-cell trait, 718
- Sienko, Carol, 422
- Silica, content, of Hawaiian basaltic magma, 388
Paricutin volcano lavas, 515
phases of, 738
- Silkworm, movement of yolk cells, 161
- Silver chromate gelatin, diffusion lines in, 651
- Simon, Norman, 95
- Simpson, G. G., 134
- Simpson, Melvin, 353
- Singh, R. N., 389
- Skin, fungistatic action of squalene on dermatophytes, 816
human, effect of serum ultrafiltrate on tissue mast cells, 99
structures, sulfhydryl and disulfide content of, 70
- Skipper, S. J., 441, 815
- Slanetz, Charles A., 296
- Smith, A. E. Wilder, 514
- Smith, Dietrich C., 873
- Smith, J. F. Downie, 824
- Smith, Ralph B., 538
- Smoker's respiratory syndrome, 341
- Snails, and quaternary ammonium compounds, 470
heat death temperatures, 773
- Snake, poikilotherm, rattling frequency, 442
- Snavely, Parke D., Jr., 419
- Snyder, George L., 446
- Sobel, Harry, 816
- Sohn, I. Gregory, 656
- Soil, fungus, nitrate formation, 187
H. capsulatum source, 654
mechanics, international conference report, 310
science, meeting report, 339
- Sokal, Robert R., 649
- Solar system, formation, 586
See also Sun
- Sorghum halepense, Ephelis* on, 288
- Sosman, Robert B., 738
- Souder, Wilmer, 819
- Soule, Phelps, 544
- Soviet science, genetics and Lysenkoism, 694, 908
geology, and claims for chemical composition of rock phosphates, 913
- Soybean flowering, auxin-florigen balance, 71
- Spael, Theodore H., 806
- Spain, TMV resistance in, 296
- Sparrow, Arnold H., 306
- Spaulding, Albert, 3A (1/15)
- Spaulding, William E., 259
- Speck, Louise B., 221
- Spectrophotometer, instability, 420
- Spectrum, of magnesium in sulfuric acid, 850
of methyl alcohol, 579
solar, 449
- Spencer, Herta, 880
- Spermatozoa, electron microscope study, 212
- Spider, black widow, in New England, 192, 390
- Spinks, J. W. T., 159
- Spirodiscus Ehrenberg and Ophiocystium Nägeli*, 388
- Spleen, effect of hypoxia on DNA synthesis, 380
materials, antibody formation, 585
- Sporer, Alfred H., 68
- Sports, study of racing records, 333
- Squalene, fungistatic action on dermatophytes, 816
- Squire, C. F., 400
- Squires, Rodney M., 381
- Staats, Joan, 295
- Stafford, G. H., 412
- Stafford, P. T., 617
- Stanford-Binet tests *see* Intelligence tests
- Stanley, Julian C., 611
- Stanton, Henry T., Jr., 391
- Starch, grains, growth conditions and appearance in potatoes, 509
of tobacco leaves, C¹⁴ incorporation, 906
- Starlings, tape recordings of distress calls as repellents, 318
- Statistics, Kinsey methods, 718
- Stebbins, G. Ledyard, 699
- Stedman, R. L., 686
- Stelle, A. Macneil, 15
- Stern, Curt, 221, 229
- Stern, Kurt G., 880
- Sterne, M., 440
- Steroid Reference Substances, U.S.P. Advisory Board on, 828
- Stewart, John Q., 254.
- Stone, Sanford H., 100
- Straus, William L., Jr., 133, 265
- Stream, phytoplankton and pollution, 732
- Streamflow and flood-frequency studies, 694
- Streptococcus, Group A, typing sera, cells for production of, 69
- Streptomyces scabies* and induction of potato scab lesions, 286
- Stromatolite classification in Montana, 659
- Stroup, E. D., 648
- Struck, Herman R., 522
- Stunkard, Horace W., retirement, 720
- Substrates, competing, in enzyme research, 337
- Succinic dehydrogenase, in rat kidney, mercurial inhibition, 100
inhibition in gall-bladder tissue and liver cells, 881
- Sugar of tobacco leaves, C¹⁴ incorporation, 906
- Sulfaguanidine in urology, 191
- Sulfanilamide acetylation, pentobarbital inhibition, 185
- Sulfhydryl and disulfide in keratinization, 70
- Sulfur solutions, colloidal, 911
- Sulfuric acid, spectrum of magnesium in, 850
- Sun, activity and terrestrial disturbances, 584
atoms and ions in elements, 449
eclipse on June 30, study plans, 460
energy utilization, 82
spectrum, 449
- Swanson, C. P., 42
- Sweetpotatoes, maleic hydrazide as sprout inhibitor, 507
- Swenson, H. A., 614
- Synchrotron, nonlinear alternating gradient, 583

T

- Tabern, D. L., 739
- Tachycardia, ventricular, and potassium, 200
- Taeuber, Conrad, 254
- Takami, Takeo, 161
- Tanner, Vasco M., 3A (1/22)
- Tape recordings of bird distress calls, 318
- Tavorite, Brazilian phosphate mineral, 739
- Taylor, Leland H., 258
- Taylor, Raymond L., 241, 244, 484, 780
- Technical writing *see* Scientific writing
- Techniques:
autoradiograph production, 659
avian chromosome study, 508
bone density evaluation, 810
calculation of electrode potentials in polarography, 324
chemical procedure for niobium analysis, 655
chloride ion determination, 323
chromatography of chlorophylls, 68
computations of river sediment discharge, 657
cooperative multiple-choice apparatus, 189, 656
cyclotron neutron calibration, 44

- detection of microbially produced gaseous hydrocarbons, 381
 electron-diffraction study of minerals, 513
 electronic quantitation of light absorption and nuclear fluorescence in living cells, 410
 fabric studies of gravelly sediments, 696
 filtration of embryo extract for tissue cultures, 321
 for quantitative paper chromatography, 653
 gamma-ray irradiation with rotating sector method, 159
 hair depigmentation as radiation dosimeter, 186
 helicopter in geologic fieldwork, 697
 and walkie-talkie, 389
 hyaluronic acid in human intervertebral disk, determination, 189
 intravascular clot test, 883
 isatin as color reagent for amino acids, 124
 isotopic lithium metal preparation, 469
 Li^7 (*n,t*) reaction, 350
 living out of "future" experiences under hypnosis, 472
 location of radioactive isotopes, 51
 magnetic anomalies of three-dimensional distributions, 329
 making prefilled microelectrodes, 846
 mapping shallow horizons, 740
 molybdenum blue reaction and determination of phosphorus in sea waters, 327
 neuroblast separation from grasshopper embryos, 93
 nuclear emulsions for electron microscopy, 441, 815
 obtaining venous blood from orbital sinus, 100
 photographic reproduction of pencil drawings, 913
 physical dose estimates in detonation experiments, 44
 plant tissue cultures from single cells, 877
 polarographic determination of tungsten in rocks, 355
 preparation of colloidal solutions, 911
 preparation of inorganic bone matrix, 771
 procaine injection in hyperkinetic disorders, 417
 production of Group A streptococcus typing antisera, 69
 radioactive gold in electrophoresis patterns of plasma, 95
 radioisotopes in tissues, determining, 739
 recovery of metabolic products from rats, 447
 scintillation counting of natural radiocarbon, 155
 scribing in map reproduction, 330
 shipping live mosquitoes, 443
 tape recordings as repellents, 318
 tetrazolium reaction in yeast, 817
 three-dimensional movies, 905
 water boiler neutron source operation, 21
 water evaporation, 328
 Temperature, high, and death in snails, 773
 and rattling frequency in rattle-snake, 442
 injury and Piromen, 348
 of Pacific bottom waters in Tertiary, 853
 Temperature scale proposal, Giauque-Kelvin, 761
 Ter Haar, D., 298
 Terrain evaluations, special-purpose, 616
 Tertiary, ocean temperatures in, 853
 Testimony, effective, for scientific witnesses, 819
 2-Tetrahydroxy butyl 5-methyl 4-carbethoxy furan and diabetes, 349
 Tetrazolium reaction in yeast, 817
 Texas, west, geologic survey "Horse-shoe atoll," 617
 Thacker, E. J., 94
 Therapy, neutron capture, 580
 Thermal precipitation, analysis, 816
 Thermochromism and vinylogy, 193
 Thermometer, electronic, 827
 Thioctic acid and alcohol intake, 735
 Thirumalachar, M. J., 288
 Thompson, Dorothy Jean, 176
 Thompson, Mary E., 326
 Thorium, chemistry, 445
 in reactor-core construction, 5
 Thymectomy and lymphoid tumors, 439
 Thyroid, gland, reducing dental caries, 687
 rat, body irradiation and iodine 131 metabolism, 65
 tissue, effects of Itrumil, 912
See also Antithyroid
 Till-like deposits on Natapoc Mountain, 878
 Tipton, Samuel R., 93
 Tischler, M. S., 513
 Tissue, chromate and nucleic acid interaction, 221
 determining radionuclides in, 739
 effect of serum ultrafiltrates, 99
 histochemistry of keto-enolic substances, 690
See also Cancer, Growth, Plant tissues, Tumor
 Tissue culture technique, for autoradiograph production, 659
 for filtration of chick embryo, 321
 Tobacco, and smoker's respiratory syndrome, 341
 leaf carbohydrates, carbon-14 incorporation after different periods of photosynthesis, 906
 tissue culture from single cells, 877
 Tobacco mosaic virus, resistance in Spain, 296
 strains, differential ability to bind host-cell nucleoprotein, 269
 Todd, Ruth, 448
 Tomato root culture and callus tissue, 220
 Toxins, fish, dialysis of, 160
 Trace element content of cancerous and noncancerous liver tissue, 772
Tradescantia chromosomes, effects of fast neutrons, 36, 42, 46
 Trainer, Frank W., 356
 Transplantation of apparently benign neoplasm, 124, 911
 Trees, conifer, development in Mont Tremblant region, 908
 longevity under adversity, 396, 883
 fruit, indole-3-acetic acid and antibiotics, 347
 2,4,5-T and growth in apricot trees, 383
 growth control, 585
 Miocene swamp-cypress forest, 579
 2,4,5-Trichlorophenoxyacetic acid and growth in frosted fruit trees, 383
 Trilobite protaspid with superfamily differences, 737
 Tritium recovery, 350
 Triuret from uric acid by irradiation, 129
 Troy, New York, radioactivity of rainwater, 619
 Trum, Bernard F., 65
 Tuberculosis, 1,3,4-oxadiazolones in treatment, 514
 Tubers *see* Potato tubers
 Tulloch, George S., 532
 Tumbleston, Robert, 357
 Tumor, ascites, in mice, Y^{36} distribution and, 880
 malignant, induction in tissue free of carcinogenic agents, 439
 neoplasm transplantation, 124, 911
See also Cancer, Growth, Tissue
 Tunell, George, 467
 Tungsten in rocks, polarographic determination, 355
 Turner, Edward L., 275
 Turner, Naomi C., 847
 Tyler, Stanley A., 606
 Typhus, murine, in mice, cortisone and, 468
- U—V**
- Ultrasonic sounds, production by rats and other vertebrates, 808
 Ultraviolet absorption by perspiration, 514
 UNESCO's program for study of science education, 343
 Unger, L. J., 734
 U.S. Geological Survey *see* Geological Survey
 United States, water power, 328
 shortages, 828
 University of Illinois, 50th anniversary of engineering experiment station, 824
 Unpopular science, 162
 Updyke, Elaine L., 69
 Upton, Arthur C., 186
 Uranium, in reactor-core construction, 4
 miners, tissue radioactivity, 429
 Uric acid, triuret from, 129
 Uridine polyphosphates, enzymes of, 479
 Uridylic acid, metabolism, 59
 Urine, alligators, effect of carbonic anhydrase inhibitor, 291
 glucuronic acid conjugates, 510
 Urology, sulfaguanidine in, 191
 Utah, geology of La Sal Mountains, 477
 Salt Lake Valley geophysical surveys, 513
 Vaccines, production of Group A streptococcus typing antisera, 69
 Vallejo-Freire, A., 470
 Vallentyne, J. R., 605
 Vanadium oxide, navajoite, 326
 Van Cleave, A. B., 159
 Vandembelt, J. M., 514
 Van Scott, E. J., 70
 Velardo, Joseph T., 872
 Venezuelan Guayana expedition, 826

- Ventricular ectopic activity in dog, 200
- Verbal habits and visual recognition of words, 671
- Vermont, bedrock geology of Montpelier quadrangle, 695
- Vining, Leo C., 698
- Virology, thermochromism and, 193
- Virus, distemper, immunization of ferrets, 125
- encephalitis and shipment of live mosquitoes for study, 443
- hemagglutinating, mechanism of suppression, 391
- infections, dynamics of, symposium report, 427
- poliomyelitis, plaque technique, 178
- study with x-ray diffraction, 579
- tobacco mosaic, resistance in Spain, 296
- strains, nucleoprotein binding, 269
- Visas to foreign scientists, 342, 3A (3/19), 498, 677
- Visual recognition of words, verbal habits and, 671
- Visual threshold and adaptation, mechanism, 887
- Vitamin, B complex, alcohol intake and, 735
- B₁₂ from sewage, 637
- E and survival time in irradiated mice, 126
- iso-anhydrovitamin A, 660
- Vitrain, bacteriostatic substance from, 214
- Vittorio, P. V., 906

Volcanoes, activity in Katmai National Monument, 319

Hawaiian, silica content of lavas, 388

sediments in Natapoc Mountain, 878

Von Halle, Elizabeth, 46

von Moos, A., 310

W

Wachstein, M., 100

Wadley, F. M., 689, 803

Wagener, Willis W., 883

Waggoneer, Paul E., 123

Wald, George, 887

Walkie-talkie in geologic field surveys, 389

Wall, Frederic T., 555

Wallin, J. R., 294

Wangersky, Peter J., 850

Ward, Frederick N., 655

Warmke, H. E., 322

Washington, geology and coal resources, 419

landslide investigations, 475

till-like deposits, 878

Water, Delaware River, chemical and physical characteristics, 613

Devils Lake Basin, chemical quality, 614

evaporation studies, 328

irradiated, radical yield of, 904

pollution and plankton, 732

power, world, 328

radioactivity, after nuclear detonation, 619

resources, clouds as, 207

sea, molybdenum blue reaction and phosphorus determination, 327

streamflow and flood-frequency studies, 694

supply systems in U.S., shortages, 828

See also Ground water, River

Water boiler neutron source, design and construction, 9

operation, 21

Water-methanol solutions, 585

Waymouth, Charity, 321

Weather, and solar radiation, 576

microseism period and hurricanes, 55

tropical, in Pacific, 61

Weaver, Robert J., 287

Weaver, Warren, 3A (2/26)

Weeks, Alice D., 326

Weininger, Otto, 285

Weir, J. A., 872

Weiss, Samuel, 205, 803

Weiss, Ulrich, 774

Weitz, J. L., 327

Wetmore, Ralph H., 559

Weyer, Edward, 635

Wheland, G. W., 481

White, John I., 554

White, Philip R., 321

White, Walter S., 354

White Pine copper deposit, 354

Whitmire, Carrie E., 468

Wiedorn, William S., 360

Wiener, A. S., 734

Wigmore, Mary E., 731

Wilcox, Ray E., 515

Wildman, S. G., 269, 849

Wilgram, George F., 842

Wilken, Werner, 608

Williams, H. Leverne, 367

Williams, J. B., 771

Withey, Stephen, 1

Wolfle, Dael, 3A (2/19), 3A (3/12), 483, 675, 7A (6/18)

Woodhall, Barnes, 189

Woodring, W. P., 698

Worcester, D. A., 257

Words, verbal habits and visual recognition of, 671

Workman, E. J., 73

Wrather, W. E., 3A (3/5)

retirement as AAAS treasurer, 859

Wright, James C., 354

Wright, Louis B., 545

Writing *see* Scientific writing

Wu, S. H., 212

Wyoming, geologic map, 327

Wyss, Orville, 893

X—Y—Z

Xanthium root growth after stem irradiation, 127

X-irradiation, and oxygen poisoning, 623

breakage of lily chromosomes, 485

production of dicentric bridges in meiosis in grasshopper, 685

X-ray, for study of biological materials, 579

movies, three-dimensional, 905

to evaluate bone density, 810

to study materials at temperatures up to 4000°F, 279

Yaws in Haiti, eradication, 864

Yeast, tetrazolium reaction, 817

Yolk cells in silkworm, movement, 161

Yost, Don M., 554

Young, L. L., 328

Yttrium-90, distribution in ascites tumor-bearing mice, 880

Zayed, Salah Mohamed Abdel Dayem, 193

Zea mays *see* Corn

Zeidberg, L. D., 654

Zero method, limitations in population counts, 689

Zietz, Isidore, 329

Zighera, C. Y., 96

Zimmerman, W., III, 411

Zinc deposits in Nevada, geologic control, 474

Zinc, radio-, in rat pancreas, 219

Zirconium in reactor-core construction, 6

Zitcer, Elsa M., 99

Zoological nomenclature, 477, 801

colloquium on, International Trust for Zoological Nomenclature, 114, 131

Zwitterion, 420