

SCIENCE

NEW SERIES. VOLUME LXXI

JANUARY-JUNE, 1930

NEW YORK
THE SCIENCE PRESS
1930

THE SCIENCE PRESS PRINTING COMPANY
LANCASTER, PA.

CONTENTS AND INDEX

NEW SERIES. VOL. LXXI—JANUARY TO JUNE, 1930

THE NAMES OF CONTRIBUTORS ARE PRINTED IN SMALL CAPITALS

- Academies of Science, State, and High-school Students, L. A. ASTELL, 445
- Academy, of Science, Michigan, 93; Iowa, J. E. GILMAN, 610; California, African Mammal Hall for the Museum, 332; of Sciences, National, 513, 543, 566
- Acridian Follicle, W. J. BAUMGARTNER, 466
- Adsorption and Emulsion Formation, P. G. NUTTING, 36
- Advanced Study, Institute for, 599
- Aeroarctic's First Expedition, 1931, 280
- Agricultural Conference, Pan-American, 598
- Agriculture, in the British Empire, 179; in England, 257
- Air and Animal Life, J. W. HERSHEY, 394
- Alaska Agricultural College and School of Mines, 657
- ALLEE, W. C., Ecological Monographs, 63
- ALLEN, C. E., Inheritance in a Hepatic, 197; Grants of National Research Council, 280
- ALLISON, F. E., and H. J. MORRIS, Nitrogen Fixation, 221
- ALLISON, I. S., Saline Drinking Waters, 559
- American Association for the Advancement of Science, Address of Retiring President, 1; Des Moines Meeting, Officers, 63; General Features, 137; Registration, 137; Local Committee, 138; Press Service, 139, 218; Program, 139; Exhibition, 140; Prize, 140; Sessions and Complimentary Lectures, 140; Council and Executive Committee, 142; President Elect, 145; Financial Condition, 146; Secretaries' Conference, 147; Academy Conference, 147; Future Meetings, 148; Sessions of Sections, A—109, 149; B—19, 149; C—151; D—152, 225; E—47, 153; F—153, 169; G—156, 197; F and G—159; H—160, 249; I—160, 204; K—161; L—162; M—57, 162, 467, 471; N—77, 164; O—81, 165; Q—167, 295; Organizations Related to the Association, 167; Committee of One Hundred, 397, 408; Southwestern Division, Tucson Meeting, 356; Pacific Division, 580; Spring Meeting of Executive Committee, B. E. LIVINGSTON, 588
- Anatomical Congress, International, 237
- ANDREWS, J., Excystation of Coccidial Oocysts, 37
- Angst, Ernst Clement, 596
- Anthropology and Indian Affairs, F.-C. COLE, 249
- Arboretum, National, F. V. COVILLE, 176
- ARCHIBALD, R. C., Mathematics before the Greeks, 109; Babylonian Mathematics, 342
- Arizona, National Monuments in, 629
- Association and Constitution, E. C. BINGHAM and H. J. FORNWALT, 564
- ASTELL, L. A., State Academies of Science and High-school Students, 445
- Astronomy in South Africa, H. S. JONES, 319
- Atmometers, Porous-cup, Valve for, J. D. WILSON, 101
- Australasian Association for the Advancement of Science, 10
- Australia, Northwestern, Carnegie-Australian-Harvard Expedition to, 180
- Australopithecus not a Chimpanzee, A. S. ROMER, 482
- "Auximones," N. A. CLARK, 268
- Bacilli, Artificial, C. B. LIPMAN, 418
- Backer, C. A., Problem of Krakatoa, R. F. GRIGGS, 132
- Bacteria and Plant Synthesis, H. HIBBERT, 419
- Bacterium, tularensis, F. W. SHAW, 245; granulosis and Trachoma, P. K. OLITSKY and J. R. TYLER, 263
- Bahamas, International Expedition to, 124
- BAKER, F. C., Castoroides ohioensis from Illinois, 389
- Banana in Early Books, P. R. WHITE, 461
- Barnes, Charles Reid, Life Membership, 218
- Barro Colo. Isl. Biological Station, V. KELLOGG, 538
- BARTLEY, S. H., and E. B. NEWMAN, Cerebral Action Currents, 587
- BARTSCH, P., Teredolithus, 460
- BASS, L. W., Applications of Iodine, 37; Research at the Mellon Institute, 561
- BAUMGARTNER, W. J., The Acridian Follicle, 466
- Bees and Symbiotic Mites, N. LEVEQUE, 607
- Beetle, Japanese, Parasite of, R. W. GLASER, 16
- Benton, John Robert, 256
- Biblichresis, W. A. HAMOR and L. W. BASS, 375
- Bibliographies, M. C. MERRILL, 38
- Bieler, Etienne S., Scientific Work of, L. V. KING, 497
- BIGELOW, H. B., View-point in Oceanography, 84; Woods Hole Oceanographic Institution, 277
- BIGELOW, M. H., Silver or Gold, 507
- BINGHAM, E. C., and H. J. FORNWALT, Association and Constitution, 564
- Biochemistry and Physiology, Chart Illustrating the History of, J. NEEDHAM, 134
- Biological, Survey of Lake Erie, P. R. BURKHOLDER, 288; Effects of High Frequency Fields, G. M. MCKINLEY and D. R. CHARLES, 490; Experimentation, High Frequency Equipment for, J. G. MCKINLEY, Jr., and G. M. MCKINLEY, 508; Sciences, National Research Fellowships, 236, 629
- Biology, Experimental Method in, E. C. JEFFREY, 34
- BISSENETTE, T. H., Securing Marine Invertebrates, 464
- Blood Smears, Fixing, C. W. REES, 134
- BOAS, F., Karl von den Steinen, 7
- BORING, E. G., Sigma, 362
- Botanical, Society of Amer., 411; Gardens, Kew, 499
- BOWIE, W., International Cooperation in Geographical Work, 425; Wegener Hypothesis, 459
- BRAGG, W. H., The Meaning of the Crystal, 547
- BRIDGMAN, P. W., Present-day Physics, 19
- British, Honors, 124, 631; Empire, Agriculture in, 179; Fauna of, 308; Association for the Advancement of Science, Centenary, 354; Presidency of, A. F. HUNTER, 462
- BROWN, E., The Vitality of Buried Seeds, 561
- BROWN, E. W., Eclipse of April 28, 314
- BROWN, P. E., Pedology or Soil Science, 243
- BURKHOLDER, P. R., Biological Survey of Lake Erie, 288
- BURNSIDE, C. E., Slant Cultures, 365
- Bush, V., Operational Circuit Analysis, L. P. WHEELER, 484
- Busuanga Herre, New Genus, A. W. HERRE, 132
- BUWALDA, J. P., and W. L. STANTON, Geological History of the Indio Hills and the Salton Basin, 104
- California, Academy of Sciences, African Mammal Hall, 332; Univ. of, Retirement of President, 500
- CAMPBELL, A. D., Edward Drake Roe, Jr., 121
- Canadian Research Laboratories, National, 91
- Cancer Research Fund of Univ. of Pennsylvania, 191
- Capnometer, H. B. MELLER, 344
- CARMAN, A. P., Ether Structure, 214
- Carnegie Institute of Technology, 553
- CARPENTER, C. M., and A. B. PAGE, Production of Fever in Man by Short Radio Waves, 450
- CASTLE, W. E., Race Mixture, 603
- Cats, Adrenalectomized, W. W. SWINGLE and J. J. PRIFNER, 321, 489
- CATTELL, MCK., and D. J. EDWARDS, Action of Hydrostatic Pressure on Striated Muscle, 17

- Central Bodies, E. B. WILSON, 661
 Centrifuge Tubes for Balancing, H. W. ESTILL, 587
 Cerebral Action Currents, S. H. BARTLEY and E. B. NEWMAN, 587
 CHALKLEY, H. W., Stock Cultures of Ameba, 442
 CHAMBERS, R., Membranes of Echinoderm Ova, 340
 CHASE, H. D., Starlings in Oklahoma, 484
 Chemical Soc., Amer., Atlanta Meeting, 259
 Chemistry, Century of Progress, 308; Fellowships, at Johns Hopkins, 410; House in London, 430
 Chicago, Univ. of, Chemical Laboratory of, 30
 Chichen Itza, Conference at, A. V. KIDDER, 391
 Chickens, Leg Bones in, L. F. PAYNE, 664
 Chicory, Inactivity of, C. REYNOLDS, 586
 Chlorophyll, Colorimetric Determination of, H. B. SPRAGUE and L. B. TROXLER, 666
 CLARK, A. H., Press Notices of the Amer. Assoc., 218
 CLARK, E. P., Derris and "Cube" Roots, 396
 CLARK, G. L., L. W. PICKETT and W. K. FARR, X-ray Analysis of Cotton Fibers, 293
 CLARK, N. A., "Auximones," 268
 Clay, Grading and Hardness in, W. D. KELLER, 320
 Clinical Medicine, THE LATE C. F. HOOVER, 491
 COCKERELL, T. D. A., Nomenclature, 217; Taxonomy, 240, 586; American Chipmunks, A. H. HOWELL, 342; Overhead, 363; Genetics, 663
 COLE, F.-C., Anthropology and Indian Affairs, 249
 COLE, R., Progress of Medicine and the Harvey Society Lectures, 617
 COMPTON, K. T., Inaugural Address at Mass. Tech., 593
 Condensers in Series, H. S. UHLER, 488
 Control, C. W. WOODWORTH, 388; C. L. METCALF, 637; R. L. TAYLOR, 638
 COOK, O. F., The Hevea Rubber Tree, 386
 COOLEY, R. A., Montana Tick Parasite Expedition, 419
 COOMBS, H. C., Costal Movements of Respiration, 136
 Cornell Univ., Degree of Chemical Engineer, 278; State Appropriations for, 530
 Cosmic Radiation, R. A. MILLIKAN, 640
 COTNER, F. B., Cytology of Cilia Formation, 670
 COVILLE, F. V., The National Arboretum, 176
 Crystal, The Meaning of, W. H. BRAGG, 547
 Cypridina luciferin, S. KANDA, 444
 Cytology of Cilia Formation, F. B. COTNER, 670
 DAVENPORT, C. B., James Arthur Harris, 474
 DAVIS, W. H., Lactophenol, 16
 DAVISSON, C. J., Wave Properties of Electrons, 651
 DAVY, J. B., Economics of Forestry, W. E. HILEY, 485
 DAWSON, H. L., Hair Growth and Pregnancy, 607
 Deaths, Recent, 7, 61, 122, 179, 234, 257, 307, 353, 409, 429, 475, 529, 579, 597
 DEATRICK, E. P., Weed Eradication, 487
 Dental Council, 28
 Derris, and "Cube" Roots, E. P. CLARK, 396
 DEXTER, T. S., Hardiness in Plants, 220
 Digitalis purpurea, Exposure under Ultra-violet transmitting Glass, A. MCCREA, 346
 Discussion, 14, 34, 67, 97, 129, 186, 214, 240, 262, 285, 314, 340, 361, 386, 415, 436, 458, 481, 505, 536, 559, 585, 603, 635, 661
 DODDS, J. S., The Government Mapping Program, 471
 DORSEY, N. E., The Micrometric Muddle, 67
 Drosophila melanogaster, B. B. LEAGUE, 99; Meiosis in, A. F. HUETTNER, 241; Once More, E. C. JEFFREY, 315
 Dudley Herbarium, 629
 DUFTON, A. F., Laws of Orbital Motion, 538
 DUNLAP, K., National Institute of Psychology, 430
 DUNN, G., Science and Engineering, 276
 Earthquake, New Madrid, W. A. PUSEY, 285
 Earthquakes, Man-made, E. H. SELLARDS, 188
 Eastman, George, Award of Medal to, 477
 Echinoderm Ova, Membranes of, R. CHAMBERS, 340; E. E. JUST, 243
 Eclipse, Expedition, Univ. of California, 235; of April 28, E. W. BROWN, 314
 Ecological Monographs, W. C. ALLEE, 63
 Einstein, Publications, W. F. G. SWANN, 390; Address at University of Nottingham, 608
 Electrical Potentials and Currents in Plants, C. SHEARD and A. F. JOHNSON, 246
 Electron and Radiation, R. D. KLEEMAN, 340
 Electrons, Wave Properties of, C. J. DAVISSON, 651
 EMERY, F. E., Oestrus after Removal of One Ovary, 388
 ENDERS, R. K., Banana Stowaways Again, 438
 Engineering, Pageant, 383; and Agriculture, H. GIESE, 467; Summer School, 499; Council and Aviation, 530
 Engineers, in American Life, 28; Mechanical, Amer. Soc. of, Celebration of Fifty Years of Progress, 334
 ERWIN, A. T., The Nativity of the Pumpkins, 483
 ESSIG, E. O., Plant Quarantine, 350
 ESTILL, H. W., Balancing Centrifuge Tubes, 587
 Ether Structure, A. P. CARMAN, 214
 Ethics, Professional, Absent-mindedness and, C. W. STILES, 101; and the Artist, J. F. MUELLER, 389
 EVE, A. S., The Universe as a Whole, 519
 Evolution, Organic, A. HRDLICKA, 230; Emergent, R. K. NABOURS, 371; Stellar, C. D. PERRINE, 415
 Explorations in the Gobi Desert, H. F. OSBORN, 481
 Farlow, W. C., Icones Farlowianae, C. H. KAUFFMAN, 70
 Fellowships, Storow, in Geology and Geography, 62; National Research Council, 236; Charles Lathrop Pack Forestry, 258; Chemistry, Johns Hopkins, 410, 629
 FELT, E. P., Scientific Names, 215
 FERRIS, G. F., Plant Quarantine, 68, 606
 Fertilizer Experiments, W. J. SPILLMAN, 135
 Fever in Man, Produced by Short Radio Waves, C. M. CARPENTER and A. B. PAGE, 450
 Field Columbian Museum, 356
 FILENE, E. A., Salaries for University Teachers, 401
 Fireflies, Synchronous Flashing of, R. H. MERRILL, 132; C. A. RICHMOND, 537
 FITCH, R. H., and A. L. TATUM, An Electrical Recording Manometer, 539
 FLEXNER, S., Richard Mills Pearce, Jr., 331
 Florida, Subtropical National Park in, 597
 FOOTE, P. D., Superfluous Publications, 14
 FORBES, R. D., National Forest Reservation Commission and Forest Research Reserves, 505
 Forbes, Stephen Alfred, H. B. WARD, 378
 Forest, Survey, 210; Reservation Commission, R. D. FORBES, 505
 Forestry, Foundation, Univ. Michigan, 180; School of, Yale Univ., Gifts to, 181; Fellowships in, Charles Lathrop Pack, 258
 FORT, T., The "Gibbs Phenomenon," 559
 Franklin Institute, Awards of, 501, 531
 FREUD, B. B., and H. Z. FREUD, Ring Method and Surface Tension, 345
 FREY, C. A., Acid-fast Bacteria in the Soil, 366
 Fritz, John, Medal, 94
 FULCHER, G. S., Pyramid of Gizeh, 285
 Game Reservation, 553
 GARRISON, F. H., Medical Bibliography, 189
 GARTH, T. R., Color-blindness of Indians, 462
 Gas in Collodion Sacs, P. L. K. GROSS and L. S. KASSEL, 263
 Geographical, Soc., Amer., Medal Awards, 333; Work, International Cooperation in, W. BOWIE, 425
 Geological, Events in the History of the Indio Hills and the Salton Basin, J. P. BUWALDA and W. L. STANTON, 104; Congress, International, 122; Soc. of Amer., 309; Survey, Illinois State, 431
 GEORGE, E. F., Sand-storm Electricity, 99

- GERICKE, W. F., Percentage of Protein in Grain, 78
German Association of Scientific Men and Physicians, 553
GEROULD, J. H., Heart-beat in Insects, 264
"Gibbs Phenomenon," T. FORT, 559
GIESE, H., Engineering and Agriculture, 467
GILBERT, W. W., William O.orton, 89
GILMAN, J. C., Iowa Academy of Science, 610
Glacialist, Problems of the, F. LEVERETT, 47
GLASER, R. W., Parasite of Japanese Beetle, 16
GLEASON, H. A., Sanity in Nomenclature, 458
Glutathione, in Plant Tissues, V. B. WHITE, 74; Structure of, B. H. NICOLET, 589
Gold, World Production of, 208
GOLDFORB, A. J., Medical and Other Sciences, 77
GOLDSWORTHY, M. C., and R. E. SMITH, "Sour Sap," 506
Gortner, R. A., Biochemistry, W. SEIFRIZ, 189
Greenland, Expedition of Univ. of Michigan, 597
GREGORY, W. K., Origin of Man, 645
GRIGGS, R. F., Problem of Krakatoa, C. A. Backer, 132
GROSS, P. L. K., and L. S. KASSEL, Gas in Collodion Sacs, 263
GUDGER, E. W., and W. H. HOFFMANN, The Whale Shark, 639
Guggenheim Foundation, 279; Medal for Aeronautics, 500; Advisory Board, 554
GUYER, M. F., Somatic Modifications, 169

HADLEY, P., The Passenger Pigeon, 187
Hales, Stephen, Prize, 219
HALL, E. E., Frederick Slate, 307
HAMOR, W. A., Pedology or Chthonology, 70; and L. W. BASS, Bibliochresis, 375
HANSEN, H. N., Segregation (?) in *Phoma terrestris*, 424
HANSON, F. B., and F. HEYS, Radiation and Mutations, 43
HARRINGTON, M. R., and J. A. B. SCHERER, How Old is the Pleistocene?, 585
Harris, James Arthur, C. B. DAVENPORT, 474; 528
HARROLD, T. J., Handling Paraffin Ribbons, 641
Harvard University, Film Foundation, 381; New Biological Laboratory, 658
Harvey Society Lectures, R. COLE, 617; G. LUSK, 627
Hawaiian Islands, Pearl-oyster Resources of the, 355
Health Institute, 562
HEIDELBERGER, M., and F. E. KENDALL, Displacement of Toxin by "Toxoid," 511
HELLER, V. G., and C. H. LARWOOD, Saline Drinking Water, 223
HELSON, H., The Tau Effect, 536
HENDERSON, J., Biological Nomenclature, 286
HERRE, A. W., A New Guinea Eel-fair, 16; Busuanga Herre, New Genus, 132
HERSHEY, J. W., Air and Animal Life, 394
HIBBERT, H., Bacteria and Plant Synthesis, 419
Hiley, W. E., Economics of Forestry, J. B. DAVY, 485
HILL, A. E., William Henry Nichols, 528
HILL, H. H., Plant Juice Clarification, 540
HILL, S. E., Improved Calomel Electrode Vessel, 193
HILTON, W. A., Distribution of Pauropus, 69
HOBBS, W. H., Antarctic Adventure and Research, Taylor, 666
Honor Societies, E. P. LYON, 325
HOOVER, C. F., Laboratories and Clinical Medicine, 491
Horticultural Society, Massachusetts, 29
HOVGAAARD, W., Theoretical Mechanics in Engineering Schools, 347
HRDLICKA, A., Organic Evolution, 230
Hu, H. H., and W. Y. Chun, *Icones Plantarum Sinicarum*, E. D. MERRILL, 134
HUBBS, C. L., Scientific Names in Zoology, 317
HUBERT, H. E., and T. H. HARRIS, Evaporation from Petri Dish Cultures, 510
HUETTNER, A. F., Meiosis in *Drosophila melanogaster*, 241
HUNTER, A. F., Presidency of British Association, 462

HUTCHINSON, G. E., Ecology of Lake Tanganyika, 616
Hydrobiology and Agriculture, J. G. NEEDHAM, 265

Indian Life, Museum and Laboratory, 61
International Critical Tables, 92
Iowa Academy of Science, J. C. GILMAN, 610

J., W. C., Julius Buel Weems, 178
JEFFREY, E. C., Experimental Method in Biology, 34; *Drosophila*, 315
JENNINGS, O. E., Phytoplankton at Erie, 560
Jones, G. H., Chemical Laboratory, Chicago, 30
JONES, H. S., Astronomy in South Africa, 319
JUDAY, C., Die Biologie der Moore, O. Harnisch, 133; Der Hochgebirgssee, Pesta, 665
JUST, E. E., Ultra-violet and Fusion of Eggs of *Chaetopterus*, 72; Parthenogenesis, 72; Osmic Acid in Fixing Solutions, 72; Fertilization Membrane of Echinid Ova, 243

K., W. P., Dexter Dwight Mayne, 60
KANDA, S., Cypridina luciferin, 444
KAUFFMAN, C. H., *Icones Farlowianae*, W. G. Farlow, 70
KEEN, W. W., Useful Great Toes, 342
KELLER, W. D., Streak and Hardness in Clay Grading, 320
KELLEY, T. L., The Novel Problem, 295
KELLOGG, V., Appropriations by the National Research Council, 258; Barro Colorado Island Biological Station, 538
KERSHAW, F. S., Edward S. Morse, 233
KEYS, A. B., Oxygen Consumption of Fishes, 195
KIDDER, A. V., Conference at Chichen Itza, 391
Kidney in Health and Disease, 580
KING, L. V., Scientific Work of Etienne S. Bieler, 497
Kishinouye, Kamakichi, T. W. V., 179
KLEEMAN, R. D., The Electron and Radiation, 340
KNOOP, F., Organic Compounds and the Animal Body, 23
KOFOD, C. A., Methodik der wissenschaftlichen Biologie, T. Peterfi, 462; *Protozoenkunde*, Doflein, 665
KRAATZ, W. C., Mouse Opossum Stowaways, 288
KRUMWIEDE, C., M. McGRATH and C. OLDENBUSCH, Etiology of Psittacosis, 262
KUNZ, G. F., Platinum Deposits, P. A. Wagner, 39

Ladd-Franklin, Christine, R. S. WOODWORTH, 307
LANE, A. C., and W. F. CHENEY, JR., Sea-level Change, 319
LEAGUE, B. B., *Drosophila melanogaster*, 99
Lesions in the Cerebral Cortex, F. H. PIKE and M. L. CHAPPELL, 76
LEVENE, P. A., Vitamin B, 668
LEVEQUE, N., Symbiotic Mites and Bees, 607
LEVERETT, F., Problems of the Glacialist, 47
LEWIS, G. N., Symmetry of Time in Physics, 569
LILLIE, F. R., and S. YAMANOUCHI, Shosaburo Watasé, 577
LINTON, E., Sounds of the Yellowstone Lake Region, 97
LIPMAN, C. B., Artificial Bacilli, 418
LIVINGSTON, B. E., Spring Meeting of the Executive Committee of the American Association, 588
LUSK, G., Science and Life, 271; The Harvey Society, 627
LYON, E. P., Honor Societies, 325

McCALLUM, A. B., and R. C. BRADLEY, Haemoglobin, 341
McCAY, C. M., Magendie and Vitamins, 315
McCREA, A., Effect on *Digitalis purpurea* of Ultra-violet-transmitting Glass, 346
McGREGOR, E. A., Innovation in Scale Control, 244
MACHT, D. I., Phytopharmacology, 302
McKAY, J. W., and T. H. GOODSPEED, Effects of X-radiation on Cotton, 644
McKINLEY, G. M., and D. R. CHARLES, Biological Effects of High Frequency Fields, 490

- MCKINLEY, J. G., JR., and G. M. MCKINLEY, High Frequency Equipment for Biological Experimentation, 508
 MCKINNEY, H. H., and W. J. SANDO, Winter Wheat, 668
 McLAUGHLIN, A. R., Laboratory Devices, 392
 McLAUGHLIN, D. B., Bright Meteor, 131
 McWHORTER, F. P., Eliminating Opaquing in Photography, 393
 Macy, Josiah, Jr., Foundation, 454
 Magendie and Vitamins, C. M. McCAY, 315
 Mammal Hall, African, Univ. of Calif. Acad. of Sci., 332
 MANWARING, W. H., Contemporary Research "Aces," 361
 MARVIN, H. H., Pressure in a Fluid, 538
 Massachusetts Inst. Tech., Installation Address, S. W. STRATTON, 591; Inaugural Address, K. T. COMPTON, 593
 MATTHEW, W. D., Credit or Responsibility in Scientific Publication, 662
 MAYNARD, L. A., Diet for Stock Rats, 192
 Mayne, Dexter Dwight, W. P. K., 60
 Mechanics, Theoretical, W. HOGGAARD, 347
 Medical, and Other Sciences, A. J. GOLDFORB, 77; Bibliography, F. H. GARRISON, 189; Education, 244; Center in Brooklyn, 476
 Medicine, Yale School of, 211, 235; St. Louis Univ. School of, Assignment of Patent Rights to, 453; Progress and the Harvey Society Lectures, R. COLE, 617
 MELLEN, I., Can a Catfish Count?, 586
 MELLER, H. B., The Capnometer, 344
 Mellon Institute, Appointments, 93; Research at, L. W. BASS, 561; Building, 579
 MELLON, M. G., Unbound Text and Note Book, 69
 Memorials, 121, 257, 353, 409, 429, 475, 529, 597
 Mercer, Henry Chapman, A. MOYER, 498
 MERRILL, E. D., Icones Plantarum Sinicarum, H. H. HU and W. Y. CHUN, 134
 MERRILL, M. C., Bibliographies, 38
 MERRILL, R. H., Synchronous Flashing of Fireflies, 132
 METCALF, C. L., What is Control?, 637
 MEYER, A. H., Phosphorous Fixing Compound, 461
 MEYERHOFF, H. A., Stratigraphy of Porto Rico, 322
 Mexico, Univ. of, and Dr. Holland, 531
 Michigan, Univ. of, Observatory, 9; Forestry Foundation, 180; Expedition to Greenland, 597; to San Carlos Mountains, 657; Academy of Sciences, 93
 MICKEL, C. E., Future of Taxonomy, 436
 Micrometric Muddle, N. E. DORSEY, 67
 Microscopic Preparations, A. T. RASMUSSEN and C. A. FISHER, 289
 Miller, Arthur McQuiston, Memorial Service, 429
 MILLIKAN, R. A., Cosmic Radiation, 640
 MOOERS, C. A., Liming Investigations, 81
 MORGAN, M. F., Nitrate Nitrogen in Soil, 343
 Morse, Edward S., The Late, F. S. KERSHAW, 233
 MORSE, W., Chemical Constitution of Pectinatella, 265
 Motions of the B Stars, J. S. PLASKETT, 225
 MOYER, A., Henry Chapman Mercer, 498
 MUELLER, J. F., Professional Ethics and the Artist, 389
 MURRAY, E., Psittacosis Epidemics, 417
 Museum of Natural History, American, 507
 Mutations and Natural Radiation, F. B. HANSON and F. HEYS, 43

 NABOURS, R. K., Emergent Evolution and Hybridism, 371
 National, Research Council, Appropriations, V. KELLOGG, 258; Grants, C. E. ALLEN, 280; Fellowships, 236, 629; Academy of Sciences, 513, 543, 566
 NEEDHAM, J., History of Biochemistry and Physiology, 134
 NEEDHAM, J. G., Nomenclature, 26; Hydrobiology and Agriculture, 265
 NELSON, D. H., Isolation of Nitrosomonas, 541
 Nichols, William Henry, A. E. HILL, 528
 NICOLET, B. H., Structure of Glutathione, 589
 NITCHE, C. C., and F. C. SCHMUTZ, Transmission Changes in Ultra-violet Glasses, 590
 Nitrogen, Research Award, 182; Fixation, F. E. ALLISON and H. J. MORRIS, 221
 Nomenclature, J. G. NEEDHAM, 26; J. HENDERSON, 286; C. L. HUBBS, 317; H. A. GLEASON, 458
 NORRIS, L. C., and A. T. RINGROSE, A Pellagrous-like Syndrome in Chicks, 643
 DU NOÛY, P. L., Transmission and Diffraction of Light by Normal Serum as a Function of Temperature, 108
 Novy, Professor, Presentation to, 30
 NOYES, W. A., Professors' Salaries, 397
 NUTTING, P. G., Adsorption and Emulsion Formation, 36

 Obituary, 7, 60, 89, 121, 178, 233, 256, 307, 331, 353, 378, 429, 474, 497, 528, 577, 596
 Oceanographic, Investigations in Maine, H. R. SEIWELL, 194; Institution, Woods Hole, H. B. BIGELOW, 277; Expedition, Bermuda, 333
 Ohio State University, Chemistry at, 382
 O'HARRA, C. C., Fossil Mammal with Unborn Twins, 341
 OLIVER, C. P., X-ray Treatment and Mutation, 44
 OLITSKY, P. K., and J. R. TYLER, Bacterium granulosus and Trachoma, 263; Direct Transmission of Human Trachoma to the Monkey, 564
 OLMSFED, J. M. D., and S. F. COOK, Splenic Contraction, 442
 Optical Illusion, R. F. STEVENS, 439
 Organic, Compounds and Animal Body, F. KNOOP, 23; World and the Causal Principle, H. C. WARREN, 204
 Organisms, Preparation of, P. L. RADIR, 613
 Origin of Man, W. K. GREGORY, 645
 Orton, William O., W. W. GILBERT, 89
 OSBORN, H. F., The Discovery of Tertiary Man, 1; Amer. Museum Explorations in the Gobi Desert, 481
 Osmic Acid in Fixing Solutions, E. E. JUST, 72
 OTIS, C. H., A Source of Diastase, 221
 OTT, E., Determination of Polymerization, 465
 Oxygen Consumption of Fishes, A. B. KEYS, 195

 Panama, A Momentous Hour at, J. F. STEVENS, 550
 PAPISH, J., and Z. M. HANFORD, Germanium and Arsenic in Meteorites, 269
 Paraffin, Embedding, C. ZIRKLE, 103; Ribbons, T. J. HARROLD, 641
 Park, National, Great Smoky Mountain, 123
 PAYNE, L. F., Leg Bones in Chickens, 664
 Pearce, Richard Mills, Jr., S. FLEXNER, 331
 Pedology or Chthonology, W. A. HAMOR, 70
 Pele, A Sacrifice to, G. R. WIELAND, 386
 PENNISTON, J. B., Satellite Distances, 512
 Pennsylvania, Univ. of, Cancer Research Fund, 191
 PERBINE, C. D., Stellar Evolution, 415
 PETER, A. M., Soil Science, 218
 PETTY, J. J., Striated Cobbles from W. Va., 483
 PHILIP, C. B., Experimental Transmission of Yellow Fever by Mosquitoes, 614
 Philosophical Society, American, 431
 Physical, and Optical Societies, British, Exhibition, 209; Soc., Amer., Summer Meeting, 598
 Physics, Present-day, P. W. BRIDGMAN, 19; Symmetry of Time in, G. N. LEWIS, 569
 Physiologists, Plant, Amer. Soc. of, Awards, 218
 Phytopathological Soc., Canadian, 63; Amer., Southern Division, 477
 Phytopharmacology, D. I. MACHT, 302
 PIELEMEIER, W. H., Pressure Potential in a Fluid, 438
 PIKE, F. H., and M. L. CHAPPELL, Lesions in the Cerebral Cortex, 76
 PINGCH'ANG, S., Central Asiatic Expedition, 129
 Planet, Ninth, 310, 364
 Plant, Physiologists, Amer. Soc. of, Awards, 218; Quarantine, E. O. ESSIG, 350; Juice Clarification, H. H. HILL, 540; Drier, Laboratory, L. R. TEHON, 563

- PLASKETT, J. S., The Motions of the B Stars, 225
Pleistocene, How Old is It? M. R. HARRINGTON and J. A. B. SCHERER, 585
Polymerization, Determination of, E. OTT, 465
Popular Science Monthly Prize Award, 10
PORTER, W. T., C. E. ROY and A. VIANEY, An Electric Kymograph, 41
PRATT, O. B., and H. O. SWARTOUT, Fruit and Vegetable Pigments as Indicators, 486
Pressure, Hydrostatic, on Striated Muscle, MCK. CATTELL and D. J. EDWARDS, 17; Potential in a Fluid, W. H. PIELEMEIER, 438; H. H. MARVIN, 538
Psittacosis, Etiology of, C. KRUMWIEDE, M. McGRATH, and C. OLDENBUSCH, 262; Epidemics, E. MURRAY, 417
Psychology, National Institute of, K. DUNLAP, 130
Public Health Service, U. S., 381
PUSEY, W. A., The New Madrid Earthquake, 285

Quarantine, Plant, G. F. FERRIS, 68, 606
Quotations, 244, 364, 420, 562, 640, 664

Race Mixture, W. E. CASTLE, 603
Radio, Talks, 211, 454
RADIR, P. L., Preparation of Small Organisms, 613
RASMUSSEN, A. T., and C. A. FISHER, Microscopic Preparations, 289
REAGAN, A. B., Sand-storm Electricity, 506
REED, C. T., Flagellum Division, 15
REES, C. W., Fixing Thin Blood Smears, 134; Diplo-dinium ecaudatum, 369
Reforestation in New York State, 354
Reports, 191, 218, 265, 440, 507
REYNOLDS, C., Inactivity of Chicory, 586
RICHARDS, O. W., and P. M. ROOPE, A Tangent Meter, 290
RICHARDSON, E. C., International Catalogue of Scientific Literature, 635
RICHMOND, C. A., Fireflies Flashing in Unison, 537
ROBINSON, B. L., and L. C. WILCOX, The Gray Herbarium Card Index, 253
ROBINSON, R. H., D. F. FISHER and A. SPULER, The Western Cooperative Oil Spray Project, 440
Roe, Edward Drake, Jr., A. D. CAMPBELL, 121
ROMANOFF, A. L., Shaking Machine, 320
ROMER, A. S., Australopithecus not a Chimpanzee, 482
ROSENBERGER, H., Microcinematographic Apparatus, 266; An Electromagnetic Pump, 463
Royal Society, Conversaciones, 579; Statesmen as Fellows, 656; of Canada, 630

SACKETT, R. L., A New Science, 57
Salaries, Professors', W. A. NOYES, 397; E. A. FILENE, 401; Discussion, W. P. TAYLOR, 408
SAVAGE, T. E., Age of the New Albany Shale, 537
SCHOLLENBERGER, C. J., Soil Reaction, 220
Science, A New, R. L. SACKETT, 57; and Life, G. LUSK, 271; and Engineering, G. DUNN, 276
Scientific, Events, 9, 28, 61, 91, 122, 179, 208, 235, 257, 278, 308, 332, 354, 381, 410, 430, 452, 476, 499, 530, 552, 579, 597, 629, 656; Notes and News, 11, 31, 64, 94, 125, 182, 212, 237, 260, 281, 310, 335, 357, 383, 412, 432, 455, 478, 501, 533, 555, 581, 599, 631, 658; Apparatus and Laboratory Methods, 16, 41, 72, 101, 134, 192, 220, 244, 266, 289, 320, 343, 365, 392, 421, 441, 463, 486, 508, 539, 563, 587, 615, 641, 666; Names, 26, E. P. FELT, 215; T. D. A. COCKERELL, 217; E. L. TROXELL, 217; Books, 39, 70, 132, 189, 342, 462, 484, 665; Literature, International Catalogue of, E. C. RICHARDSON, 635; Publication, Credit or Responsibility in, W. D. MATTHEW, 662
SCOFFIELD, C. S., and L. V. WILCOX, The Boron Content of Oranges, 542
SEIFRIZ, W., Outlines of Biochemistry, R. A. GORTNER, 189

SEIWELL, H. R., Oceanographic Investigations, 194
SELLARDS, E. H., Man-made Earthquakes, 188
SHAW, E. H., JR., Zoopharmacology and Phytopharmacology, 460
SHAW, F. W., Cultivation of Bacterium tularense, 245
SHEARD, C., and A. F. JOHNSON, Electrical Potentials and Currents in Plants, 246; G. M. HIGGINS and W. I. FOSTER, Germination of Seeds by Solar Irradiation, 291
Sherborn, C. Davies, Tribute to, 236
SIDERIS, C. P., Taxonomic Classification of Pythiacious Organisms, 323
Sinanthropus pekinensis, 91
Slate, Frederick, E. E. HALL, 307
SMITH, G.-H., Pedography, 363
Soil, Science, International Congress of, 9; W. W. WEIR, A. M. PETER, 218; or Pedology, P. E. BROWN, 243; Reaction, C. J. SCHOLLENBERGER, 220; Test for Nitrate Nitrogen in, M. F. MORGAN, 343; Acid-fast Bacteria in, C. A. FREY, 366; Phosphorus Fixing Compound in, A. H. MEYER, 461
Somatic Modifications, M. F. GUYER, 169
Sounds of the Yellowstone Lake Region, E. LINTON, 97
"Sour Sap," M. C. GOLDSWORTHY and R. E. SMITH, 506
Special Articles, 16, 43, 73, 104, 135, 194, 221, 246, 268, 291, 321, 345, 367, 394, 422, 442, 465, 488, 511, 541, 564, 589, 614, 641, 668
Special Correspondence, 288, 390, 419, 538, 561
Sperry, Elmer A., 664
SPILLMAN, W. J., Fertilizer Experiments, 135
SPRAGUE, H. B., and L. B. TROXLER, Colorimetric Determination of Chlorophyll, 666
Standards Association, American, 92
Steinen, Karl von den, F. BOAS, 7
STEVENS, J. F., A Momentous Hour at Panama, 550
STEVENS, R. F., An Optical Illusion, 439
STILES, C. W., Absent-mindedness and Professional Ethics, 101
STOUT, G. L., Hail Injury to Trees and Shrubs, 187
STRATTON, S. W., Installation Address at the Massachusetts Institute of Technology, 591
SWANN, W. F. G., Einstein's Publications, 390
SWEZY, O., and H. M. EVANS, Ovarian Changes in the Rat, 46
SWINGLE, W. W., and J. J. PFIFFNER, Adrenalectomized Cats, 321, 489

Taxonomy, The Future of, T. D. A. COCKERELL, 240, 586; C. E. MICKEL, 436
TAYLOR, R. L., What is Control? 638
TAYLOR, W. P., Salaries for College and University Teachers, 408
TEHON, L. R., Laboratory Plant Drier, 563
Tertiary Man, Discovery of, H. F. OSBORN, 1
THARALDSEN, C. E., L. J. BOYD and D. ANCHEL, Storage Tube for Plasma and Embryo Juice, 667
THEILER, M., White Mice and Virus of Yellow Fever, 367
THOMAS, W., Colloidal Silica and the Absorption of Phosphoric Acid by Plants, 422
TILDEN, E. B., and J. R. TYLER, Bacterium granulosis and Trachoma, 186
Tobler, August, T. W. V., 178
Trachoma, and Bacterium granulosis, E. B. TILDEN and J. R. TYLER, 186, P. K. OLITSKY and J. R. TYLER, 263; Human, Direct Transmission of, to the Monkey, P. K. OLITSKY and J. R. TYLER, 564
TRASK, P. D., Mechanical Analyses, 441
Tropical Diseases, Exhibit at Antwerp, 552
TROXELL, E. L., Scientific Names, 217
TSAI, L. S., Sex Glands and Adaptive Ability, 106

UHLER, H. S., Condensers in Series, 488
Ultra-violet, and Fusion of Eggs of Chaetopterus, E. E. JUST, 72; Glasses, Transmission Changes in, C. C. NITCHE and F. C. SCHMUTZ, 590

- Universe as a Whole, A. S. EVE, 519
University and Educational Notes, 14
- V., T. W., August Tobler, 178; Kamakichi Kishinouye, 179
Vitamin B₂, P. A. LEVENE, 668
- Wagner, P. A., Platinum Deposits, G. F. KUNZ, 39
WARD, H. B., Stephen Alfred Forbes, 378
Warner, Worcester Reed, Gift of Crystal to Smithsonian Institution, 410
WARREN, H. C., The Organic World and the Causal Principle, 204
Watasé, Shosaburo, F. R. LILLIE and S. YAMANOUCHI, 577
Water, Saline, Drinking, V. G. HELLER and C. H. LARWOOD, 223; I. E. ALLISON, 559; Mississippi River, Manganese Content of, A. H. WIEBE, 248
Weems, Julius Buel, W. C. J., 178
Wegener Hypothesis, W. BOWIE, 459
Weights and Measures at South Kensington Museum, 476
WEINRICH, M. F., Heat Transmission through Blankets, 421
WEIR, W. W., Soil Science, 218
Welch, Dr., Celebration in Honor of, 309, 410, 654; "Apotheosis," 420
Westinghouse Research Laboratories, 430
WEYER, E. G., and C. W. BRAY, Auditory Nerve Impulses, 215
Whale Shark, Second Capture of, E. W. GUDGER and W. H. HOFFMANN, 639
Wheat, Winter, Behavior in Artificial Environments, H. H. MCKINNEY and W. J. SANDO, 668
WHEELER, L. P., Operational Circuit Analysis, V. Bush, 484
WHITE, P. R., The Banana in Early Books, 461
WHITE, V. B., Glutathione in Plant Tissue, 74
WIEBE, A. H., Manganese Content of Mississippi River Water, 248
WIELAND, G. R., A Sacrifice to Pele, 386
WILLARD, B., A Natural Cat Mummy, 287; Conglomerite, A New Rock Term, 438
WILLEY, A., and C. LHERISSON, Mass Conjugation in Paramecium, 367
WILSON, E. B., The Central Bodies, 661
WILSON, J. D., Valve for Porous-cup Atmometers, 101
WINTERSTEIN, H., Metabolism of the Local Excitatory Process, 641
WOODWORTH, C. W., What is Control? 388
WOODWORTH, R. S., Christine Ladd-Franklin, 307
- X-radiation, Effects of, on Cotton, J. W. MCKAY and T. H. GOODSPEED, 644
- Yale Univ., Forestry School, 181; School of Medicine, 235
Yellow Fever, Virus of, and White Mice, M. THEILER, 367; Experimental Transmission of, C. B. PHILIP, 614
- ZIRKLE, C., Paraffin Embedding, 103
Zoological Society of London, 452
Zoopharmacology and Phytopharmacology, E. H. SHAW, JR., 460