

SCIENCE

NEW SERIES. VOLUME LXXII

JULY-DECEMBER, 1930

NEW YORK
THE SCIENCE PRESS
1930

THE SCIENCE PRESS PRINTING COMPANY
LANCASTER, PA.

CONTENTS AND INDEX

NEW SERIES. VOL. LXXII—JULY TO DECEMBER, 1930

THE NAMES OF CONTRIBUTORS ARE PRINTED IN SMALL CAPITALS

- Abstract Group, the Term, G. A. MILLER, 168
 Academy, of Science, N. C., H. R. TOTTEN, 71; Texas, 597; Illinois, F. M. FRYXELL, 172; National, 372, 402
 Actino-uranium, A. F. KOVARIK, 122
 ADAMS, A. E., L. RICHARDS and A. KUDER, Thyroid and Pituitary Glands and Moulting, 323
 Adrenal Cortex, F. A. HARTMAN and K. A. BROWNELL, 76
 Adrenalectomized Cats, W. W. SWINGLE and J. J. PFIFFNER, 75
 Adrenalectomy in the Albino Rat, R. I. PENCHARZ, J. M. D. OLMSTED and G. GIRAGOSSINTZ, 175
 Aedes Campestris, Viability in Eggs, G. A. MAIL, 170
 Aeronautic Radio Research of Bur. of Standards, 573
 Aeronautics, International Congress on, 290
 Agricultural, Economists, Conference, 137; Economics at Univ. of Calif., Giannini Foundation, 163; States of Eastern Europe, 269; Progress, A. F. WOODS, 563; Revolution in U. S., L. B. SCHMIDT, 585
 ALEXANDER, J., Physicochemical Phenomena in the Antarctic, 478
 ALLARD, H. A., Chirp-rate of the Cricket, 347
 ALLEN, G. M., and T. BARBOUR, Scientific Names, 219
 ALLEN, R. F., Heterothallism in *Puccinia coronata*, 536
 American Association for the Advancement of Science, Address of President of Pacific Div., 177; Pacific Div., J. M. LUCK, 255, 371, 522; Cleveland Meeting, B. E. LIVINGSTON, 472, 493, 537, 631
 Ammonoids, Carboniferous, C. CRONEIS, 534
 Amoebic Abscesses, Bacteria-free, L. R. CLEVELAND and E. P. SANDERS, 149
 Amphipod, Terrestrial, in the United States, J. P. VISSCHER and C. S. HEIMLICH, 560
 ANDREWS, E. C., Science and History, 205
 Anemia, Nutritional, in the White Rat, W. B. NEVENS and D. D. SHAW, 249
 Anesthesia in Fish, D. J. VERDA and W. P. ELHARDT, 581
 Angiosperms, Twin Seedlings, R. H. WOODWORTH, 398
 Annelids, Small, Injecting in the Coelom of, L. P. SAYLES, 632
 Anosmia or "Squeeze-ups," H. S. COLTON and C. F. PARK, JR., 579
 Antarctic, Physicochemical Phenomena in the, J. ALEXANDER, 478
 Anthocyanin as an Indicator, B. HARROW, 14
 Anthropology and Archeology, Scientific Minute Men in, W. DAVIS, 115
 ARCHIBALD, R. C., Egyptian Mathematics, 39
 ARNOLD, C. A., Paleobotanical Excursion of the Botanical Congress, 429
 AVERY, O. T., and R. DUBOS, Specific Action of a Bacterial Enzyme on Pneumococci of Type III, 151
 Bacillus Amylovorus (Burr) Trev., Longevity of, H. E. THOMAS, 634
 Bacteriophage, A. P. KRUEGER, 507
 BAILEY, H. D., Stain for Bacteria, 95
 BAKER, F. C., Genus and Species Making, 37
 Balance, The Conception of, W. THOMAS, 425
 BALDWIN, H. I., Jacobsen Germinator, 345
 BANGHAM, W. N., Tropical Vegetation, 457
 BARBOUR, G. B., Peking Man, 635
 Batholiths, A. C. LANE, 341
 BAUMGARTNER, W. J., and M. A. PAYNE, Technique for Study of Cells of Insects, 199
 BEACH, J. R., Virus of Laryngotracheitis of Fowls, 633
 BEERS, C. D., Slides of the Rhizopod *Arcella*, 122
 Beetles, Bark, Tree Medication in the Control of, F. C. CRAIGHEAD and R. A. ST. GEORGE, 433
 Behavior, Mitochondrial, G. E. GATES, 629
 Bentonite, Hounsfield, Age of, G. M. KAY, 365; in the Ordovician, Ontario, D. C. MADDOX, 630
 Bibliographic System, Uniform, J. L. ST. JOHN, 90
 Bibliography, Making, A. C. TESTER, 321
 BIGELOW, M. H., Mineral Resources of Greece, 398
 BIGELOW, W. D., Harvey Washington Wiley, 311
 Biological, Oxidation, A. SZENT-GYÖRGYI, 125; Research at Amoy, China, A. M. BORING, 429; Survey, U. S., Regional Reorganization, 521
 Bituminous Fossil Plant, W. F. PROUTY, 527
 BLACKWELDER, E., Yardang and Zastruga, 396
 BLAIR, G. B., Planetary Systems, 479
 BLISS, S., Pellagra an Iron Deficiency Disease, 577
 BOAS, F., Growth of Children, 44
 BOBOVNIKOFF, N. T., Comets, C. P. OLIVIER, 657
 BOGUSCH, E. R., Measuring Slide for Class Use, 506
 BORING, A. M., Biological Research at Amoy, China, 429
 Botanical, Soc. of Amer., R. H. TRUE, 85; Congress, International, 164; Garden, Missouri, Celebration, 240; Congress, Paleobotanical Excursion, C. A. ARNOLD, 429; Address Book, E. D. MERRILL, 652
 BOWER, F. O., Size and Form in Plants, 227
 BOWMAN, I., Polar Exploration, 439
 BRAGG, W., Count Rumford and Michael Faraday, 19
 BRASCH, F. E., and J. MAYER, History of Science Society, 41
 Brazil Stain and Pollen Cells, J. M. CAPINPIN, 370
 British, Air Route to the Arctic, 108; Geological Museum, 391; Parasite Laboratory, 417; National Physical Laboratory, 495; Freshwater Biological Station, 554; Assoc., Medical, 137, 145; Adv. Science, 165; Address President, 227; Address President Sect. D, 279; at Bristol, 367; Address President Sect. B, 379, 416; Scientific Workers, 646
 BROOKS, C. F., A Celestial Searchlight, 244
 BROUWER, D., Astronomy, R. H. BAKER, 197; Orbits of Comets and Asteroids, R. T. CRAWFORD, 480
 BROWN, D. E. S., and F. J. M. SICHEL, Myogram of the Isolated Skeletal Muscle Cells, 17
 BROWN, F. C., Circular Shadows from Vortices, 478
 BROWN, J. G., Living Micro-Organisms in the Air of the Arid Southwest, 322
 BRYAN, K., Cooperation in Geomorphology, 66
 BUNZELL, H. H., Catalase Activity in Tissues, 505
 Cajori, Florian, D. E. SMITH, 287
 Calculus, Discoverer of, R. ROSS, 458
 California, Wild Life in, 520; Univ. of, Life Sciences Building, 30; Giannini Foundation, 163
 CALMAN, W. T., Taxonomic Outlook in Zoology, 279
 CAMPBELL, D. H., The Origin of Land Plants, 177
 Cancer, Radiological Diagnosis of, 334; Causation, R. S. MCCOMBS and R. P. MCCOMBS, 423; and Adrenal Cortex Extract, S. ITAMI and E. McDONALD, 460
 Canker, Black Walnut, C. R. ORTON, 142
 CAPINPIN, J. M., Brazilin Stain and Pollen Cells, 370
 Carbonates in Soil, C. J. SCHOLLENBERGER, 13
 CARLSON, F. A., Geographical Index Numbers, 300
 Catalase Activity in Tissues, H. H. BUNZELL, 505
 CATTELL, J. MCK., The Usefulness of Psychology, 284
 Cattle, the "Mad Itch" of, R. E. SHORE, 559
 Causal Principle and the Organic World, M. N. CHAPPELL and F. H. PIKE, 427

- Census Count of 1930, and the Logistic Curve, R. PEARL and L. J. REED, 399
- "Centimeter," Pronunciation of, E. THOMAS, 458
- Centrifuge, Microscope, E. N. HARVEY and A. L. LOOMIS, 42
- CHALKLEY, L., JR., Ultra-violet Transmitting Glasses, 143
- CHANEY, R. W., Sequoia Forest, 653
- CHAPMAN, W. W., Attack by a Screech Owl, 91
- CHAPPELL, M. N., and F. H. PIKE, The Organic World and the Causal Principle, 427
- Chemical, Forces, K. FAJANS, 99; Research, G. T. MORGAN, 379; Soc. Amer., Cincinnati Meeting, 215
- Chemistry, The Commerce of, J. N. TAYLOR, 153; and Education, W. MCPHERSON, 485; Pure and Applied, International Union of, 571
- Chirp-rate of the Cricket, H. A. ALLARD, 347
- Chitine, What Is It?, W. T. M. FORBES, 397
- CLEMENTS, F., Color-blindness, 203
- CLEVELAND, L. R., and E. P. SANDERS, Bacteria-free Amoebic Abscesses, 149
- Cloud Distribution, R. J. HOLDEN, 397
- Coal, Bituminous, Int. Congress on, 572
- COCKERELL, T. D. A., Imperfect Fossils, 654
- Cocos and Valency, H. LEFFMANN, 344
- Colgate Univ., McGregory Hall, R. C. ROBERTS, 647
- COLLINS, W. H., National Museum of Canada, 144
- Color-blindness, F. CLEMENTS, 203
- Colorimetric Phosphorus Determination, A. H. MEYER, 174
- COLTON, H. S., and C. F. PARK, JR., Anosmia or "Squeez-ups," 579
- Committee of One Hundred, R. H. TRUE, 624
- COMPTON, A. H., Are Planets Rare?, 219
- Control, There is no, C. W. WOODWORTH, 141
- COOK, H. J., Mammoth and Giant Bison, 68
- COOK, R. V., Striae in a Kundt's Tube, 422
- Cornell Univ., Baker Lectureship, 393
- Correction, A. M. J. RATHBUN, 528
- CORRESPONDENT, National Museum of Canada, 40; Research Work of Mich. Coll. Mining, 222
- CORT, W. W., Parasitology at Mich. Biol. Station, 458
- COUCH, A. B., Softening Tissue Imbedded in Paraffin, 607
- COWDRY, E. V., and A. W. HAM, Life Cycle of the Parasite of East Coast Fever, 461
- CRAIGHEAD, F. C., and R. A. ST. GEORGE, Tree Medication for the Control of Bark Beetles, 433
- CRAIGIE, H., Observations of Lightning, 344
- CRONEIS, C., Carboniferous Ammonoids, 534
- CROWELL, M. F., and C. M. McCAY, Lethal Dose of Ultra-violet Light for Brook Trout, 582
- Culture Media for Opalinidae, M. M. METCALF, 561
- CUMMINS, H., Tags for Wet Specimens, 658
- Curtiss, Ralph Hamilton, J. H. MOORE, 58
- CUTRIGHT, P. R., Camera Lucida Drawings, 299
- Cysts, Setigerous, C. P. PHOEBUS, 196
- Cytology, Demonstrations in, A. F. HUETTNER, 604
- DARROW, G. M., and G. F. WALDO, Fruit-bud Formation in the Strawberry, 349
- DAVENPORT, C. B., "Race Crossing in Jamaica," 501
- DAVIDSON, F. A., The Curve of Normal Growth, 226
- DAVIDSON, J., and M. PHILLIPS, Lignin and Lodging of Cereals, 401
- DAVIES, P. A., Regeneration in the Willow, 276
- DAVIS, A. L., Work Done by a Ricksha Coolie, 143
- DAVIS, D. W., College and Oyster Industries, 413
- DAVIS, W., Scientific Minute Men, 115; Names and Ambiguity, 654
- DAVIS, W. M., Scientific Articles, 131
- DAVY, J. B., Origin of Symphoricarpus, 220
- Dean, Walter, Legacies of, B. L. ROBINSON, 459
- Deep Sea Observation, H. F. OSBORN, 27
- DeLamar Lectures, 596
- DELO, D. M., Dreikanter in Wyoming and Montana, 604
- Diamonds, South African Alluvial, G. F. KUNZ, 515
- Diphtheria Toxin and Short Electric Waves, W. T. SZYMANOWSKI and R. A. HICKS, 174
- Disintegrator, Mechanical, E. W. SCHULTZ and F. D. BANHAM, 147
- Doctorates Conferred in the Sciences by American Universities, C. J. WEST and C. HULL, 357
- Drawings, Camera Lucida, P. R. CUTRIGHT, 299
- Dreikanter in Wyoming and Montana, D. M. DELO, 604
- Drinking Water, Saline, and Livestock, L. S. PALMER and C. H. ECKLES, 364
- Duck Sickness, Western, E. R. KALMBACH, 658; L. T. GILTNER and J. F. COUCH, 660
- DURAN-REYNALS, F., Effect of Testicle Extract and Normal Serum on the Growth of a Transplantable Epithelial Tumor, 608
- EARL, R. O., Staining of Plant Tissues, 562
- Earth, The Age of, G. VON HEVESY, 509
- EAST, E. M., Homozygotes and Induced Parthenogenesis, 148
- Electrode, An Aqueous, C. P. HEINLEIN, 16
- Elm, Dutch, Disease in Ohio, C. MAY, 142
- Engineers, Civil, Awards, 61; Electrical, Periodicals, J. K. MCNEELY and C. D. CROSNOW, 81; Tours, 335
- Entropy and Organization, D. L. WATSON, 220
- Enzyme, Bacterial, Specific Action of, on Pneumococci of Type III, O. T. AVERY and R. DUBOS, 151
- Enzymes, Proteolytic, Titrating, F. L. GATES, 147
- VAN DE ERVE, J., and J. M., Lantern Slide Projection Technique, 532
- Ether Concept, L. B. SPINNEY, 303
- Euphony, C. E. SEASHORE, 318
- Eusynthetology or Eurhetics, J. F. MESSENGER, 504
- Evolution, Organic, W. H. LONGLEY, 141
- Expedition, of the *Dana*, 29; U. S. Naval Observatory, 30; of Univ. of Mich., 136; to Montana, Scott Fund, 393, Shippee Johnson, Peruvian, 573
- FAIRCHILD, H. L., Meteor Crater Bolide, 463
- FAJANS, K., Chemical Forces, 99
- Fellowships, Storow, D. WHITE, 61; Beit Memorial, 266
- Fertility, Soil, W. F. GERICHKE, 202
- Fewkes, Jesse Walter, J. R. SWANTON, 5
- FIDLAR, E., Rare Gases, 296
- Fire Blight Pathogen, R. H. ROSEN, 301
- Fisheries, Bur., 60; Training for, L. RADCLIFFE, 245
- Floras, Fossil, Antillean, C. J. MAURY, 253
- Fluke, American, D. F. SINITSIN, 273
- Flukes, Human, Molluscan Hosts for, L. G. INGLES, 527
- FORBES, W. T. M., What is Chitine?, 397
- Forest, Education Board, Pack, Awards of, 85; Fund, Harvard, 313; Pathology, E. E. HUBERT, 351
- Forests, Transition from Old to New, T. T. MUNGER, 327; Experimental and Ranges, L. F. KNEIPP, 560
- Fossil Frog, M. M. METCALF, 602
- Fossils, Imperfect, T. D. A. COCKERELL, 654
- Fowls, Virus of Laryngotracheitis of, J. R. BEACH, 633
- FOYE, W. G., New England Intercollegiate Geologic Excursion, 504
- Franklin Institute, 419
- FREAR, D. E., Clarification of Plant Juices, 634
- Freeman, George Fouché, R. C. SMITH, 449
- FREUD, B. B., and H. C. FREUD, Surface Tension, 435
- Fruit-Bud, Formation in the Strawberry, G. M. DARROW and G. F. WALDO, 349
- FRYXELL, F. M., Illinois Acad. of Sciences, 172
- FULLER, H. J., Ultra-violet Radiation and Plants, 535
- GAGER, C. S., Sir William and Sir Joseph Hooker, 238
- GALTSOFF, P. S., Fecundity of the Oyster, 97
- GARRISON, F. H., Medical History in Canada, J. J. Heagerty, 171

- Gases, Rare, E. FIDLAR, 296
Gastric Pouch, Auto-transplanted, A. C. IVY, 197
GATES, F. L., Titrating Proteolytic Enzymes, 147
GATES, G. E., Mitochondrial Behavior, 629
Genetic Term, New, A. H. HERSH, 294
Genetics, Animal, Dept. of, at Univ. Edinburgh, 162
Genus and Species Making, F. C. BAKER, 37
Geographical, Index Numbers, F. A. CARLSON, 300; Soc., Royal Centenary, 450
Geologic, Survey of Georgia, 291; Excursion, New England Intercollegiate, W. G. FOYE, 504; Research, W. T. THOM, JR., and R. M. FIELD, 655
Geological, Survey, U. S., Appointments, 86; of California, O. P. JENKINS, 528; Congress, 312
Geology and Cooperative Research, W. T. THOM, JR., and R. M. FIELD, 117
Geomorphology, Cooperation in, K. BRYAN, 66
GERARD, R. W., Oxygen Consumption of Nerve, 195
GERICKE, W. F., Soil Fertility, 202
GERMANN, F. E. E., 25th Anniversary of Relativity, 554
Germinator, Individual, Jacobsen, H. I. BALDWIN, 345
GIBBARD, J., Microelectrophoresis Cell, 398
Gibbs's Phenomenon, C. N. MOORE, 456
GIFFORD, J. C., Scientific Names, 116
Gilliss, James Melville, Memorial to, 470
GILTNER, L. T., and J. F. COUCH, Western Duck Sickness, 660
Girth, Arm, Measurement of, H. T. MANUEL, 399
Glands, Thyroid and Pituitary, A. E. ADAMS, L. RICHARDS and A. KUDER, 323
GLOCK, W. S., Dual Nature of Physiography, 3
Glozel, a Mystery, D. RIESMAN, 127
Gorgas, Colonel, Work of, F. P. THOMAS, 319
GOUCHER, F. S., Microphonic Action in Telephone Transmitters, 467
Greenland, Aerological Stations in, W. H. HOBBS, 580
GREGORY, W. K., William Diller Matthew, 642
GROSVENOR, W. M., Surface Tension, 244
Growth, of Children, F. BOAS, 44; Normal, Curve of, F. A. DAVIDSON, 226
GUDGER, E. W., The Basking Shark, 341
- Hackh, I. W. D., Chemical Dictionary, W. A. NOYES, 119
HARKINS, W. D., and H. F. JORDAN, Surface Tension, 73
HARRINGTON, E. L., Control Method for Liquids, 201
HARRIS, M. B. K., Staining Spirochetes, 275
HARROW, B., Anthocyanin as an Indicator, 14
HARTMAN, F. A., and K. A. BROWNELL, The Hormone of the Adrenal Cortex, 76
HARVEY, E. N., and A. L. LOOMIS, A Microscope Centrifuge, 42
HEIDELBERGER, M., and F. E. KENDALL, Protein Antibody System, 252
HEINLEIN, C. P., An Aqueous Electrode, 16; Electromagnetic Touch-stimulus Reaction Key, 606
HEMENWAY, A. F., Plant Microtechnique, 251
HENDERSON, J., Sorting Power of Wind and Wave, 559
HERSH, A. H., New Genetic Term, 294
Heterothallism, R. F. ALLEN, 536
VON HEVESY, G., The Age of the Earth, 509
History, of Science Soc., F. E. BRASCH and J. MAYER, 41; and Science, E. C. ANDREWS, 205
HIURA, M., Germination of Oospores, 95
HOBBS, W. H., Aerological Stations in Greenland, 580
HOFFMAN, D. C., and F. DURAN-REYNALS, Enhancement of Infections by Testicle Extract, 508
HOLDEN, R. J., Cloud Distribution, 397
Homo sapiens, var., Chicagoensis, R. SPILLMAN, 366
Hooker, Sir William and Sir Joseph, Tablet to, C. S. GAGER, 238
HOPKINS, E. F., the Growth of *Chlorella* sp., 609
Horizontal Demonstrations, E. J. WIMMER, 533
HORLACHER, W. R., Mutations and Electricity, 96
"Hormone, Cortical," and Addison's Disease, L. G. ROWNTREE and C. H. GREENE, 482; W. W. SWINGLE and J. J. PFIFFNER, 483
HOWARD, L. O., Control of Malaria, I. J. Kligler, 15; Biological Control of Insect and Plant Pests, W. R. Thompson, 368; The Coconut Moth in Fiji, J. D. Tothill, T. H. C. Taylor and R. W. Paine, 368
HUBERT, H. E., Forest Pathology, 351
HUETTNER, A. F., Demonstrations in Cytology, 604
HULBERT, E. O., Spectra of Gases, 115
HUNT, R., Promotion of Medicine and Pharmacy, 49; Physiologically Active Compounds, 526
- Illinois Acad. of Sciences, F. M. FRYXELL, 172
Inflorescence, Conifer, G. R. WIELAND, 113
INGLES, L. G., Molluscan Hosts in N. A. for Human Flukes, 527
Insects, Technique for Study of Cells of, W. J. BAUMGARTNER and M. A. PAYNE, 199
Instrument Makers, Scientific, R. S. WHIPPLE, 208
ITAMI, S., and E. McDONALD, Adrenal Cortex Extract and Cancer, 460
IVY, A. C., Auto-Transplanted Gastric Pouch, 197
- JACKSON, D. C., Technical Schools and Industry, 637
JACOT, A. P., Nomenclature, 272
JEFFREY, E. C., Die Phylogenie der Pflanzen, W. Zimmermann, 320; Die Paläobotanischen Untersuchungsmethoden, R. Kräusel, 344
JENKINS, O. P., Geological Survey of Calif., 528
JENNISON, M. W., Mildewed Cotton Fabrics, 346
JOHNSON, D., Sea-level Change, 35
JOHNSON, E. H., Science Source Material, 340
JOHNSTON, W. D., JR., Growth of Stalactites, 298
JONES, F. S., and H. S. SIMMS, Status of Lactenin, 456
Journals, Reprints of Contents, C. F. MEYER, 628
JUDSON, L. S., and P. E. GRIFFITH, Electrodynamical Recorder, 15; Variable Resistance Pneumograph, 369
- KALMBACH, E. R., Western Duck Sickness, 658
KAY, G. M., Age of the Hounsfield Bentonite, 365
KENNELLY, A. E., The Rumford Fund, 605
KLEEMAN, R. D., Electromagnetic Radiation and the Electron, 225
Kligler, I. J., Control of Malaria, L. O. HOWARD, 15
KNEIPP, L. F., Experimental Forests and Ranges, 560
KNOWER, H. MCE., Staining Sections of the Spinal Cord and Brain-stem, 172
KOFOD, C. A., History of Science, W. C. D. Dampier-Whetham, 656
KOVARIK, A. F., Actino-uranium, 122
KRUEGER, A. P., Bacteriophage, 507
KUNZ, G. F., South African Alluvial Diamonds, 515
Kymograph, Belt Paper, A. R. McLAUGHLIN, 71
- Laboratories, and University Assistants in Italy, 29
Lactenin, Status of, F. S. JONES and H. S. SIMMS, 456
Landsteiner, Karl, Work of, 605
LANE, A. C., Batholiths, 341
LANE, B. H., George McLane Wood, 620
Language of Scientists, G. W. LAY, 567
Lantern Slide Projection, J. and M. VAN ERVE, 532
LAY, G. W., Language of Scientists, 567
LEE, O. J., The Birth of the Moon, 89
LEFFMANN, H., Cocos and Valency, 344
Lehigh Univ. Honorary Degrees, 190; James Ward Packard Laboratory at, 419
LEVERETT, F., Length of Pleistocene Glacial and Interglacial Stages, 193
Lightning, Observations of, H. CRAIGIE, 344
Lignin and Lodging of Cereals, J. DAVIDSON and M. PHILLIPS, 401
Liquids, Control Method for, E. L. HARRINGTON, 201
LIVINGSTON, B. E., Cleveland Meeting of the Amer. Assoc., 493; Meeting of Executive Committee, 631

- LIVINGSTON, R., An Electromagnetic Pump, 223
 LLOYD, W., The Myocardium in Yellow Fever, 18
 LOGAN, T. S., and R. K. TAYLOR, Triboelectric Luminescence, 89
 LONGFELLOW, D. W., The Birth of the Moon, 424
 LONGLEY, W. H., Organic Evolution, 141
 LUCK, J. M., Pacific Div. of the Amer. Assoc., 255; Executive Committees, 371; Amer. Assoc. on Pacific Coast, 522
 LUNT, H. A., Carbonates in Soil, 295
- MCADIE, A., Physical Processes of Weather, N. Shaw, 297
 MCARTHUR, E. H., Behavior of Sudan III, 14
 MCATEE, W. L., Support of the Zoological Record, 247
 MCCOMBS, R. S., and R. P. MCCOMBS, Causation of Cancer, 423
 MCCONNELL, C. H., The Mitosis Found in Hydra, 170
 MACHT, D. I., Zoopharmacology versus Phytopharmacology, 68
 MACINNES, J. M., and J. C. BOYCE, Gas Discharge Wavelength List in the Extreme Ultra-violet, 90
 MCLAUGHLIN, A. R., A Belt Paper Kymograph, 71
 MCNEELY, J. K., and C. D. CROSNOW, Periodicals for Electric Engineers, 81
 MCPHERSON, W., Chemistry and Education, 485
 MADDOX, D. C., Bentonite in the Ordovician, Ontario, 630
 MAGNESIUM, Test Papers for Detecting, I. STONE, 322
 MAGNETIC POLES of the Earth and the Birth of the Moon, D. W. LONGFELLOW, 424
 MAIL, G. A., Viability in Eggs of *Aedes campestris*, 170
 MALPIGHI as Anatomist, A. W. MEYER, 234
 MAMMOTH and Giant Bison, H. J. COOK, 68
 MAN, Peking, G. B. BARBOUR, 635
 MANGANESE, Necessity and Function of, in the Growth of *Chlorella* sp., E. F. HOPKINS, 609
 MANUEL, H. T., Measurement of Arm Girth, 399
 MANWARING, W. H., Biochemical Relativity, 23
 MARMOSA as a Stowaway, G. E. POTTER, 91
 MATHEMATICS, Egyptian, R. C. ARCHIBALD, 39; Babylonian, G. A. MILLER, 601
 MATTHEW, William Diller, W. K. GREGORY, 642
 MAURY, C. J., Antillean Fossil Floras, 253
 MAY, C., Dutch Elm Disease in Ohio, 142
 MEASURING SLIDE for Class Use, E. R. BOGUSCH, 506
 MEDICAL PATENTS, 69; Center for Uruguay, 358; Education, Standardization versus, C. R. STOCKARD, 409; Assoc., Amer., Detroit Meeting, 41
 MEDICINE and Pharmacy, R. HUNT, 49
 MEMORIALS, 7, 135, 188, 266, 288, 332, 390, 416, 449, 494, 569, 594, 621
 MENTAL HYGIENE Movement, W. A. WHITE, 77
 MERRILL, E. D., Int. Botanical Address Book, 652
 MESSENGER, J. F., Eusynthetology or Eurhetics, 504
 METABOLISM of the *Brucella* Group in Synthetic Media, C. E. ZOBELL and K. F. MEYER, 176
 METCALF, M. M., Salinity and Size, 526; Culture Media for Opalinidae, 561; A Fossil Frog, 602
 METCALF, Z. P., Nomenclature, 318
 METEOR, Paragould, and Meteorites, C. C. WYLIE, 66; Crater Bolide, H. L. FAIRCHILD, 463
 MEYER, A. H., Phosphorus Determination, 174
 MEYER, A. W., Malpighi as Anatomist, 234
 MEYER, C. F., Reprints of Contents of Journals, 628
 MEYER, M. F., Musical Pitch and Physical Pitch, 503
 MICHIGAN, Univ. of, Greenland Expedition, 136; College of Mining and Technology, CORRESPONDENT, 222
 MICRO-ORGANISMS, Living, in the Air of the Arid Southwest, J. G. BROWN, 322
 MICROSCOPES, Cases for, F. A. VARRELMAN, 173
 MICROTÉCHNIQUE, Plant, A. F. HEMENWAY, 251
 MILLER, G. A., Term Abstract Group, 168; Babylonian Mathematics, 601
 MINERAL RESOURCES of Greece, M. H. BIGELOW, 398
 MITCHELL, R. H., Stone's Structure Machine, 275
- Mitosis Found in Hydra, C. H. MCCONNELL, 170
 MOORE, C. N., Gibbs's Phenomenon, 456
 MOORE, C. R., Int. Congress for Sex Research, 521
 MOORE, J. H., Ralph Hamilton Curtiss, 58
 MORGAN, G. T., Chemical Research, 379
 MOSQUITOES versus Culicidae, C. K. WENTWORTH, 579
 MULVANIA, M., Types of Plants in Florida, 603
 MUNGER, T. T., Old Forests and New, 327
 MUSEUM, of Science, Contributions of Count Rumford and Faraday, W. BRAGG, 19; of Canada, National, CORRESPONDENT, 40; Field Work, W. H. COLLINS, 144; of the City of New York, 267
 MUSICAL PERFORMANCE, C. E. SEASHORE and J. TIFFIN, 480
 MUTATIONS and Electricity, W. R. HORLACHER, 96
 MYCELIUM, Fungus in Cotton, M. W. JENNISON, 346
- NABOURS, R. K., Plant Hybridization, H. F. ROBERTS, 274; Parthenogenesis and Homozygosis, 502
 NAKAHARA, W., and H. YAOI, Extractability of the Alleged Chicken Sarcoma Agent, 277
 NAMES, Scientific, J. C. GIFFORD, 116; G. M. ALLEN and T. BARBOUR, 219; Priority in Higher Group, H. E. WOOD, 2ND, 219; and Ambiguity, W. DAVIS, 654
 NATIONAL, Acad. of Sciences, 372, 402; Research Council, Appropriations for Grants-in-Aid by, 452
 NAVEZ, A. E., Polarized Light and Films of Starch, 13
 NERVE, Oxygen Consumption of, R. W. GERARD, 195; Impulse, Oxidative Nature of, F. O. SCHMITT, 583
 NERVE-MUSCLE UNIT, F. H. PRATT and M. A. REID, 431
 NEVENS, W. B., and D. D. SHAW, Nutritional Anemia in the White Rat, 249
 NOMENCLATURE, A. P. JACOT, 272; Z. P. METCALF, 318
 NORDBY, J. E., The Dry Weight of Wool, 120
 NORTH CAROLINA Acad. of Sci., H. R. TOTTE, 71
 DU NOÛY, P. L., Critical Temperature of Serum: Depolarization Factor of Serum Molecules, 224
 NOYES, W. A., Chemical Dictionary, I. W. D. HACKH, 119
 NUTTING, P. G., Quartz Surfaces, 243
- Obituary, 5, 58, 134, 157, 187, 266, 287, 311, 332, 390, 416, 449, 470, 494, 569, 594, 620
 OIL Absorption of Shell Eggs, T. L. SWENSON and H. H. MOTTERN, 98
 OLIVIER, C. P., Comets, N. T. BOBROVNIKOFF, 657
 ORTON, C. R., Black Walnut Canker, 142
 OSBORN, H. F., Paleontology versus Genetics, 1; Deep Sea Observation, 27
 OSBORN, H. F., Titanotheres, A. S. ROMER, 92
 OVA, Blood Calcium and the Antirachitic Factor, W. C. RUSSELL, C. H. HOWARD and A. F. HESS, 506
 OWL, Screech, Attacks, W. W. CHAPMAN, 91; A. M. REESE, 366
 OYSTER, Fecundity of the, P. S. GALTSOFF, 97; Industries and the College, D. W. DAVIS, 413
- PAGE, L., Mathematical and Physical Papers, J. Larmor, 118
 PALEONTOLOGY versus Genetics, H. F. OSBORN, 1
 PALMER, L. S., and C. H. ECKLES, Saline Drinking Water, 364
 PARASITE, Laboratory, British, 417; of East Coast Fever, Life Cycle of, E. V. COWDRY and A. W. HAM, 461
 PARASITES, Animal, of Man, A. C. REED, 611
 PARASITOLOGY, at Mich. Biol. Station, W. W. CORT, 458
 PARTHENOGENESIS, Induced, and Homozygotes, E. M. EAST, 148; R. K. NABOURS, 502
 PEARL, R., and L. J. REED, The Logistic Curve and the Census Count of 1930, 399
 PELLAGRA an Iron Deficiency Disease, S. BLISS, 577
 PENCHARZ, R. I., J. M. D. OLMSTED and G. GIRAGOSSINTZ, Adrenalectomy in the Albino Rat, 175
 PEROMYSCUS Program, La Jolla, F. B. SUMNER, 477
 PESSIN, L. J., Soil Sampler, 459

- PHILIP, C. B., Mosquito Vectors of Experimental Yellow Fever, 578
- PHILLIPS, W. F. R., Micro Slide, Staining Rack for, 581
- PHOEBUS, C. P., Setigerous Cysts, 196
- Physics, Modern Ether Concept in, L. B. SPINNEY, 303
- Physiography, Dual Nature of, W. S. GLOCK, 3
- Physiologically Active Compounds, R. HUNT, 526
- Piano Camera, J. TIFFIN and C. E. SEASHORE, 146
- Pitch, Musical, W. B. WHITE, 295; and Physical Pitch, M. F. MEYER, 503
- Planetary Systems, G. B. BLAIR, 479
- Planets, Rare?, J. G. PORTER, 170; A. H. COMPTON, 219
- Plant, Lice Pumping in Unison, W. L. TANNER, 560; Juices, Clarification of, D. E. FREAR, 634
- Plants, Land, Origin of, D. H. CAMPBELL, 177; Resistant to Disease, 213; Size and Form in, F. O. BOWER, 227; New Type of, in Florida, M. MULVANIA, 603
- Pleistocene Glacial and Interglacial Stages, Length of, F. LEVERETT, 193
- Pneumograph, Variable Resistance and Electromagnetic Tambour, L. S. JUDSON and P. E. GRIFFITH, 369
- Polar Exploration, I. BOWMAN, 439
- Polarized Light and Films of Starch, A. E. NAVEZ, 13
- Poles, Magnetic, of the Earth and the Birth of the Moon, O. J. LEE, 89
- Poliomyelitis Virus, Immunization of, with Aluminum Hydroxide Mixtures, C. P. RHOADS, 608
- PORTER, J. G., Are Planets Rare? 170
- Potential in a Microelectrophoresis Cell, G. GIBBARD, 398
- POTTER, G. E., Marmosa as a Stowaway, 91
- PRATT, F. H., and M. A. REID, Nerve-muscle Unit, 431
- Pregl, Fritz, O. W., 645
- Protein Anti-body System, M. HEIDELBERGER and F. E. KENDALL, 252
- Proteins-Antibody, Purified, L. REINER, 483
- PROUTY, W. F., A Bituminous Fossil Plane, 527
- Psychology, The Usefulness of, J. MCK. CATTELL, 284
- Pump, Electromagnetic, R. LIVINGSTON, 223
- Quartz Surfaces, Chemical Activation of, P. G. NUTTING, 243
- Quotations, 41, 69, 92, 145, 248, 367, 430, 605
- "Race Crossing in Jamaica," C. B. DAVENPORT, 501
- RADCLIFFE, L., Training for Fisheries, 245
- Radiation, Electromagnetic, and the Electron, R. D. KLEEMAN, 225
- Radio, Talks, Science Service, 135; Education by, 451
- RAMALEY, F., Specialization in Science, 325
- RATHBUN, J., A Correction, 528
- Reaction Key, Electromagnetic Touch-Stimulus, C. P. HEINLEIN, 606
- Recorder, Electrodynamical, L. S. JUDSON and P. E. GRIFFITH, 15
- REED, A. C., Animal Parasites of Man, 611
- REESE, A. M., English Popularizer of Science, 69; Owl Attacks, 366
- REINER, L., Purified Antibody-Proteins, 483
- Relativity, Biochemical, W. H. MANWARING, 23; Celebration of 25th Anniversary, F. E. E. GERMANN, 554
- RHOADS, C. P., Immunization with Aluminum Hydroxide Mixtures of Poliomyelitis Virus, 608
- Ricksha Coolie, Work Done by, A. L. DAVIS, 143
- RIESMAN, D., Glozel, a Mystery, 127
- "Right-handedness" in White Rats, L. S. TSAI and S. MAURER, 436
- Roberts, H. F., Plant Hybridization, R. K. NABOURS, 274
- ROBERTS, R. C., McGregory Hall at Colgate Univ., 647
- ROBINSON, B. L., Legacies of Walter Deane, 459
- ROBINSON, E. S., Exp. Psychology, E. G. BORING, 529
- ROGERS, N. A., Flocks of Swans, 116
- ROMER, A. S., Titanotheres, H. F. OSBORN, 92
- ROSEN, R. H., Fire Blight Pathogene, 301
- ROSS, R., Discoverer of the Calculus, 458
- ROSSELAND, S., Size of Universe, L. SILBERSTEIN, 479
- ROWNTREE, L. G., and C. H. GREENE, Addison's Disease and the "Cortical Hormone," 482
- Rumford Fund, A. E. KENNELLY, 605
- RUSSELL, W. C., C. H. HOWARD and A. F. HESS, The Development of Ova, Blood Calcium and the Anti-rachitic Factor, 506
- St. JOHN, J. L., Uniform Bibliographic System, 90
- Salinity and Size, M. M. METCALF, 526
- Sarcoma Agent, Alleged, Chicken, W. NAKAHARA and H. YAOI, 277
- SAYLES, L. P., Injecting the Coelom of Small Annelids, 632
- SCHMIDT, L. B., Agricultural Revolution in U. S., 585
- SCHMITT, F. O., The Nerve Impulse, 583
- SCHOEWE, W. H., and K. BRYAN, Selenite Fragments and Wind Action, 169
- SCHOLLENBERGER, C. J., Carbonates in Soil, 13
- SCHULTZ, E. W., and F. D. BANHAM, Mechanical Disintegrator, 147
- Science, English Popularizer of, A. M. REESE, 69; and History, E. C. ANDREWS, 205; Specialization in, F. RAMALEY, 325; Source Material, E. H. JOHNSON, 340
- Scientific Events, 7, 29, 60, 84, 107, 135, 162, 188, 213, 238, 266, 288, 312, 333, 358, 391, 416, 450, 472, 495, 520, 554, 595, 622, 646; Articles, W. M. DAVIS, 131; and Technical Societies, 240
- Sclerospora Graminicola, Germination of Oospores of, M. HIURA, 95
- Sea-level Change, D. JOHNSON, 35
- Searchlight, Celestial, C. F. BROOKS, 244
- SEASHORE, C. E., Euphony, 318; and J. TIFFIN, Evaluating Musical Performance, 480
- Selection, Natural, F. R. WELSH, 528
- Selenite Fragments and Wind Action, W. H. SCHOEWE and K. BRYAN, 169
- Sequoia Forest, R. W. CHANEY, 653
- Serum, Critical Temperature of, Molecules, P. L. DU NOÛY, 224
- Sex Research, International Congress, C. R. MOORE, 521
- Shark, Basking, E. W. GUDGER, 341
- Shaw, N., Weather, A. MCADIE, 297
- Shippee-Johnson Peruvian Expedition, 573
- SHOPE, R. E., The "Mad Itch" of Cattle, 559
- SIDERIS, C. P., Soil Science, 40
- Silberstein, L., Size of Universe, S. ROSSELAND, 479
- SINITZIN, D. F., American Fluke, 273
- Sinuses, Paranasal, and the Singing Voice, F. WHEELER, 630
- Skeletal Muscle Cell, Isolated, Myogram of the, D. E. S. BROWN and F. J. M. SICHEL, 17
- Slides of the Rhizopod Arcella, C. D. BEERS, 122
- SMITH, D. E., Florian Cajori, 287
- SMITH, R. C., George Fouché Freeman, 449
- Soil, Science, C. P. SIDERIS, 40; Carbonates in, H. A. LUNT, 295; Sampler, L. J. PESSIN, 459
- SOLLMANN, T., George Neil Stewart, Physiologist, 157
- Sorting Power of Wind and Wave, J. HENDERSON, 559
- Specimens, Fiber Tags for, H. CUMMINS, 658
- Spectra of Gases, E. O. HULBERT, 115
- SPILLMAN, R., Homo sapiens var. Chicagoensis, 366
- SPINNEY, L. B., Ether Concept, 303
- Stain for Bacteria, H. D. BAILEY, 95
- Staining, Sections of the Spinal Cord and Brain-stem, H. MCE. KNOWER, 172; Spirochetes, M. B. K. HARRIS, 275; of Plant Tissues, R. O. EARL, 562; Rack for Micro-Slides, W. F. R. PHILLIPS, 581
- Stalactites, Growth of, W. D. JOHNSTON, JR., 298
- Stewart, George Neil, Physiologist, T. SOLLMANN, 157
- STOCKARD, C. R., Medical Education, 409
- STONE, A., Machine for the Investigation of Structure, 276
- STONE, I., Detecting Magnesium, 322

- Storror Fellowships, D. WHITE, 61
 Striae in a Kundt's Tube, R. V. COOK, 422
 Structure, Machine, Stone's, R. H. MITCHELL, 275;
 A. STONE, 276
 Sudan III, Behavior of, E. H. MACARTHUR, 14
 SUMNER, F. B., La Jolla Peromyscus Program, 477
 Surface Tension, W. D. HARKINS and H. F. JORDAN, 73;
 W. M. GROSVENOR, 244; B. B. FREUD and H. C. FREUD,
 435
 Swans, Flocks of, N. A. ROGERS, 116
 SWANTON, J. R., Jesse Walter Fewkes, 5
 SWENSON, T. L., and H. H. MOTTERN, The Oil Absorp-
 tion of Shell Eggs, 98
 SWINGLE, W. W., and J. J. PFIFFNER, Adrenalectomized
 Cats, 75; Addison's Disease and the "Cortical Hor-
 mone," 483
 Symphoricarpos, Origin of, J. B. DAVY, 220
 SZENT-GYÖRGYI, A., Biological Oxidation and the Supra-
 renal Gland, 125
 SZYMANOWSKI, W. T., and R. A. HICKS, Short Electric
 Waves and Diphtheria Toxin, 174
- TANNER, W. L., Plant Lice Pumping in Unison, 560
 TAYLOR, J. N., The Commerce of Chemistry, 153
 TAYLOR, W. R., The Oedogoniaceae, L. H. TIFFANY, 120
 Telephone Transmitters, Microphonic Action in, F. S.
 GOUCHER, 467
 Technical Schools and Industry, D. C. JACKSON, 637
 Temperature, Body, in Opossums, O. WADE, 365
 TESTER, A. C., Making a Bibliography, 321
 Testicle Extract, Enhancement of Infections by, D. C.
 HOFFMAN and F. DURAN-REYNALS, 508; and Normal
 Serum, Effect of, on the Growth of a Transplantable
 Epithelial Tumor, F. DURAN-REYNALS, 608
 THOM, W. T., JR., and R. M. FIELD, Geology and Coop-
 erative Research, 117; Geological Research, 655
 THOMAS, E., Pronunciation of "Centimeter," 458
 THOMAS, F. P., Work of Colonel Gorgas, 319
 THOMAS, H. E., Longevity of *Bacillus Amylovorus*
 (Burr) Trev., 634
 THOMAS, W., The Conception of Balance, 425
 Thompson, W. R., Insect and Plant Pests, L. O.
 HOWARD, 368
 Tiffany, L. H., The Oedogoniaceae, W. R. TAYLOR, 120
 TIFFIN, J., and C. E. SEASHORE, Iowa Piano Camera, 146
 Tissue in Paraffin, Softening, A. B. COUCH, 607
 TOWNSEND, C. H., The Whaling Situation, 652
 Tothill, J. J., T. H. C. Taylor and R. W. Paine, The
 Coconut Moth in Fiji, L. O. HOWARD, 368
 TOTTEN, H. R., N. C. Academy of Science, 71
 Triboelectric Luminescence, T. S. LOGAN and R. K.
 TAYLOR, 89
 TRUE, R. H., Botanical Soc. of Amer., 85; Committee
 of One Hundred at Cleveland, 624
 TSAI, L. S., and S. MAURER, "Right-handedness" in
 White Rats, 436
- Ultra-violet, Extreme, J. M. MACINNES and J. C. BOYCE,
 90; Transmitting Glasses, L. CHALKLEY, JR., 143;
 Radiation, and Higher Plants, H. J. FULLER, 535;
 Light, and Brook Trout, M. F. CROWELL and C. M.
 MCCAY, 582
- VARRELMAN, F. A., Cases for Microscopes, 173
 Vegetation, Tropical, W. N. BANGHAM, 457
 VERDA, D. J., and W. P. ELHARDT, Anesthesia in Fish,
 581
 Veterinary Congress, International, 213
 VISSCHER, J. P., and C. S. HEIMLICH, Terrestrial Am-
 phipod in the United States, 560
 Vortices, Circular Shadows from, F. C. BROWN, 478
 Vowels, Analysis of, I. C. YOUNG and R. H. STETSON, 223
- WADE, O., Body Temperature in Opossums, 365
 WATSON, D. L., Entropy and Organization, 220
 WELSH, F. R., Natural Selection, 528
 WENTWORTH, C. K., Mosquitoes versus Culicidae, 579
 WEST, C. J., and C. HULL, Doctorates Conferred in the
 Sciences by American Universities, 357
 Westinghouse, George, Memorial to, 360
 Whaling Situation, The, C. H. TOWNSEND, 652
 WHEELER, F., Paranasal Sinuses and the Singing Voice,
 630
 WHIPPLE, R. S., Scientific Instrument Makers, 208
 WHITE, D., Storror Fellowships, 61
 WHITE, W. A., The Mental Hygiene Movement, 77
 WHITE, W. B., Musical Pitch, 295
 WIELAND, G. R., Conifer Inflorescence, 113
 Wiley, Harvey Washington, W. D. BIGELOW, 311
 Willow, Regeneration in, P. A. DAVIES, 276
 WIMMER, E. J., Class Demonstrations, 533
 Wood, George McLane, B. H. LANE, 620
 WOOD, H. E., 2ND, Priority in Family, Order and Higher
 Group Names, 219
 WOODS, A. F., Scientific Research and Agricultural Prog-
 ress, 563
 WOODWORTH, C. W., There is no Control, 141
 WOODWORTH, R. H., Twin Seedlings in Angiosperms, 398
 Wool, Weight of, J. E. NORDBY, 120
 WYLIE, C. C., Paragould Meteor and Meteorites, 66
- Yale Univ., Honorary Degree from, 31; and Bernice P.
 Bishop Museum, 109; School of Medicine, Health Sur-
 veys by, 472
 Yardang and Zastruga, E. BLACKWELDER, 396
 Yellow Fever, The Myocardium in, W. LLOYD, 18; Ex-
 perimental, Mosquito Vectors of, C. B. PHILIP, 578
 YOUNG, I. C., and R. H. STETSON, Analysis of Vowels,
 223
- Zimmerman, W., Die Phylogenie der Pflanzen, E. C.
 JEFFREY, 320
 ZOBELL, C. E., and K. F. MEYER, The Metabolism of the
 Brucella Group in Synthetic Media, 176
 Zoological, Record, Support of, W. L. MCATEE, 247;
 Garden, The Whipsnade, 333
 Zoology, Taxonomic Outlook in, W. T. CALMAN, 279
 Zoopharmacology versus Phytopharmacology, D. I.
 MACHT, 68